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WORK PLAN ADDENDUM 25 MUNITIONS RESPONSE AND EXCAVATION OF CONTAMINATED SOIL AT OPERABLE UNIT 5 (OU 5) SITE 15 BLUE 10 ORDNANCE DISPOSAL AREA NAS CECIL FIELD FL

2/1/2008

CH2MHILL CONSTRUCTORS INC

Work Plan Addendum No. 25
Munitions Response and Excavation of Contaminated Soil at Site 15, Blue 10 Ordnance Disposal Area

Former Naval Air Station Cecil Field
Jacksonville, Florida

Revision No. 00

Contract No. N62467-98-D-0995
Contract Task Order No. 0057

Contract No. N62467-01-D-0331
Contract Task Order No. 0063

Submitted to:

U.S. Naval Facilities Engineering Command Southeast

Prepared by:

CH2MHILL Constructors, Inc.
Northpark 400
1000 Abernathy Road
Suite 1600
Atlanta, GA 30328

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1000 Abernathy Road
Suite 1600
Atlanta, GA 30328

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Prepared/Approved By:

Jeffery D. Marks, Project Manager — February 15, 2008 Date

Approved By:

Michael D. Halil, Deputy Program Manager — February 15, 2008 Date

Client Acceptance:

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Contents

Acronyms ..... **vi**
1.0 Introduction **1-1**
1.1 Project Authorization 1-2
1.2 Project Purpose 1-2
1.3 Regulatory Framework 1-2
2.0 Background **2-1**
2.1 Descriptions 2-1
2.1.1 Facility Description 2-1
2.1.2 Site Description 2-1
2.2 History 2-1
2.2.1 Historical Use 2-1
2.2.2 Historical Site Investigations and Activities 2-6
2.2.3 Preliminary Assessment/Site Inspection (PA/SI) 2-9
2.3 Recent Site Activities 2-10
2.3.1 In-situ Waste Characterization 2-10
2.3.2 Gopher Tortoise Survey, Trapping, and Relocation 2-10
3.0 Scope of Work **3-1**
3.1 Munitions Response 3-1
3.1.1 Mobilization and Site Preparation 3-1
3.1.2 Mosquito Control 3-1
3.1.3 Site Survey 3-2
3.1.4 Tree and Vegetation Removal with MEC Support 3-2
3.1.5 Portable Type 2 HE Storage Magazine Installation and Temporary Storage of MEC 3-2
3.1.6 Instrument-Assisted Surface Clearance 3-4
3.1.7 Digital Geophysical Mapping Survey 3-4
3.1.8 Subsurface Anomaly Investigation 3-4
3.1.9 Disposal of MEC 3-5
3.1.10 Disposition of MPPEH 3-5
3.1.11 Containerization, Characterization, and T&D of Contaminated Material 3-5
3.1.12 Onsite Construction Support 3-5
3.1.13 MR After Action Report 3-6
3.2 Excavation 3-7
3.2.1 Mobilization and Site Preparation 3-7
3.2.1 Backfill Material Certification 3-9
3.2.2 Onsite Lead Treatment and Stabilization 3-10
3.2.3 Excavation, Backfilling, and Site Restoration 3-10
3.2.4 Decontamination 3-19
3.2.5 Characterization, Transportation, and Disposal of Generated Wastes 3-19
3.2.6 Demobilization 3-19

3.2.7 Remedial Action Completion Report 3-19
3.3 Project Schedule 3-19
3.4 Communications Plan 3-19
3.5 Traffic Control Plan 3-20
4.0 Munitions Response Operations Plan 4-1
4.1 Site Visit/Records Review 4-1
4.2 MEC Team Composition 4-1
4.2.1 UXO Personnel Qualifications 4-1
4.2.2 DGM Contractor Personnel Qualifications 4-1
4.2.3 Personnel Responsibilities 4-2
4.2.4 UXO Team Composition and Roles 4-5
4.3 Project Authority 4-5
4.4 Training 4-5
4.4.1 Health and Safety Indoctrination 4-5
4.4.2 Site Specific Training 4-5
4.4.3 MEC Awareness Training 4-6
4.4.4 OSHA Training 4-6
4.4.5 Hazards Communication Training 4-6
4.4.6 Hearing Conservation Training 4-6
4.4.7 First Aid and CPR 4-7
4.4.8 Bloodborne Pathogen Training 4-7
4.4.9 Visitor Training 4-7
4.5 Medical Surveillance 4-7
4.5.1 Medical Examinations 4-7
4.5.2 Exposure Monitoring 4-8
4.5.3 Alcohol and Drug Abuse Surveillance Plan 4-8
4.6 Munitions Response Procedures 4-8
4.6.1 Subsurface Clearance 4-8
4.6.2 Area Preparation 4-9
4.6.3 MEC Intrusive Operations 4-10
4.6.4 Portable Type 2 HE Storage Magazine Installation and Temporary Storage of MEC 4-11
4.6.5 MEC Disposal 4-13
4.6.6 Engineering Controls 4-16
4.6.7 MPPEH Procedures 4-17
4.7 Explosives Management Plan 4-17
4.7.1 Acquisition 4-17
4.7.2 Receipt 4-18
4.7.3 Transportation 4-18
4.7.4 Lost, Stolen, or Unauthorized Use of Explosives 4-19
4.8 Explosives Safety Submission 4-19
4.9 Site Safety and Health Plan 4-19
5.0 Chemical Warfare Materiel 5-1
6.0 Quality Management Program 6-1
6.1 Project QC Personnel and Responsibilities 6-1
6.2 Project Records Maintenance 6-5
6.3 QC Inspections 6-6

6.3.1 Munitions Response Definable Features of Work 6-6
6.3.2 Excavation Definable Features of Work 6-6
6.4 Testing Requirements 6-12
6.4.1 Equipment 6-12
6.4.2 Identification and Certification of Testing Laboratories 6-12
6.4.3 Construction 6-12
6.4.4 Environmental 6-12
6.4.5 Testing and Sampling 6-13
6.4.6 Test Control 6-13
6.4.7 Completion Inspection 6-13
7.0 Sampling and Analysis Plan 7-1
7.1 Data Quality Levels for Measurement Data 7-1
7.2 Sampling Objectives 7-5
7.3 Borrow Source Confirmation Sampling 7-5
7.3.1 Waste Characterization Sampling 7-6
7.3.2 Lead Confirmation Sampling 7-7
7.4 Equipment Decontamination 7-7
7.5 Sample Documentation 7-8
7.6 Field Quality Control 7-8
7.7 Analytical Methods 7-9
8.0 Waste Management Plan 8-1
8.1 Waste Characterization 8-1
8.2 Waste Profile 8-2
8.3 Waste Management 8-2
8.3.1 Waste Storage Time Limit 8-2
8.3.2 Labels 8-2
8.3.3 Waste Management Area Requirements 8-3
8.4 Shipping Documentation 8-6
8.5 Transportation 8-7
8.5.1 Transporter Responsibilities 8-7
8.5.2 Waste Transportation and Disposal Log 8-8
8.6 Waste Disposal 8-8
8.7 Security and Contingency Planning 8-8
8.8 Records/Reporting 8-9
9.0 Environmental Protection Plan 9-1
9.1 Regulatory Drivers 9-1
9.2 Spill Prevention and Control 9-1
9.3 Spill Prevention 9-1
9.4 Spill Containment and Control 9-1
9.5 Spill Cleanup and Removal 9-2
9.6 Environmental Conditions 9-2
9.7 Protection of Endangered Species 9-2
9.8 Protection of Water Resources 9-3
9.9 Protection of Land Resources 9-3
9.10 Additional Environmental Considerations 9-3
10.0 References 10-1

Tables

2-1 Recreational Use Pickup Levels....2-2
3-1 Wetland Grasses....3-18
3-2 Communications Matrix....3-20
3-3 Project Personnel Directory....3-20
6-1 Roles, Responsibilities, and Authorities of Key Project Personnel....6-3
6-2 QC Procedures for Mobilization and Site Preparations....6-7
6-3 QC Procedures for Backfill Certification....6-8
6-4 QC Procedures for Onsite Lead Treatment and Stabilization....6-8
6-5 QC Procedures for Excavation, Backfilling, and Site Restoration....6-9
6-6 QC Procedures for Waste Management....6-11
6-7 QC Procedures for Decontamination and Demobilization....6-12
7-1 Data Quality Levels....7-1
7-2 Sampling and Analytical Summary....7-2

Figures

2-1 General Location Map....2-2
2-2 Site Vicinity Map....2-3
2-3 General Arrangement....2-4
2-4 Photographs of Munitions Burn Chamber....2-5
2-5 Photograph of Static Rocket Firing Pad....2-5
2-6 Sample Location Map....2-7
2-7 Waste Characterization Sample Zones and Sample Locations....2-11
2-8 Gopher Tortoise Locations....2-13
3-1 Operational Grid Site Map....3-3
3-2 Staked Silt Fence Detail....3-8
3-3 Barricade Fence Detail....3-8
3-4 Temporary Containment of Excavated Soil....3-9
3-5 Excavation Plan....3-12
3-6 Areas A, B, D, E, and G Excavation Plan....3-13
3-7 Areas H, I, J, L, M, and N Excavation Plan....3-14
3-8 Areas K, O, P, and Q Excavation Plan....3-15
3-9 Area C Excavation Plan....3-16
3-10 Area F Excavation Plan....3-17
6-1 Project Organization Chart....6-2

Appendices

A Project Schedule

B Health and Safety Plan

C Environmental Conditions

D Explosives Safety Submission

E Example Florida Department of Environmental Protection Emergency Permits for Detonation

- Example Emergency Permit Request
- Example Emergency Permit Order
- Example Emergency Permit Order Public Notice

F Munitions Response Operations Forms

- MEC Information
- MEC Disposal Checklist
- Misfire Checklist
- BATF Form 5400.5

G Materials that Present a Potential Explosive Hazard/Munitions Debris Collection and Inspection Procedures

H In-situ Waste Characterization Results

- Data Summary Table
- Laboratory Analytical Report

I Quality Control Attachments

- Submittal Register
- Testing Plan and Log
- Transportation and Disposal Log
- Summary of Field Tests Log
- Contractor Daily Production Report
- Contractor Daily Quality Control Report
- Preparatory Phase Report

Acronyms

AA&E	Arms, Ammunitions, and Explosives
AAR	After Action Report
ACO	Administrative Contracting Officer
AEDA	Ammunition, Explosives, and Dangerous Articles
AFCEE	Air Force Center for Environmental Excellence
AHA	Activity Hazard Analysis
AMP	Air Monitoring Plan
ATF	Alcohol, Tobacco, and Firearms
BaPEQ	Benzo-(a)pyrene Equivalent
BATF	Bureau of Alcohol, Tobacco, and Firearms
BIP	blown-in-place
bgs	below ground surface
BRAC	Base Realignment and Closure
CAD	cartridge actuated device
CDL	Commercial Driver's License
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CH2M HILL	CH2M HILL Constructors, Inc.
CIH	Certified Industrial Hygienist
CKD	cement kiln dust
CO	Contracting Officer
COC	chemical of concern
COPC	chemical of potential of concern
COTR	Contracting Officer's Technical Representative
CPR	cardiopulmonary resuscitation
CTO	Contract Task Order
CWM	Chemical Warfare Materiel
dBA	decibels A scale
dBC	decibels C scale
DDESB	Department of Defense Explosive Safety Board
DGM	Digital Geophysical Mapping
DMM	Discarded Military Munitions
DoD	Department of Defense
DOT	Department of Transportation
DQO	data quality objective

ECA	Equipment Check Area
EGIS	Environmental Geographical Information System
EISOPQAM	Environmental Investigative Standard Operating Procedure and Quality Assurance Manual
EMP	Explosives Management Plan
EOD	Explosive Ordnance Disposal
EPA	U.S. Environmental Protection Agency
ERA	Ecological Risk Assessment
ESQD	explosive safety quantity distance
ESS	Explosives Safety Submission
EZ	Exclusion Zone
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FEAD	Facilities Engineering and Acquisitions Division
FLUCCS	Florida Land Use and Cover Classification System
ft^2	square feet
GCTLs	Groundwater Cleanup Target Levels
GPO	Geophysical Prove Out
GPS	Global Positioning System
HE	High Explosive
HMX	Octahydro-1,3,5,7-tetramitro-1,3,5,7-tetrazine
HSP	Health and Safety Plan
IRCDQM	Installation Restoration Chemical Data Quality Manual
JAA	Jacksonville Airport Authority
lb	pound(s)
LDR	Land Disposal Restriction
LKD	Lime Kiln Dust
LUC	Land Use Control
µg/kg	micrograms per kilogram
mg/kg	milligrams per kilogram
MEC	Munitions and Explosives of Concern
mg/L	milligrams per liter
MGFD	Munition with the Greatest Fragmentation Distance
mm	millimeter
MPPEH	Material Potentially Presenting an Explosive Hazard
MR	Munitions Response
MRQCM	Munitions Response Quality Control Manager
MRS	Munitions Response Site
MRSO	Munitions Response Safety Officer
MS/MSD	matrix spike/matrix spike duplicate
NAS	Naval Air Station
NAVFAC SE	U.S. Naval Facilities Engineering Command, Southern Division

NAVSEA	Naval Sea Systems Command
NEW	net explosive weight
NGVD	National Geodetic Vertical Datum
NIOSH	National Institute for Occupational Safety and Health
NONEL	non-electric
NOSSA	Naval Ordnance Safety and Security Activity
NTR	Navy Technical Representative
NVLAP	National Voluntary Laboratory Accreditation Program
OP	Ordnance Publication
ORM	Operational Risk Management
OSHA	Occupational Safety and Health Act
PAH	Polynuclear Aromatic Hydrocarbons
PA/SI	Preliminary Assessment / Site Investigation
PC	Portland cement
PCBs	polychlorinated biphenyls
PLS	pounds per live seed
PLS/A	pounds per live seed per acre
PM	Project Manager
PPE	personal protective equipment
PRE	Preliminary Risk Evaluation
PTSP	Pre-Task Safety Plan
PVC	polyvinyl chloride
QA	Quality Assurance
QC	Quality Control
RACR	Remedial Action Completion Report
RAOs	Remedial Action Objectives
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
RTK	Real-Time Kinematic
S/S	Solidification / Stabilization
SAP	Sampling and Analysis Plan
SCTLs	Soil Cleanup Target Levels
SOPs	Standard Operating Procedures
SUXOS	Senior Unexploded Ordnance Supervisor

T&D	Transportation and Disposal
TAL	Target Analyte List
TAT	Turnaround time
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TCRA	Time Critical Removal Action
TEU	technical escort unit
TRPH	Total Recoverable Petroleum Hydrocarbons
TSDF	Treatment, Storage, and Disposal Facility
TtNUS	Tetra Tech NUS, Inc.
UCLs	Upper Confidence Limits
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
UXO	Unexploded Ordnance
UXOQCS	Unexploded Ordnance Quality Control Specialist
UXOSO	Unexploded Ordnance Safety Officer
yd^3	cubic yards
YWWA	Yellow Water Weapons Area

1.0 Introduction

The purpose of this Work Plan Addendum is to outline the procedures to be used to perform munitions response (MR) for discarded military munitions (DMM) and material that potentially present an explosive hazard (MPPEH), and excavation of contaminated soil at Site 15, Blue 10 Ordnance Disposal Area (Site 15) located at former Naval Air Station (NAS) Cecil Field, Jacksonville, Florida. The MR action and contaminated soil excavations are being implemented by CH2M HILL Constructors, Inc. (CH2M HILL) for the U.S. Naval Facilities Engineering Command Southeast (NAVFAC SE) under Response Action Contract No. N62467-01-D-0331, Contract Task Order (CTO) No. 0063 and Response Action Contract No. N62467-98-D-0995, CTO No. 0057, respectively.

This Work Plan Addendum is organized into the following sections of text and appendices:

Section 1.0 Introduction includes the project authorization, project purpose, and regulatory framework.

Section 2.0 Background includes the general project background, location, and history.

Section 3.0 Scope of Work describes the project scope of work, schedule, communications plan, and traffic control plan. A detailed project schedule is provided in Appendix A of this Work Plan Addendum. The NAS Cecil Field Basewide Work Plan (CH2M HILL, 1998) provides a brief description of the reporting requirements under this contract.

Section 4.0 Munitions Response Operations Plan details the planned Munitions and Explosives of Concern (MEC) team composition, project authority, training, medical monitoring, and operational procedures.

Section 5.0 Chemical Warfare Materiel (CWM) describes actions to take in the event that CWM is discovered at the site.

Section 6.0 Quality Management Program details the quality control (QC) program for the project and includes the testing requirements for work described in this Work Plan Addendum. The QC attachments (i.e., the submittal register, testing plan and log, etc.) are provided in Appendix I.

Section 7.0 Sampling and Analysis Plan (SAP) provides project sample locations, sample collection frequency, and the required laboratory analyses for samples collected during project activities. The NAS Cecil Field Basewide Work Plan (CH2M HILL, 1998) and Florida Department of Environmental Protection (FDEP) Standard Operating Procedures (SOPs) outline the sample collection methodology including sample handling, labeling, and required collection of quality assurance (QA)/QC samples.

Section 8.0 Waste Management Plan discusses the characterization, onsite management, and transportation and disposal (T&D) of wastes generated during project activities.

Section 9.0 Environmental Protection Plan contains site-specific environmental provisions and references the NAS Cecil Field Basewide Work Plan (CH2M HILL, 1998), which

contains the Environmental Protection Plan for all work completed at the former NAS Cecil Field.

Section 10.0 References includes a listing of the documents utilized to develop this Work Plan Addendum.

The Health and Safety Plan (HSP) that addresses the work described in this Work Plan Addendum is included in Appendix B. The HSP included in the NAS Cecil Field Basewide Work Plan (CH2M HILL, 1998) addresses health and safety issues for the remedial activities to be completed at the former NAS Cecil Field.

1.1 Project Authorization

CH2M HILL was contracted on April 12, 2001, by NAVFAC SE to complete the scope of work associated with the excavation of contaminated soil at Site 15, under the Response Action Contract No. N62467-98-D-0995, CTO No. 0057, and on January 12, 2007 to complete the MR for DMM and MPPEH at Site 15 under the Response Action Contract No. N62467-01-D-0331, CTO No. 0063.

Site 15 was designated a Munitions Response Site (MRS) by the Naval Ordnance Safety and Security Activity (NOSSA) after receipt of an MRS Identification and Notification Report submitted by NAVFAC SE on October 31, 2006.

1.2 Project Purpose

The purpose of the scope of work described in this Work Plan Addendum is:

1. To provide the MR as a cautionary action to: 1) ensure that the presence of discovered MPPEH was unique to the area where the items were found, 2) protect human health and safety for site personnel, and 3) allow the future proposed land use of the area; and

2. To excavate, transport, and dispose of approximately 11,853 cubic yards (yd^3) of soil from 17 areas where chemicals of concern (COCs) concentrations are above the recreational use Pickup Levels, based the Draft Record of Decision (ROD) (Tetra Tech NUS, Inc. [TtNUS], 2006) and Draft Proposed Plan (TtNUS, 2007) for Site 15, in order to reduce human health risk and ecological risk, and allow for the anticipated future land use as a Natural Resource and Recreation Corridor while providing onsite MEC construction support as a cautionary action to protect human health and safety during construction activities at the site. The excavated areas will be backfilled with uncontaminated material and revegetated, with all disturbed wetlands restored.

1.3 Regulatory Framework

Remedial activities at Site 15 are regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Wastes generated during the remediation activities at former NAS Cecil Field will be managed consistent with State of Florida hazardous waste generator provisions (Florida Administrative Code [FAC] 62-730).

The MR action to locate and remove MEC will be performed as a Time Critical Removal Action (TCRA) consistent with the CERCLA process.

In the event that MEC is encountered, the actual detonation (that is, disposal operation) will be carried out under an Emergency Permit as an Emergency Detonation of Certain Hazardous Wastes, in accordance with the provisions of FAC Chapter 62-730.320. Because MEC is potentially flammable, shock sensitive, and explosive, it is considered a reactive hazardous waste. Under the Florida hazardous waste rules (FAC Chapter 62-730), FDEP grants authorization for the emergency detonation or treatment of such hazardous wastes under an emergency permit. The provisions for this permit include:

- FDEP must be notified and permission (written or oral) obtained prior to detonation, and the notification must include:
  - Type and amount of MEC to be detonated,
  - Time and place of detonation, and
  - Detonation procedures.
- FDEP grants specific authorization which cannot exceed 90 days.
- Authorization conditions:
  - Detonation is conducted/supervised by local law enforcement officials, bomb squads, or other officials/agencies experienced in the handling and disposal of explosives.
  - Applicable local, state, and federal approvals and licenses will be obtained.
  - Visible residue will be recovered and properly disposed.
  - Adequate fire protection will be provided.
  - Local FDEP representative will be notified and may be present to observe detonation activities.
  - Prior to detonation, the site will be secured and access controlled.
  - Detonation will be conducted only at the times and place specified in the notice.
  - Post-detonation soil sampling may be required by FDEP.
  - A written summary will be submitted to FDEP within 30 days of detonation.

2.0 Background

2.1 Descriptions

2.1.1 Facility Description

The former NAS Cecil Field, shown on Figure 2-1, is located in western Duval County, 14 miles southwest of Jacksonville, in northeastern Florida. It was established in 1941 to provide facilities, services, and material support for naval operations and maintenance of naval weapons, aircraft and other units of the operating forces as designated by the Chief of Naval Operations. The base was placed on the National Priorities List in 1989. In 1993 and 1995, the Base Realignment and Closure (BRAC) Commission recommended the closure of NAS Cecil Field. When naval operations at the base ceased on September 30, 1999, it occupied over 31,000 acres. NAS Cecil Field was comprised of four separate facilities: the Cecil Field Complex (Cecil Field), the Outlying Field Whitehouse, the Pinecastle Electronic Warfare Target Area/Warfare Range (located approximately 80 miles south of Cecil Field), and the Yellow Water Weapons Area (YWWA).

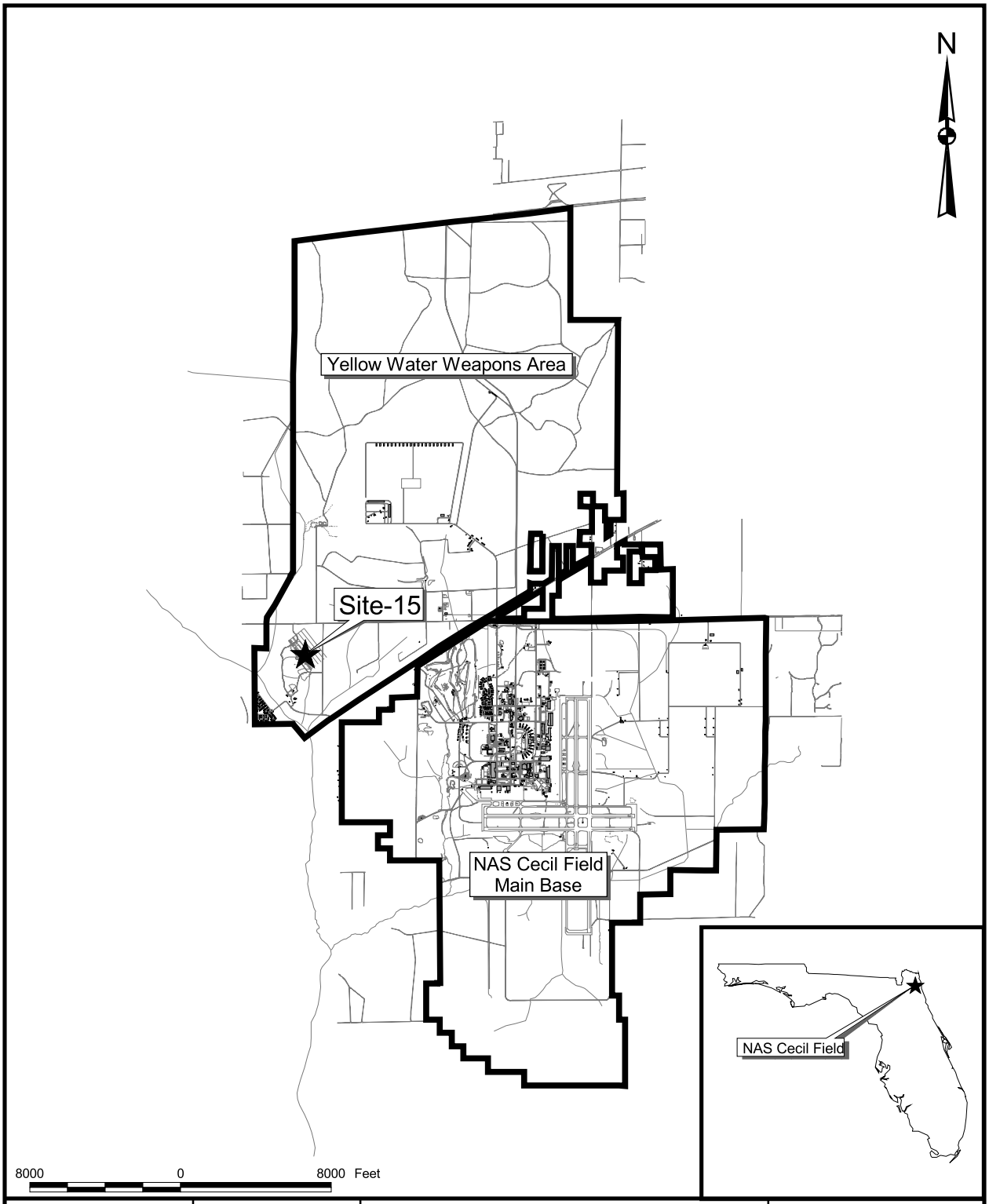
2.1.2 Site Description

Site 15 is located in the southwest section of YWWA, shown on Figures 2-1 and 2-2, and covers approximately 85 acres, with elevations ranging from approximately 79 feet National Geodetic Vertical Datum (NGVD) to 72 feet NGVD. The site is heavily forested, primarily with slash pine and understory vegetation. Several forest fires have occurred in an area of stressed vegetation. Referred to as the forest burn area, the area is present in the southwestern portion of the site, approximately 900 feet southwest of the burn chamber and firing pad. Several slash pines are partially burned in this area. Controlled burns were commonly undertaken in this area to control understory growth in the planted pine forests.

2.2 History

2.2.1 Historical Use

From the early 1940s through the mid 1950s, Site 15 was used as a skeet range. The former skeet range, shown on Figure 2-3, was approximately 1,000 feet by 2,400 feet in size. From the mid 1960s through 1977, Site 15 was used for munitions disposal. This operation consisted of burning munitions materials in a large metal chamber and static firing of rockets. The munitions disposal structures were situated west of the skeet range. The majority of munitions disposed of at the site were burned and included small arms munitions, 20-millimeter (mm) projectiles (believed to be target practice), parachute and distress flares, Mark IV signal cartridges, rocket igniters, cartridge activated devices (CADs), 2.75-inch rockets, and 5-inch rockets. The rocket motors were reportedly either static fired for disposal or the rocket propellant was placed on the ground and ignited in the area of the burn chamber. An estimated 350 tons of munitions were disposed of at the site while in operation.



DRAWN BY MJJ	DATE 14Jan00	GENERAL LOCATION MAP OU 5, SITE 15 FEASIBILITY STUDY REPORT NAS CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 7653
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. Figure 2-1 REV 0

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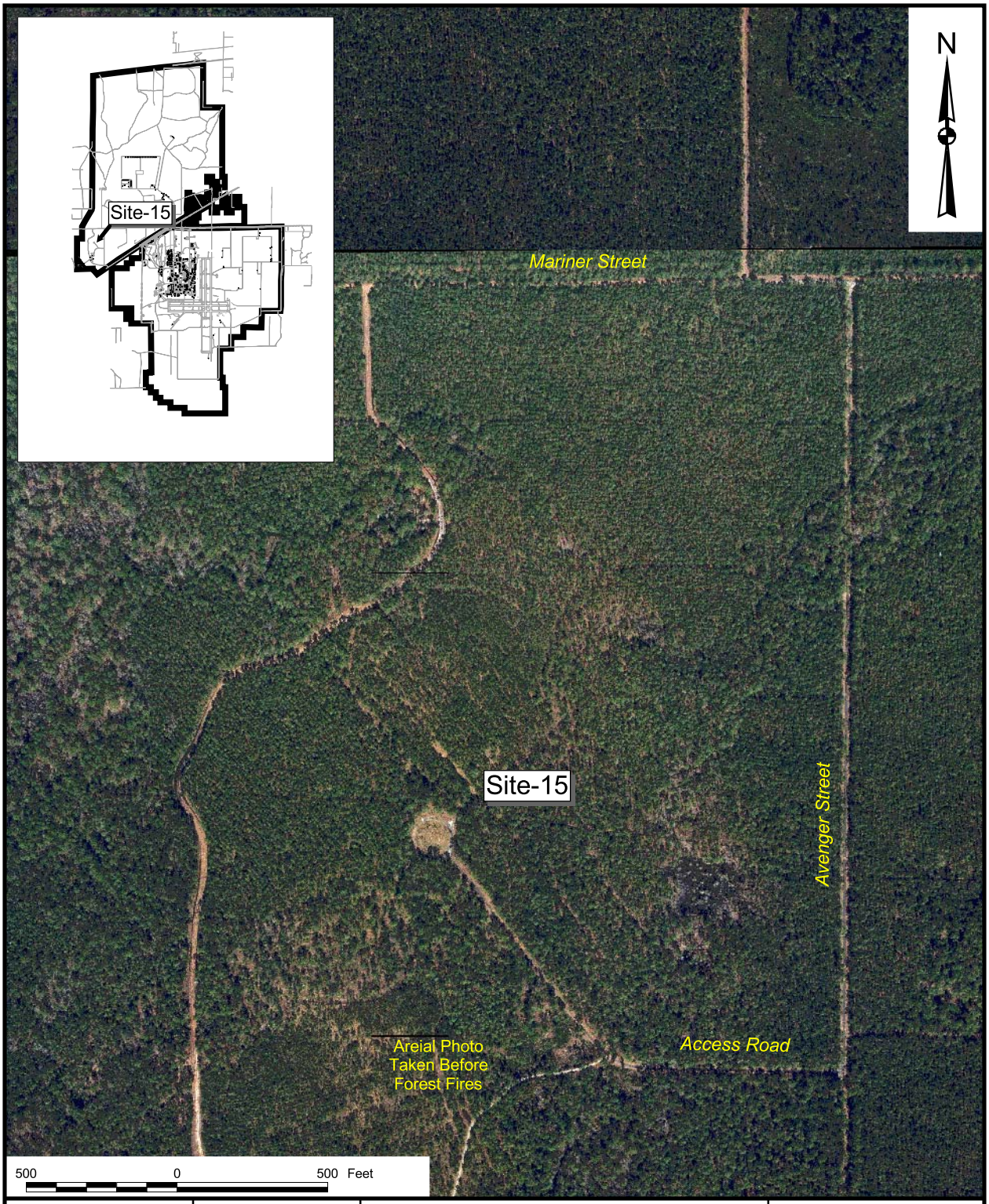

DRAWN BY MJJ	DATE 14Jan00	SITE VICINTY MAP OU 5, SITE 15 FEASIBILITY STUDY REPORT NAS CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 7653
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COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. Figure 2-2 REV 0

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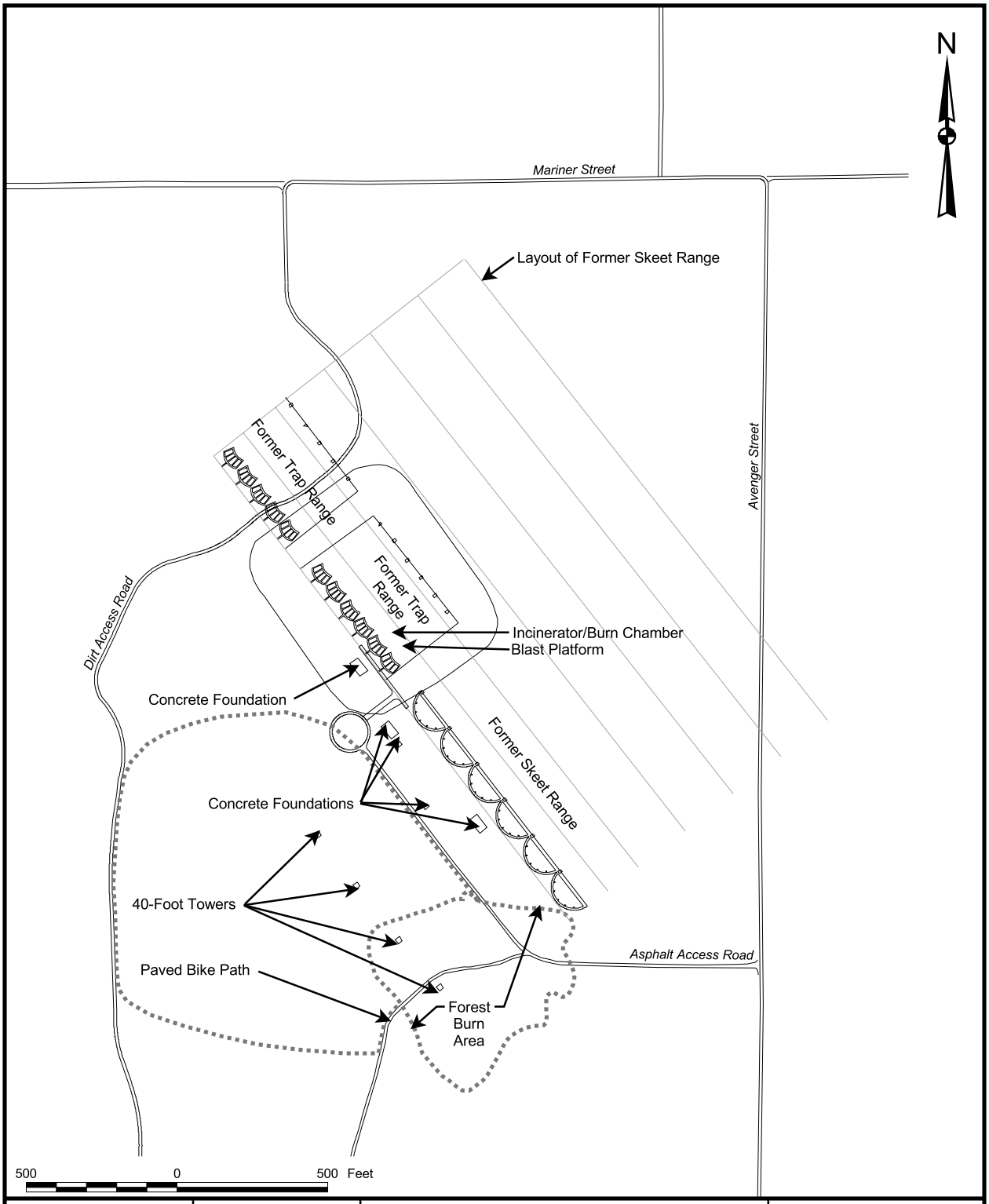

DRAWN BY MJJ DATE 14Jan00		GENERAL ARRANGEMENT OU 5, SITE 15 FEASIBILITY STUDY REPORT NAS CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 7653
CHECKED BY DATE			APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED	NAVFAC		DRAWING NO. FIGURE 1-3 REV 0

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The munitions burn chamber and static rocket firing pad, photographs of which are provided as Figures 2-4 and 2-5, respectively, are the only structures currently at the site. The burn chamber is a rounded, steel, tank-like container, approximately 10 feet in length and 4 feet in height. The chamber has a burn stack that rises approximately 3 feet above the body of the chamber. Access to the chamber is through a 2-foot by 2-foot hinged door. When full, the burn chamber can accommodate 1.5 cubic yards of material. The static rocket firing pad is an L-shaped concrete structure approximately 10 feet long by 4 feet wide by 6 feet high. Steel firing rods are seated into the concrete at 45-degree angles. Several concrete building foundations, remnants of buildings that supported skeet range activities, are located in the area surrounding the burn chamber and firing pad.

FIGURE 2-4
Photographs of Munitions Burn Chamber

FIGURE 2-5
Photograph of Static Rocket Firing Pad

Review of aerial photographs from 1952, prior to the initiation of munitions disposal on Site 15, show an active trap and skeet range facility located at the site. The area covered by the skeet range appears to be approximately 50 acres in size, and is centered over the area in which the burn chamber and firing pad were constructed.

2.2.2 Historical Site Investigations and Activities

An extensive investigation of Site 15 was conducted beginning in 1985 and continued through the preparation of the Feasibility Study (FS) conducted by TtNUS in 2005. During this period, 853 soil samples, 13 sediment samples, 7 surface water samples, 40 groundwater samples, and 15 ecological samples were collected and analyzed. Figure 2-6 shows all sample locations (TtNUS, 2005).

The environmental site investigations and sampling activities showed that the soil contains several chemicals at concentrations that could result in unacceptable human health risks under the currently planned recreational use of Site 15. A human health Preliminary Risk Evaluation (PRE) identified several polynuclear aromatic hydrocarbons (PAHs) globally designated as benzo(a)pyrene equivalent (BaPEq), two metals (arsenic and lead), and total recoverable petroleum hydrocarbons (TRPHs) as chemicals of potential concern (COPCs). An Ecological Risk Assessment (ERA) also identified PAHs, arsenic, and lead in soil as COPCs.

A statistical-based approach was used to determine the concentrations above which soil must be removed to achieve upper confidence limits (UCLs) or average concentrations less than or equal to the Soil Cleanup Target Level (SCTL) for a defined exposure unit, the area to which a receptor is assumed to be exposed. Site-specific Remedial Action Objectives (RAOs) specify COCs, media of interest, exposure pathways, and cleanup goals or acceptable contaminant concentrations. The RAOs identified for the Site 15 soil are as follows:

- Prevent unacceptable human health risk associated with exposure to surface soil containing PAHs, arsenic, and lead at concentrations greater than the established site-specific SCTLs, and
- Reduce ecological risk associated with exposure to surface soil containing PAHs and lead above site-specific ecological target levels.

A third RAO was developed in order to allow continued use of the site as a "green space," as follows:

- The remediation of the site will not adversely impact the anticipated future land use of the site, which is as a Natural and Recreation Corridor (TtNUS, 2005).

In accordance with FAC Chapter 62-780, soil with concentrations greater than three times the site-specific SCTLs would be removed based on acute toxicity. Based on the existing conditions and the site-specific SCTLs, remediation or treatment would not be needed to address antimony, 1-methylnaphthalene, or 2-methylnaphthalene. Removal of soil with BaPEq and arsenic concentrations greater than three times their site-specific SCTLs is more than sufficient to result in site-wide UCLs less than the site-specific SCTLs. To be protective of human and ecological receptors, the existing onsite TRPH concentrations indicate that remediation or treatment would not be needed. However, the site still has locations where TRPH concentrations exceed the leachability criterion of 340 milligrams per kilogram (mg/kg), the most restrictive FDEP SCTL for TRPH.

Legend
- Monitoring Well
- Surface Soil Sample Location
- Subsurface Soil Sample Location
- Surface Water / Sediment Sample Location
- Confirmation Soil Sample Location
- Post RI Surface Soil Sample Location
- Post RI Surface Water / Sediment Sample Location

N

Inset 2

50 0 50 100 Feet

SEE INSET 1

SEE INSET 2

Inset 1

50 0 50 100 Feet

100 0 100 200 Feet

P:\GIS\Cecil\Site-15_FS.apr 17Apr05 MJJ 03-Layout-SampleLocations

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AS NOTED	

NAVFAC

SAMPLE LOCATION MAP
OU 5, SITE 15
FEASIBILITY STUDY REPORT
NAS CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NO.	
7653	
OWNER NO.	
APPROVED BY	DATE
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Because the volume of soil associated with the exceedance of the leachability criterion was relatively insignificant, it was agreed that the Pickup Value for TRPH would be based on the leachability criterion rather than conducting additional investigations to further delineate the extent of required cleanup (TtNUS, 2005). The corresponding Pickup Values that comply with regulatory requirements and would obtain site-wide Cleanup Goals that allow for recreational use of the site are presented in Table 2-1 (TtNUS, 2005).

TABLE 2-1
Recreational Use Pickup Levels

COCs	Maximum Concentration Detected	Recreational Use Cleanup Goal	Recreational Use Pickup Level
BaPEq	956,000 μg/kg	2,250 μg/kg	6,750 μg/kg (1)
Arsenic	451 mg/kg	36 mg/kg	108 mg/kg (1)
Lead	41,400 mg/kg	3,281 mg/kg	6,500 mg/kg (2)
TRPH	2,380 mg/kg	8,900 mg/kg	340 mg/kg (3)

Notes:
μg/kg: micrograms per kilogram
mg/kg: milligrams per kilogram
1 Three times the site-specific recreational SCTL as per FAC 62-780 for acute toxicity
2 Site-specific acute toxicity SCTL
3 FAC Chapter 62-777 leachability SCTL

The preferred remedial alternatives included in the Draft ROD (TtNUS, 2006) and Draft Proposed Plan (TtNUS, 2007) for Site 15 include:

- Soil: Excavation to meet recreational remedial action objectives with offsite treatment and disposal and the implementation of land use controls (LUCs). Specifically, this alternative would remove soil from the areas of Site 15 where concentrations of the COCs are greater than the recreational use pickup levels. A total of approximately 11,660 yd^3 of contaminated soil would be excavated from 20 areas totaling approximately 7.2 acres. Most of the excavated soil (approximately 10,900 yd^3) would be disposed of offsite at a permitted Resource Conservation and Recovery Act (RCRA) non-hazardous waste landfill and the balance (approximately 700 yd^3) would be disposed at an offsite permitted RCRA hazardous waste landfill. The excavated areas would then be backfilled with 11,600 yd^3 of uncontaminated imported fill material, the site would be revegetated, and impacted wetlands would be restored. Because the soil remaining onsite would continue to contain concentrations of COCs that would not be protective of hypothetical future receptors, LUCs would have to be established and enforced. The LUCs would restrict site use to low-intensity recreational use, and prevent commercial/ industrial and residential development and medium- and high-intensity recreational use.

- Groundwater: One year of monitoring to support no further action with controls. Specifically, this alternative would consist of 1 year of quarterly groundwater monitoring conducted using five new groundwater wells. A site review would be conducted after the first year of monitoring to confirm that onsite arsenic groundwater concentrations continue to be lower than the FDEP poor quality aquifer Groundwater Cleanup Target Level (GCTL) of 100 μg/L, and to demonstrate that offsite migration of

arsenic at concentrations greater than the FDEP drinking water GCTL of 10 µg/L does not occur. After a successful review of monitoring data, the site would be deemed No Further Action with controls. These controls would be LUCs to prohibit the use of the surficial aquifer from human consumption, dewatering, irrigation, heating/cooling purposes, and industrial purposes. Regular site inspections would be performed to verify continued implementation of the LUCs.

2.2.3 Preliminary Assessment/Site Inspection (PA/SI)

CH2M HILL completed and submitted a PA/SI (CH2M HILL, 2007) in February 2007 with respect to past use of MEC at Site 15 at the former NAS Cecil Field.

During a site visit completed by CH2M HILL on August 29, 2006 for the PA/SI, two potential MEC items were observed on the ground surface. During a follow-up site visit completed on October 25, 2006, one of the two potential MEC items was identified as a 20-mm cartridge case with projectile and the other as a 20-mm projectile only. Identification was completed by one Unexploded Ordnance (UXO) Technician and because of the condition and location of the items, determination of whether the items were high explosive (HE) or target practice could not be made. Therefore, the items were assumed to be HE. The items were not moved during identification and are in a secured area. A removal response requested of Explosives Ordnance Disposal (EOD) Mayport from BRAC Program Management Office (PMO) Southeast (SE) was denied and CH2M HILL was requested to provide the EOD response to identify, remove, and dispose of the potential MEC items. The response will be completed with the MR action described in this submission.

Findings of the PA/SI indicate the potential for contact with MEC during the planned excavation and removal of contaminated soil. The planned phased approach to address site MEC hazards is summarized below.

Three phases are planned. Phase I consists of a geophysical instrument assisted search of the surface and digital geophysical mapping (DGM) of the subsurface. This phase would be supported with vegetation reduction efforts where required. Phase II requires intrusive actions for reacquisition and investigation of a statistically representative subset of subsurface DGM anomalies. Both Phases I and II include the identification, disposition, and or storage of MPPEH. Phase III activities are yet to be determined. The results of Phases I and II will influence Phase III activities and actions.

Within the footprint of the proposed excavation areas, Phase I will include a visual search of the surface augmented with the addition of handheld magnetometers (Schonstedt Ga-52Cx) to locate and remove MEC (to include small arms) and ferrous items 2-inch by 2-inch and larger. Surface/near-surface search efforts will: 1) identify MEC for assessment and disposition options, 2) recover MPPEH for consolidated storage and processing, 3) collect surface solid waste, and 4) flag-in place MEC determined unsafe to move. The surface search will be supplemented with a DGM survey to record the location of ferrous and non-ferrous items potentially representing MEC in the subsurface. Any identified MEC will be disposed of as required.

Phase II will be driven by Phase I DGM results. Phase II is currently planned to include intrusive investigation and characterization of a statistically representative subset of DGM anomalies within the footprint of the proposed excavation areas. Characterization will also

include the identification of an additional 10 percent of the total number of anomalies for a focused investigation in high concentration areas. Anomaly investigation involves soil removal to identify the source of the anomaly. Focused investigations may also be applied where anomaly investigations do not provide sufficient information to fully identify the source of the anomaly; for example, if a geophysical signature remains following removal of the previously identified anomaly. Excavations may be manual, or manual and mechanical aided, as required by depth of anomalies. If mechanical equipment is necessary based on the depth of the anomaly, measures will be taken to avoid any contact with the anomaly. Two typical approaches will be: 1) to excavate to the side of the anomaly and use manual excavation with hand tools to move in horizontally to the anomaly, or 2) to incrementally excavate directly over the anomaly with periodic magnetometer checks, stopping mechanical excavation 1 foot above the target, and completing excavation manually with hand tools.

MEC items discovered during Phases I or II that are safe to move will be collected, segregated, and consolidated for later disposal. MEC items that are not safe to move will be flagged and avoided until a disposition or disposal action is selected. Based on the type and quantity of MEC discovered during Phases I and II, a planned MEC disposal event may occur on a daily, weekly, or single occasion.

Results of Phase II will drive the Phase III requirements. Depending on the MEC density observed in Phase II, Phase III activities may be limited to UXO construction support (two UXO Technicians) to visually observe soil and vegetation removal activities or may require a removal action.

2.3 Recent Site Activities

2.3.1 In-situ Waste Characterization

In March 2007, to prepare for the excavation of contaminated soil, CH2M HILL conducted in-situ soil disposal characterization sampling utilizing MEC avoidance in accordance with Work Plan Addendum No. 21, Revision 01 (CH2M HILL, 2007). One composite sample was collected per approximate 300 tons and submitted for laboratory analyses. A total of 8,093 yd^3 (12,140 tons) of soil is proposed as non-hazardous and 3,760 cy (5,640 tons) of soil is proposed as hazardous. Figure 2-7 shows the waste characterization sample locations. The data summary tables and analytical reports are included in Appendix H.

2.3.2 Gopher Tortoise Survey, Trapping, and Relocation

Also in March 2007, CH2M HILL conducted an onsite gopher tortoise survey. This investigation consisted of pedestrian surveys by five CH2M HILL scientists, engineers and technicians through, and at least 30 feet beyond, each of the 17 proposed excavation areas. When a tortoise burrow was found, its location was marked with a pin flag and recorded on an aerial photograph, and its spatial coordinates documented using a backpack global positioning system (GPS) unit. The status of each burrow was classified as active, inactive, or abandoned based on the Florida Fish and Wildlife Conservation Commission classification system.

Figure 2-7

Cecil Field Site 15

Waste Characterization Zones and Sample Locations

CH2MHILL

The site comprises two land cover classes, based on the Florida Land Use and Cover Classification System (FLUCCS); shrub and brushland (320) and coniferous plantation (421). Common vegetative species in the shrub and brushland community include gallberry (*Ilex glabra*), slash pine saplings (*Pinus elliottii),* saw palmetto (*Serenoa repens*), wax myrtle (*Myrica cerifera*), sand blackberry *(Rubus cuneifolius*), wiregrass (*Aristida stricta*), broomsedge (*Andropogon virginicus*), narrowleaf cudweed (*Gnaphalium falcatum),* wild grape (*Vitis* sp.), and greenbrier (*Smilax* spp.). The dense vegetative growth suggests the absence of fire in recent years. Areas D, E, G, H, and J are located in the shrub and brushland community. Dominant vegetative species in the coniferous plantation are slash pine and loblolly pine (*Pinus taeda*), with sparse understory and groundcover strata. Areas A, B, C, F, I, K, L, M, N, O, P, and Q are located within the planted pine community.

A total of three active and two inactive burrows were identified at the project site, as well as 16 abandoned burrows. One of the three active burrows was located adjacent to the access road along the periphery of the shrub and brushland community. The remaining two active burrows were found in a vegetated cul de sac that forms the terminus of the access road. The two inactive burrows were found in a more densely vegetated portion of the shrub community. Most of the project site is suboptimal gopher tortoise habitat because of the relative paucity of grasses and herbaceous ground cover and/or lack of open, sunny areas for egg-laying. The location of the burrows is shown on Figure 2-8.

In June 2007, CH2M HILL conducted gopher tortoise trapping and relocation at Site 15 under Florida Fish and Wildlife Conservation Commission permit GTRS-2007-3620. This permit allowed for the trapping and relocation of five or fewer gopher tortoises to an on-site relocation area. The bucket method of trapping was used by digging a five-gallon bucket into the soil in front of the gopher tortoise burrow and monitoring twice a day for 28 days or until a female specimen was trapping and relocated, at that time the burrow could be collapsed. A total of five gopher tortoises and a clutch of seven eggs were relocated under this permit, but only two of the burrows were collapsed. Due to permit constraints the trapping and relocation effort was suspended and a standard permit was applied for with the Florida Fish and Wildlife Conservation Commission. On September 13, 2007 trapping and relocating was resumed under permit number WR07376 and concluded on October 15, 2007 with the successful closure of all gopher tortoise burrows in the project area.

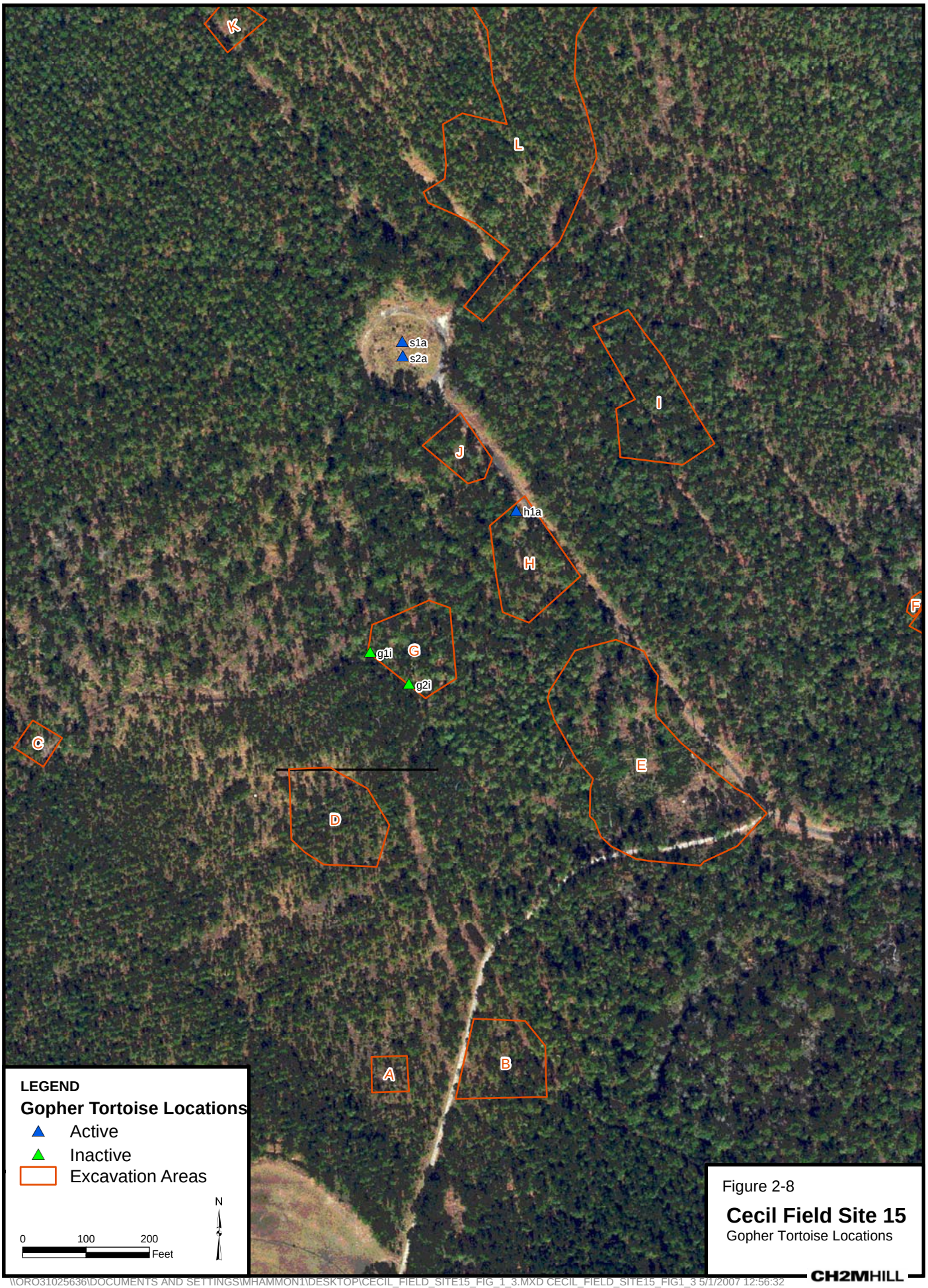


Figure 2-8

Cecil Field Site 15

Gopher Tortoise Locations

CH2MHILL

3.0 Scope of Work

The project scope of work, schedule, communications plan, and traffic control plan are described in this section.

3.1 Munitions Response

The activities associated with the Munitions Response scope of work are as follows:

- Mobilization and Site Preparation
- Mosquito Control
- Site Survey
- Tree and Vegetation Removal with MEC Support
- Portable Type 2 HE Storage Magazine Installation and Temporary Storage of MEC
- Instrument-Assisted Surface Clearance
- DGM Survey
- Subsurface Anomaly Investigation
- Disposal of MEC (if necessary)
- Disposition of MPPEH
- Containerization, Characterization, and T&D of Contaminated Materials
- Onsite Construction Support
- Preparation and submittal of a MR After Action Report (AAR)

3.1.1 Mobilization and Site Preparation

This task will consist of the mobilization of personnel and equipment to the work site and the establishment of temporary facilities and site controls, consisting of portable sanitary facilities, decontamination area, site refuge area, material/equipment laydown area, construction barricades, and security fencing. Project management and scheduling activities, including contractor coordination, will be conducted from the CH2M HILL office located at the former NAS Cecil Field, Jacksonville, Florida.

3.1.2 Mosquito Control

A local pest control company, supported by a UXO escort for UXO avoidance (as necessary), will be used to spray the heavily vegetated areas to provide an appropriate working environment for UXO Technicians and site workers. This task is required because of the nature of the operations to be conducted by UXO Technicians at the site and the observed heavy concentration of mosquitoes. The tasks associated with MR require individuals to be focused and concentrated on visual and audible observations (from handheld geophysical instruments) and the large mosquito population will be a significant distraction if not alleviated or reduced.

3.1.3 Site Survey

A site boundary survey will be performed and a uniform system of operational grids established across the site, as shown on Figure 3-1. The boundary survey will be performed first and will include placement of colored flagging on stakes along the perimeter of the excavation areas and overall site to establish work area limits. A system of 100- by 100-foot grids coinciding with the Florida State Plane coordinate system will be established across the site using labeled stakes. Following grid placement, the extents of the exclusion zones (EZs) will be surveyed to include the placement of stakes with colored flagging along the perimeter of each EZ.

The NAS Cecil Field Environmental Geographic Information System (EGIS) (ArcView format) will be used as the basis for a site plan and the locations of buildings, utilities, land features, roadways, any planimetric features, and fence lines.

Site surveys will be performed using a Real-Time Kinematic (RTK) GPS. The surveyed horizontal geographic position and State Plane coordinates will be referenced to permanent or semi-permanent control points existing on the site and will be accurate to ±0.25 meter. Horizontal control of Class One, third order or better will be established for all new semi-permanent and tertiary control points. Horizontal controls for graphic and non-graphic information are Mercator Projection, GRS 80, State Plane Coordinate System, North American Datum 1983, Lambert Zones 1 through 6 (or appropriate zone for region to be mapped). Vertical controls are mean sea level, North American Vertical Datum, 1988. Data conversions from the metric system to the English system will use 1 meter = 39.37 inches exactly.

3.1.4 Tree and Vegetation Removal with MEC Support

Tree and vegetation removal over the investigation areas (approximately 22 acres) is necessary to complete the surface/near-surface sweep, geophysical survey, and subsurface anomaly investigations. Trees and vegetation will be removed to approximately 6 inches above the ground surface. MEC avoidance will be performed during tree and vegetation removal. This includes visual observation of the ground surface by UXO Technicians prior to and during vegetation removal and instrument-assisted detection using a handheld magnetometer (Schonstedt Ga-52Cx). The instrument will be used to check inside heavy vegetation (for example, a thick bush) where it is not possible for the UXO Technician to visually check the area. Locations adjacent to the work areas will be made available for placement of cut trees, limbs, and vegetation.

3.1.5 Portable Type 2 HE Storage Magazine Installation and Temporary Storage of MEC

Recovered MEC that is safe to move will be stored within a portable Type 2 HE storage magazine. The Type 2 HE storage magazine will be a skid-mounted 5.5-foot by 5-foot by 5-foot box Type 2 magazine as described in Section 55.208(a) of Alcohol, Tobacco, and Firearms (ATF) P 5400.7, Alcohol, Tobacco, and Firearms Explosives Law and Regulations. This explosives storage area will meet the requirements of:

- Title 27 Code of Federal Regulations (CFR), Alcohol, Tobacco Products and Firearms, Part 55, Commerce in Explosives

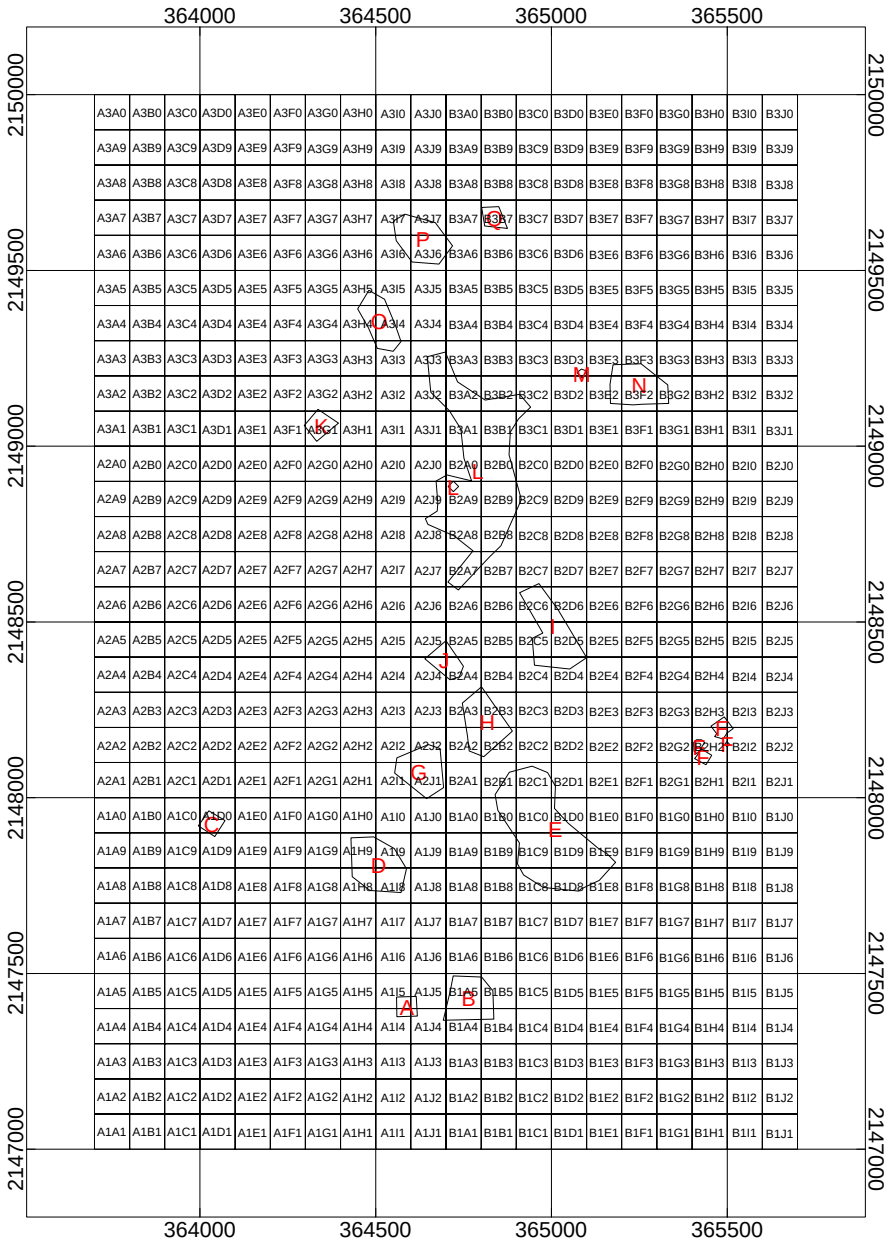


Figure 3-1

Site 15 Basemap

Cecil Field

Duval County, Florida

250 0 250 500 750

US survey foot

*NAD83 / *StatePlane Florida East FIPS 0901 Feet*

- Department of Defense (DoD), 2004, 6055.9-STD – DoD Ammunition and Explosives Safety Standards
- Naval Sea Systems Command (NAVSEA), July 1, 2007 Ordnance Publication (OP) 5 Volume 1 - Ammunition and Explosives Ashore: Safety Regulations for Handling, Storing, Production, Renovation, and Shipping of Ammunition and Explosives Ashore, Seventh Revision, Change 6

The storage magazine will be installed in accordance with this Work Plan Addendum and Explosives Safety Submission (ESS) (Appendix D) and secured within a fence.

Items will not be transported for offsite storage or treatment.

3.1.6 Instrument-Assisted Surface Clearance

Within the footprint of the investigation areas, a surface clearance will include a visual search of the surface augmented with the addition of handheld magnetometers (Schonstedt Ga-52Cx) to locate and remove MEC (to include small arms) and ferrous items 2-inch by 2-inch and larger from the soil surface. Surface/near-surface search efforts will: 1) identify MEC for assessment and disposition options; 2) recover MPPEH for consolidated storage and processing; 3) collect surface solid waste; and 4) flag-in-place MEC determined unsafe to move.

3.1.7 Digital Geophysical Mapping Survey

The surface/near-surface search will be supplemented with a subsurface DGM of the investigation areas to record the location of ferrous and non-ferrous items possibly representing MEC. A Geophysical Investigation Plan will be provided under separate cover as a revision to this Work Plan Addendum.

DGM will be completed using EM61-MK2 time-domain metal detectors to map the investigation areas and select geophysical anomalies that could potentially represent subsurface MEC while developing a clear, defensible, and complete Administrative Record containing all recorded and developed data. Prior to commencing the DGM survey, the selected geophysical equipment and survey methodologies will be demonstrated as meeting project data quality objectives (DQOs) using a geophysical prove out (GPO) prior to use for site surveys. The GPO provides an opportunity to ensure that the appropriate DGM and navigation equipment has been selected for the site geology, vegetation, and terrain features that may affect the survey. The GPO will be conducted in an area outside of the site that is representative of site conditions.

3.1.8 Subsurface Anomaly Investigation

Intrusive investigation will involve the excavation of a statistically representative number of anomalies. Anomaly investigation involves soil removal to identify the source of the anomaly. Focused investigations may also be applied where anomaly investigations do not provide sufficient information to fully identify the source of the anomaly; for example, if a geophysical signature remains following removal of the previously identified anomaly. Excavations may be manual, or manual and mechanical aided, as required by depth of anomalies. If mechanical equipment is necessary based on the depth of the anomaly, measures will be taken to avoid any contact with the anomaly. Two typical approaches are: 1) to excavate to the side of the anomaly and use manual excavation with hand tools to

move in horizontally to the anomaly, or 2) to incrementally excavate directly over the anomaly with periodic magnetometer checks, stopping mechanical excavation 1 foot above the target, and completing excavation manually with hand tools.

3.1.9 Disposal of MEC

All MEC recovered at the site will be disposed of by open detonation in accordance with this Work Plan Addendum and all applicable state (FAC Chapter 62-730.320) and federal regulations.

Following MEC disposal, visible residual materials and/or impacted soil will be recovered from the site and managed, transported, and disposed of in accordance with Section 8.0 Waste Management Plan of this Work Plan Addendum.

3.1.10 Disposition of MPPEH

All MPPEH will be inspected, demilitarized if necessary, certified and verified as free of explosive hazards and suitable for recycling. Handling and disposal procedures for MPPEH are provided in the ESS (Appendix D) and the procedures are provided in Appendix G.

3.1.11 Containerization, Characterization, and T&D of Contaminated Material

Recovered visible residual materials and/or impacted soil and any generated decontamination wastes will be containerized in 20-yd^3 roll-off containers or 55-gallon drums; sampled and characterized in accordance with Section 7.0 Sampling and Analysis Plan of this Work Plan Addendum; and managed, transported, and disposed of in accordance with Section 8.0 Waste Management Plan of this Work Plan Addendum.

3.1.12 Onsite Construction Support

Onsite construction support will be provided for all remaining intrusive construction activities discussed in this Work Plan Addendum.

A team of two UXO Technicians, or more as needed, will be present onsite to provide construction support. A UXO Technician will observe all intrusive construction activities by standing in a safe area to the side of the excavator outside of the swing radius, and will be responsible for examining the face of the excavation and the material as it is placed on a spoils pile. The face of the excavation will be carefully observed to visually detect MEC before they are disturbed. The UXO Technician will take advantage of natural or placed protective structures to shield him/herself from the potential hazard of falling or projected debris. Another UXO Technician may be positioned at other loading or dump sites to achieve secondary inspections of the excavation spoils, as appropriate. The UXO Technician(s) will communicate with the excavator, loader, or truck operators via hand-held radios and hand signals to stop activities if suspected MEC are observed. When this happens, the operators will immediately stop operations and depart the site. The UXO Technicians will then examine the item to determine if it is MEC. If the item is determined to be MEC, it will be reported to the CH2M HILL Project Manager and the proper response procedures followed as outlined in this Work Plan Addendum.

3.1.13 MR After Action Report

An MR AAR will be prepared to document the activities performed to complete the MR scope of work (to include onsite construction support) in accordance with NOSSA Instruction 8020.15A. The AAR will include the following:

- Executive summary
- Current, determined, or reasonably anticipated future land use for each MRS covered by this AAR
- Description of each MRS, including size(s) (in acres)
- Discussion of the removal action methods and technology, including relative effectiveness, any limitations of technologies used during the munitions response, and the effects on residual hazard/risk relative to that which was originally projected
- Rationale for any variations from the expected implementation of the approved ESS that affected the outcome
- Information regarding areas within the MRS where munitions response activities were not conducted, together with the rationale for not conducting them
- Summary of the MEC and MPPEH found and/or recovered, including final disposition of each
- Summary of the project QC and QA reports
- Summary of the LUCs that were implemented, if any, and the areas to which they apply
- Summary of provisions for long-term management, including maintenance, monitoring, record-keeping, and 5-year reviews
- Request to cancel any EZs or other site approvals established in support of the munitions response
- Maps (scale 1 inch/400 feet preferred) showing
  - Current, determined, or reasonably anticipated future land use
  - Areas within a MRS where response actions were executed and the clearance depth
  - Areas within a MRS where response actions were not performed
  - Munitions Constituent (MC) sampling locations
  - Residual munitions hazard and chemical risk
- Digitally recorded and geo-referenced maps of subsurface geophysical anomalies, including suspected munitions
- Dig sheets for all excavations on projects where geophysical mapping and investigation occurred
- Color photographs of major activities and recovered MEC
- Videotape with voice narration showing major response activities and recovered MEC

- Description and results of laboratory analyses of MC sampling
- Archaeological sites or environmentally sensitive areas that were encountered and a description of any corrective, mitigative, or protective measures taken

3.2 Excavation

The activities associated with the excavation of contaminated soil scope of work are as follows:

- Mobilization and Site Preparation
- Backfill Material Certification
- Survey
- Construction Support (onsite)
- Soil Excavation and Backfilling
- Onsite lead treatment and stabilization
- T&D of Generated Wastes
- Site Restoration
- Decontamination
- Demobilization
- Preparation and submittal of a Remedial Action Completion Report (RACR)

3.2.1 Mobilization and Site Preparation

This task will consist of the mobilization of personnel and equipment to the work site and the establishment of temporary facilities and site controls, consisting of portable sanitary facilities, decontamination area, site refuge area, material/equipment laydown area, construction barricades, and security fencing. Project management and scheduling activities, including contractor coordination, will be conducted from the CH2M HILL office located at the former NAS Cecil Field, Jacksonville, Florida.

Any damage to underground utilities or subsurface structures will be immediately reported to VT Griffin Global Services and the Facilities Engineering and Acquisitions Division (FEAD), and subsequently repaired by CH2M HILL via methods approved by VT Griffin Global Services and the FEAD.

Erosion control measures will be implemented if soil is stockpiled or an excavation remains open overnight. Plastic sheeting, silt fencing, and hay bales will be available onsite should weather conditions warrant covering and berming stockpiled material to control runoff or dust emissions. Figure 3-2 provides a detail of the staked silt fencing that will be installed around the perimeter of any open excavation and drainage feature. Figure 3-3 shows a detail of the temporary barricade fencing to be placed around any excavations that remain open overnight. Figure 3-4 presents a detail of the temporary containment of excavated soil in the event soil is staged at the site overnight. This temporary containment will consist of straw bales around the perimeter of the staging area and a polyethylene liner and cover.

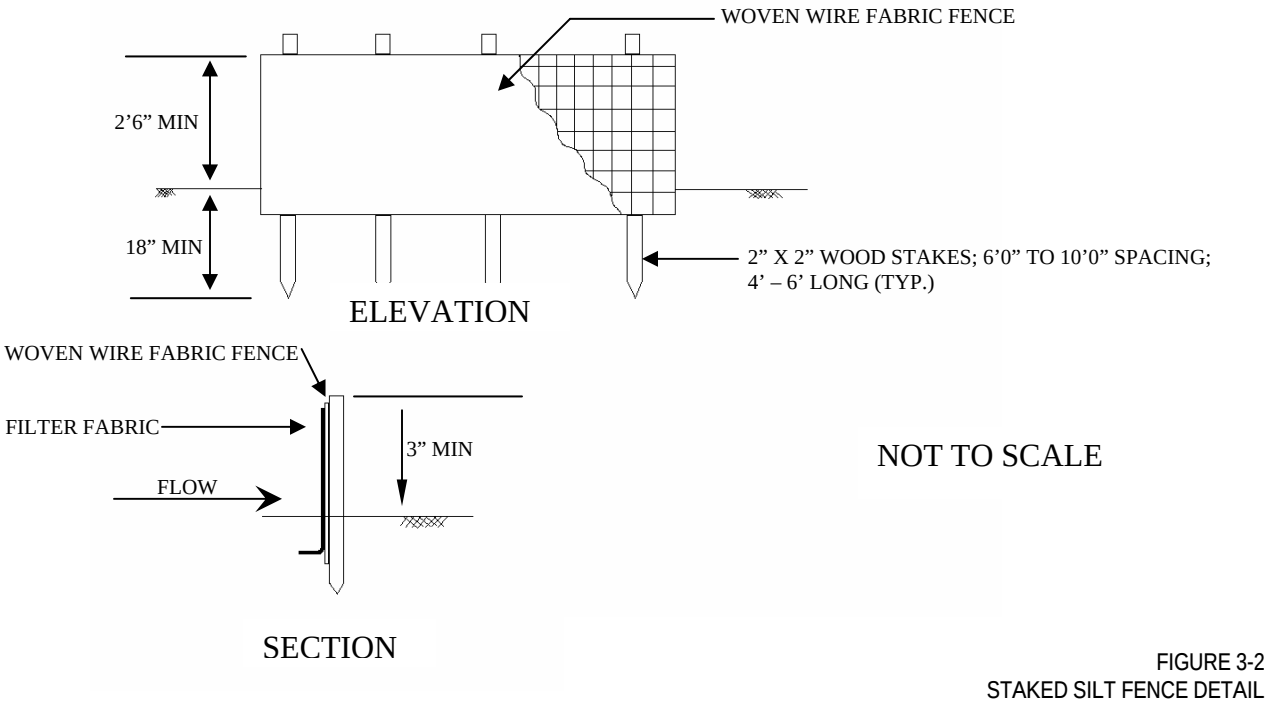


FIGURE 3-2
STAKED SILT FENCE DETAIL

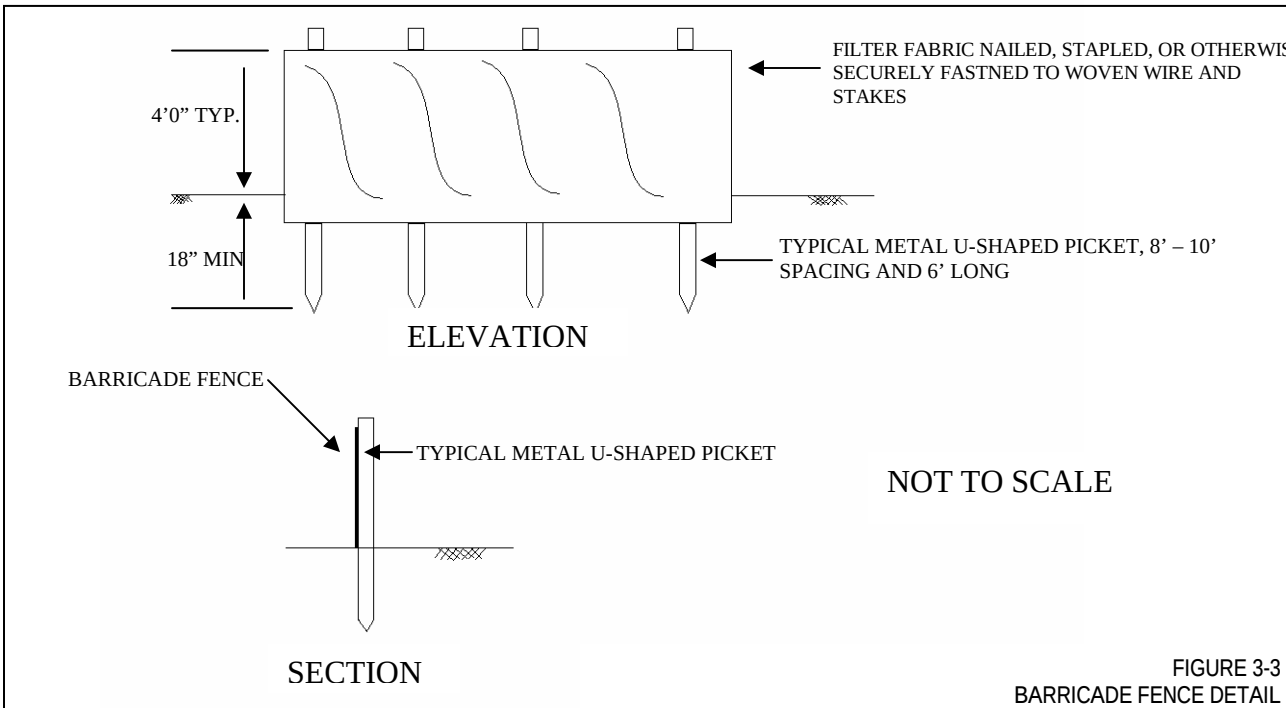


FIGURE 3-3
BARRICADE FENCE DETAIL

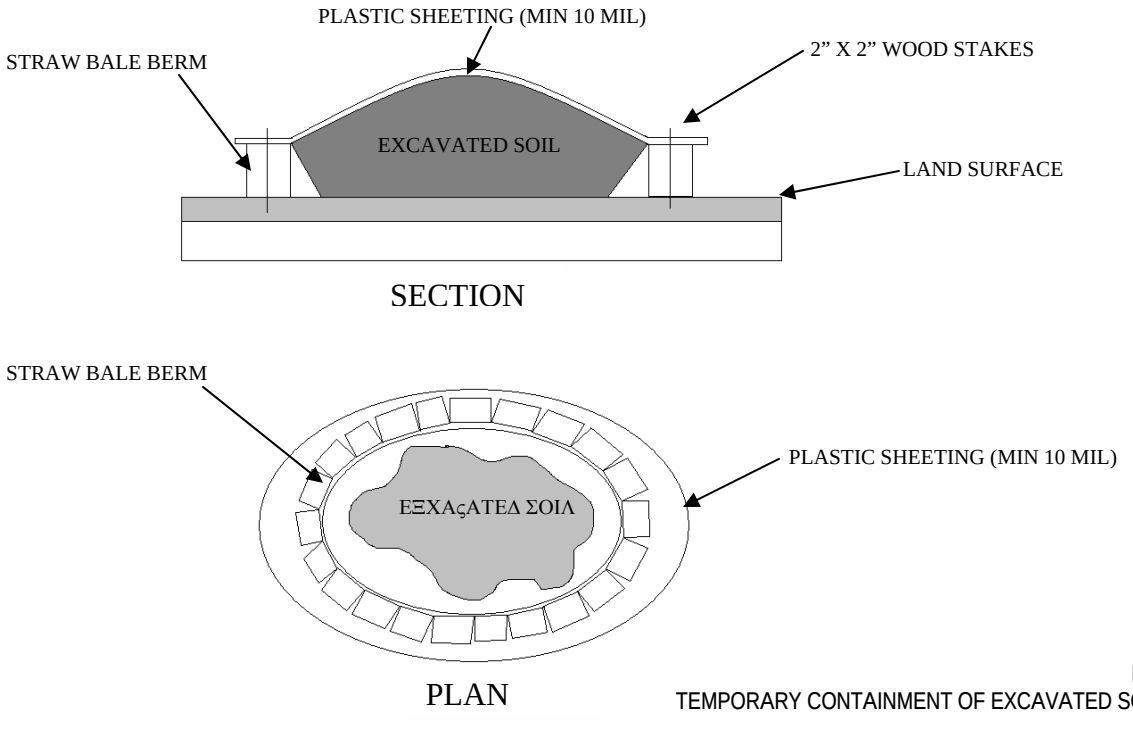


FIGURE 3-4
TEMPORARY CONTAINMENT OF EXCAVATED SOIL DETAIL

3.2.1 Backfill Material Certification

All material that will be utilized as fill will be free of contamination. One representative sample from each fill source will be collected and submitted to an approved laboratory for the following analyses:

- Target Compound List (TCL) Volatiles by U.S. Environmental Protection Agency (EPA) Method 8260B
- TCL Semivolatiles by EPA Method 8270C
- 16-listed PAHs by EPA Method 8310
- TRPH by the Florida Petroleum Residual Organic (FL-PRO) Method
- TCL Pesticides by EPA Method 8081A
- Herbicides by EPA Method 8151A
- Polychlorinated Biphenyls (PCBs) by EPA Method 8082
- Target Analyte List (TAL) Metals by EPA Method 6010A/7471A
- pH by EPA Method 9045B

Fill material must meet FDEP SCTLs for Direct Exposure – Residential or Leachability based on Groundwater Criteria, whichever is lower, as specified in FAC Chapter 62-777, to be usable.

3.2.2 Onsite Lead Treatment and Stabilization

Lead-contaminated soil with concentrations greater than the "recreational use pickup value" of 6,500 mg/kg has been found at nine areas. Toxicity Characteristic Leaching Procedure (TCLP) testing of soil samples from these areas has shown that soil from these areas exceeded the toxicity characteristic value of 5.0 milligrams per liter (mg/L) in leachate. This is significant because any excavated soil exceeding the TCLP action level would require treatment and disposal at a permitted RCRA hazardous (Subtitle C) treatment, storage, and disposal facility (TSDF), whereas excavated soil below the TCLP action level could be disposed of at a RCRA non-hazardous (Subtitle D) TSDF.

Solidification/stabilization (S/S) is a well-established technology used to treat waste materials to reduce contaminant solubility and mobility. S/S processes will involve the addition and mixing of either a 10 percent or 15 percent Portland cement mix to the excavated soil to encapsulate, solidify, and/or chemically modify the lead contaminants to reduce their leachability. S/S is often used to reduce the leachability of a hazardous constituent to levels below the toxicity characteristic action level, thereby allowing a waste to be disposed of as a non-hazardous waste. A wide variety of additives have been used for S/S of metals containing wastes, including Portland cement, fly ash, lime, cement kiln dust (CKD), lime kiln dust (LKD), phosphate compounds, sulfide compounds, silicate compounds, and proprietary reagents.

A treatability study is currently being conducted to evaluate the effectiveness of S/S for treatment of lead-contaminated soil from Site 15. Effectiveness will be judged as reduction of lead in TCLP leachate to a concentration less than the action level of 5.0 mg/L. Different S/S reagents and doses (reagent/soil mix ratios) will be tested with the intent of identifying cost-effective and optimal treatment parameters. Because of the numerous possible reagents and combinations, and in an attempt to control cost, the study is being conducted in phases starting with simple S/S options, proceeding with more complicated options if necessary, and concluding with confirmation testing of a selected "best" option.

Following treatment and stabilization, treated soil will be segregated in 300-ton stockpiles in preparation for confirmation sampling. One representative sample from each stockpile will be collected and submitted to an approved laboratory for the analyses of TCLP Metals by EPA Method 1311/6010A. Each stockpile must meet action level of 5.0 mg/L, as specified in 40 CFR 261.24 to be managed as non-hazardous waste. The specific procedures to be used for treatment will be determined following laboratory testing, and will be provided in a revision to this Work Plan Addendum.

3.2.3 Excavation, Backfilling, and Site Restoration

Contaminated soil from 17 distinct areas with a combined surface area of 7.25 acres containing concentrations of the COCs greater than the recreational use Pickup Levels will be excavated. These areas are outlined below:

- PAH-contaminated soil with BaPEq concentrations greater than 6,750 μg/kg in eight areas totaling 234,769 square feet, from 0 to 1 foot below ground surface (bgs)
- PAH-contaminated soil with BaPEq concentrations greater than 6,750 μg/kg in one area totaling 108 square feet, from 0 to 2 feet bgs

- Lead-contaminated soil with concentrations greater than 6,500 mg/kg in eight areas totaling 76,525 square feet, from 0 to 1 foot bgs
- Arsenic-contaminated soil with concentrations greater than 36 mg/kg in one area totaling 1,923 square feet, from 0 to 1 foot bgs
- Arsenic-contaminated soil with concentrations greater than 36 mg/kg in one area totaling 2,113 square feet, from 0 to 2 feet bgs
- TRPH-contaminated soil with concentrations greater than 340 mg/kg in one area totaling 448 square feet, from 1 to 2-foot bgs (This area is located within the excavation limits of one of the above-mentioned areas of PAH-contaminated soil.)

Contaminated Soil Excavation

The proposed horizontal extents of contaminated soil excavation determined by TtNUS are shown on the Excavation Plan provided as Figures 3-5 through 3-10. Approximately 11,853 yd^3 of contaminated soil will be excavated from the site. Tree stumps located within each excavation area will be removed with the soil. Excavated contaminated soil will be managed, transported, and disposed of in accordance with Section 8.0 Waste Management Plan of this Work Plan Addendum.

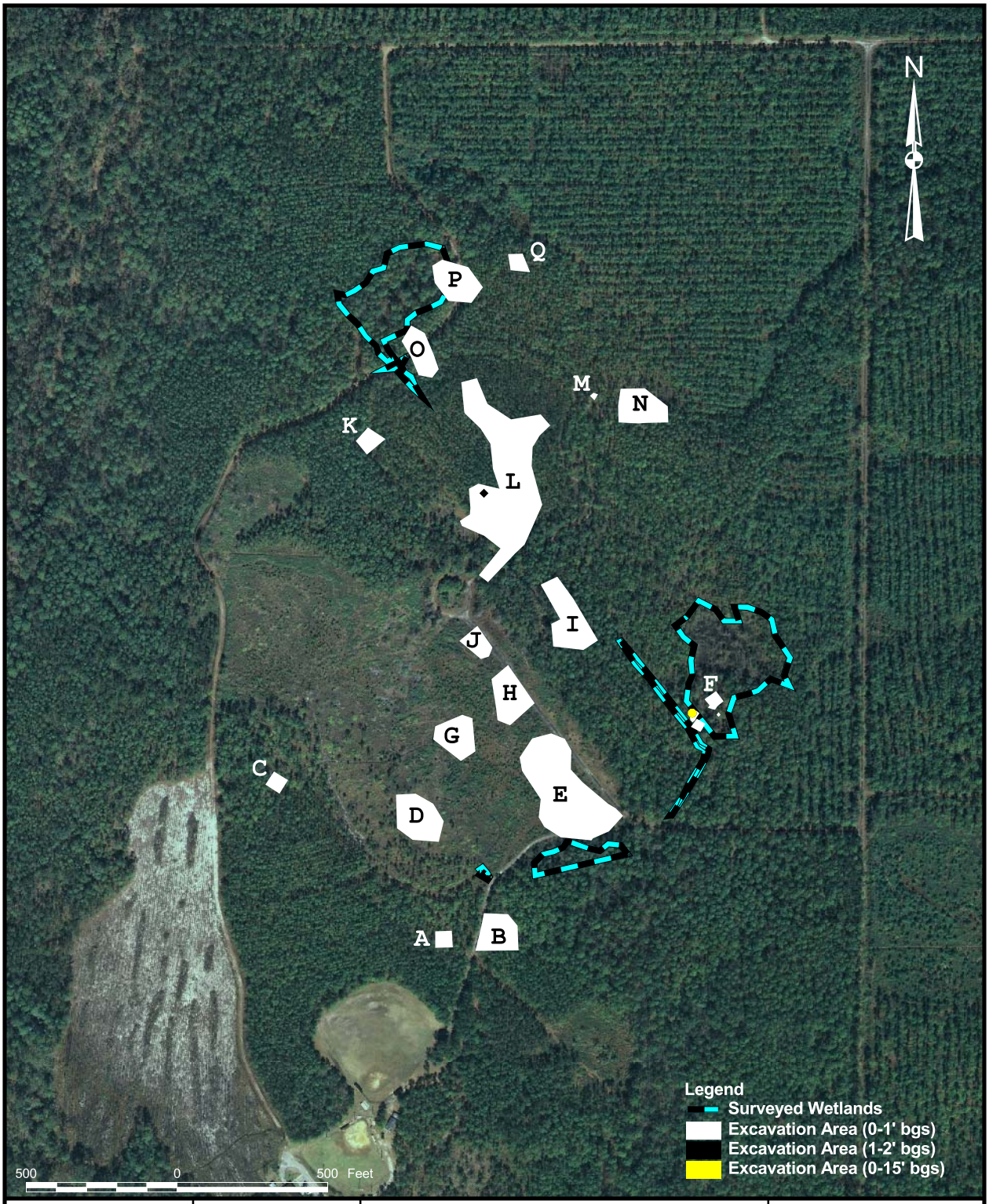
Excavated contaminated material will be direct loaded in tandem trailer trucks for transportation and disposal; or contaminated material may be stockpiled on 20-mil polyethylene sheeting, covered with 10 or 6-mil polyethylene sheeting, and bermed as shown on Figure 3-4 and in accordance with Section 8.0 Waste Management Plan of this Work Plan Addendum to avoid the potential for contaminating the surrounding soil. Any onsite lead treatment and stabilization will occur while soil is stockpiled. The specific procedures to be used for treatment will be determined following laboratory testing, and will be provided in a revision to this Work Plan Addendum.

Backfilling

Areas **not** located within previously delineated wetlands, as shown on Figures 3-5 through 3-10, will be backfilled in an even distribution with uncontaminated granular fill material to original grade. Backfill will be placed and machine-compacted at a maximum of 1-foot lifts. Topsoil is not required; however, the offsite material used for backfill must be capable of supporting vegetation.

Approximately 7,874 square feet (0.18 acres) of proposed excavation areas will impact previously delineated wetlands, as shown on Figures 3-5 through 3-10, and include the following:

- Excavation of approximately 181 cubic yards of soil contaminated by arsenic from approximately 2,436 square feet of Excavation Area F.
- Excavation of approximately 300 cubic yards of soil contaminated by BaPEq from approximately 5,400 square feet of Excavation Area P.



DRAWN BY MJJ	DATE 02Jan07	EXCAVATION PLAN OPERABLE UNIT 5, SITE 15 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 7653
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COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. Figure 3-5 REV 0

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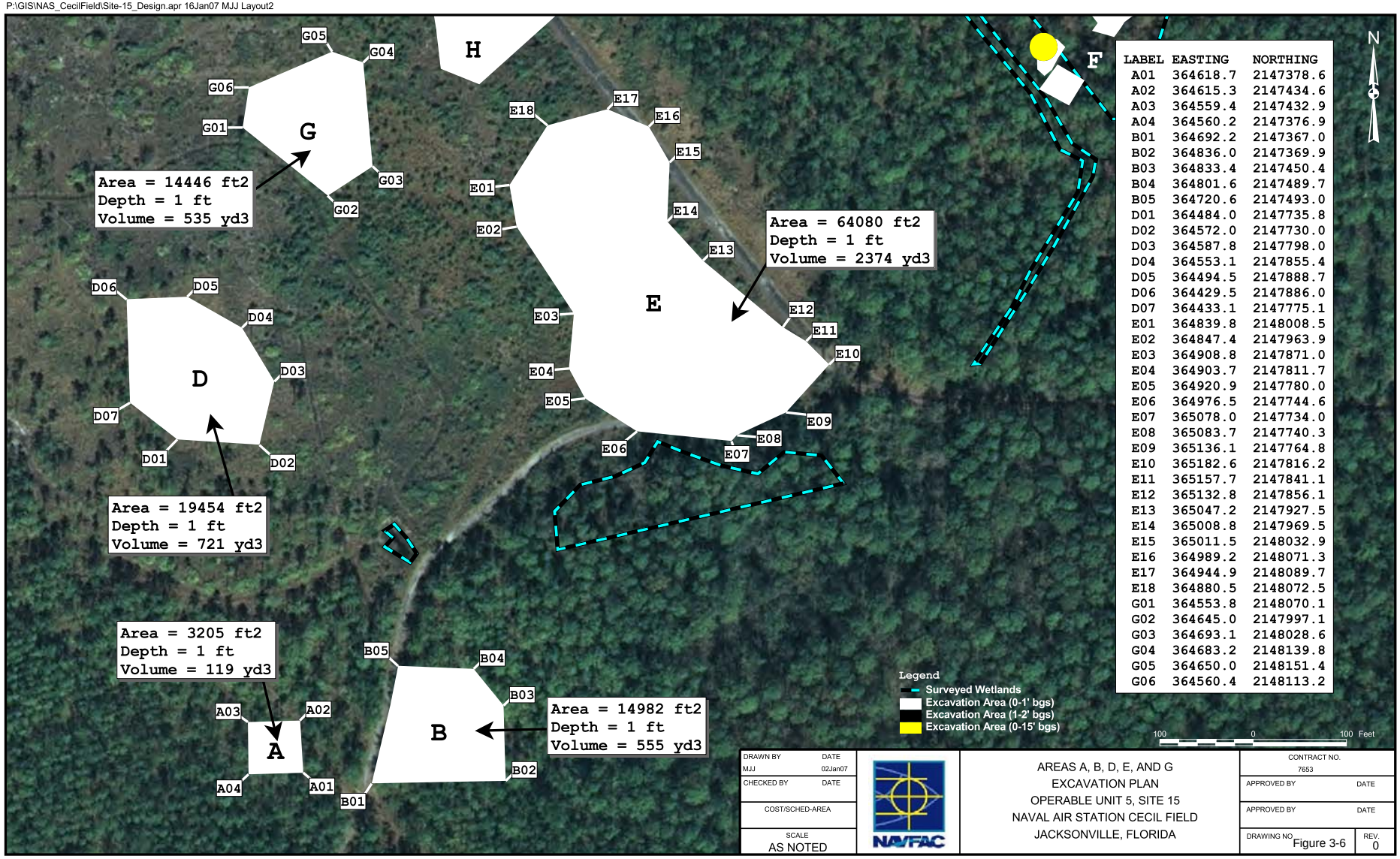

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B01	364692.2	2147367.0
B02	364836.0	2147369.9
B03	364833.4	2147450.4
B04	364801.6	2147489.7
B05	364720.6	2147493.0
D01	364484.0	2147735.8
D02	364572.0	2147730.0
D03	364587.8	2147798.0
D04	364553.1	2147855.4
D05	364494.5	2147888.7
D06	364429.5	2147886.0
D07	364433.1	2147775.1
E01	364839.8	2148008.5
E02	364847.4	2147963.9
E03	364908.8	2147871.0
E04	364903.7	2147811.7
E05	364920.9	2147780.0
E06	364976.5	2147744.6
E07	365078.0	2147734.0
E08	365083.7	2147740.3
E09	365136.1	2147764.8
E10	365182.6	2147816.2
E11	365157.7	2147841.1
E12	365132.8	2147856.1
E13	365047.2	2147927.5
E14	365008.8	2147969.5
E15	365011.5	2148032.9
E16	364989.2	2148071.3
E17	364944.9	2148089.7
E18	364880.5	2148072.5
G01	364553.8	2148070.1
G02	364645.0	2147997.1
G03	364693.1	2148028.6
G04	364683.2	2148139.8
G05	364650.0	2148151.4
G06	364560.4	2148113.2

DRAWN BY MJJ	DATE 02Jan07	AREAS A, B, D, E, AND G EXCAVATION PLAN OPERABLE UNIT 5, SITE 15 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NO. 7653
CHECKED BY	DATE		APPROVED BY / DATE
COST/SCHED-AREA			APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. Figure 3-6 / REV. 0

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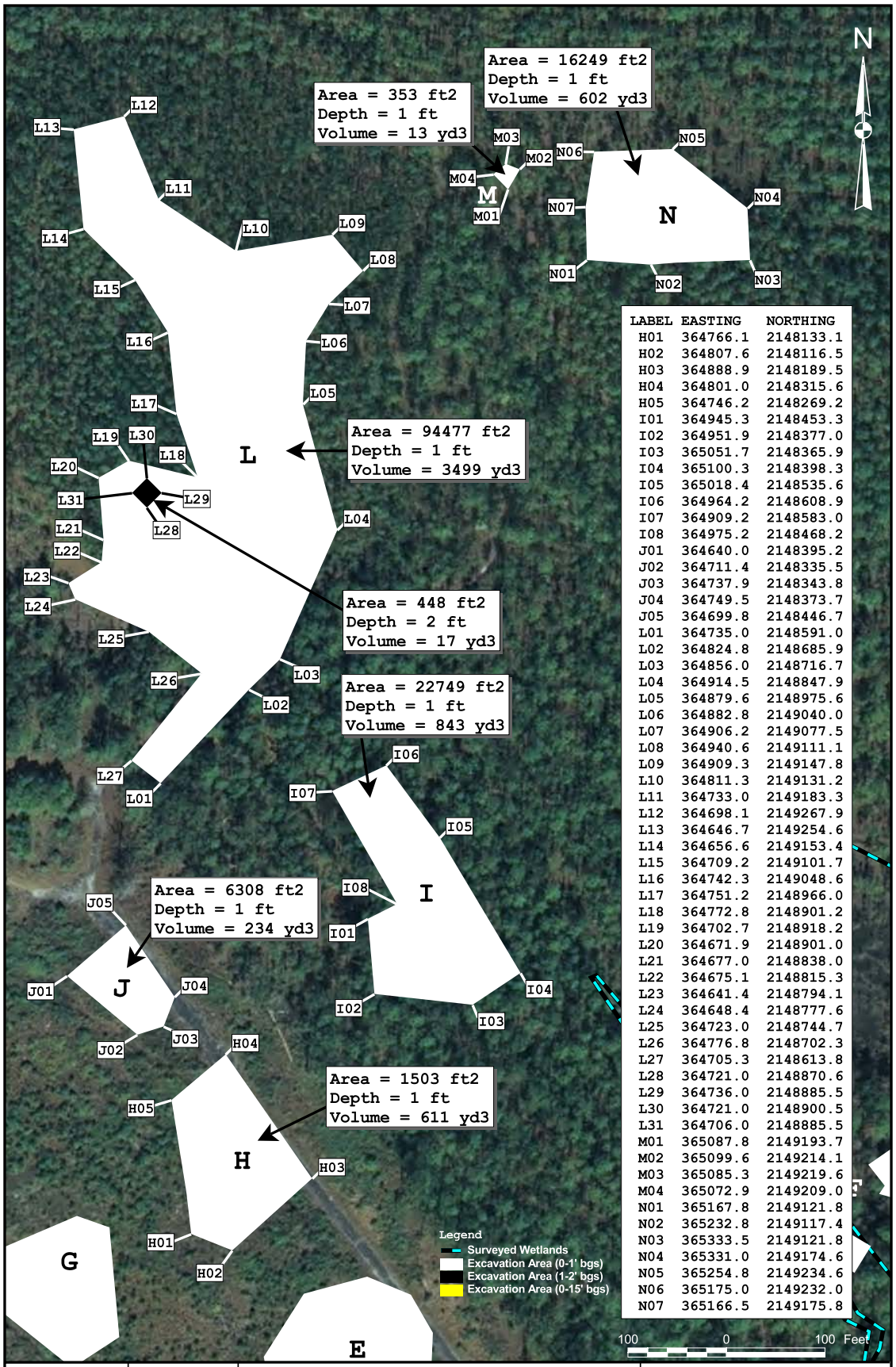

LABEL	EASTING	NORTHING
H01	364766.1	2148133.1
H02	364807.6	2148116.5
H03	364888.9	2148189.5
H04	364801.0	2148315.6
H05	364746.2	2148269.2
I01	364945.3	2148453.3
I02	364951.9	2148377.0
I03	365051.7	2148365.9
I04	365100.3	2148398.3
I05	365018.4	2148535.6
I06	364964.2	2148608.9
I07	364909.2	2148583.0
I08	364975.2	2148468.2
J01	364640.0	2148395.2
J02	364711.4	2148335.5
J03	364737.9	2148343.8
J04	364749.5	2148373.7
J05	364699.8	2148446.7
L01	364735.0	2148591.0
L02	364824.8	2148685.9
L03	364856.0	2148716.7
L04	364914.5	2148847.9
L05	364879.6	2148975.6
L06	364882.8	2149040.0
L07	364906.2	2149077.5
L08	364940.6	2149111.1
L09	364909.3	2149147.8
L10	364811.3	2149131.2
L11	364733.0	2149183.3
L12	364698.1	2149267.9
L13	364646.7	2149254.6
L14	364656.6	2149153.4
L15	364709.2	2149101.7
L16	364742.3	2149048.6
L17	364751.2	2148966.0
L18	364772.8	2148901.2
L19	364702.7	2148918.2
L20	364671.9	2148901.0
L21	364677.0	2148838.0
L22	364675.1	2148815.3
L23	364641.4	2148794.1
L24	364648.4	2148777.6
L25	364723.0	2148744.7
L26	364776.8	2148702.3
L27	364705.3	2148613.8
L28	364721.0	2148870.6
L29	364736.0	2148885.5
L30	364721.0	2148900.5
L31	364706.0	2148885.5
M01	365087.8	2149193.7
M02	365099.6	2149214.1
M03	365085.3	2149219.6
M04	365072.9	2149209.0
N01	365167.8	2149121.8
N02	365232.8	2149117.4
N03	365333.5	2149121.8
N04	365331.0	2149174.6
N05	365254.8	2149234.6
N06	365175.0	2149232.0
N07	365166.5	2149175.8

DRAWN BY MJJ	DATE 02Jan07	AREAS H, I, J, L, M, AND N EXCAVATION PLAN OPERABLE UNIT 5, SITE 15 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 7653
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COST/SCHEDULE-AREA			APPROVED BY / DATE
SCALE AS NOTED	NAVFAC		DRAWING NO. Figure 3-7 / REV 0

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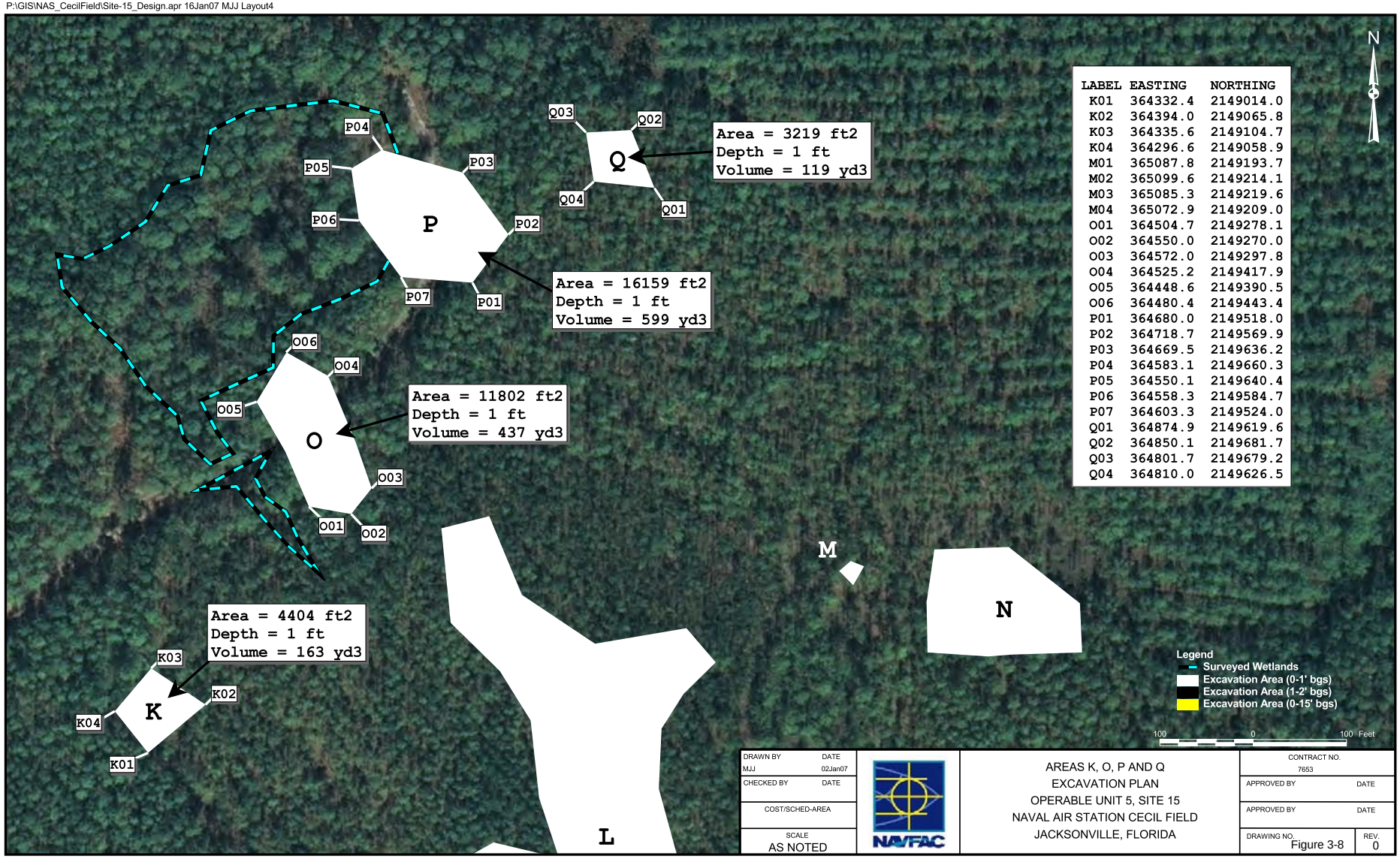
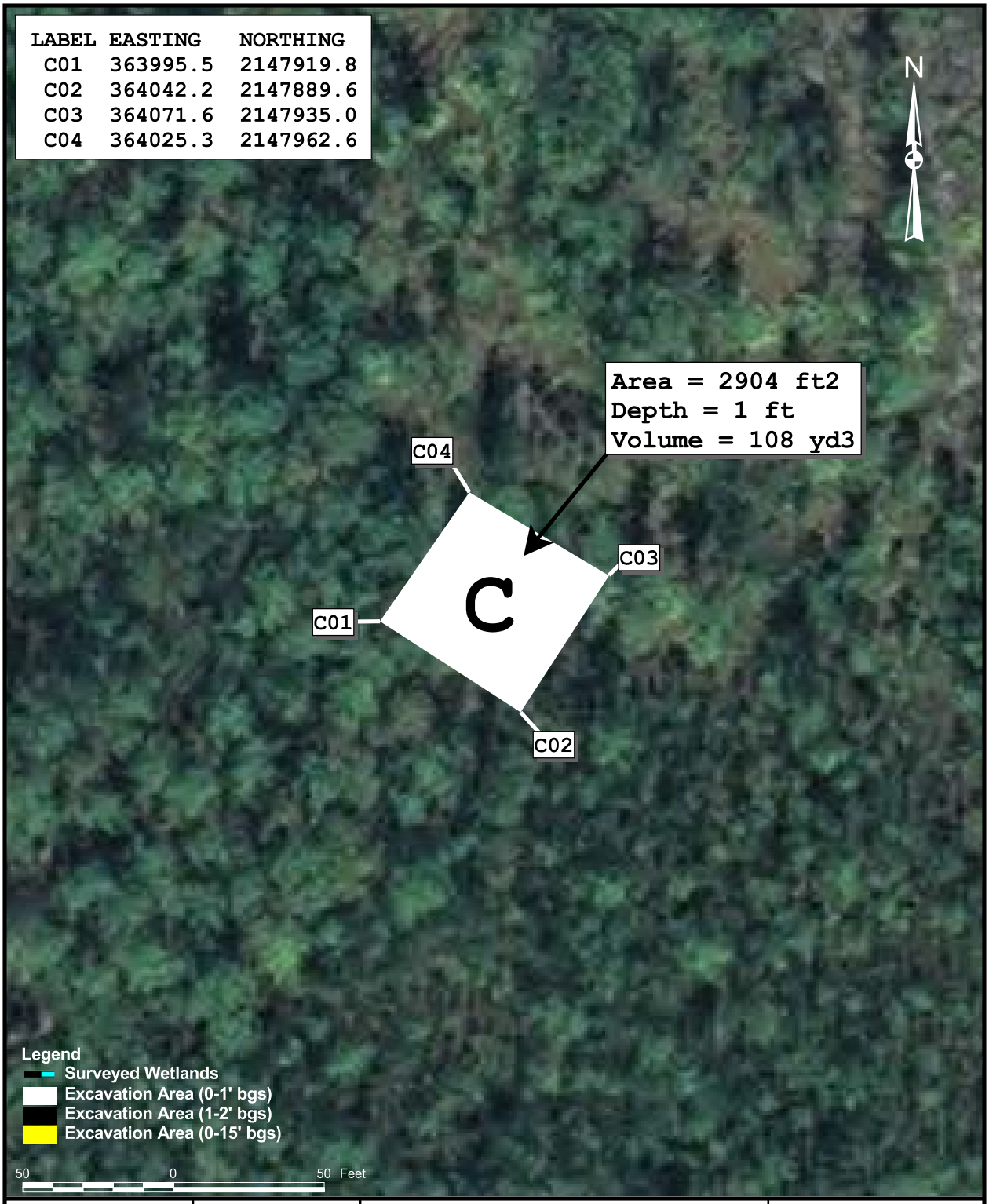


LABEL	EASTING	NORTHING
K01	364332.4	2149014.0
K02	364394.0	2149065.8
K03	364335.6	2149104.7
K04	364296.6	2149058.9
M01	365087.8	2149193.7
M02	365099.6	2149214.1
M03	365085.3	2149219.6
M04	365072.9	2149209.0
O01	364504.7	2149278.1
O02	364550.0	2149270.0
O03	364572.0	2149297.8
O04	364525.2	2149417.9
O05	364448.6	2149390.5
O06	364480.4	2149443.4
P01	364680.0	2149518.0
P02	364718.7	2149569.9
P03	364669.5	2149636.2
P04	364583.1	2149660.3
P05	364550.1	2149640.4
P06	364558.3	2149584.7
P07	364603.3	2149524.0
Q01	364874.9	2149619.6
Q02	364850.1	2149681.7
Q03	364801.7	2149679.2
Q04	364810.0	2149626.5

DRAWN BY MJJ	DATE 02Jan07	AREAS K, O, P AND Q EXCAVATION PLAN OPERABLE UNIT 5, SITE 15 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NO. 7653
CHECKED BY	DATE		APPROVED BY / DATE
COST/SCHED-AREA			APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. Figure 3-8 / REV. 0



DRAWN BY MJJ	DATE 02Jan07	AREA C EXCAVATION PLAN OPERABLE UNIT 5, SITE 15 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 7653
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. Figure 3-9 REV 0

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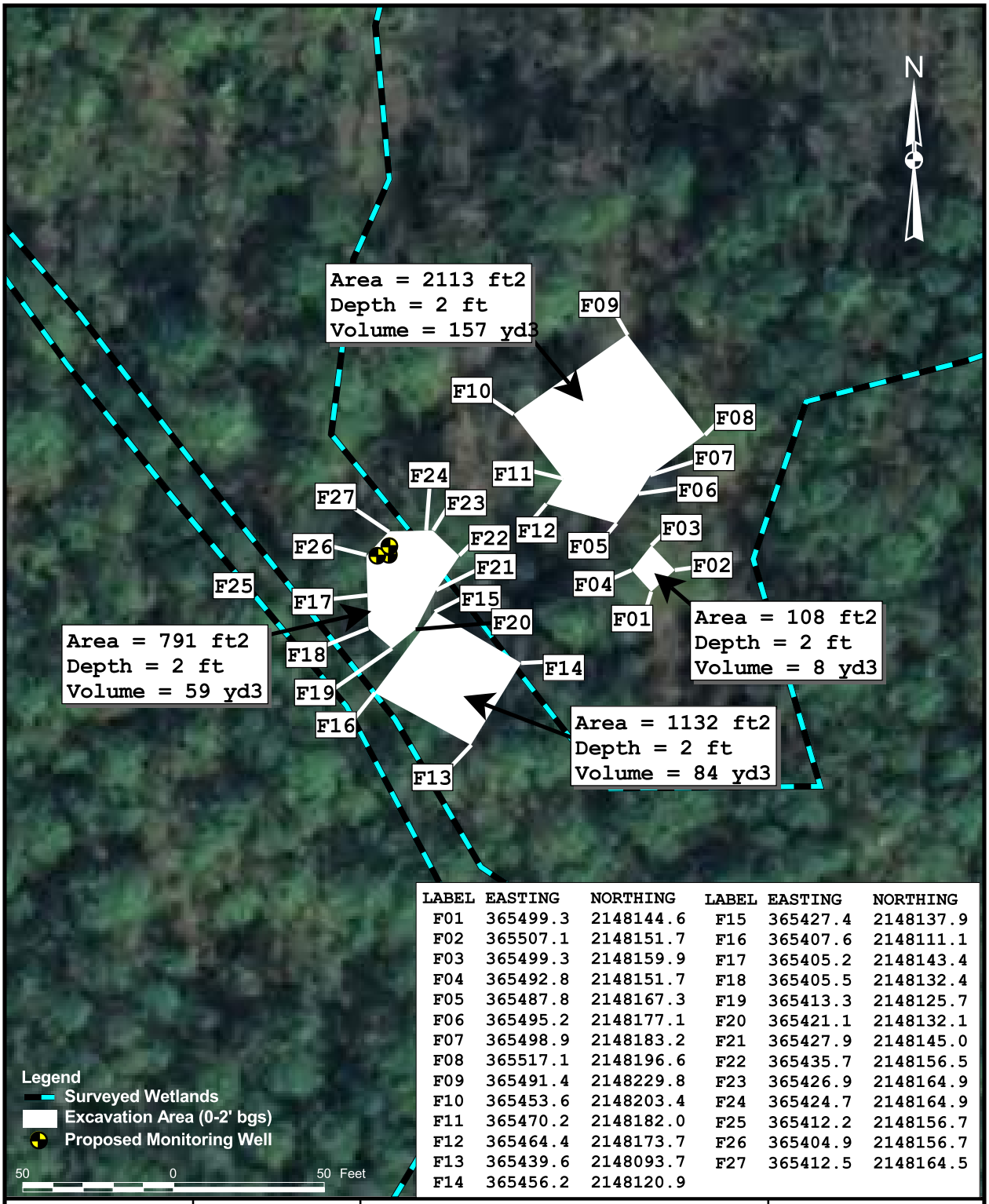

LABEL	EASTING	NORTHING	LABEL	EASTING	NORTHING
F01	365499.3	2148144.6	F15	365427.4	2148137.9
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F03	365499.3	2148159.9	F17	365405.2	2148143.4
F04	365492.8	2148151.7	F18	365405.5	2148132.4
F05	365487.8	2148167.3	F19	365413.3	2148125.7
F06	365495.2	2148177.1	F20	365421.1	2148132.1
F07	365498.9	2148183.2	F21	365427.9	2148145.0
F08	365517.1	2148196.6	F22	365435.7	2148156.5
F09	365491.4	2148229.8	F23	365426.9	2148164.9
F10	365453.6	2148203.4	F24	365424.7	2148164.9
F11	365470.2	2148182.0	F25	365412.2	2148156.7
F12	365464.4	2148173.7	F26	365404.9	2148156.7
F13	365439.6	2148093.7	F27	365412.5	2148164.5
F14	365456.2	2148120.9			

DRAWN BY MJJ	DATE 02Jan07	AREA F EXCAVATION PLAN OPERABLE UNIT 5, SITE 15 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 7653
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COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. Figure 3-10 REV 0

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Most of the excavation areas affecting wetlands are positioned at the edge of the wetland, and thus equipment will be staged in uplands and access gained to the contaminated soils without any physical disturbance of uncontaminated wetlands. Excavation Area F is located in the interior of a delineated wetland and as much as 1,000 square feet (ft^2) of additional wetland surface disturbance will be necessary for equipment to gain access to the contaminated soil. Therefore, wetland area site restoration will total approximately 8,874 ft^2 (0.20 acres).

Prior to backfilling, the soil will be gently disked in each excavation area located within the wetlands to alleviate surface soil compaction caused by excavation equipment. The impacted wetlands will then be backfilled to original grade in an even distribution with uncontaminated, naturally friable topsoil with a U.S. Department of Agriculture soil texture classification of loamy sand, sandy loam, or loam. Finer textural classification will not be used because surface runoff might pond within the excavation area for extended periods. The topsoil will be obtained from a source free of infestation by Phragmites (Phragmites austrlis), reed canary grass (Phalaris arundinacea), or other plant species recognized as invasive in wetland settings. Fill material will be placed with no mechanical compaction.

Site Restoration

The excavated areas **not** located within previously delineated wetlands, as shown on Figures 3-5 through 3-10, will be graded to provide drainage, then fertilized and hydro-seeded with landscape grasses (i.e., bahia) commonly used in the area. The area will then be covered with mulch to retain moisture and to allow the seed to germinate.

In the excavated areas located within previously delineated wetlands, as shown on Figures 3-5 through 3-10, the disturbed area will be disked and 400 pounds per acre of 10-20-20 fertilizer will be incorporate into the topsoil. The soil surface will than be disked to a minimum depth of 4 inches to incorporate the fertilizer and prepare a seedbed. The seed mixture consisting of the species of vegetation listed in Table 3-1 will be broadcast over the excavation footprint.

TABLE 3-1
Wetland Grasses

Scientific Name	Common Name	Seeding Rate (PLS/A)	Quantity Required (PLS)	Comments
Panicum virgatum	Switchgrass	25	5	Warm-season grass
Dichanthelium clandestim	Deertongue grass	12	2.4	Warm-season grass
Seasonal Nurse Crop	Annual Rye Foxtail Millet Annual Rye Winter Rye	20	4	Feb. 1 – Apr. 30 May 1 – Aug. 31 Sep. 1 – Nov. 15 Nov. 16 – Jan. 31

PLS – pounds per live seed
PLS/A - pounds per live seed per acre

3.2.4 Decontamination

Personnel and equipment will be properly decontaminated to remove all contamination that may be adhering to personnel or equipment as a result of project activities. Any water accumulated during the decontamination process will be containerized in 55-gallon drum(s); sampled in accordance with Section 7.0 Sampling and Analysis Plan of this Work Plan Addendum; and managed, transported, and disposed in accordance with Section 8.0 Waste Management Plan of this Work Plan Addendum. Decontamination of personnel and equipment will be performed in accordance with the HSP provided in Appendix B and the applicable provisions of 29 CFR 1910.120.

3.2.5 Characterization, Transportation, and Disposal of Generated Wastes

Generated wastes during soil excavation activities, to include decontamination wastes, will be containerized in 55-gallon drum(s); sampled in accordance with Section 7.0 Sampling and Analysis Plan of this Work Plan Addendum; and managed, transported, and disposed in accordance with Section 8.0 Waste Management Plan of this Work Plan Addendum.

3.2.6 Demobilization

During demobilization, temporary facilities and equipment will be removed from the site. In addition, any debris or solid waste material remaining from project activities will be removed and properly disposed of offsite in accordance with Section 8.0 Waste Management Plan of this Work Plan Addendum.

3.2.7 Remedial Action Completion Report

This activity includes the preparation and submission of a RACR documenting all performed remediation activities. The RACR will include a comprehensive site description, history of remediation activities, details of remaining site contamination, any recommended future remediation activities, and the LUC Remedial Design to implement the required LUCs. The RACR will also include survey construction drawings showing pre- and post-excavation site conditions, site photographs documenting before, during, and after remediation activities, field test and laboratory analytical results, and documentation of offsite transportation and disposal of wastes.

3.3 Project Schedule

A project schedule has been prepared that includes each project activity. The schedule addresses the project management, field tasks, reports and deliverables and associated review periods for the project. The proposed schedule might vary depending on the actual conditions encountered in the field. Appendix A provides a schedule for the work to be performed.

3.4 Communications Plan

A communication matrix outlining the lines of communications for NAVFAC SE and CH2M HILL is presented in Table 3-2. Table 3-3 provides a project personnel directory.

TABLE 3-2
Communications Matrix

CH2M HILL Position	Navy Direct Report
Phil Smith, Executive Sponsor	Richard Stanley, CO
Sidney Allison, Program Manager Michael Halil, Deputy Program Manager	Dorothy Okamoto, COTR Richard Stanley, ACO
Jeffery Marks, CTO Project Manager	Barbara Nwokike, RPM Arthur Mosley, NTR/FEAD

CO – Contracting Officer
ACO – Administrative Contracting Officer
NTR – Navy Technical Representative
RPM – Remedial Project Manager
COTR – Contracting Officer's Technical Representative

TABLE 3-3
Project Personnel Directory

Contact	Company
Sidney Allison, Program Manager Robert Hess, Contracts Administration Manager Richard Rathnow, Health and Safety Manager Theresa Rojas, QA/QC Manager	CH2M HILL Constructors, Inc Northpark 400 1000 Abernathy Road, Suite 1600 Atlanta, GA 30328 770/604-9095
Michael Halil, Deputy Program Manager Jeffery Marks, Project Manager	CH2M HILL Constructors, Inc. 10142 103rd St. Suite 105 Jacksonville, FL 32210 904/777-4812
Richard Stanley, CO	NAVFAC SE P.O. Box 190010 North Charleston, SC 29419-9010 843/820-5939
Dorothy Okamoto, COTR	As above 843/820-5940
Barbara Nwokike, RPM	BRAC PMO SE 4130 Faber Place Drive, Suite 202 North Charleston, SC 29405 843/743-2141
Arthur Mosley, NTR/FEAD	Engineering Field Activity Southeast Environmental Programs Coordinator / Facilities Engineering and Acquisition Division P. O. Box 5, Building 27 NAS Jacksonville, FL 32212-0139 904/542-5571 ext.234

3.5 Traffic Control Plan

Traffic control will be the responsibility of CH2M HILL. CH2M HILL will minimize disturbance to established traffic patterns during project activities. CH2M HILL will consult with onsite personnel to evaluate site access, placement of equipment, and traffic flow to minimize the impact of this work.

4.0 Munitions Response Operations Plan

4.1 Site Visit/Records Review

CH2M HILL performed site visits on April 17, 2006 and August 29, 2006, and a records review was performed during development of the PA/SI. No additional site visits or records review activities are planned.

4.2 MEC Team Composition

4.2.1 UXO Personnel Qualifications

UXO personnel assigned to positions UXO Technician I, UXO Technician II, UXO Technician III, UXO Safety Officer (UXOSO), UXO Quality Control Specialist (UXOQCS), or Senior UXO Supervisor (SUXOS), will be qualified and certified in accordance with NAVSEAINST 8020.9B, Ammunition and Explosives Personnel Qualification and Certification Program; terms outlined by U.S. Department of Labor Employment Standards Administration Wage Hour Division for UXO Personnel; and Department of Defense Explosives Safety Board (DDESB) TP-18, Minimum Qualifications for UXO Technicians and personnel.

4.2.2 DGM Contractor Personnel Qualifications

DGM operations personnel will have the qualifications specified below.

Project Geophysicist

The Project Geophysicist will have a degree in geophysics, geology, geological engineering, or a closely related field, and will have a minimum of 5 years of directly related geophysical experience. This individual will be capable of managing a geophysical data collection and processing project/program including several task orders/sites and will have at least one year of experience in managing geophysical operations for an MEC site.

Site Geophysicist

The Site Geophysicist will have a degree in geophysics, geology, geological engineering, or a closely related field, and will have a minimum of 5 years of directly related geophysical experience. This individual will be capable of competently managing personnel, equipment and data on projects requiring multiple (three or more) geophysical field teams and geophysical data processors and will have at least 1 year of experience in performing geophysical operations on an MEC site.

Geophysical Data Processor

The Geophysical Data Processor will have a degree in geophysics, geology, geological engineering, or a closely related field, and will have at least six months experience in processing geophysical data related to MEC projects.

Field Geophysicist

The Field Geophysicist will have a degree in geophysics, geology, geological engineering, or a closely related field, and will have a minimum of 2 years of directly related geophysical experience.

Geophysical Technician

The Geophysical Technician will have at least 6 months experience in geophysical data collection on MEC-related projects.

4.2.3 Personnel Responsibilities

Project Manager

The CH2M HILL Project Manager reports to the CH2M HILL Activity Manager. He is responsible for ensuring that all activities performed by CH2M HILL at the former NAS Cecil Field are conducted in accordance with contractual specifications and approved work plans. The Project Manager will also coordinate with the Navy representative. The CH2M HILL Project Manager is responsible for management of all operations conducted for the project. He will ensure that all personnel assigned to the project, including subcontractors, have reviewed the technical plans before any task associated with the project begins. The CH2M HILL Project Manager will monitor the budget and schedule to ensure availability of necessary personnel, equipment, subcontractors, and services. He will also participate in the development of the field program, evaluation of data, and reporting.

CH2M HILL Munitions Response Manager

The CH2M HILL MR Manager provides specialized technical support and training during the implementation of MR activities. The MR Manager monitors advances in MR technology and advances the state of the art for MR operations. He also ensures that the best technical approach is utilized on each MR project.

Munitions Response Safety Officer

The CH2M HILL MR Safety Officer (MRSO) is responsible for developing MR Safety policy and guidance for project delivery teams and for providing oversight for the implementation of MR specific sections of the HSP for MR related projects. Overall, the MRSO is responsible for ensuring the safety of all project personnel involved in MR operations.

Munitions Response Quality Control Manager

The CH2M HILL MR Quality Control Manager (MRQCM) provides oversight for implementation of MR specific sections of CH2M HILL's QC Program for all MR related projects. The MRQCM is responsible for ensuring that all MR work complies with stipulated contractual requirements and is in compliance with all DoD, federal, state, and local statutes and codes.

Health and Safety Manager

The Program Health and Safety Manager (a Certified Industrial Hygienist [CIH]) oversees the development and implementation of the HSP to ensure that it meets all of the specific needs of the project and that the appropriate health and safety requirements have been defined. He routinely coordinates directly with the MR Manager, MRSO, Munitions Response Quality Control Manager (MRQCM), Project Manager, SUXOS, and UXOSO onsite to answer technical questions and to provide assistance to the work sites. He also performs health and safety program audits and inspections to ensure compliance with company health and safety policy.

Senior UXO Supervisor

The SUXOS will possess the qualifications listed in Section 4.2.1 UXO Personnel Qualifications. This individual will have at least 15 years of UXO experience, which may be a combination of active duty military EOD and contractor UXO experience, and will include 10 years in supervisory positions. The SUXOS will be able to fully perform all of the functions enumerated in the following sections for UXO Technicians II and III. In addition, the ability to perform the following functions is a requirement for the SUXOS: planning, coordinating, and supervising all contractor onsite UXO activities; preparation of SOPs for MEC operations; ensuring compliance with DoD directives as well as local, state, and federal statues and codes; and certification of Ammunition, Explosives, and Dangerous Articles (AEDA) and/or range scrap as ready for turn-in or disposal in accordance with current policies. The SUXOS must also be fully capable of supervising multiple project teams that may be performing MEC- and MEC-related activities (for example, vegetation clearance; land surveying; reconnaissance and classification of MEC, pyrotechnic items, and military explosives and demolition materials; locating surface and subsurface MEC; destroying MEC by burning or detonation; and/or transporting and storing MEC and explosives material).

UXO Safety Officer

The UXOSO will have the same minimum qualifications as a UXO Technician III, as listed below. In addition, this individual will have the specific training, knowledge, and experience necessary to implement the HSP and verify compliance with applicable health and safety requirements. This individual will be able to perform all functions enumerated in the following sections for UXO Technicians II and III. In addition, the UXOSO will have the ability to implement the approved MEC and explosives safety program in compliance with all DoD, Federal, State, and local statutes and codes; analyze MEC and explosives operational risks, hazards, and safety requirements; establish and ensure compliance with all site-specific safety requirements for MEC and explosives operations; enforce personnel limits and safety EZs for MEC clearance operations, MEC and explosives transportation, storage, and destruction; conduct safety inspections to ensure compliance with MEC and explosives safety codes; and operate and maintain air monitoring equipment as required for airborne contaminants.

UXO Quality Control Specialist

The UXOQCS will have the same minimum qualifications as a UXO Technician III as listed below. In addition, this individual will have documented QC training. This individual will

be able to fully perform all functions enumerated for UXO Technicians II and III. The UXOQCS will have the ability to implement the UXO-specific sections of this Work Plan Addendum for all MEC-related tasks, conduct QC inspections of all MEC and explosives operations for compliance with established procedures, and direct and approve all corrective actions to ensure all MEC-related work complies with contractual requirements.

A UXOQCS is not required full-time onsite. The SUXOS will act as the UXOQCS for the former NAS Cecil Field site.

UXO Technician III

A UXO Technician III will possess the qualifications stated in Section 4.2.1 UXO Personnel Qualifications. This individual will have experience in MEC clearance operations and supervising personnel, and will have at least 10 years combined active duty military EOD and contractor UXO experience. This individual will be able to fully perform all functions enumerated in the following section for UXO Technician II. In addition, the ability to perform the following functions is a requirement for the UXO Technician III: supervising and performing onsite disposal of MEC, preparing explosives storage plans in accordance with all applicable guidance, preparing required MEC administrative reports, preparing SOPs for onsite MEC operations, performing risk hazard analyses, conducting daily site safety briefings, and supervising the conduct of all onsite evolutions directly related to MEC operations.

UXO Technician II

A UXO Technician II will possess the qualifications stated in Section 4.2.1 UXO Personnel Qualifications. As an exception, a UXO Technician II may be a UXO Technician I with at least 5 years combined military EOD and contractor UXO experience. In addition, the ability to perform the following functions is a requirement of the UXO Technician II: properly storing MEC material in accordance with applicable guidance, identifying fuzes and determining fuze condition, determining a magnetic azimuth using current navigational/ locating equipment, performing field expedient identification procedures to identify explosives contaminated soil, preparing an onsite holding area for MEC material, and operating modes of transportation for transporting MEC material, when appropriate.

Essential Personnel

The SUXOS/UXOSO may approve additional personnel for entry inside the EZ if they have specialized skills needed to accomplish the project objectives and have documented specialized training.

Heavy Equipment Operators

Subcontractors who will be responsible for the operation and maintenance of heavy equipment on site must be properly trained and certified to perform the tasks assigned. It is the responsibility of the subcontractor to provide the required documentation and medical surveillance records for their personnel. Heavy equipment operators will report directly to the SUXOS.

4.2.4 UXO Team Composition and Roles

The UXO team will consist of up to one SUXOS, one UXOSO, one UXO Technician III, and three UXO Technicians II team members.

4.3 Project Authority

The SUXOS has final onsite authority for MR safety.

4.4 Training

4.4.1 Health and Safety Indoctrination

Prior to commencement of site activities, the CH2M HILL Project Manager will ensure that all employees engaged in hazardous waste operations are informed of the nature and degree of exposure to hazards which are likely to result from participation in site operations. CH2M HILL will accomplish this by ensuring that all personnel entering the site have received the appropriate Occupational Safety and Health Administration (OSHA) and site-specific training prior to participating in site activities.

4.4.2 Site-Specific Training

Health and safety training requirements for on site project personnel have been established in accordance with OSHA requirements for hazardous site workers (29 CFR 1910.120). These training requirements are specified in the HSP (Appendix B), and are to be met before project personnel can begin site work. All personnel working on the site will review this HSP with the SUXOS/UXOSO. Personnel will sign an acknowledgment form to document their review and agreement to comply with the provisions of the HSP.

Activity Hazard Analysis (AHA) will be prepared using the AHA form provided in the HSP Attachments as a guide before beginning each project activity posing health and safety hazards to project personnel. The AHA will identify the work tasks required to perform each activity, along with potential health and safety hazards and recommended control measures for each work task. In addition, a listing of the equipment to be used to perform the activity, inspection requirements, and training requirements for the safe operation of the equipment listed must be identified. Daily safety meetings held with all project personnel in attendance will review the hazards posed and required health and safety procedures/AHAs that apply for each day's project activities.

At the start of each day's activities during the daily safety meeting, the SUXOS will complete the Pre-Task Safety Plan (PTSP), provided in the HSP attachments, with input from the work crew. The PTSP serves the same purpose as the general assembly safety meetings, but the PTSPs are held between the crew supervisor and their work crews to focus on those hazards posed to individual work crews. The day's tasks, personnel, tools and equipment that will be used to perform these tasks are listed, along with the hazards posed and required health and safety procedures, as identified in the AHA. The use of PTSPs, better promotes worker participation in the hazard recognition and control process, while reinforcing the task-specific hazard and required health and safety procedures with the crew each day. The use of PTSPs is a common safety practice in the construction industry.

4.4.3 MEC Awareness Training

Initial MEC Training

Initial MEC awareness training is an appropriate safety precaution for all personnel working on this project. MEC awareness consists of training in basic MEC characteristics, identification and reporting procedures.

Repetitive MEC Training

On the first workday of each work week/period or more frequently if needed, a pertinent MEC-related topic will be selected and discussed by the SUXOS during the Tailgate Safety Briefing. These safety meetings will help ensure the safety and health of field personnel in the performance of regular work activities and in emergency situations. Safety meetings will be documented.

4.4.4 OSHA Training

All employees involved in hazardous waste site activities receive 40 hours of OSHA HAZWOPER training. They must also have current HAZWOPER 8-Hour Refresher Training prior to working on the site. Any site worker entering the site will be required to have current HAZWOPER training.

4.4.5 Hazards Communication Training

OSHA's standard for hazard communication requires all workers be informed of potentially hazardous materials used in their work area. Employees will be provided information and training on hazardous materials at their work site at the time of their initial assignment and whenever a new material is introduced or found that could present a potential hazard. Personnel will be briefed on the general requirements of the OSHA hazard communication standard and duty-specific hazards by their immediate supervisor before they begin any duties on the work site. Personnel transferred from another site also will be briefed on the duty-specific hazards by their immediate supervisor before they begin any duties on the work site.

4.4.6 Hearing Conservation Training

The risk management of noise requires the identification of noise sources, assessment of potential to cause injury, and control of all noise sources, such that no personnel should be exposed to potentially harmful noise levels. A full systematic approach must be implemented to successfully manage site noise. The amount of noise or its loudness is measured for continuous noise in decibels on the A scale (dBA), slow response mode. The limit for unprotected noise exposure is 85 dBA averaged over an 8-hour day. Noise levels above 85 dBA generally require raising one's voice to be heard at a distance of 3 feet (approximately 1 meter). The higher the noise level, the shorter the allowable limits of unprotected exposure time. Hearing protection should be utilized for all noise exposures above 85 dBA. The level of impulsive or impact noise is measured on the C scale (dbC) using a "peak hold" or impact setting. The maximum limit for impulsive noise is 140 dbC for a single impulse. Whenever CH2M HILL employee noise exposures equal or exceed an 8-hour time-weighted average sound level of 85 dBA and/or an impact noise level of

140dbC from use of heavy equipment or explosions from the detonation of MEC, hearing protection will be required.

4.4.7 First Aid and CPR

At least two site personnel will be required to have first aid and cardiopulmonary resuscitation (CPR) training and appropriate certification. CPR certification is renewed annually; first aid certification is renewed every 3 years. All first aid/CPR training is American Red Cross-approved or in accordance with OSHA standards. Additionally, first aid/CPR qualified personnel received bloodborne pathogen training as required by 29 CFR 1910.1030.

4.4.8 Bloodborne Pathogen Training

Bloodborne Pathogen training is required for all personnel working on MR sites who could reasonably come in contact with blood or other potentially infectious materials, as the result of performing their job duties.

4.4.9 Visitor Training

Visitors to the site may include representatives from the Navy, City of Jacksonville, or Jacksonville Airport Authority (JAA). These personnel, even if escorted, must receive, as a minimum, a briefing on site conditions, hazards, and emergency response procedures. Visitors must possess the appropriate level of OSHA training. The SUXOS will provide the visitor briefing. All visitors to the site will be escorted at all times. Visitors not complying with the above requirements will not enter the site.

4.5 Medical Surveillance

The Medical Surveillance Program is designed to track the physical condition of employees on a regular basis as well as survey pre-employment or baseline conditions prior to potential exposures. The employer (prime/subcontractor) is responsible for the medical surveillance of their employees. The employer (prime/subcontractor) must vouch for the medical eligibility of their employees.

4.5.1 Medical Examinations

Each employee must receive a baseline physical, which can be part of an annual medical monitoring program, prior to being permitted to enter the EZ. The content of the physical will be determined by the employer (prime/subcontractor), but should be based on National Institute for Occupational Safety and Health (NIOSH)/OSHA/U.S Cost Guard (USCG)/EPA Occupational Safety & Health Guidance Manual for Hazardous Waste Site Activities. The minimum medical monitoring requirements for work at the site are as follows:

- Complete medical and work histories
- Physical examination
- Pulmonary function tests (FVC and FEV1)
- Blood chemistry (CBC and SMAC 24)

- Urinalysis with microscopic examination
- Audiometric testing
- Eye examination and visual acuity
- Chest x-ray (as directed by the Occupational Physician)
- Electrocardiogram (as directed by the Occupational Physician)
- Other biological testing as prescribed by the Occupation Physician
- Serum lead
- Zinc protoporphyrin
- Arsenic

In addition to a baseline physical, employers (prime/subcontractors) must provide their employees a physical every 12 months.

Any employee found to have a medical condition that could directly or indirectly be aggravated by exposure to these site contaminants cannot be employed for the project.

4.5.2 Exposure Monitoring

A review of the site location and conditions has resulted in the determination that an Air Monitoring Plan (AMP) is not anticipated to be needed for execution of the MR for this project. Should changes in project-specific site conditions warrant, a site-specific AMP will be developed.

4.5.3 Alcohol and Drug Abuse Surveillance Plan

CH2M HILL employees who perform or oversee MR operations are subject to the provisions of HSE-105, *Drug-Free Workplace*.

Subcontractors are responsible for ensuring that their employees who perform MR operations on CH2M HILL projects are on a drug abuse surveillance program that meets the requirements of HSE-105.

4.6 Munitions Response Procedures

4.6.1 Subsurface Clearance

Safety Considerations

Subsurface clearance actions will be accomplished in strict accordance with the HSP (Appendix B) and ESS (Appendix D). The UXO team should review these plans and any archival information available regarding the MRS. The UXO team will determine the probable types of MEC that may be encountered and specific safety considerations. Prior to commencing subsurface clearance activities, the UXO team will provide a general work and safety briefing to all onsite personnel. This briefing will address the following:

- Probable site hazards and site-specific safety considerations
- UXO safety support procedures
- Responsibilities and lines of authority for any MEC-related response
- Emergency response procedures

Underground Utilities

Utility clearance and/or excavation permits, if required, will be obtained prior to the commencement of any intrusive activities. The UXO Team is responsible for verifying that all necessary excavation permits are on site prior to commencing operations. In the event subsurface utilities are suspected in an excavation area, the UXO team will attempt to verify their location using geophysical survey instrumentation (only utilities with a ferrous content are detectable with a magnetometer). All located utilities should be marked with a series of pin flags to visually delineate their approximate subsurface routing.

Exclusion Zones

EZs will be established in accordance with the ESS (Appendix D) for all MEC clearance procedures (for example, anomaly excavation, accessing and identification of MEC, MEC recovery, and MEC destruction). During these operations, all non-essential personnel will withdraw to a location outside the EZ. Essential personnel include only those UXO team personnel necessary to accomplish the specific MEC subsurface clearance task.

4.6.2 Area Preparation

Area preparation includes mosquito control, site layout (survey), and reduction and/or removal of trees and vegetation that may impede or limit the effectiveness of the DGM survey or subsurface clearance actions. The anomaly avoidance procedures will be followed during area preparation. Teams working in areas not previously cleared of MEC will be accompanied by UXO qualified personnel.

Mosquito Control

A local pest control company, supported by a UXO escort for UXO avoidance, will be used to spray the heavily vegetated areas to provide an appropriate working environment for UXO technicians and site workers. This task is required because of the nature of the operations to be conducted by the UXO technicians. The tasks to be performed require individuals to be focused and concentrated on visual and audible observations (from handheld geophysical instruments). Based on experience, the heavy concentration of mosquitoes at the site will be a significant distraction for personnel if not alleviated or reduced.

Mosquito control will be completed by the City of Jacksonville Mosquito Control, schedule permitting, or by a local pest control company. The project site will be sprayed by airplane or fog truck.

Site Layout (Survey)

Site surveys will be performed using a RTK GPS. A site boundary survey will be performed and a uniform system of operational grids established across the site. The boundary survey will be performed first and include placement of colored flagging on stakes along the perimeter of the site to establish work area limits. A system of 100- by 100-foot grids coinciding with the Florida State Plane coordinate system will be established across the site using labeled stakes. Following grid placement, the extents of the EZs will be surveyed to include the placement of stakes with colored flagging along the perimeter of each EZ. Stake

locations will be checked by a UXO Technician with a handheld magnetometer (Schonstedt Ga-52Cx) prior to any stakes being driven.

Tree and Vegetation Removal with MEC Support

A local vegetation removal contractor will be used to remove existing trees and vegetation over the investigation areas. This task is necessary to complete the surface/near-surface sweep, geophysical survey, and subsurface anomaly investigations. Trees and vegetation will be removed to approximately six inches above the ground surface. MEC avoidance will be performed during tree and vegetation removal. This includes visual observation of the ground surface by UXO Technicians prior to and during vegetation removal and instrument-assisted detection using a handheld magnetometer (Schonstedt Ga-52Cx). The instrument will be used to check inside heavy vegetation (for example, a thick bush) where it is not possible for the UXO Technician to visually check the area.

4.6.3 MEC Intrusive Operations

An instrument-assisted surface clearance, digital geophysical mapping survey, and a subsurface anomaly investigation will be performed, beginning over the approximate 7.25-acre excavation footprints, to locate and excavate the sources of all detectable metallic anomalies in the subsurface.

Equipment Check Area

Daily equipment checks will be performed over static items in an equipment check area on both the Schonstedt GA-52Cx magnetometers and EM61-MK2 metal detectors to ensure the equipment is operating appropriately. Any equipment not passing system checks will be fixed or removed from site.

Instrument-Assisted Surface Clearance

A SUXOS will oversee the MEC Clearance Team (one UXOSO, one UXO Technician III [Team Leader], and three UXO Technicians II) as they proceed back and forth across the footprint of the investigation areas, the operations will include a visual search of the surface augmented with the addition of handheld magnetometers (Schonstedt Ga-52Cx) to locate and remove MEC (to include small arms) and ferrous items 2-inch by 2-inch and larger from the soil surface. Surface/near-surface search efforts shall: 1) identify MEC for assessment and disposition options; 2) recover MPPEH for consolidated storage and processing; 3) collect surface solid waste; and 4) flag-in-place MEC determined unsafe to move

Navigation within the grid will be performed using the survey land method to mark the boundary of the surveyed area. The spacing between members of the sweep line will not be larger than 5 feet, and the SUXOS will ensure that the MEC Clearance Team covers the entire area assigned to them.

The advantages of an instrument-assisted surface clearance is that it is an accepted and proven method and the equipment is relatively inexpensive and reliable. The disadvantages of this method are that it is labor intensive, not verifiable because there is no recorded data that can be examined later to verify the quality of the overall MEC Clearance Team, and the required attention to detail of the individual team members.

Digital Geophysical Mapping Survey

The surface/near-surface search will be supplemented with a subsurface DGM of the investigation areas to record the location of ferrous and non-ferrous items possibly representing MEC.

DGM will be completed using EM61-MK2 time-domain metal detectors to map the investigation areas and select geophysical anomalies that could potentially represent subsurface MEC while developing a clear, defensible and complete Administrative Record containing all recorded and developed data. Prior to commencing the DGM survey, the selected geophysical equipment and survey methodologies will be demonstrated as meeting project DQOs using a GPO prior to use for site surveys. The GPO provides an opportunity to ensure that the appropriate DGM and navigation equipment has been selected for the site geology, vegetation, and terrain features that may affect the survey. The GPO will be conducted in an area outside of the site that is representative of site conditions.

Subsurface Anomaly Investigation

Intrusive investigation will involve the excavation of a statistically representative number of anomalies. Anomaly investigation involves soil removal to identify the source of the anomaly. Focused investigations may also be applied where anomaly investigations do not provide sufficient information to fully identify the source of the anomaly; for example, if a geophysical signature remains following removal of the previously identified anomaly. Excavations may be manual, or manual and mechanical aided, as required by depth of anomalies. If mechanical equipment is necessary based on the depth of anomaly, measures will be taken to avoid any contact with the anomaly. Two typical approaches will be: 1) to excavate to the side of the anomaly and use manual excavation with hand tools to move in horizontally to the anomaly, or 2) to incrementally excavate directly over the anomaly with periodic magnetometer checks, stopping mechanical excavation one-foot above the target, and completing excavation manually with hand tools.

4.6.4 Portable Type 2 HE Storage Magazine Installation and Temporary Storage of MEC

In the event an MEC item is identified at the site, the SUXOS will secure the site and notify the CH2M HILL PM, who in turn will notify the NAVFAC SE Remedial Project Manager (RPM) and FDEP representative. If the SUXOS and one other qualified UXO Technician determines the MEC item(s) safe to move, the MEC item(s) will be placed in a portable Type 2 HE storage magazine for temporary storage, and secured for disposal by detonation at the end of the MR. If the SUXOS determines the MEC item(s) are not safe to move, the site will remain secured until disposal operations can be performed.

The Type 2 HE storage magazine will be a skid-mounted 5.5-foot by 5-foot by 5-foot box Type 2 magazine as described in Section 55.208(a) of ATF P 5400.7, Alcohol, Tobacco, and Firearms Explosives Law and Regulations. This explosives storage area will meet the requirements of:

- Title 27 CFR, Alcohol, Tobacco Products and Firearms, Part 55, Commerce in Explosives
- DoD, 2004, 6055.9-STD – DoD Ammunition and Explosives Safety Standards

- NAVSEA, July 1, 2007 OP 5 Volume 1 - Ammunition and Explosives Ashore: Safety Regulations for Handling, Storing, Production, Renovation, and Shipping of Ammunition and Explosives Ashore, Seventh Revision, Change 6

The magazine will be installed in accordance with this Work Plan Addendum and ESS (Appendix D) and secured within a fence.

Items will not be transported for offsite storage or treatment.

Inspections

The magazine will be inspected at least every 7 days to determine whether there has been unauthorized entry or attempted entry into the magazine, or unauthorized removal of the contents of the magazine.

Physical Security

Magazine locks will meet the standards for ATF Type 2 magazines, as specified in Section 55.208(a)(4), ATF P 5400.7. The magazine will have two locks. The SUXOS will hold a key to one of the locks, and the UXOSO will hold the key to the other. Access to the explosives will require both individuals.

Placards

The magazine will display the placards required by Department of Transportation (DOT) 49 CFR Part 172, Subpart F, for the appropriate hazard division and class. A hazard identification for fire fighting personnel (Fire Division 1 symbol in accordance with Chapter 4-4.2 of OP 5 Volume 1 [NAVSEA, 2007]) will also be displayed at the magazine storage area. Signs stating “EXPLOSIVES” and "NO SMOKING" will be posted on the fence surrounding the magazine.

Lightning Protection System

The magazine will be grounded for lightening protection.

Fire Protection

Fire extinguishers of 10 lb and type BC will be located in the magazine area. Smoking, matches, open flames, spark-producing devices, and firearms will not be permitted within 50 feet of the magazine. The land surrounding the magazine will be kept clear of all combustible materials for a distance of at least 50 feet.

Housekeeping

The area surrounding the magazine will be kept clear of all vegetation (including rubbish, dry grass, and trees) for not less than 50 feet in all directions.

Safety Distances

Determination of appropriate safety distances will be in accordance with the ESS (Appendix D). Based on Table 7-9 in OP 5 Volume 1 (NAVSEA, 2007), the hazardous fragment explosive safety quantity distance (ESQD) for a maximum net explosive weight (NEW) of 15 lb for Division 1, Class 1 Explosives is 506 feet. The ESQD arc for the magazine

is shown on Figure 2-1 of the ESS. No buildings or public transportation routes are located within the ESQD for the Type 2 HE storage magazine. The Type 2 HE storage magazine will be placed to have at least a 45-foot intraline distance from any intrusive work.

4.6.5 MEC Disposal

All MEC recovered at the site will be disposed of by open detonation in accordance with this Work Plan Addendum and all applicable state (FAC Chapter 62-730.320) and federal regulations.

In the event an MEC item is identified at the site, the SUXOS will secure the site and notify the CH2M HILL Project Manager, who in turn will notify the NAVFAC SE RPM and FDEP representative. The SUXOS is responsible for completing the MEC Information form (Appendix F). If the SUXOS and one other qualified UXO Technician determine the MEC item(s) are safe to move, the MEC item(s) will be placed in a portable Type 2 HE storage magazine for temporary storage, and secured for disposal by detonation at the end of the MR. If the SUXOS determines the MEC item(s) not safe to move, the site will remain secured until disposal operations can be performed. Determination of appropriate safety distances will be in accordance with the ESS (Appendix D) and FAC Chapter 62-730.320(2e). Coordination with the FDEP for detonation of recovered MEC requires an Emergency Permit for Detonation. Examples of a completed Emergency Permit Request, Emergency Permit Order, and Emergency Permit Order Public Notice are provided in Appendix E.

MEC item(s) which have been moved for temporary storage in a portable Type 2 HE storage magazine will be disposed of by detonation at the MEC demolition location shown in the ESS (Appendix D). Engineering controls which conform with DDESB TP-16 Revision 1 and U.S. Army Corps of Engineers (USACE), Huntsville Center, Use of Sandbags for Mitigation of Fragment and Blast Effects Due to Intentional Detonation of Munitions, HNC-ED-CS-S-98-7 dated August 1998 and approved by DDESB February 23, 1999, will be used to maintain the appropriate safety distances. Calculations for the engineering controls are discussed in the ESS (Appendix D).

The safest and most expeditious methods of disposal will be utilized in every case. Disposal will be conducted in accordance with EODB 60A 1-1-31, OP 5 Volume I, and NAVSEA SW060-AA-MMA-010 Volumes I and II and the procedures outlined below.

Movement of UXO

Recovered MEC will not be moved unless it is safe to do so. MEC items that are required to be moved onsite (that is, to the temporary Type 2 HE storage magazine or from the storage magazine to the demolition site) will primarily be moved by hand; however, these items may be moved by vehicle across the open areas within the MRS. The terrain within the MRS is flat and vegetation is either mowed or will be removed as part of site preparation activities. All vehicle movements of MEC within the MRS will comply with the requirements of SW023-AG-WHM-010, On-Station Movement of Ammunition and Explosives by Truck and Railcar.

The following rules are applicable:

- Movement of UXO is only performed when a UXO Technician can make a positive identification that the munition is safe to move and have his/her identification verified by at least one other UXO Technician prior to movement.
- Fuzed UXO and UXO that is determined as not safe to move will be destroyed by blown-in-place (BIP) if the area can withstand a high-order detonation.
- MEC that is not safe to move must be treated in-place or moved using remote means.

Procedures if MEC Cannot be Moved

If the area cannot withstand a high-order detonation and the MEC is not safe to be moved, the MEC may be rendered safe by military EOD. If rendered safe or movement is not an option, then design and implementation of engineering controls to mitigate the effects of a high-order detonation must be effected. Coordination with and approval by NOSSA is required before detonating a MEC.

MEC Destruction

Handling and disposal of MEC is a hazardous process. The detonation of MEC will be done in accordance with the ESS (Appendix D) and FAC Chapter 62-730.320. The SUXOS and another qualified UXO Technician must agree on the positive identification of the item and the disposition of the item prior to implementing any disposal operations. If the area where the item is found is determined to be incapable of withstanding a high-order detonation, protective works, such as sandbags, dirt revetments, or trenches will be used. Engineering controls must be pre-approved by NOSSA or submitted to NOSSA for review and approval prior to being implemented. MEC must not be destroyed unless a positive identification can be made. In the event assistance is needed to make a positive identification, military EOD assistance will be requested as an emergency response.

Only the SUXOS and UXO Team members will be allowed within the EZ once the disposal operations have begun. The SUXOS will have overall control of the site. All UXO personnel will ensure safe work practices are observed.

When possible, detonations will be initiated electrically or with shock tube systems. This method offers the SUXOS the maximum amount of control over the detonation and allows the detonation to be aborted up to the instant of initiation. An MEC Disposal Checklist (provided in Appendix F) provides step-by-step checks to ensure that the demolition team has completed each step for detonation of MEC. The checklist provides procedures for preparation of the detonation charge.

The SUXOS is responsible for scheduling the detonation operations and for ensuring that all project personnel are accounted for before disposal operations begin.

The Disposal Team, comprised of the SUXOS and a UXO Technician, will inspect the location and condition of each MEC slated for detonation to ensure positive identification of the MEC and to determine the NEW for calculation of safety distances.

Prior to initiation, the SUXOS will ensure that guards are stationed at the roadblocks, scan the hazard/fragmentation area with binoculars, and sound three distinct blasts on an air or

vehicle horn. The SUXOS will then scan the area again and initiate the demolition charge if all is clear.

In the event of a misfire, a 60-minute wait time will be observed. Then a new double-primed initiator will be prepared and used to initiate the charges. The Misfire Checklist (provided in Appendix F) will be completed by the SUXOS and filed with the Field Daily Activity Logs.

During demolition activities, the SUXOS will have overall control of the site. An EZ will be established around the demolition site according to the ESS (Appendix D) and FAC Chapter 62-730.320(2e). Only the SUXOS, UXO Team, and UXO-qualified safety personnel will be allowed within the EZ once the disposal operations have begun. The UXOSO will ensure safe work practices are observed, and the UXO Technician III will perform the necessary steps to safely dispose of the military munitions. The following general procedures will be followed for all disposals by detonation:

- The UXO Team, comprised of the UXO Technician III and a UXO Technician II, will inspect the location, condition, and NEW of the military munitions to be disposed of.
- The UXO Technician III will ensure that permission to detonate explosives has been obtained from the SUXOS.
- The SUXOS will schedule the detonations and to ensure that all project personnel are accounted for before disposal operations begin.
- A minimum separation distance of 25 feet will be observed for initiators and main-charge explosives while at the disposal site.
- Upon arrival at the safe firing point, the UXO Team will lay out the firing wire. If several military munitions are located in close proximity to each other, a mainline/branchline shot may be used to destroy these military munitions simultaneously to increase the efficiency of the operation. The UXO Team will ensure that the total NEW of the military munitions to be destroyed does not increase the EZ minimum separation distance to a radius that is larger than has been evacuated.
- All detonations will be double-primed. The firing wire and initiators will be tested for continuity and the UXO Technician III will observe the UXO Technician II position the explosive charge against the military munition. The disposal shot may be tamped to minimize the effects of the detonation. However, the initiators (blasting caps) should never be buried.
- The initiators will then be connected to the firing wire and secured to the end of the detonating cord or placed into the main charge.
- The UXO Technician III will then inspect the disposal shot and return to the safe firing point.

Post-Demolition Operations

After successful initiation of the explosive charge, the UXO Team will conduct an inspection of the detonation site to ensure complete destruction of the military munitions. After verification that no more detonations will be required, an “all clear” notification will be sent out to all parties on the notification list.

The UXO Team will collect for disposal all sandbag fragments, large munition fragments, and other debris; and generally clean and restore the area.

Visible residual materials and/or impacted soil will be recovered from the site and managed, transported, and disposed of in accordance with Section 8.0 of this Work Plan Addendum.

4.6.6 Engineering Controls

Fragment or blast mitigation may be provided by appropriate DDESB-approved engineering controls. Typical engineering controls for intentional detonation include tamping and sandbags. The design of such an engineering control will be based on the munition with the greatest fragmentation distance (MGFD). The NEW used for the design of the engineering control will be the total NEW of all munitions plus the initiating explosives.

Sandbag Thickness for Intentional Detonations

The amount of sandbagging required to contain all fragmentation depends on the munition, and is described in Use of Sandbags for Mitigation of Fragmentation and Blast Effects Due to Intentional Detonation of Munitions, HNC-ED-CS-S-98-7, August 1998.

Sandbag Enclosure Construction Method

The gradations and physical composition of sand for the sandbags are not critical, but should be at least typical of local construction practice for sand used in foundations and backfill. Minor inclusions of clay or soils materials are permitted. However, no rocks or stones will be placed in the sandbags.

Four walls of identical thickness will surround the munition. The sandbag walls will be stacked to maintain a clear standoff distance of 6 inches between the munition and the inside face of each wall. The interior face of each wall should be vertical but the exterior face can be built with a 1:6 slope (2 inches horizontal to 12 inches vertical). If a sloped outer face is used, the thickness of the wall at the top must be no less than the specified required thickness.

At a minimum, a double layer of sandbags will be used. For example, when a 12-inch thickness is required, the sandbags should be oriented so that two sandbags are necessary to achieve this thickness. The sandbags will be placed tightly against each other. All vertical joints will be staggered and there should be no clear line of sight from the munition to the exterior. As the wall is built, each new layer of sandbags will run in opposite direction to the layer below, so that the layers are interlocked.

After the walls are constructed to a height of 6 inches above the upper surface of the munition, the counter charge or other initiator will be placed on the shell. The counter charge should be located on the side of the munition. Sensitized detonating cord will lead through a polyvinyl chloride (PVC) pipe to the counter charge. The blasting cap used to initiate the detonating cord will not be attached until the sandbag enclosure has been completed and permission to fire has been granted.

A sheet of 0.75-inch thick Douglas fir (or equivalent) plywood will be cut to the dimensions of the cavity between the walls, plus 12 inches in each direction. The plywood sheet will

then be centered on the walls so that it bears on 6 inches of each wall. The additional sandbags that make up the roof of the enclosure are then placed on top. As with the walls, the roof sandbags will be stacked with staggered horizontal joints and alternating directions in each layer. The exterior sides of the roof may also be vertical or have a 1:6 slope. The thickness of the sandbag roof above the plywood panel must be the same as the required wall thickness.

After the sandbag layers of the roof have been placed to the correct height, the enclosure is complete and the munition may be detonated.

4.6.7 MPPEH Procedures

Handling and disposal procedures for MPPEH are provided in the ESS (Appendix D) and procedures provided in Appendix G.

4.7 Explosives Management Plan

4.7.1 Acquisition

This Explosives Management Plan (EMP) provides details of the plan for management of explosives to support the project. The design of the project field effort specifies that explosives will be received on an as-needed basis. The quantity of delivered explosives will be adequate to complete the identified task without resulting in an unused portion. This plan was developed in accordance with MMRP MCX DID OE-005-03, local and state laws and regulations, Bureau of Alcohol, Tobacco, and Firearms (BATF) P 5400.7, DoD 6055.9-STD, DOT regulations, and OPNAVINST 5530.13C.

Explosive donor charges will be delivered by a commercial explosives vendor properly licensed in accordance with NAVSEA SW020-AF-HBK-010, Motor Vehicle Driver and Shipping Inspector's Manual for Ammunition, Explosives, and Related Hazardous Materials. Explosives will be delivered directly to the MRS work area as needed and will be immediately prepared and used to perform detonation of recovered MEC. The contractor and MEC subcontractor will coordinate with, and obtain approval from the CH2M HILL PM and SUXOS, prior to bringing explosives onto the site. Explosives vendors cannot supply explosives without the required valid dealer BATF license. A copy of this vendor license will be maintained at the project site, and upon request, will be made available to any local, state, or federal authority.

The following explosives may be used during disposal of military munitions:

- Main charge HE such as TNT, Octahydro-1,3,5,7-tetramitro-1,3,5,7-tetrazine (HMX), C-4 (M112 blocks), or binary explosives that detonate at high velocities will be used to detonate military munitions.
- Jet perforators or similar prepackaged shaped charges will be used to explosively vent hard-cased munitions.
- Detonating cord will be used to construct mainline-branch line shots, to link multiple shots together, or to transmit the explosive train to the main charge explosive when the main charge is buried (tamped), underwater, or otherwise inaccessible.

- Electric and/or non-electric blasting caps will be used as initiators.
- Non-electric (NONEL) tubing will be used to transmit the explosive train from the igniter to the demolition devices. Shock tube priming of explosives offers the instantaneous action of electric detonation without the risk of accidental initiation of the blasting cap (and the charge) by radio transmitters in the area, or by static electricity discharge. The explosion of the shock tube is totally contained within the plastic tubing.

4.7.2 Receipt

When commercial explosives are received, the explosives will be transported to the site by a commercial explosives carrier who is licensed and permitted. Explosives in unsealed boxes containing partial lots will be opened, and the contents of the box will be counted. Any discrepancies between the actual type and quantity of explosives received and the shipping documentation will be noted on the shipping documentation with the signatures of both the delivery driver and the individual authorized to receive the explosives. A legible copy will be filed on site. The authorized individual receiving the explosives will immediately inform the SUXOS of the discrepancy, who will in turn notify the CH2M HILL Project Manager. In addition, the following apply:

- Explosives must be accounted for from initial delivery to the site until the item is expended or the contractor is relieved from accountability by the Contracting Officer.
- Individuals authorized to receive, issue, transport, and use explosives by contract position title and those individuals will assume accountability by signing the receipt documents.
- The SUXOS as the end user of explosives will certify in writing that the explosives were used for their intended purpose.

4.7.3 Transportation

Onsite Transportation Procedures

MEC items that are required to be moved onsite (to the temporary Type 2 HE storage magazine or from the storage magazine to the demolition site) will primarily be moved by hand; however, MEC items may be moved by vehicle across the open areas within the MRS. The terrain within the MRS is flat and vegetation is either mowed or will be removed as part of site preparation activities. All vehicle movements of MEC within the MRS will comply with the requirements of SW023-AG-WHM-010, On-Station Movement of Ammunition and Explosives by Truck and Railcar.

Explosive donor charges will be delivered by a commercial explosives vendor properly licensed in accordance with NAVSEA SW020-AF-HBK-010, Motor Vehicle Driver and Shipping Inspector's Manual for Ammunition, Explosives, and Related Hazardous Materials. Explosives will be delivered directly to the MRS work area as needed and will be immediately prepared and used to perform detonation of recovered MEC.

Vehicle Requirements

Vehicles transporting explosives on the project site must comply with NAVSEA SW023-AG-WHM-010, On-Station Movement of Ammunition and Explosives by Truck and Railcar, and the following requirements:

- Vehicles transporting explosives must be marked with appropriate placards when carrying all Class 1 explosives.
- All vehicles transporting explosives must be equipped with reliable communications, a first-aid kit, and two 10-lb type-BC fire extinguishers.
- Vehicles transporting explosives must be inspected daily when in use, and the inspections must be documented using a Motor Vehicle Inspection Form.
- A vehicle used to transport explosives must have a non-sparking bed liner, and all explosive loads must be covered prior to departure.
- Vehicles transporting explosives must be operated by a qualified driver with a Commercial Drivers License (CDL) that includes an explosives certification.

4.7.4 Lost, Stolen, or Unauthorized Use of Explosives

If explosives are discovered to be lost, stolen, or used without authorization, the incident will be immediately reported to the SUXOS, who in turn, will then inform the CH2M HILL Project Manager and MR Market Segment Director.

The license holder is required by law (27 CFR 55.30) to report the theft or loss of explosives to the BATF within 24 hours. In the event of such an occurrence, the following procedures will be followed:

- The magazine (if one is used onsite) will be secured, and the area will be sealed until the appropriate authorities complete their investigation.
- The license holder will make the appropriate notifications as per 27 CFR 55.30. These include calling BATF (800-424-9555) and the local law enforcement authorities.
- The license holder is responsible for completing and forwarding BATF Form 5400.5 (provided in Appendix F). This form will be completed by the SUXOS, and a copy will be provided to the UXOSO.

4.8 Explosives Safety Submission

The ESS is provided in Appendix D.

4.9 Site Safety and Health Plan

The HSP is provided in Appendix B.

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5.0 Chemical Warfare Materiel

There is no history or evidence of CWM ever being used at the former NAS Cecil Field. However, in the event that suspected CWM is encountered, the following procedures will be followed:

- The discoverer will immediately notify the UXO Technician III.
- The UXO Technician III will immediately direct the work team to stop work and evacuate the site in an upwind direction. The initial EZ for CWM is 450 feet upwind in accordance with FM-9-15.
- The UXO Technician III will note the location of the suspected CWM to help with its identification and relocation.
- The UXO Technician III will designate a minimum of two UXO-qualified individuals to position themselves upwind as far as possible to prevent unauthorized personnel from accidental exposure.
- The UXO Technician III will immediately notify the SUXOS, who will in turn immediately notify the CH2M HILL Project Manager. The Project Manager will ensure the BRAC PMO SE RPM and CH2M HILL MR Market Segment Director are notified as soon as possible.
- The BRAC PMO SE RPM will coordinate notification of local and federal government agencies and request technical support from the U.S. Army.
- Note: Request for technical support for CWM may be initiated through the U.S. Army's 52nd Ordnance Group at Fort Gillem, GA (404) 469-3333.

The SUXOS will account for all field personnel and notify the CH2M HILL Project Manager.

The SUXOS will ensure the area is secured until properly relieved by active duty EOD personnel, technical escort unit (TEU), or local authority.

The SUXOS will direct personnel to support such personnel as appropriate.

Before work can resume, the site plans will be reviewed for adequacy in consideration of this newly discovered hazard.

6.0 Quality Management Program

The Quality Management Program details the QC procedures to be employed during project activities. The requirements and systems established herein are relevant and applicable to project work performed by CH2M HILL and its subcontractors. This site- and task-specific QC Plan supplements the general QC provisions provided in the NAS Cecil Field Basewide Work Plan (CH2M HILL, 1998).

The project organization chart (Figure 6-1) depicts the chain-of-command for this CTO and the individuals responsible for executing the work as indicated. Individual roles and responsibilities of CTO personnel are summarized in Table 6-1.

6.1 Project QC Personnel and Responsibilities

The Project QC Manager is responsible for the execution of the project's construction QC system and communicates the onsite QA program policies, objectives, and procedures to the project personnel and Subcontractors during project meetings and informal discussions. The SUXOS will assist the Project QC Manager in monitoring, controlling, and documenting the quality of the onsite construction, survey, and remedial activities. All documentation related to the control of the quality of the project including analytical test results, inspections, material test results, and audits will be reviewed or prepared by the Project QC Manager. The Project QC Manager's duties include the following:

- Three phases of control inspections
- Control testing
- Document control
- Review of Submittals
- Completion inspection
- Records
- Audits and surveillance

The Project QC Manager will also coordinate with and assist the Navy representatives in the performance of QA audits and inspections.

QC for the field activities on this project will include two primary elements: 1) field observation/audits of personnel and procedures and 2) checking equipment and instruments (for example, geophysical sensors and two-way radios) for functioning and appropriate response prior to use. CH2M HILL will have a Project QC Manager assigned to the project having overall QC responsibility. The CH2M HILL SUXOS will have daily on site QC responsibilities. The Project QC Manager and SUXOS have yet to be determined; however, Project QC Manager appointment letters will be submitted for each prior to the commencement of field work.

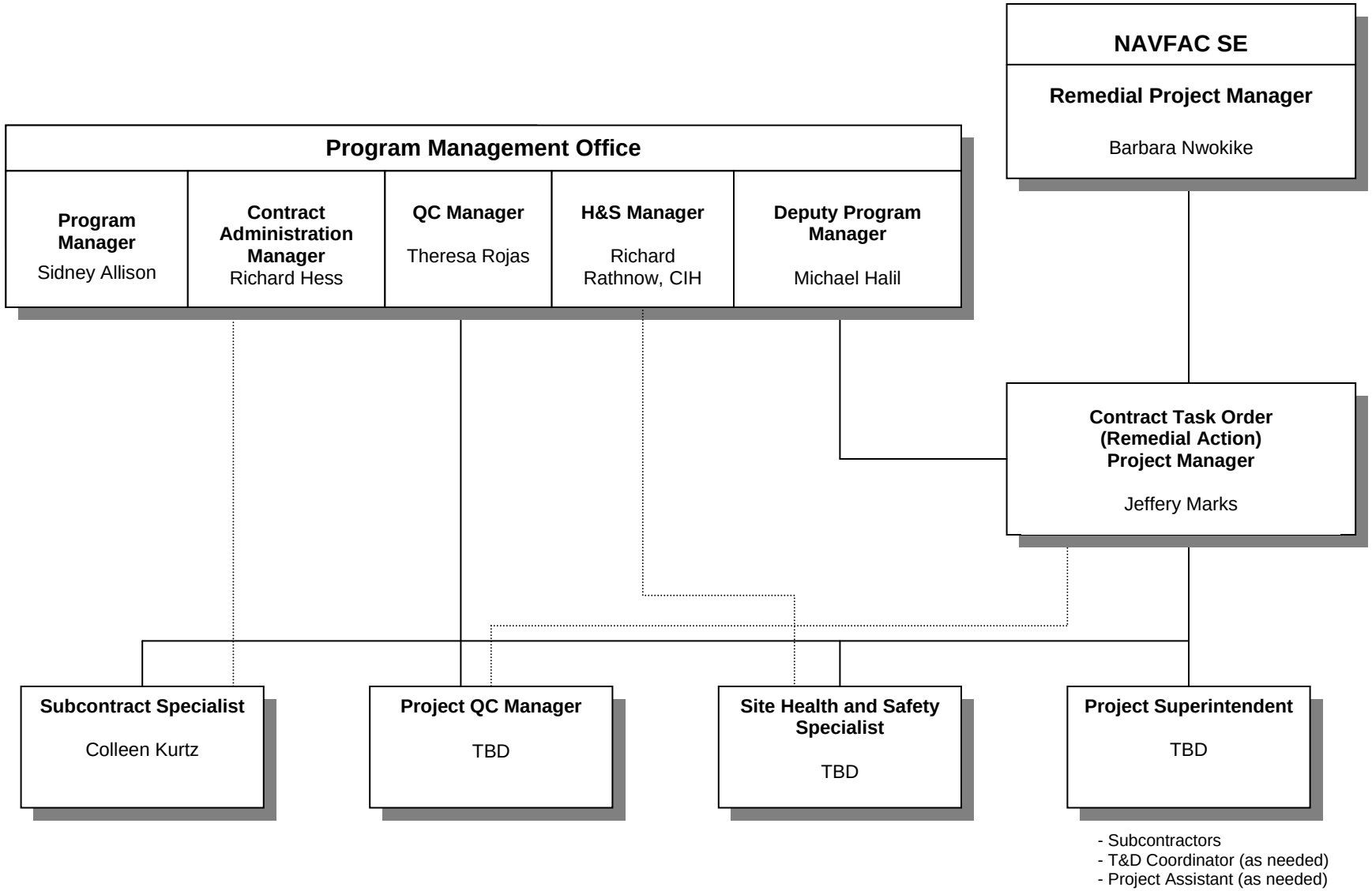

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Figure 6-1
Project Organization Chart

TABLE 6-1
Roles, Responsibilities, and Authorities of Key Project Personnel

Role	Responsibility	Authority
Project Manager	• Management and Technical Direction of work • Communication with NAVFAC SE RPM and NTR • Overview subcontractor performance • Select CTO staff • Develop CTO Work Plan and supporting plans • Meet CTO Performance Objectives • Prepare status reports	• Approve subcontractor selection • Approve invoices to NAVFAC SE • Approve CTO baseline schedule • Stop work at the site for any reason • Approve payment to vendors and suppliers • Approve payment to subcontractors
Site Superintendent	• Responsible for all site activities • Provide direction to subcontractors • Act for Project Manager • Provide daily status reports • Prepare CTO Work Plan • Conduct daily safety meetings • Review subcontractor qualifications • Stop work for unsafe conditions or practices	• Stop work for subcontractors • Approve corrective action for site work-arounds • Approve materials and labor costs for site operations • Resolve subcontractor interface issues • Approve daily and weekly status reports
Engineering Manager	• Monitor and oversee subcontractor compliance with scope of work • Review requests for changes in scope of work • Review technical qualifications of subcontractors • Prepare Field Change Requests • Respond to Design Change Notices • Recommend improvements in work techniques or metrics • Recommend work-around to Site Superintendent	• Approve Field Change Requests below ceiling amount • Complete daily compliance report
Field Accountant	• Provide project scheduling coordination • Responsible for site cost tracking and reporting • Maintain record of site purchases • Maintain government property records	• Approve payables for disposable items
Transportation and Disposal Coordinator	• Develop site specific procedures for transport and disposal practices • Plan and coordinate the transport and disposal of waste • Review subcontractor qualifications • Audit T&D subcontractors compliance with contract requirements	• Approve subcontractors daily report of waste material removed from the site • Approve corrective action plans from T&D subcontractor

TABLE 6-1
Roles, Responsibilities, and Authorities of Key Project Personnel

Role	Responsibility	Authority
Project Assistant	• Maintain CTO files and correspondence • Coordinate CTO schedule and monitor deliverables • Maintain change management records • Maintain Action Tracking System log	• Submit Action Tracking System log • Assign correspondence log numbers
Project QC Manager/ QC Inspector(s)	• Monitor and report on subcontractor quality and quantities • Audit subcontractors offsite fabrication • Maintain Submittal Register • Participate in Continuous Improvement Team • Stop work for non-compliant operations • Maintain Lessons Learned Log	• Stop work for non-compliant operations • File daily quantities report • File Lessons Learned Log Sheet • Approve resumption of work for resolved quality issues
Site Health and Safety Specialist	• Monitor and report on subcontractor safety and health performance • Record and report safety statistics • Conduct needed site safety and health orientation • Maintain Environmental Log • Stop work for unsafe practices or conditions	• Stop work for unsafe practices or conditions • Approve subcontractor site specific health and safety plan • Set weekly safety objectives • Approve resumption of work for resolved safety issues
Subcontract Specialist	• Prepare bid packages • Purchase disposable materials • Maintain subcontract log	

The following outlines the specific QC responsibilities of the SUXOS and the Project QC Manager.

The SUXOS will be responsible for ensuring that:

- Safety briefings have been performed for all personnel each day prior to commencing site activities and documenting the activity.
- Communications equipment has been checked for operability at the start of each workday.
- Geophysical instruments are checked at the start of each day on standard items of the approximate size, shape and weight of the DMM and MPPEH found previously at the site to ensure proper functioning.
- All site personnel are adhering to the project HSP (Appendix B).
- Tree and vegetation removal has been performed according to this Work Plan Addendum to ensure appropriate site conditions for MR operations.

- UXO Technicians are outfitted with appropriate personal protective equipment (PPE) and low-metal content boots, and that all metallic items (belts, keys, cellular phones, etc.) are removed from their clothing prior to operating geophysical instruments.
- All equipment needing charging prior to use is properly connected to chargers and a charge is being applied.
- Documentation of on site activities is performed on a daily basis and copies provided to the CH2M HILL Project Manager each day.
- Demolition activities strictly adhere to this Work Plan Addendum and the HSP.

The Project QC Manager will be responsible for the following:

- Review and verification of UXO personnel qualifications.
- At least one audit per week of each activity being performed that week.
- Auditing daily site documentation for completeness.
- Documentation of all audit results.
- Ensuring appropriate filing and storage of records.
- Documentation of QC issues.

Providing written recommendations to the CH2M HILL PM for corrective actions within one workday of identifying any QC issue.

6.2 Project Records Maintenance

The Project QC Manager is responsible for overall management and control of project submittals.

The Project QC Manager is to establish and maintain an onsite project file for document control. The Project QC Manager is responsible for controlling access to the project file to ensure that records are not lost or misplaced. The purpose of this file is to maintain a complete set of all documents, reports, certifications, and other records that provide information on project plans, contract agreements and project activities.

The Project QC Manager will complete a Submittal Register, provided in Appendix I, to document submittals in accordance with Appendix B of CH2M HILL's Contract Management Plan (CH2M HILL, 2003). CH2M HILL, the Navy, or others will approve submittals as identified in the Submittal Register. All approved submittals will be distributed by CH2M HILL to the appropriate Navy personnel, the project site, and the project file.

6.3 QC Inspections

The Project QC Manager will perform final inspections of the materials and overall work activities. The inspections are performed to ensure safe, efficient, high quality work is performed, while meeting the objectives and requirements of the plans and specifications.

The project tasks for this CTO project are grouped into two main categories (munitions response and excavation) and further grouped into definable features of work, which are work activities that are significant enough to warrant distinct plans and specifications.

6.3.1 Munitions Response Definable Features of Work

The definable features of work, responsible person(s), and audit procedures are listed in Section 6.0 of the ESS provided in Appendix D.

6.3.2 Excavation Definable Features of Work

The excavation definable features of work for this project are:

- Mobilization and Site Preparation
- Backfill Material Certification
- Onsite lead treatment and stabilization
- Soil Excavation and Backfilling
- Waste Management
- Site Restoration
- Decontamination
- Demobilization

Mobilization and Site Preparation

As part of the mobilization activity, a pre-construction meeting will be held to review the preparedness to begin the project, the overall project scope and schedule, communications and reporting. The preparedness check will verify that site preparation provisions such as permitting/approvals, utility clearances, demarcating the work zones, staging of equipment and material, and installation of erosion and sediment transport controls, as necessary, are in place. Additionally, equipment and materials will be verified functional and in good working condition prior to starting the project.

Preparatory Phase

The preparatory phase will include a review of the relevant AHAs, the project Work Plan Addendum, communications matrix, project schedule, submittal status, and confirmation of appropriate materials and equipment.

Initial Phase

Inspections will be made as necessary to ensure construction limits are defined, utilities marked, and material staged in the designated areas.

Follow-up Phase

The Project QC Manager will provide continuous oversight of the site preparation activities to verify that the work is completed in accordance with the requirements provided in this Work Plan Addendum. Deficiencies will be noted and corrected.

Table 6-2 lists the quality controls that will be implemented during mobilization and site preparation activities.

TABLE 6-2
QC Procedures for Mobilization and Site Preparation

Task	Procedures/Construction Details
Pre-construction Meeting	• Verification of excavation permit and utility clearance (as necessary) • Verification of designated locations of equipment layout, material and waste staging, and decontamination
Site Walk	• Verification of site layout plan • Verification of Environmental Conditions Report
Pre-construction Submittals	• Subcontractor plans and specifications • Subcontractor personnel qualification and certifications
Temporary Facilities	• Verification of temporary facilities for conformance with facility requirements • Verification of temporary utility hookups for conformance with the utility and the base requirements • Verify implementation of environmental protection measures (erosion and sediment control)

Backfill Material Certification

Prior to backfill activities any fill material will be certified as 'clean' in accordance with the Sampling and Analysis plan

Preparatory Phase

The preparatory phase will include the following: a review of the relevant AHAs, a review of the requirements provided in the Work Plan Addendum and the site-specific Health and Safety Plan; and confirming the appropriate equipment, resources, and qualified personnel are available to perform the work. Containers and waste staging areas will be prepared and managed in accordance with the protocols of the Waste Management Plan.

Initial Phase

Prior to the start of the sampling activities, the Project QC Manager will complete the initial inspection of the planned operation. The inspection will evaluate personnel qualifications, equipment conditions, and site arrangements. The Project QC Manager will verify the sampling equipment is free of deficiencies and proper sampling protocols are being followed. Deficiencies will be documented and corrected prior to starting the activity.

Follow-up Phase

The Project QC Manager will be responsible for the ongoing inspection during sampling activities. Surveillance will verify that the work is completed in accordance with the requirements provided in this Work Plan Addendum. Deficiencies will be noted and corrected. The daily activity will be documented in the Daily Contractor Quality Control Report.

Table 6-3 lists the quality controls that will be implemented during sampling activities.

TABLE 6-3
QC Procedures for Backfill Certification

Task	Procedures/Construction Details
Sampling	• Verify personnel qualifications • Verify appropriate equipment • Verify recording forms have been prepared and are accurate and complete

Onsite Lead Treatment and Stabilization

Following excavation on-site lead treatment and stabilization will involve the addition and mixing of either a 10 percent or 15 percent Portland cement mix to the excavated soil to encapsulate, solidify, and/or chemically modify the lead contaminants to reduce their leachability.

Preparatory Phase

The preparatory phase will include the following: a review of the relevant AHAs, a review of the requirements provided in the Work Plan Addendum and the site-specific Health and Safety Plan; and confirming the appropriate equipment, resources, and qualified personnel are available to perform the work. Containers and waste staging areas will be prepared and managed in accordance with the protocols of the Waste Management Plan.

Initial Phase

Prior to the start of the on-site lead treatment and stabilization, the Project QC Manager will complete the initial inspection of the planned operation. The inspection will evaluate personnel qualifications, equipment conditions, and site arrangements. The Project QC Manager will verify the equipment is free of deficiencies and proper protocols are being followed. Deficiencies will be documented and corrected prior to starting the activity.

Follow-up Phase

The Project QC Manager will be responsible for the ongoing inspection during on-site lead treatment and stabilization. Surveillance will verify that the work is completed in accordance with the requirements provided in this Work Plan Addendum. Deficiencies will be noted and corrected. The daily activity will be documented in the Daily Contractor Quality Control Report.

Table 6-4 lists the quality controls that will be implemented during sampling activities.

TABLE 6-4
QC Procedures for On-site Lead Treatment and Stabilization

Task	Procedures/Construction Details
On-site Lead Treatment and Stabilization	• Verify personnel qualifications • Verify appropriate equipment • Verify mixing percentages • Verify recording forms have been prepared and are accurate and complete

Excavation, Backfilling, and Site Restoration

Preparatory Phase

The preparatory phase will include the following: a review of the relevant AHAs, a review of the requirements provided in the Work Plan Addendum and the site-specific Health and Safety Plan; verifying acceptance and approval of the utility clearance; determining status of borrow source for use as backfill; and confirming that craftsmen are available to complete the work. The excavation competent person will be identified and the logistical approach for conducting the excavation and site restoration will be discussed. Containers and waste staging areas will be prepared and managed in accordance with the protocols of the Waste Management Plan.

Initial Phase

As the excavation activities proceed, the Project QC Manager will conduct initial inspections and monitor the work completed to verify conformity with this Work Plan Addendum. Deficiencies will be documented and corrected as necessary.

Follow-up Phase

The Project QC Manager will be responsible for the ongoing inspection of excavation and site restoration activities. Surveillance will verify that the work is being completed according to the Work Plan Addendum provisions. The following quality checks will be completed:

- Measure and record horizontal and vertical boundaries to verify excavation depth and width.
- Inspect placement of erosion control measures.
- Maintain chronological journal of visual observations while work activities progress.
- Verify approval to backfill completed excavations and determine adequate soil compactive effort during backfill.
- Monitor segregation and management of wastes.

Table 6-5 lists the quality controls that will be implemented during sampling activities.

TABLE 6-5
QC Procedures for Excavation, Backfilling, and Site Restoration

TABLE 6-5
QC Procedures for Excavation, Backfilling, and Site Restoration

Task	Procedures/Construction Details
Excavation	• Verify personnel qualifications • Verify excavation limits and locations • Verify appropriate equipment • Verify appropriate excavation depths have been reached • Verify recording forms have been prepared and are accurate and complete
Backfilling	• Verify personnel qualifications • Verify appropriate fill material is being used • Verify appropriate equipment • Verify recording forms have been prepared and are accurate and complete

TABLE 6-5
QC Procedures for Excavation, Backfilling, and Site Restoration

Task	Procedures/Construction Details
Site Restoration	• Verify personnel qualifications • Verify wet land areas and proper locations • Verify appropriate equipment • Verify appropriate seed mixtures are being used • Verify recording forms have been prepared and are accurate and complete

Waste Management

Preparatory Phase

The preparatory phase for transportation and disposal of waste streams includes a review of the waste management plan included in this Work Plan Addendum; disposal, recycling or treatment facility qualifications; transportation schedule for hauling material offsite; and confirming that the appropriate equipment and materials, such as waste manifests, are available to commence the work activity. Review and acceptance of the waste disposal package by the CH2M HILL waste coordinator is required prior to submitting the package to the Navy for approval. Prior to any work, the relevant AHAs will be reviewed and discussed. All temporary storage containers will be inspected prior to acceptance onto the project and labeled.

Initial Phase

This phase includes inspecting the waste transport vehicles (roll-off containers, end-dumps, transports, etc.) prior to accepting on the job. Containers used for soil transport will be lined prior to loading. Containers used for transporting liquids will be free of liquids or other foreign materials prior to filling. Information provided on the waste manifest must be verified as complete and accurate including, but not limited to, generator name, address and signature, date, type of material being hauled, designated recycling or treatment facility, and volume and/or weight of material. Any discrepancies on waste manifest documents will be corrected.

Follow-up Phase

This phase includes verifying that the designated recycling or treatment facility has accepted and treated the waste material at the facility and has sent the required completed manifest to the generator or the generator's technical representative. Receipt of the certificate of recycling or disposal from the designated facility must be verified, as well as that the invoice is complete and accurate. A field logbook and an electronic log of all transportation and disposal shipments will be maintained. Containers, tanks, and roll-off containers will be routinely inspected for integrity and inventoried. Waste storage areas (including areas with stockpiles, containers, tanks, roll-off containers) will be visually inspected on a daily basis for releases or signs of corrosion, deterioration, or other conditions that could result in a release. These results of all inspections will be recorded.

Table 6-6 lists the quality controls that will be implemented during sampling activities.

TABLE 6-6
QC Procedures for Waste Management

Task	Procedures/Construction Details
Waste Management	• Verification of designated locations of equipment layout, material and waste staging, and decontamination • Update waste tracking log and label waste containers • Inspect segregated wastes, label containers with content • Inspect waste containers for cleanliness, acceptable materials of construction, adequate storage volume
Transportation and Disposal	• Verify waste profile completion (obtain Navy Signature) • Transporter and Disposal facility certificates • Verify stockpile and waste storage area inspection

Decontamination and Demobilization

Personnel and equipment will be decontaminated in accordance with the provisions of the site-specific Health and Safety Plan. Pre-final inspection of cleanliness will be performed by the Site Superintendent and the Site Health and Safety Specialist. Final equipment inspections will be performed and documented by the Project QC Manager, or his/her designee.

Equipment and personnel will demobilize from the site following the completion of the work activities identified in this Work Plan Addendum. The Project QC Manager will verify that the objectives of associated system removal activities have been met. A final inspection will be conducted to verify completion of all project activities. Findings, should any be identified, will be tracked, resolved and documented during a final site walk through inspection.

Preparatory Phase

The preparatory phase will include a review of decontamination procedures, the site-specific Health and Safety Plan, the waste management plan, and relevant AHAs.

Initial Phase

The Site Superintendent will perform inspections to confirm that the objectives of the decontamination activities have been met and that the rework items, if any, have been completed to the satisfaction of CH2M HILL and the Navy.

Follow-up Phase

The Project QC Manager will provide continuous oversight of the decontamination and demobilization to verify that the work is completed in accordance with the requirements provided in this Work Plan Addendum. Deficiencies will be noted and corrected.

Table 6-7 lists the quality controls that will be implemented during decontamination and demobilization activities.

TABLE 6-7
QC Procedures for Decontamination and Demobilization

Task	Procedures/Construction Details
Decontamination and Demobilization	• Pre-final site inspection and develop punch-list items • Work areas to ensure all temporary facilities, equipment and materials are safely removed from the site • Work areas to ensure project housekeeping and cleaning • Decontamination of personnel and equipment • Completion inspection when work is substantially complete • Punch lists on outstanding items • Project housekeeping and final project cleaning • Final Inspections • Orderly Site Demobilization • Collation of Site Records and Documents • Final Reports and Deliverables • Complete Resolution of Punch-list items • Final Site Inspection • Orderly Site Demobilization

6.4 Testing Requirements

This section describes equipment and construction testing; environmental analysis laboratories and their certifications; environmental sampling and analysis, and test control. The Testing Plan and Log is provided in Appendix I.

6.4.1 Equipment

Testing and maintenance of geophysical instruments, two-way radios and other equipment will be performed in accordance with manufacturer's specifications. Daily equipment checks will be performed over static items in an equipment check area on both the Schonstedt GA-52Cx magnetometers and EM61-MK2 metal detectors to ensure the equipment is operating appropriately. Any equipment not passing system checks will be fixed or removed from site.

6.4.2 Identification and Certification of Testing Laboratories

The environmental testing laboratories utilized for this CTO project will function as a subcontractor, and have not yet been identified.

6.4.3 Construction

Construction testing is not planned for this CTO.

6.4.4 Environmental

Laboratories performing testing of environmental samples requiring definitive analysis will be approved by the National Voluntary Laboratory Accreditation Program (NVLAP), USACE, or Air Force Center for Engineering and the Environment (AFCEE), and certified by the State of Florida.

6.4.5 Testing and Sampling

Soil, water, and solids will be sampled under the direction of CH2M HILL. Geophysical or geotechnical soil testing (grain size, standard proctor and compaction) is not and will not be performed. A Navy-, USACE-, or AFCEE- and FDEP-approved laboratory will be used for all chemical sample analyses.

6.4.6 Test Control

Environmental samples will be collected in accordance with EPA methods and procedures. Other controls will include, but are not limited to, maintaining a chain of custody; proper handling, packing, and shipping; and the use of qualified laboratories. The Project QC Manager will verify the following:

- Facilities and testing equipment are available and comply with testing standards.
- The field instruments are calibrated in accordance with manufacturers' recommendations.
- Recording forms, including all of the test documentation requirements, have been prepared and are accurate and complete.

6.4.7 Completion Inspection

Near the completion of all tasks associated with the scope of work, the Project QC Manager shall conduct a punch-out inspection of the work items to determine completion status and conformance. A punch list of items will be generated that also includes target dates for resolving any deficiencies. This punch list of items shall be attached to the QC report on the day(s) of performing the inspections. The status of the items shall be tracked via follow-up inspections.

The Project Manager will notify the Navy that the project is ready for a pre-final inspection. The Navy will perform this inspection to determine whether the project is complete and ready for acceptance. Should any items be identified, a punch list of items will be generated and tracked by the Project QC Manager. Upon satisfactory completion of the punch list, the PM shall notify the Navy that the project is ready for the final inspection.

Advanced notice of at least 14 days shall be given to the Navy CO of the plan for conducting the final inspection. The status of the punch list items from the pre-final inspection shall be reported, and a statement that pending items shall be completed prior to the date of the final inspection. The Project Manager, Project QC Manager, SUXOS, essential subcontractor representatives, Navy representative(s), and others as determined by the Navy will attend the final inspection.

7.0 Sampling and Analysis Plan

This SAP describes the tasks and responsibilities with respect to the sampling and analysis associated with the work effort described in this Work Plan Addendum. CH2M HILL intends this document to be a site-specific guide for use by the field team while performing the project-required sampling and analysis. Any changes to the activities described in this SAP must be documented as an addendum to this SAP and approved by the Project Manager and Project Chemist.

In March 2007, CH2M HILL conducted in-situ soil disposal characterization sampling utilizing MEC avoidance. One composite sample was collected per approximate 300 tons and submitted for laboratory analyses. 8,093 ft^3 (12,140 tons) of soil is considered as non-hazardous and 3,760 ft^3 (5,640 tons) of soil is considered as hazardous, exceeding the criteria presented in 40 CFR 261.24.

Samples will be collected in accordance with the EPA Region IV Environmental Investigative Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), 2001 and the FDEP Standard Operating Procedures for Field Activities, DEP-SOP-001/01, January 1, 2002. Where the two contradict, the more stringent will apply.

The sampling team will be qualified under the Navy Installation Restoration Chemical Data Quality Manual (IRCDQM), 1999 sampling requirements.

7.1 Data Quality Levels for Measurement Data

The data quality levels for each sampling task are listed in Table 7-1. The sampling events, the sampling and analytical requirements, along with the required level of quality and data packages are listed in Table 7-2. The quantitation, project action, accuracy, precision, and completeness limits by which the data will be evaluated will be provided by the selected laboratory and approved by CH2M HILL QA Chemist.

TABLE 7-1
Data Quality Levels

Sampling Activity	Data Quality Level Category
Backfill Certification (offsite laboratory analyses)	Definitive
Solid Waste Characterization (offsite laboratory analyses)	Definitive
Liquid Waste Characterization (offsite laboratory analyses)	Definitive
Lead Treatment and Stabilization Confirmation (offsite laboratory analyses)	Definitive

A Navy-, USACE- or AFCEE-, and FDEP-approved laboratory will be used for all sample analyses. In addition, the laboratory will also follow FDEP SOPs for Laboratory Activities, DEP-DOP-002/01, January 1, 2002.

TABLE 7-2
Sampling and Analysis Summary

Sample Task	Sample Point	Matrix	Sampling Frequency	Approx Sample No	Sampling Method (Note 1)	Sampling Equipment (Note 1)	TAT (Note 2)	Data Package Reqmnt	Required Analysis	Analytical Method	Holding Time	Sample Preservtn	Containers
Backfill Certification													
Backfill Certification	Fill Source	Soil/ Solids	One per Fill Source	1	Composite 5 random grabs into 1 sample (1 grab for VOCs)	SS Auger, SS Spoons, SS Bowl; TerraCore Samplers	7 days	CH2M HILL Level C	TCL Volatiles	5035/8260B	14 days	Methanol; Sodium Bisulfite or H2O; Cool to 4°C	(3) Prepared 40 ml vials and add'l 4 oz jar
									TCL Semi-Volatiles	8270C	14 day extr; 40 day analysis	Cool to 4°C	(4) 8 oz glass
									TCL Pesticides	8081A	14 day extr; 40 day analysis		
									Herbicides	8151A	14 day extr; 40 day analysis		
									TAL Metals	6010A/7471A	6 month; Hg 28 days		
									PAHs (including 1- and 2-Methylnaphthalene)	8310	14 day extr; 40 day analysis		
									PCBs	8082	14 day extr; 40 day analysis		
									TRPH	FL-PRO	14 day extr; 40 day analysis		
									pH	9045A	ASAP		
	Trip Blank	Water	1 Per cooler containing volatile samples	1	Prepared by Lab	(2) 40 mL vials	7 days	CH2M HILL Level C	TCL Volatiles	8260B	14 days	HCl pH< 2; Cool to 4°C	(2) 40 mL vials
Characterization													
Disposal of Liquid Wastes	Drums	Water	One per 10 drums or one per portable tank	1	Composite (1 grab for VOCs)	Bailer, drum thief or dip jar	14 days	CH2M HILL Level B	TCL Volatiles	8260B	14 days	HCl pH< 2; Cool to 4°C	(2) 40 ml vial
									TCL Semi-volatiles	8270C	7 days ext; 40 days analysis	Cool to 4°C	(4) 1L amber glass

TABLE 7-2
Sampling and Analysis Summary

Sample Task	Sample Point	Matrix	Sampling Frequency	Approx Sample No	Sampling Method (Note 1)	Sampling Equipment (Note 1)	TAT (Note 2)	Data Package Reqmnt	Required Analysis	Analytical Method	Holding Time	Sample Preservtn	Containers
									TCL Pesticides	8081A	7 days ext; 40 days analysis	Cool to 4°C	
									PCBs	8082	7 days ext; 40 days analysis	Cool to 4°C	
									Herbicides	8151A	7 days ext; 40 days analysis	Cool to 4°C	
									TAL Metals	6010B/7470A	6 months; Hg 28 days	HNO_3 pH< 2; Cool to 4°C	(1) 500mL HDPE
									Corrosivity	9045	ASAP	Cool to 4°C	(1) 1 L Amber
									Ignitability	1010	ASAP		
Disposal of Solid Wastes	Stockpiles, Drums or Roll-off Container	Soil/ Solids	One per 300 tons	1	Composite 5 random grabs into 1 sample (1 grab for VOCs)	SS Auger, SS Spoons, SS Bowl	14 days	CH2M HILL Level B	TCLP Volatiles	1311/8260B	14 day TCLP extr; 14 day analysis	Cool to 4°C	(1) 4 oz glass
									TCLP Semi-Volatiles	1311/8270C	14 day TCLP; 7 day extr; 40 day analysis	Cool to 4°C	(3) 16 oz glass
									TCLP Pesticides	1311/8081A	14 day TCLP; 7 day extr; 40 day analysis		
									TCLP Herbicides	1311/8151A	14 day TCLP; 7 day extr; 40 day analysis		
									TCLP Metals	1311/6010A/7471A	6 month TCLP; 6 month analysis; Hg: 28 day TCLP; 28 day analysis		
									Ignitability	1010/1030	ASAP	Cool to 4°C	(1) 4 oz glass
									Corrosivity	9045A	ASAP		

TABLE 7-2
Sampling and Analysis Summary

Sample Task	Sample Point	Matrix	Sampling Frequency	Approx Sample No	Sampling Method (Note 1)	Sampling Equipment (Note 1)	TAT (Note 2)	Data Package Reqmnt	Required Analysis	Analytical Method	Holding Time	Sample Preservtn	Containers
Confirmation													
Lead Treatment and Stabilization Confirmation	Treated Stockpiles	Soil/ Solids	One per treated 300 tons	19 + Duplicate and Equipment Blank per 10 Samples	Composite 5 random grabs into	SS Auger, SS Spoons, SS Bowl	7 days	CH2M HILL Level C	TCLP Lead	1311/6010A	6 month TCLP extr; 6 month analysis		

7.2 Sampling Objectives

The sampling objectives for this project will be as follows:

- Collect samples for backfill certification for any fill source being used as fill material.
- Collect samples for solid waste characterization, as necessary.
- Collect samples for liquid waste characterization, as necessary.
- Collect confirmation samples following lead treatment and stabilization.

7.3 Borrow Source Confirmation Sampling

Following verification of complete soil removal, the excavated area will be backfilled to original grade in an even distribution with soil from an offsite source. Sample results will be compared to FDEP Chapter 62-777, FAC, Table 2 – SCTLs, Direct Exposure/Residential and Leachability limits to determine if the borrow source material is appropriate for use. One representative sample from each fill source will be collected and submitted to an approved laboratory for analyses. The samples will be collected in the following manner and analyzed in accordance with Table 7-2.

Procedure for Collecting Volatile Fractions

1. Using an auger, split spoon, or other device, retrieve a core from the stockpile or borrow source area to be tested.
2. Remove the core from the auger, split spoon, or other device.
3. Using a TerraCore sampler, take an approximate 5-gram sample from the core.
4. Place the 5-gram sample into a pre-preserved volatile organic analytic (VOA) vial and seal the cap tightly. Repeat for all vials provided by the laboratory (Note: Ideally, the entire operation — filling the TerraCore sampler, pushing it into the vial, and capping the vial — should not take more than 1 minute).
5. After filling the required VOA vials, fill a 4-ounce jar completely full with the remaining core sample. This will be used by the laboratory to determine percent moisture.
6. Label the vials.
7. Place in cooler for shipment to the laboratory.

Procedure for Collecting Non-Volatile Samples

1. From five randomly selected sample locations, collect several spoonfuls of soil into a stainless steel bowl.
2. Homogenize the five grab samples by the quartering techniques using the stainless steel spoon.
3. Fill the appropriate sample jars full with the homogenized sample.

4. Close the jar, label, and package the sample for shipment to the laboratory.

A CH2M HILL Level C data package will be required along with appropriate QC samples for required analyses. All analytical data will be submitted by both hard copy and electronic files.

7.3.1 Waste Characterization Sampling

In the event that wastes are generated by MEC disposal or decontamination activities, the wastes will be sampled in the following manner and analyzed in accordance with Table 7-2. One sample will be collected per like waste stream (i.e., same matrix, contamination, and source) to perform characterization of the waste.

Solid Waste Sampling

It is estimated that one sample will be needed to perform characterization of any additional generated solid waste. Additional samples may be necessary pending the types of waste streams generated. The sample will be collected in the following manner and analyzed in accordance with Table 7-2.

Procedure for Collecting Volatile Fractions

1. At the selected sample location, using an auger, split spoon, or other similar device retrieve a core.
2. Fill the appropriate sample jars completely full with the sample from the core.
3. Close the jar, label, and package the sample for shipment to the laboratory.

Procedure for Collecting Non-Volatile Samples

1. From five randomly selected sample locations, collect several spoonfuls of the soil into a stainless steel bowl.
2. Homogenize the five samples by the quartering techniques using the stainless steel spoon.
3. Fill the appropriate sample jars completely full with the homogenized sample.
4. Close the jar, label, and package the sample for shipment to the laboratory.

Liquid Waste Sampling

It is estimated that one sample will be needed to perform characterization of the liquid waste (e.g., decontamination water). Additional samples may be necessary pending the types of waste streams generated. The sample will be collected in the following manner and analyzed in accordance with Table 7-2.

1. Using a bailer or dip jar, collect a water sample from its containment.
2. The sample containers for volatile analyses will be filled first. The 40-ml vials will be filled so that there is no headspace in each vial.
3. The sample containers for the remaining analyses will then be filled.

4. Label and package the samples for shipment to the laboratory.

A CH2M HILL Level B data package will be required along with appropriate QC samples for required analyses. All analytical data will be submitted by both hard copy and electronic files. Data will be validated by an independent contractor at 100 percent of the analytical results.

7.3.2 Lead Confirmation Sampling

Following treatment and stabilization, treated soil will be segregated in 300-ton stockpiles in preparation for confirmation sampling. The sample will be collected in the following manner and analyzed in accordance with Table 7-2.

1. From five randomly selected sample locations, use an auger, split spoon, or other similar device to collect several spoonfuls of the soil into a stainless steel bowl.
2. Homogenize the five samples by the quartering techniques using the stainless steel spoon.
3. Fill the appropriate sample jars completely full with the homogenized sample.
4. Close the jar, label, and package the sample for shipment to the laboratory.

A CH2M HILL Level C data package will be required along with appropriate QC samples for required analyses. All analytical data will be submitted by both hard copy and electronic files.

7.4 Equipment Decontamination

Sampling methods and equipment have been selected to minimize decontamination requirements and the possibility of cross-contamination. The following procedures will be used for all sampling equipment used to collect routine samples undergoing trace organic or inorganic analyses.

Reusable sampling equipment will be decontaminated before the initial sample is collected and between sampling locations using the following procedure:

1. Clean with potable water and Alconox® or equivalent laboratory grade detergent using a brush, if necessary, to remove particulate matter and surface films.
2. Rinse thoroughly with potable water.
3. Rinse thoroughly with analyte-free water.
4. Rinse thoroughly with isopropanol (pesticide-grade). Do not rinse PVC or plastic items with isopropanol.
5. Rinse thoroughly with organic/analyte-free water.
6. Allow equipment to air dry completely.

7.5 Sample Documentation

Sampling documentation will include the following:

- Numbered Chain-of-Custody Forms
- Sample Log Book which includes the following information:
  - Name of laboratories and contacts to which the samples were sent, turnaround time (TAT) requested, and data results, when possible
  - Termination of a sample point or parameter and reasons
  - Unusual appearance or odor of a sample
  - Measurements, volume of flow, temperature, and weather conditions
  - Additional samples and reasons for obtaining them
  - Levels of protection used (with justification)
  - Meetings and telephone conversations held with NAVFAC SE, regulatory agencies, project manager, or supervisor
  - Details concerning any samples split with another party
  - Details of QC samples obtained
  - Sample collection equipment and containers, including their serial or lot numbers
  - Field analytical equipment, and equipment utilized to make physical measurements will be identified
  - Calculations, results, and calibration data for field sampling, field analytical, and field physical measurement equipment
  - Property numbers of any sampling equipment used, if available
  - Sampling station identification
  - Date and Time of sample collection
  - Description of the sample location
  - Description of the sample
  - Sampler(s)' name(s) and company
  - How the sample was collected
  - Diagrams of processes
  - Maps/sketches of sampling locations
  - Weather conditions that may affect the sample (e.g., rain, extreme heat or cold, wind, etc.)
- Sample Labels
- Custody Seals (minimum of two on each shipping container)

7.6 Field Quality Control

For treatment confirmation sampling events, field duplicate samples and equipment blank samples will be collected at a minimum frequency of 10 percent times the total number of samples (rounded to nearest whole number) collected for an analysis. One trip blank sample will be provided at a frequency of one per sample cooler containing volatile samples. Matrix spike/matrix spike duplicates (MS/MSD) will be required at a frequency of one per sample event or a minimum of 5 percent of the total number (rounded to nearest whole number) of samples collected for an analysis. QC samples are not required for waste characterization. A

trip blank (only) will be required for QC on borrow source materials (for those coolers containing samples for volatile analysis). Quantity and frequency are detailed in Table 7-2.

7.7 Analytical Methods

Samples will be collected for analytical methods summarized in Table 7-2.

Preliminary analytical results will be faxed to Bethany Garvey at the following fax number per the TAT listed in Table 7-2 from day of sample receipt. The final hardcopy data and electronic file will be delivered to Kama White within 14 days of sample receipt.

Bethany Garvey
Laboratory Coordinator
CH2M HILL
Northpark 400
1000 Abernathy Road, Suite 1600
Atlanta, GA 30328
770-604-9182 ext 54124
EFax: 678-579-8176
bethany.garvey@ch2m.com

Kama White
CH2M HILL
Northpark 400
1000 Abernathy Road, Suite 1600
Atlanta, GA 30328
(770) 604-9182 ext 54385
kama.white@ch2m.com

8.0 Waste Management Plan

This Waste Management Plan addresses the characterization, onsite management, and T&D of waste generated during the MR and remedial activities at the former NAS Cecil Field, Jacksonville, Florida. It is anticipated the following wastes will be generated during these activities:

- Non-hazardous contaminated soil
- Hazardous contaminated soil
- Aqueous waste (decontamination water)
- Treatment/detonation residuals and/or soil impacted by MEC treatment/detonation
- MPPEH
- PPE
- Debris, including discarded materials generally considered not water-soluble. Debris includes, but is not limited to, materials used in decontamination (for example, plastic sheeting, sampling materials, and PPE).
- Sampling-related waste including, but not limited to decontamination water, sampling equipment, gloves, and protective clothing.
- Uncontaminated general construction debris (such as caution tapes, barricades, signs, packing materials).

8.1 Waste Characterization

In March 2007, CH2M HILL conducted in-situ soil disposal characterization sampling utilizing MEC avoidance. One composite sample was collected per approximate 300 tons and submitted for laboratory analyses. 8,093 yd^3 (12,140 tons) of soil is considered as non-hazardous and 3,760 yd^3 (5,640 tons) of soil is considered as hazardous, exceeding the criteria in 40 CFR 261.24.

Other generated wastes during project activities, to include decontamination wastes and wastes generated from MEC treatment/detonation, will be characterized according to Section 7.0 Sampling and Analysis Plan of this Work Plan Addendum. Waste characterization information will be documented on a waste profile form provided by the offsite treatment or disposal facility as part of the waste acceptance process.

All MPPEH will be inspected, demilitarized if necessary, certified and verified as free of explosive hazards and suitable for recycling. Handling and disposal procedures for MPPEH are provided in the ESS (Appendix D) and the procedures provided in Appendix G.

Typically, uncontaminated wastes such as general construction debris will be characterized using process knowledge and generally will be classified as municipal solid waste.

8.2 Waste Profile

Waste characterization information will be documented on a waste profile form provided by the offsite treatment or disposal facility as part of the waste acceptance process. The profile will be reviewed and approved by the CH2M HILL Waste Coordinator prior to submission to the Navy for generator signature. Navy personnel will provide generator certification and/or signature, as required. The signed profile will then be submitted to the disposal facility for acceptance approval.

The profile typically requires the following information including but not limited to:

- Generator (Navy) information including name, address, contact, and phone number
- Site name including street/mailing address
- Process generating waste (e.g., MEC disposal)
- Source of contamination (e.g., MEC detonation)
- Historical use for area
- Waste composition (e.g., 95 percent soil, 5 percent debris)
- Physical state of waste (e.g., solid, liquid, etc.)
- Applicable hazardous waste codes

A facility-approved copy of the waste profile shall be received prior to scheduling of offsite transportation of the waste.

8.3 Waste Management

8.3.1 Waste Storage Time Limit

Hazardous wastes generated from treatment detonation-related activities will be removed from the site within 90 days from generation. Waste, debris, and wastewater that are characterized as non-hazardous will be removed from the site as soon as possible.

8.3.2 Labels

All containers/drums, tanks, and roll-off boxes will have clearly visible labels. If analytical results indicate that the container contents are hazardous, the tank (or other container if the contents are transferred) will be labeled with a pre-printed "**Hazardous Waste**" label, which includes:

- Accumulation start date
- Generator Name: U.S. Navy
- EPA ID number for site
- Waste codes

For containers of less than 110 gallons, the manifest number must be on the label before transporting.

If analytical results indicate that the container contents are non-hazardous, the tank (or other container if the contents are transferred) will have pre-printed "**Non-Hazardous Waste**" labels that include the following information:

- Accumulation start date
- Generator Name: U.S. Navy
- Site EPA ID Number
- Waste-specific information (e.g., tank sludge)

Until the container contents have been characterized and classified, the pre-printed "**Analysis Pending**" label or "**Waste Material**" (or an equivalent label) will be used. This waste label will contain the equivalent information provided on a Hazardous Waste label, including:

- Accumulation start date
- Generator Name: U.S. Navy
- Site EPA ID Number
- Waste-specific information (e.g., petroleum contaminated soil)

8.3.3 Waste Management Area Requirements

Hazardous wastes will be segregated from non-hazardous wastes. Additionally, incompatible wastes (e.g., reactive and corrosive wastes) will be segregated. Wastes of the same matrix, contamination, and the same source may be aggregated to facilitate storage and disposal.

Wastes will be accumulated in an area identified and approved by the Navy. If an accumulation area is not designated, CH2M HILL will accumulate hazardous wastes in an area that is not accessible to the general public, and that can be secured.

Waste accumulation areas will contain appropriate emergency response equipment. The HSP identifies the specific emergency response procedures and equipment. Hazardous waste accumulation areas will include fire extinguishers (in areas where wastes are known or suspected to be flammable or ignitable), decontamination equipment, and an alarm system (if radio equipment is not available to all staff working in accumulation area). Spill control equipment (e.g., sorbent pads) will be available in the waste accumulation areas, and where liquids are transferred from one vessel to another.

All containers, drums, and tanks will be inspected upon arrival at the site for disrepair and any residual contamination or contents. If container contains waste upon arrival or is in disrepair, it will be immediately rejected and documented.

All wastes will be contained in a manner that prevents the spread of contamination. Unless the Navy has designated a specific waste storage area, wastes will be accumulated (and stored) near the project site. These waste storage areas are under CH2M HILL control.

Security/Contingency Planning

A barrier, such as barricade tape or temporary fencing, will be provided for hazardous waste accumulation areas, and for other waste storage areas that are accessible to the

general public. All hazardous waste storage areas will also have signs to identify the areas and provide 24-hour emergency contacts and telephone numbers.

Drums or Other Small Containers

The following procedures will be followed when using drums:

- All drums will be inspected and inventoried upon arrival onsite for signs of contamination and/or deterioration.
- Adequate aisle space (e.g., 30 inches) between drums will be provided to allow the unobstructed movement of personnel and equipment. A row of drums should be no more than two drums wide.
- Each drum will be provided with its own label, with labels visible.
- Drums will remain covered except when removing or adding waste to the drum. Covers will be properly secured at the end of each workday.
- Drums will be disposed of with the contents. If the contents are removed from the drums for offsite transportation and treatment or disposal, the drums will be decontaminated prior to re-use or before leaving the site or crushed and disposed appropriately.
- During onsite transport, drums of hazardous waste will be transported on wood pallets and secured together with non-metallic bonding.
- Drums containing liquid hazardous waste will be provided with secondary containment.

Portable Tanks

The following procedures will be followed when using portable tanks:

- Tanks will be inspected upon arrival onsite for signs of deterioration and contamination. Any tank arriving onsite with contents will be rejected.
- Tanks will be provided with covers.
- Each tank will be labeled, with labels visible.
- All tanks will be provided with secondary containment.

Roll-off Boxes

The following procedures will be followed when using roll-off boxes:

- Roll-off boxes will be inspected upon arrival onsite. Any roll-off box arriving onsite with contents will be rejected.
- Roll-off boxes for hazardous or excessively contaminated soils will be provided with disposable liners that will be disposed of as contaminated debris.
- When not in use, securely fastened covers will be installed on all roll-off boxes.

- Old labels will be removed, and new labels will be attached.
- Roll-off containers will be inspected by the transporter after removal of the liner and decontaminated in the event of evidence of liner failure.

Soil Stockpiles

The following procedures will be followed when using soil stockpiles:

- Contaminated or potentially contaminated soil stockpiles will be provided with secondary containment (i.e., a liner, and perimeter berm to prevent rupture and release or infiltration of liquids), and a cover, as appropriate. Stockpiles of "clean" soil will be covered as necessary to prevent wind and stormwater erosion.
  - Minimum 6-mil polyethylene sheeting will be used for liners and covers.
  - The perimeter berm, typically hay bales placed beneath the liner, will be constructed to allow for collection of any liquids draining from the stockpile.
  - Contaminated liquids that accumulate in the secondary containment will be pumped (or otherwise removed) to a container or tank.
- Covers and perimeter berms will be secured in-place when not in use and at the end of each workday, or as necessary to prevent wind dispersion or run-off from major precipitation events.
- Construction materials for the stockpiles that contact waste will be disposed of as contaminated debris.
- Accumulation start dates will be recorded on a log or a sign located at the stockpile.

Storage Piles

Where appropriate, construction debris and waste, or intact equipment may be accumulated in storage piles. All storage piles will be managed in such a manner as to maintain good housekeeping, and to prevent the spread of contamination.

- For contaminated materials, the storage piles will be provided with secondary containment as indicated for soil stockpiles. Damaged or leaking electrical or hydraulic equipment may not be stored in storage piles.
- For uncontaminated or decontaminated debris and waste, or intact equipment, the storage piles should be placed on a liner. These piles shall be covered as necessary to prevent stormwater run-on and run-off.

Inspection of Waste Storage Areas

Waste accumulation areas will be inspected for malfunctions, deterioration, discharges, and leaks that could result in a release. The following inspection schedule will be followed:

- At least weekly inspection of containers, tanks and roll-off containers (for leaks, signs of corrosion, or signs of general deterioration).
- At least weekly inspection of stockpiles (for liner and berm integrity).

Any deficiencies observed or noted during inspection will be rectified immediately. Appropriate measures may include transfer of waste from leaking container to new container, replacement of liner or cover, or repair of containment berm.

If operations will suspended for more than 7 days, contact the regulatory compliance manager and alternate inspection arrangements will be made. Prior to demobilization, all hazardous wastes will be removed from the site.

Inspections will be recorded in the daily QC Report and include any deficiencies and how issue was rectified. Copies of the report will be maintained onsite, and available for review.

8.4 Shipping Documentation

Prior to offsite disposal of any waste, CH2M HILL will provide the Navy with a waste approval package for each waste stream. This package shall include a waste profile naming the U.S. Navy as the generator of the waste, analytical summary table(s) applicable to the waste, Land Disposal Restriction (LDR) notification for any hazardous wastes, a completed example waste manifest, and any other applicable information necessary for the Navy to complete its review of the disposal package and signature as the generator. This package will be reviewed by the CH2M HILL Waste Coordinator prior to submission to the Navy.

The signed profile will then be submitted to the disposal facility for acceptance approval. Once the approval letter is received from the disposal facility, transportation will be scheduled.

Each load of waste will be manifested prior to leaving the site. At a minimum, the manifest form will include the following information:

- Generator information including name, address, contact, and phone number, EPA ID number
  - Name: (U.S. Navy) Public Works Center
  - Address: P.O. Box 30; Jacksonville, Florida; 32312
  - Contact: John Brummet
  - EPA ID Number: FL5170022474
- Transporter information including name, address, contact and phone number, EPA ID number
- Facility information including name, address, phone number, EPA ID number
- Site name including street/mailing address
- DOT Proper Shipping Name (e.g., Hazardous Waste Solid, n.o.s., 9, UN 3077, PG III (D008))
- Type and number of container
- Quantity of waste (volumetric estimate)
- CTO or job number
- Profile number

- 24-hour emergency phone number

Additionally, each shipment of waste will also have a haul/weight ticket. An LDR Notification/Certification is also required for **hazardous wastes**. This form also requires the generator signature and submission to the disposal facility with the profile.

The generator (Navy) and the transporter must sign the manifest prior to the load of waste leaving the site. A copy of the manifest will be retained on site and included with the daily QC Report. The original signed manifest will be returned to the address of the generator. The facility will provide a copy of this signed manifest, weight tickets, and certificates of disposal to CH2M HILL for the final report. The final report will include copies of the facility signed manifest, weight ticket, LDR (if applicable), and the Certificate of Disposal/Destruction/Recycle.

If the signed hazardous waste manifest from the designated offsite facility is not received within 35 days, CH2M HILL will contact the transporter or the designated facility to determine the status of the waste. If the signed hazardous waste manifest has not been received within 45 days, CH2M HILL, in coordination with the Navy, will issue an "Exception Report" to the state of Florida, as required under 40 CFR 262.42.

8.5 Transportation

Trucks and containers used to transport contaminated waste offsite will be inspected *prior* to loading for signs of deterioration and contamination. Any truck or container with contents/residues or in poor condition will be rejected.

Each transportation vehicle and load of waste will be inspected before leaving the site and documented. The quantities of waste leaving the site will be documented, at a minimum on the T&D Log. A contractor licensed for commercial transportation will transport non-hazardous wastes. In the event that wastes are hazardous, the transporter will have a USEPA Identification number, and will comply with transportation requirements outlined in 49 CFR 171-179 (DOT) and 40 CFR 263.11 and 263.31 (Hazardous Waste Transportation). A copy of the documentation indicating that the selected transporter has appropriate licenses will be received and approved by CH2M HILL prior to transport of any waste. Only a registered hazardous waste transporter will be used for the transportation of hazardous waste.

8.5.1 Transporter Responsibilities

The transporter will be responsible for weighing loads at a certified scale. For each load of material, weight measurements will be obtained for each full and empty container, dump truck, or tanker truck. Disposal quantities will be based on the difference of weight measurements between the full and empty container, dump truck, or tanker truck. Weights will be recorded on the waste manifest. The transporter will provide copies of weight tickets to CH2M HILL.

The transporter will observe the following practices when hauling and transporting wastes offsite:

- Minimize impacts to general public traffic.

- Repair road damage caused by construction and/or hauling traffic.
- Cleanup waste spilled in transit.
- Line and cover trucks/trailers used for hauling contaminated waste to prevent releases and contamination.
- Decontaminate vehicles prior to re-use, other than hauling contaminated waste.
- Seal trucks transporting liquids.
- All personnel involved in offsite disposal activities will follow safety and spill response procedures outlined in the HSP.
- No materials from other projects will be combined with materials from the former NAS Cecil Field.

8.5.2 Waste Transportation and Disposal Log

The T&D Log is used to track waste from generation to final disposition. Wastes will be logged into the T&D Log the day waste is generated and placed into containers. Transportation of wastes will be inventoried the day of transportation from the site using the T&D Log. The final disposition of a waste will be documented on the T&D Log using the Certificate of Disposal. The blank T&D Log is attached in Appendix I.

8.6 Waste Disposal

Offsite treatment or disposal facilities will use the waste profile and supporting documentation (e.g., analytical results) to determine if they will accept a waste. The treatment or disposal facility will be responsible for providing a copy of the final waste manifest and for a certificate of treatment or disposal for each load of waste received. Wastes will be disposed as follows:

- Hazardous wastes (including environmental media) will be sent to a permitted, RCRA Subtitle C treatment, storage, or disposal facility.
- Non-hazardous wastes will be disposed in a facility permitted to accept the types and quantities of contamination (e.g., Subtitle D landfills).
- Uncontaminated, or decontaminated, construction and demolition debris may be sent to municipal landfills, or landfills designated for construction/demolition debris.

8.7 Security and Contingency Planning

Emergency response equipment including fire extinguishers, decontamination equipment and an alarm system (if radio equipment is not available to CH2M HILL) will be available at all waste and fuel storage areas. This equipment will either be provided at the waste storage area, or in personnel vehicles. Spill control equipment/material (e.g., sorbent pads) will be available in all waste and fuel storage areas and where liquids are transferred from one vessel to another.

Security will be provided in waste storage areas. Because the waste contents are unknown, a barrier, such as barricade tape or temporary fencing, should be provided. Additionally, signs will be posted at storage areas that are unmanned for more than 24 hours, identifying appropriate CH2M HILL personnel and phone numbers to contact in an emergency.

8.8 Records/Reporting

The following records and documents will be maintained:

- Transportation and offsite disposal records, including:
  - Profiles and associated characterization data
  - Manifests, LDR notifications/certifications, weight tickets, and other shipping records
  - Offsite facility waste receipts, certificates of disposal/destruction
- Inspection records

9.0 Environmental Protection Plan

The Environmental Protection Plan of the NAS Cecil Field Basewide Work Plan (CH2M HILL, 1998) addresses general procedures that will be implemented to prevent pollution and protect the environment. The purpose of this plan is to provide specific requirements/procedures to protect the environment during the MR and contaminated soil excavation activities at former NAS Cecil Field.

9.1 Regulatory Drivers

Remedial activities at Site 15 are regulated under CERCLA. Wastes generated during the remediation activities at former NAS Cecil Field will be managed consistent with State of Florida hazardous waste generator provisions (FAC Chapter 62-730).

9.2 Spill Prevention and Control

The provisions for spill prevention and control establish minimum site requirements. All spills will be reported to the CH2M HILL site supervisor and PM. Refer to the HSP for emergency response procedures and further reporting requirements.

9.3 Spill Prevention

All fuel, chemical, and waste storage areas will be properly protected from on- and offsite vehicle traffic. All tanks (including fuel storage and waste storage) must be equipped with secondary containment. These tanks must be inspected daily for signs of leaks. Accumulated water must be inspected for signs of contamination (e.g., product sheen, discoloration, and odor) before being discarded. Fire protection provisions outlined in the HSP must be adhered to.

Chemical products must be properly stored, transferred, and used. Should chemical product use occur outside areas equipped with spill control materials, adequate spill control materials must be maintained at the local work area.

9.4 Spill Containment and Control

Spill control materials will be maintained in the support zone, at fuel storage and dispensing locations, and at waste storage areas. Incidental spills will be contained with sorbent and disposed of properly. Spilled materials must be immediately contained and controlled. Spill response procedures include:

- Immediately warn any nearby workers and notify supervisor.
- Assess the spill area to ensure that it is safe to respond.
- Evacuate area if spill presents an emergency.
- Ensure any nearby ignition sources are immediately eliminated.

- Stop source of spill.
- Establish site control for spill area.
- Use proper personal protective equipment in responding to spills.
- Contain and control spilled material through use of sorbent booms, pads, or other material.

9.5 Spill Cleanup and Removal

All spilled material, contaminated sorbent, and contaminated media will be cleaned up and removed as soon as possible. Contaminated spill material will be drummed, labeled, and properly stored until material is disposed of. Contaminated spill material will be managed as waste (see Section 8.0 Waste Management Plan) and disposed of according to applicable, federal, state, and local requirements.

During those investigation or excavation activities that have the potential to disturb the land, CH2M HILL will adhere to the following practices:

- The smallest practical area will be disturbed.
- Trees outside the investigation or excavation areas will be protected from any construction activity. No ropes, cables, or guy lines will be fastened or attached to any existing trees.
- Temporary erosion and sediment controls will be used to prevent sediment from discharging to any ponds or wetland areas. Structural controls may include the use of straw bales, silt fences, earth dikes, drainage swales, sediment traps, and sediment basins.
- Material staging areas will be properly barricaded for containment and to control runoff.

9.6 Environmental Conditions

The site comprises two land cover classes, based on the FLUCCS; shrub and brushland (320) and coniferous plantation (421). Common vegetative species in the shrub and brushland community include gallberry (*Ilex glabra*), slash pine saplings (*Pinus elliottii),* saw palmetto (*Serenoa repens*), wax myrtle (*Myrica cerifera*), sand blackberry *(Rubus cuneifolius*), wiregrass (*Aristida stricta*), broomsedge (*Andropogon virginicus*), narrowleaf cudweed (*Gnaphalium falcatum),* wild grape (*Vitis* sp.), and greenbrier (*Smilax* spp.). The dense vegetative growth suggests the absence of fire in recent years. Photographs showing representative areas of the site are provided in Appendix C.

9.7 Protection of Endangered Species

Construction operations will be managed in such a manner as to minimize interference with fish and/or wildlife habitat. Care will be taken to ensure that temporary erosion and sediment controls are installed to prevent storm water discharges to any adjacent ponds or wetlands. Construction operations will be monitored and reorganized as necessary to prevent negative effects to identifiable wildlife activity.

9.8 Protection of Water Resources

The primary water resource concern during construction activities is the control of storm water run-on and run-off.

To reduce erosion, and control stormwater run-on and run-off during any activity that will disturb that land, the following structural and non-structural controls will be implemented as appropriate:

- Minimizing the area of bare soil exposed at one time (i.e., phased grading)
- Stabilizing cut-and-fill slopes
- Perimeter controls (e.g., drainage diversions)
- Stormwater retention basins
- Sediment basins and traps
- Silt fences at excavations
- Covers for stockpiles (to prevent leaching of contaminants from stockpiles)
- Site restoration (e.g., regrading, mulching, and seeding, or repaving with asphalt or concrete)

9.9 Protection of Land Resources

Land resources (e.g., trees and shrubs) will be preserved in their present condition or restored as near as possible to their natural appearance. Trees outside of any clearing limits will be protected during excavation or filling activities within the root zone, wherever possible. No ropes, cables, or guy lines will be fastened to or attached to any existing trees for anchorage unless specifically authorized by the Navy. Where authorized, the trunk will be wrapped with sufficient thickness of a material such as burlap or rags over which softwood cleats will be tied before any rope, cable, or wire is placed. Where trees may be defaced, bruised, injured, or otherwise damaged by equipment or construction operations, boards, planks, or poles may be placed around them for protection. Rocks that are displaced into uncleared areas will be removed. Monuments, markers, or other similar structures will be protected before beginning construction operations.

9.10 Additional Environmental Considerations

Additional environmental considerations are outlined in Section 9 of the ESS provided in Appendix D.

10.0 References

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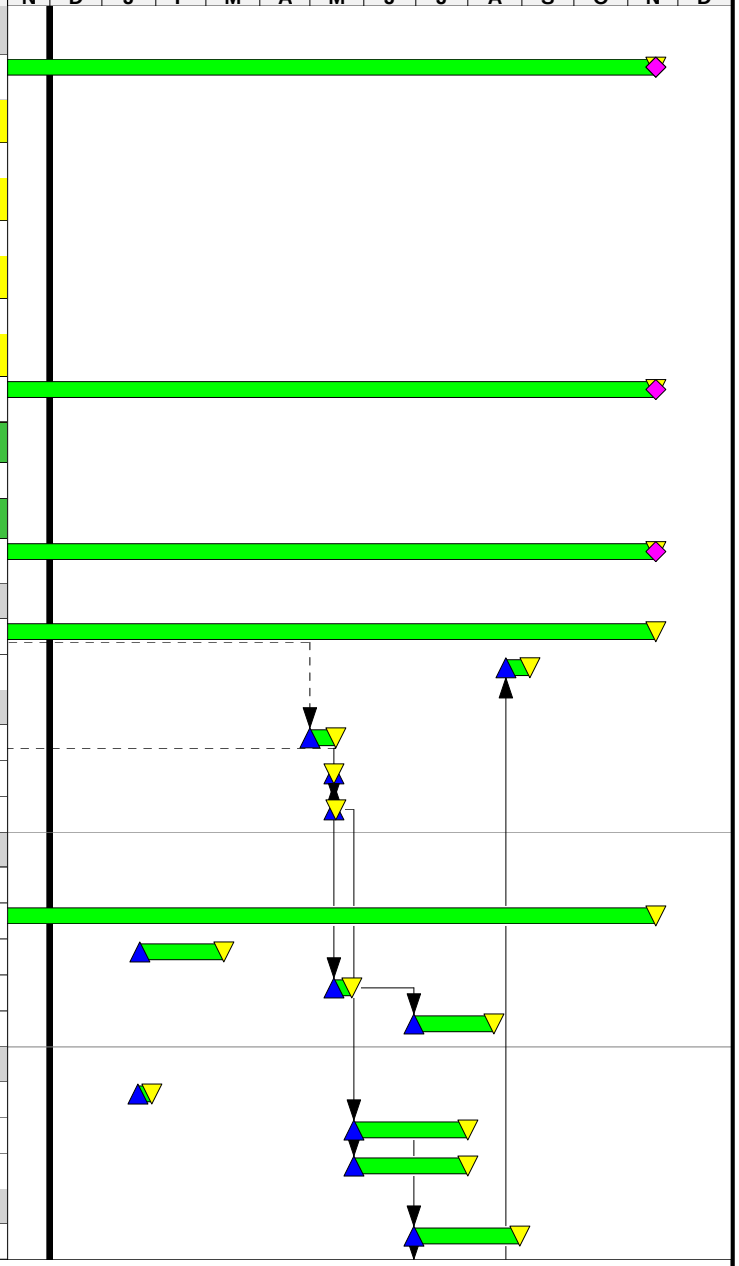
Appendix A
Project Schedule

Activity ID	WBS CHARGE #	% Comp	Activity Description	Orig Dur	Rem Dur	Early Start	Early Finish
CTO #0057 - NAS CECIL FIELD							
Subtotal		0		1,988	246	26JAN01A	17NOV08
+ PHASE 1							
		100		28	0	26JAN01A	07MAR01A
+ PHASE 2, TASK 1							
		100		81	0	26JAN01A	21MAY01A
+ PHASE 2, TASK 2							
		100		613	0	12APR01A	09SEP03A
PHASE 3							
Subtotal		0		1,938	246	09APR01A	17NOV08
+ DIG & HAUL - BUILDING 610							
		100		554	0	09APR01A	11JUN03A
SITE 15 - YWWA EXCAVATION OF HAZ/NON-HAZ SOILS							
Subtotal		5		740	246	21DEC05A	17NOV08
PROJECT MANAGEMENT							
BU32992201	99.22.01.01	0	Project Management	354	246	21DEC05A	17NOV08
BU99220426	99.22.04.26	0	Project QA/QC Audit	10	10	22AUG08	05SEP08
MOBILIZATION & PREPARATORY WORK							
BU32010394	32.01.03.94	0	Subcontractor's Pre-Con Submittals	13	13	01MAY08*	15MAY08
BU32221209	32.22.12.09	0	Subcontractor Bonds	1	1	14MAY08	14MAY08
BU32010290	32.01.02.90	0	Subcontractor Mobilization	1	1	15MAY08	15MAY08*
MONITORING, SAMPLING, TEST & ANALYSIS							
BU32020906	32.02.09.06	100	Disposal Characterization Analysis	5	0	06MAR07A	15MAR07A
BU33021491	33.02.14.91	0	Data Validation & Management	136	246	28JUN07A	17NOV08
BU32021490	32.02.14.90	0	Independent Data Validation	35	35	23JAN08*	11MAR08
BU32020990	32.02.09.90	0	Backfill Certification Analysis	9	9	15MAY08	24MAY08
BU32020907	32.02.09.07	0	Confirmatory Sampling Analysis	34	34	30JUN08	15AUG08
SITE WORK							
BU32030290	32.03.02.90	0	Clearing & Grubbing(Tree Removal)	7	7	21JAN08*	29JAN08
BU32030302	32.03.03.02	0	Earthwork(Hazardous Soil Excavation/Backfill)	57	57	26MAY08	30JUL08
BU32030303	32.03.03.03	0	Earthwork(NonHazardous Soil Excavation/Backfill)	57	57	26MAY08	30JUL08
TRANSPORTATION AND DISPOSAL							
BU32190301	32.19.03.01	0	T&D - Hazardous Soil	54	54	30JUN08*	30AUG08



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Finish Date 17NOV08
Data Date 01DEC07
Run Date 02JAN08 11:12

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Critical Activity

NFAC - CO57

Sheet 1 of 2

CTO #0057 - NAS CECIL FIELD
CTO COMPLETION SCHEDULE
NAVY RAC SOUTHERN DIVISION

CH2MHILL

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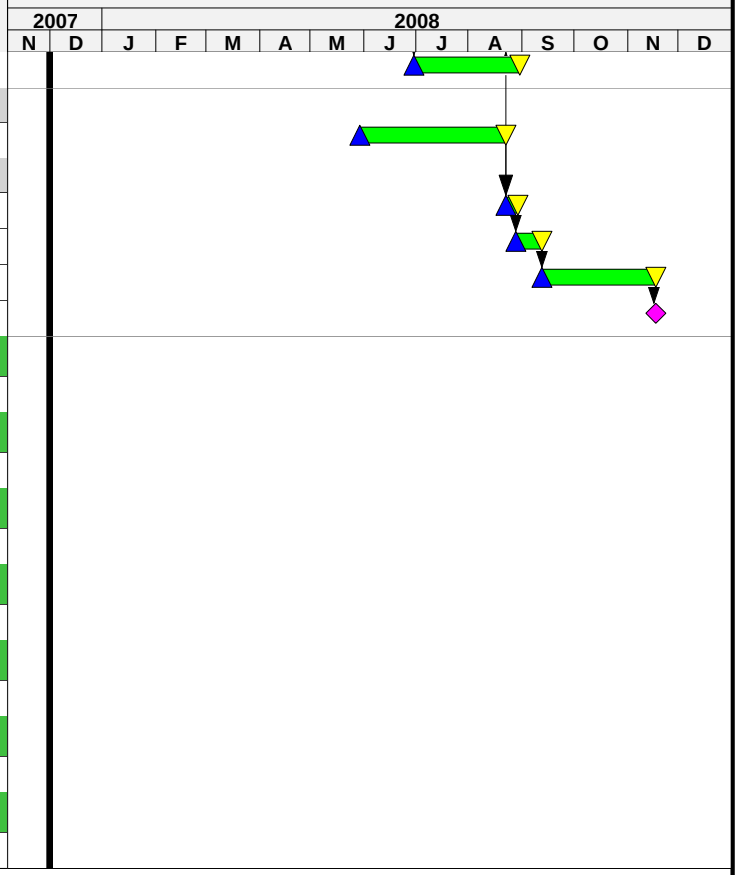
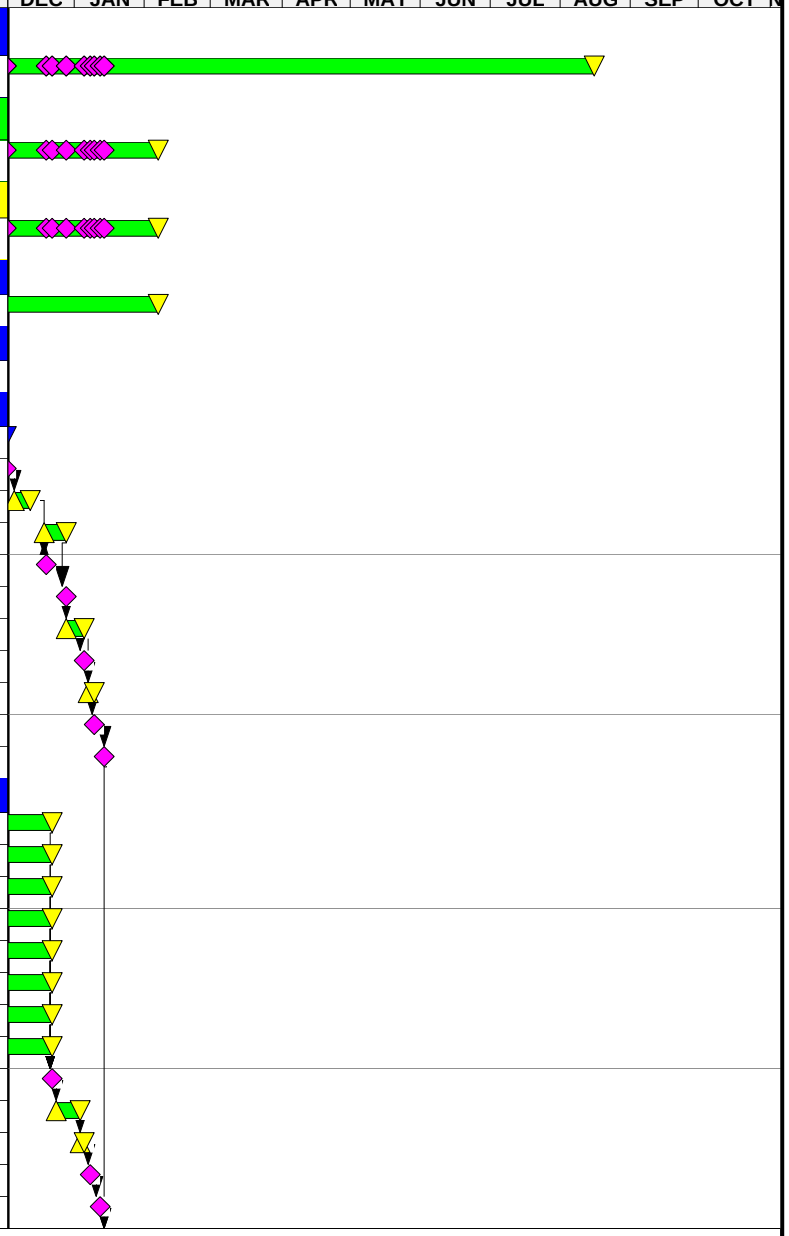
Activity ID	WBS CHARGE #	% Comp	Activity Description	Orig Dur	Rem Dur	Early Start	Early Finish
BU32190302	32.19.03.02	0	T&D - Non-Hazardous Soil	54	54	30JUN08	30AUG08
SITE RESTORATION							
BU32200401	32.20.04.01	0	Seeding, Mulch, Fertilizer	85	85	30MAY08*	22AUG08
POST CONSTRUCTION							
BU32210590	32.21.05.90	0	Subcontractor Demobilization	7	7	22AUG08	28AUG08
BU32210694	32.21.06.94	0	Subcontractor's Post-Con Submittals	11	11	28AUG08	12SEP08
BU32210605	32.21.06.05	0	CCR/Source Removal Reports	47	47	12SEP08	17NOV08
BU32210606		0	Submit CCR/SSR	0	0		17NOV08
+ SITE15 - REMOVAL OF DRUM OF UNKNOWN CONTENTS							
		0		140	0	30MAY06A	15DEC06A
+ SITE 3 & 5							
	39.22.91.01	100		67	0	29MAY07A	31AUG07A
+ SITE15 - MEC INVESTIGATION							
	38.22.01.01	100		78	0	12MAY06A	21FEB07A
+ SOIL/FREE PRODUCT REMOVAL at BUILDING 846							
		100		546	0	21JUL03A	07SEP05A
+ FLIGHTLINE SOIL T&D							
		100		9	0	09JUN03A	19JUN03A
+ ABANDON/CLOSE IN PLACE TANK 285							
		0		105	0	12FEB04A	08JUL04A
+ MURPHY HSRs PIPELINE							
		100		219	0	23NOV05A	04OCT06A



Activity ID	WBS	% Comp	Activity Description	Org Dur	Rem Dur	Early Start	Early Finish
CTO #0063 - NAS CECIL FIELD, FL							
Total		24		407	181	12JAN07A	15AUG08
PHASE 2							
Subtotal		59		272	46	12JAN07A	06FEB08
PHASE 2, TASK 1							
Subtotal		59		272	46	12JAN07A	06FEB08
PROJECT MANAGEMENT							
BZ20010399	20.01.03.99	83	Project Management (Phase 2)	96	46	12JAN07A	06FEB08
+ COST PROPOSAL PREPARATION							
		100		63	0	12JAN07A	10APR07A
BID PACKAGE PREP/AWARD							
BZ20010391	20.01.03.91	100	Prepare Bid Packages	20	0	21MAY07A	30NOV07A
BZ20150		0	Issue RFB to Subcontractors	0	0		30NOV07
BZ20010393	20.01.03.93	0	Subcontractor Pre-Bid Meeting/Site Visit	5	5	06DEC07	12DEC07
BZ20010392	20.01.03.92	0	Evaluate Bid Packages	6	6	19DEC07	27DEC07
BZ20165		0	Subcontractor Bids Due	0	0		19DEC07
BZ20188		0	Issue Letter of Intent to Award	0	0		27DEC07
BZ20181		0	Submit Subcontractor Plans & Submittals	5	5	28DEC07	04JAN08
BZ20180		0	Subcontractor Plans Due	0	0		04JAN08
BZ20189		0	Review Subcontractor Plans & Submittals	3	3	07JAN08	09JAN08
BZ20210		0	Award Subcontracts	0	0		09JAN08
BZ20211		0	Project Mobilization	0	0	14JAN08	
WORK PLANS PREPARATION							
BZ20010301	20.01.03.01	60	Sampling and Analysis Plan	38	15	07JUN07A	21DEC07
BZ20010304	20.01.03.04	60	Environmental Protection Plan	38	15	07JUN07A	21DEC07
BZ20010306	20.01.03.06	60	Pollution Control Plan	38	15	07JUN07A	21DEC07
BZ20010308	20.01.03.08	60	Site - Specific H&S Plan	38	15	07JUN07A	21DEC07
BZ20010313	20.01.03.13	60	General Site Work Plan	38	15	07JUN07A	21DEC07
BZ20010314	20.01.03.14	60	Quality Control Plan	38	15	07JUN07A	21DEC07
BZ20010315	20.01.03.15	60	Transportation & Disposal Plan	38	15	07JUN07A	21DEC07
BZ20010390	20.01.03.90	60	Hazardous Waste Mgmt Plan	38	15	07JUN07A	21DEC07
BZ20290		0	Submit Draft Work Plans	0	0		21DEC07
BZ20185		0	Southern Division WP Comment Period	7	7	24DEC07	03JAN08
BZ20190		0	Incorporate WP Comments	1	1	04JAN08	04JAN08
BZ20191		0	Submit Final WP to Southern Division	0	0		07JAN08
BZ2095		0	Work Plan Approval Received	0	0		11JAN08



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Finish Date	15AUG08
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Run Date	08JAN08 15:01

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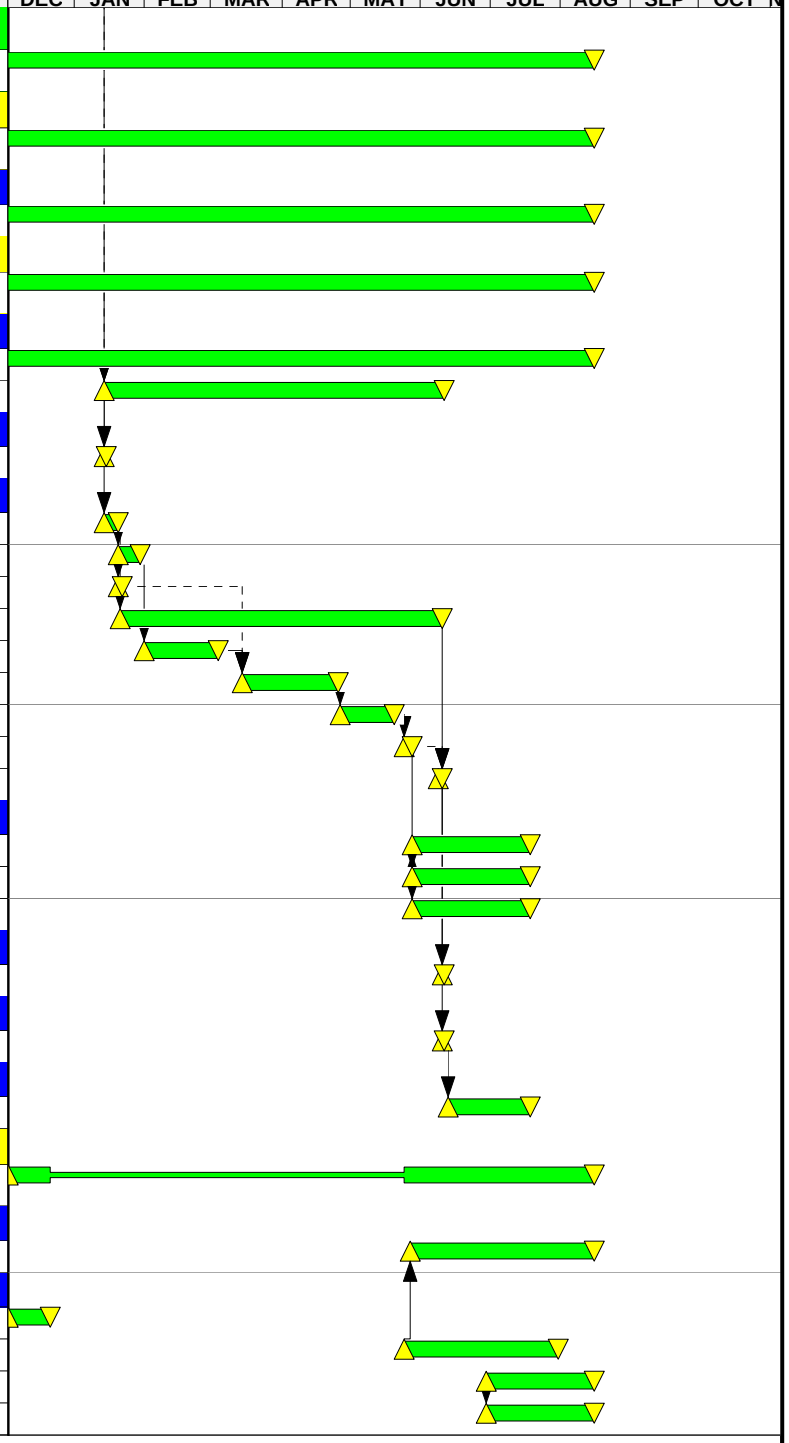
RAC4 - CO63

Sheet 1 of 2

CTO #0063 - NAS CECIL FIELD, FL
CTO COMPLETION SCHEDULE
NAVY RAC SOUTHERN DIVISION

CH2MHILL

Activity ID	WBS	% Comp	Activity Description	Org Dur	Rem Dur	Early Start	Early Finish
PHASE 3							
Subtotal		9		407	181	12JAN07A	15AUG08
PROJECT MANAGEMENT							
Subtotal	PA.01.01.01	11		275	181	12JAN07A	15AUG08
PROJECT MANAGEMENT							
BZPA010101	PA.01.01.01	11	PMO	275	181	12JAN07A	15AUG08
Site 15 MEC Investigation							
Subtotal		0		345	181	10APR07A	15AUG08
PROJECT MANAGEMENT							
BZ992220	99.22.01.02	19	Project Management Off-Site	183	181	10APR07A	15AUG08
BZ992210	99.22.01.01	0	Field Management On-Site	106	106	14JAN08*	10JUN08
MOBILIZATION & PREPARATORY WORK							
BZ310100	31.01.02.92	0	UXO Response Subcontractor Mobilization	1	1	14JAN08	14JAN08
ORDNANCE & EXPLOSIVE REMOVAL AND DESTRUCTION							
BZ310480	31.04.01.91	0	Mosquito Control	6	6	14JAN08	19JAN08
BZ310410	31.04.01.02	0	Vegetation Removal w/MEC Support	10	10	20JAN08	29JAN08
BZ310470	31.04.01.90	0	Grid Emplacement by Surveyor	2	2	20JAN08	21JAN08
BZ310560	31.04.01.14	0	Temporary MEC Storage	100	100	21JAN08	09JUN08
BZ310320	31.04.01.05	0	Surface/Near-Surface Sweep (w/Magnetometer)	32	32	01FEB08	03MAR08
BZ310430	31.04.01.06	0	Geophysical Survey	36	36	15MAR08	25APR08
BZ310440	31.04.01.07	0	Subsurface Anomaly Investigation (Mag & Dig)	23	23	27APR08*	19MAY08
BZ310450	31.04.01.12	0	MEC On-site Destruction and Disposal	3	3	25MAY08	27MAY08
BZ310490	31.04.01.92	0	Scrap Metal Removal	1	1	09JUN08	09JUN08
SAMPLING & ANALYSIS							
BZ310210	31.02.09.05	0	Waste Characterization for Disp Analytical S/C	37	37	28MAY08	18JUL08
BZ310214	31.02.14.92	0	Data Evaluation and Management	37	37	28MAY08	18JUL08
BZ310220	31.02.09.07	0	Pre-/Post Destruct & MEC Impact Soil Analysis	37	37	28MAY08	18JUL08
TRANSPORTATION AND DISPOSAL							
BZ311910	31.19.21.01	0	T&D of Post-Detonation Soils S/C	1	1	10JUN08	10JUN08
DEMOBILIZATION							
BZ312110	31.21.05.92	0	UXO Response Subcontractor Demobilization	1	1	10JUN08	10JUN08
REPORTING							
BZ312150	31.21.06.05	0	After Action Report	25	25	13JUN08	18JUL08
SITE 15 T&D							
Subtotal		0		181	181	03DEC07	15AUG08
PROJECT MANAGEMENT							
BZ99220103	99.22.01.03	0	CCI Management Office, On-Site	58	58	27MAY08	15AUG08
TRANSPORTATION AND DISPOSAL							
BZ32192203	32.19.22.03	0	Lead Treatment Bench Scale	14	14	03DEC07*	20DEC07
BZ32192204	32.19.22.04	0	On-Site Lead Treatment & Materials	66	66	25MAY08*	30JUL08
BZ32192201	32.19.22.01	0	T&D Non-Haz Soil	34	34	30JUN08*	15AUG08
BZ32192202	32.19.22.02	0	T&D Haz Soils	34	34	30JUN08	15AUG08



Appendix B
Health and Safety Plan

Health and Safety Plan

Munitions Response and Excavation of Contaminated Soil at Site 15, Blue 10 Ordnance Disposal Area

Former Naval Air Station Cecil Field Jacksonville, Florida

Revision No. 00

Contract No. N62467-98-D-0995
Contract Task Order No. 0057

Contract No. N62467-01-D-0331
Contract Task Order No. 0063

Submitted to:

U.S. Naval Facilities
Engineering Command
Southeast

Prepared by:

CH2MHILL
Constructors, Inc.
Northpark 400
1000 Abernathy Road
Suite 1600
Atlanta, GA 30328

February 2008

Contents

1.0 Introduction 1-1
1.1 Site History and Project Description 1-1
1.2 Project Objectives 1-1
2.0 Staff Organization, Qualifications, and Responsibilities 2-1
2.1 Project Manager 2-1
2.2 Senior UXO Supervisor (SUXOS) 2-1
2.3 UXO Technician II 2-1
2.4 Project Field Personnel Responsibilities 2-2
2.4.1 General Responsibilities 2-2
2.4.2 SUXOS Responsibilities 2-2
2.5 Contacts 2-3
2.6 Subcontractor Responsibilities 2-3
3.0 Hazard Analysis and Risk Assessment 3-1
3.1 MEC 3-1
3.2 Other Physical Hazards 3-1
3.2.1 Slips, Trips, and Falls 3-2
3.2.2 Noise 3-2
3.2.3 Working Around Heavy Equipment 3-2
3.2.4 Traffic Control and Safety 3-2
3.2.5 Sunburn 3-3
3.2.6 Heat Stress 3-3
3.2.7 Sanitation 3-3
3.3 Biological Hazards and Controls 3-3
3.3.1 Insect Bites 3-3
3.3.2 Spiders and Other Insects 3-4
3.3.3 Snakes 3-5
3.3.4 Lyme Disease Prevention 3-5
3.3.5 Poisonous Plants 3-6
4.0 Training Requirements 4-1
4.1 OSHA Training for General Site Workers 4-1
4.2 OSHA HAZWOPER Manager and Supervisor Training 4-1
4.3 MEC Training 4-1
4.4 UXO Personnel Training 4-2
4.5 MEC Awareness Training 4-2
4.6 Daily Site Operations Briefing 4-2
4.7 Periodic Site Training 4-2
4.8 Visitors 4-3
4.9 Training Documentation 4-3
5.0 Personal Protective Equipment 5-1
6.0 Medical Surveillance Requirements 6-1
6.1 Emergencies and Non-Emergency Medical Treatment 6-1
6.2 Record Keeping 6-2

7.0 Site Control Measures 7-1
7.1 General Site Control Information 7-1
7.2 Communications 7-1
7.3 Work Practices 7-1
8.0 Emergency Response and Contingency Procedures 8-1
General Information 8-1
8.2 Hospital Route 8-1
9.0 Accident Prevention 9-1
9.1 Pre-Emergency Planning 9-1
10.0 Emergency Equipment and First Aid Requirements 10-1
10.1 Emergency Equipment and Supplies 10-1
10.2 Incident Response 10-1
10.3 Emergency Medical Treatment 10-1
10.4 Evacuation 10-2
10.5 Evacuation Signals 10-2
10.6 Incident Notification and Reporting 10-2
10.7 Emergency Contacts 10-4
11.0 Logs, Reports, And Record Keeping 11-1
12.0 Behavior Based Loss Prevention 12-1
12.1 Activity Hazard Analysis 12-1
12.2 Pre-Task Safety Plans 12-3
12.3 Loss Prevention Observations 12-3
12.4 Loss/Near Loss Investigations 12-3
13.0 Approval 13-1
13.1 Original Plan 13-1
13.2 Revisions 13-1

Tables

2-1 Project Personnel Directory 2-3
4-1 UXO Personnel Training and Experience Hierarchy 4-2
10-1 Sample Supply List and Locations 10-1
10-2 Evacuation Signals 10-2
12-1 Task Hazard Analysis 12-2

Attachments

1 Employee Signoff Form
2 Hazard Communication Program Forms
3 Self-Assessment Checklists
4 Behavior Based Loss Prevention Forms

Acronyms

ACO	Administrative Contracting Officer
AFCEE	Air Force Center for Engineering and the Environment
AHA	Activity Hazard Analysis
AMP	Air Monitoring Plan
ATF	Alcohol, Tobacco, and Firearms
BATF	Bureau of Alcohol, Tobacco, and Firearms
BBLPS	Behavior Based Loss Prevention System
BIP	blown-in-place
BRAC	Base Realignment and Closure
CAD	cartridge actuated device
CAI	cartridge actuated initiator
CDL	Commercial Drivers License
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CH2M HILL	CH2M HILL Constructors, Inc.
CIH	Certified Industrial Hygienist
CO	Contracting Officer
CPR	Cardiopulmonary Resuscitation
CTO	Contract Task Order
DDESB	Department of Defense Explosive Safety Board
DID	Data Item Description
DMM	Discarded Military Munitions
DoD	Department of Defense
EOD	Explosive Ordnance Disposal
EPA	U.S. Environmental Protection Agency
EZ	Exclusion Zone
FAC	Florida Administrative Code
FANG	Florida Air National Guard
FDEP	Florida Department of Environmental Protection
FLARNG	Florida Army Reserve National Guard
GPS	Global Positioning System
HSP	Health and Safety Plan
JAA	Jacksonville Airport Authority
lb	pound(s)
LPO	Loss Prevention Observations
MEC	Munitions and Explosives of Concern
mm	millimeter(s)
MPPEH	Material Potentially Presenting an Explosive Hazard
MR	Munitions Response
MRQCM	Munitions Response Quality Control Manager
MRS	Munitions Response Site

MRSO	Munitions Response Safety Officer
NAS	Naval Air Station
NAVFAC SE	U.S. Naval Facilities Engineering Command, Southern Division
NAVSEA	Naval Sea Systems Command
NEW	net explosive weight
NIOSH	National Institute for Occupational Safety and Health
NLI	Loss and Near Loss Investigations
NOSSA	Naval Ordnance Safety and Security Activity
NPL	National Priorities List
NTR	Navy Technical Representative
NVLAP	National Voluntary Laboratory Accreditation Program
OP	Ordnance Publication
OSHA	Occupational Safety and Health Act
PM	Project Manager
PPE	personal protective equipment
PTSP	Pre-Task Safety Plans
PVC	polyvinyl chloride
QA	Quality Assurance
QC	Quality Control
QCR	Quality Control Report
ROICC	Resident Officer in Charge of Construction
RPM	Remedial Project Manager
RTK	Real-Time Kinematic
SHSS	Site Health and Safety Specialist
SOPs	Standard Operating Procedures
SUXOS	Senior Unexploded Ordnance Supervisor
T&D	Transportation and Disposal
TAT	turnaround time
TCRA	Time Critical Removal Action
TtNUS	Tetra Tech NUS, Inc.
USACE	U.S. Army Corps of Engineers
UXO	Unexploded Ordnance
UXOQCS	Unexploded Ordnance Quality Control Specialist
UXOSO	Unexploded Ordnance Safety Officer
YWWA	Yellow Water Weapons Area

1.0 Introduction

1.1 Site History and Project Description

The work area covered by this Health and Safety Plan (HSP) is referred to as Site 15 is located in the southwest section of Yellow Water Weapons Area (YWWA), and covers approximately 85 acres, with elevations ranging from approximately 79 feet National Geodetic Vertical Datum (NGVD) to 72 feet NGVD. The site is heavily forested, primarily with slash pine and understory vegetation. Several forest fires have occurred in an area of stressed vegetation, referred to as the forest burn area, the area is present in the southwestern portion of the site, approximately 900 feet southwest of the burn chamber and firing pad. Several slash pines are partially burned in this area. Controlled burns were commonly undertaken in this area to control understory growth in the planted pine forests.

From the early 1940s through the mid 1950s, Site 15 was used as a skeet range. The former skeet range was approximately 1,000 feet by 2,400 feet in size. From the mid 1960s through 1977, Site 15 was used for munitions disposal. This operation consisted of burning munitions materials in a large metal chamber and static firing of rockets. The munitions disposal structures were situated west of the skeet range. The majority of munitions disposed of at the site were burned and included small arms munitions, 20-millimeter (mm) projectiles (believed to be target practice), parachute and distress flares,

Mark IV signal cartridges, rocket igniters, cartridge activated devices (CADs), 2.75-inch rockets, and 5-inch rockets. The rocket motors were reportedly either static fired for disposal or the rocket propellant was placed on the ground and ignited in the area of the burn chamber. An estimated 350 tons of munitions were disposed of at the site while in operation.

The munitions burn chamber and static rocket firing pad respectively, are the only structures currently at the site. The burn chamber is a rounded, steel, tank-like container, approximately 10 feet in length and 4 feet in height. The chamber has a burn stack that rises approximately 3 feet above the body of the chamber. Access to the chamber is through a 2-foot by 2-foot hinged door. When full, the burn chamber can accommodate 1.5 cubic yards of material. The static rocket firing pad is an L-shaped concrete structure approximately 10 feet long by 4 feet wide by 6 feet high. Steel firing rods are seated into the concrete at 45-degree angles. Several concrete building foundations, remnants of buildings that supported skeet range activities, are located in the area surrounding the burn chamber and firing pad.

An extensive investigation of Site 15 was conducted beginning in 1985 and continued through the preparation of the Feasibility Study (FS) conducted by TtNUS in 2005. During this period, 853 soil samples, 13 sediment samples, 7 surface water samples, 40 groundwater samples, and 15 ecological samples were collected and analyzed.

The environmental site investigations and sampling activities showed that the soil contains several chemicals at concentrations that could result in unacceptable human health risks under the currently planned recreational use of Site 15. A human health Preliminary Risk Evaluation

(PRE) identified several polynuclear aromatic hydrocarbons (PAHs) globally designated as benzo(a)pyrene equivalent (BaPEq), two metals (arsenic and lead), and total recoverable petroleum hydrocarbons (TRPHs) as chemicals of potential concern (COPCs). An Ecological Risk Assessment (ERA) also identified PAHs, arsenic, and lead in soil as COPCs.

A statistical-based approach was used to determine the concentrations above which soil must be removed to achieve upper confidence limits (UCLs) or average concentrations less than or equal to the Soil Cleanup Target Level (SCTL) for a defined exposure unit, the area to which a receptor is assumed to be exposed. Site-specific Remedial Action Objectives (RAOs) specify COCs, media of interest, exposure pathways, and cleanup goals or acceptable contaminant concentrations. The RAOs identified for the Site 15 soil are as follows:

- Prevent unacceptable human health risk associated with exposure to surface soil containing PAHs, arsenic, and lead at concentrations greater than the established site-specific SCTLs,
- Reduce ecological risk associated with exposure to surface soil containing PAHs and lead above site-specific ecological target levels.

A third RAO was developed in order to allow continued use of the site as a "green space", as follows:

- The remediation of the site will not adversely impact the anticipated future land use of the site, which is as a Natural and Recreation Corridor (TtNUS, 2005).

In accordance with Chapter 62-780, FAC, soil with concentrations greater than three times the site-specific SCTLs would be removed based on acute toxicity. Based on the existing conditions and the site-specific SCTLs, remediation or treatment would not be needed to address antimony, 1-methylnaphthalene, or 2-methylnaphthalene. Removal of soil with BaPEq and arsenic concentrations greater than three-times their site-specific SCTLs is more than sufficient to result in site-wide UCLs less than the site-specific SCTLs. To be protective of human and ecological receptors, the existing onsite TRPH concentrations indicate that remediation or treatment would not be needed..

1.2 Project Objectives

The activities associated with the Munitions Response scope of work are as follows:

- Mobilization and Site Preparation
- Mosquito Control
- Site Survey
- Tree and Vegetation Removal with MEC Support
- Portable Type 2 High Explosive (HE) Storage Magazine Installation and Temporary Storage of MEC
- Instrument-Assisted Surface Clearance
- Digital Geophysical Mapping (DGM) Survey
- Subsurface Anomaly Investigation
- Disposal of MEC (if necessary)
- Disposition of MPPEH
- Containerization, Characterization, and T&D of Contaminated Materials

- Onsite Construction Support
- Preparation and submittal of a MR After Action Report (AAR) Backfill Material Certification
- Survey
- Construction Support (onsite)
- Soil Excavation and Backfilling
- On-site lead treatment and stabilization
- T&D of Generated Wastes
- Site Restoration
- Decontamination
- Demobilization
- Preparation and submittal of a Remedial Action Completion Report (RACR)

2.0 Staff Organization, Qualifications, and Responsibilities

All project personnel are responsible to the Senior UXO Supervisor (SUXOS) during fieldwork and will review, and become familiar with, the content of this project-specific HSP. Project team personnel will comply with the hazard-specific instruction provided by the SUXOS. Any deviations from the procedures identified in the HSP must be based on field conditions encountered and documented.

2.1 Project Manager

Jeffery Marks is the project manager (PM). The PM is responsible for ensuring all activities performed at Cecil Field are conducted in accordance with contractual specifications and the approved Work Plan Addendum (WPA), and will also coordinate with Navy representatives. The PM is responsible for management of all operations conducted for the project, and will ensure that all personnel assigned to the project, including subcontractors, have reviewed appropriate sections of the WPA before any task associated with the project begins. The PM will monitor the budget and schedule to ensure availability of necessary personnel, equipment, subcontractors, and services, and will also participate in the development of the field program, evaluation of data, and reporting.

2.2 Senior UXO Supervisor (SUXOS)

The SUXOS will be the most senior UXO Technician onsite and will also serve as the UXO Quality Control Specialist (UXOQCS). The SUXOS will directly control the operations of all personnel performing MEC activities. The SUXOS reports directly to the PM concerning technical MEC and operational issues but will report to the program level on all matters related to site safety and quality control. The SUXOS will implement the approved plans in the field and supervise all personnel on the project. The SUXOS has the authority to temporarily stop work to correct an unsafe condition or procedure. The SUXOS will meet the minimum requirements of Department of Defense Explosives Safety Board (DDESB) Technical Publication (TP) 18, Minimum Qualifications for Unexploded Ordnance (UXO) Technicians and Personnel Standards for the SUXOS, UXOSO and UXOQCS positions; NAVSEAINST 8020.9B, Ammunition and Explosives Personnel Qualification and Certification Program; and terms outlined by U.S. Department of Labor Employment Standards Administration Wage Hour Division for UXO Personnel.

2.3 UXO Technician II

UXO Technician II personnel will report directly to the SUXOS and are responsible for the safe and efficient performance of specific field tasks as assigned by the SUXOS. They are also responsible for complete familiarity with the WPA and for adherence to the procedures

described in the WPA. A UXO Technician II has the authority to temporarily stop work in order to bring an unsafe condition or procedure to the attention of the SUXOS. Each UXO Technician II will meet the minimum requirements of DDESB TP 18, NAVSEAINST 8020.9B, and U.S. Department of Labor Employment Standards Administration Wage Hour Division for UXO Personnel.

2.4 Project Field Personnel Responsibilities

2.4.1 General Responsibilities

All CH2M HILL project team field personnel are responsible to the SUXOS and will review, and become familiar with, the content of this HSP. All project team personnel will comply with the hazard-specific instruction provided by the SUXOS. Any deviations from this HSP must be based on field conditions encountered and must be well documented in the field notes.

2.4.2 SUXOS Responsibilities

The SUXOS has the specific responsibility for ensuring that all project team members, including subcontractors, comply with the HSP. It is the SUXOS' responsibility to inform the subcontractors and other field personnel of any hazards as he/she becomes aware of them. Deviations from the HSP must be based on field conditions encountered and thoroughly documented in the field logbook or notes. The SUXOS has the authority to monitor and correct CH2M HILL health and safety problems as noticed onsite. Additional SUXOS responsibilities include:

1. Following the HSP.
2. Reporting to the PM any unsafe conditions or practices.
3. Reporting to the PM all facts pertaining to incidents that result in injury or exposure to toxic materials.
4. Reporting to the PM equipment malfunctions or deficiencies.
5. Providing site safety briefing for project team members.
6. Assisting the PM in documenting compliance with the HSP.
7. Enforcing the "buddy system" as appropriate for site activities.
8. Posting location and route to the nearest medical facility, and arranging for emergency transportation to the nearest medical facility.
9. Posting the telephone numbers of local public emergency services (i.e., police and fire departments).
10. Stopping operations that threaten the health and safety of the project team or surrounding populace.
11. Observing project team members for signs of exposure, stress, or other conditions related to pre-existing physical conditions or site work activities.

2.5 Contacts

Table 2-1 contains the contact information for project personnel.

TABLE 2-1
Project Personnel Directory

Contact	Company
Sidney Allison, Program Manager Robert Hess, Contracts Administration Manager Richard Rathnow, Health and Safety Manager Theresa Rojas, QA/QC Manager	CH2M HILL Constructors, Inc. Northpark 400 1000 Abernathy Road Suite 1600 Atlanta, GA 30328 770/604-9095
Michael Halil, Deputy Program Manager Jeffery Hall, Project Manager	CH2M HILL Constructors, Inc. 6219 Authority Avenue Jacksonville, FL 32221 904/777-4812 x. 233
Richard Stanley, ACO	NAVFAC SE P.O. Box 190010 North Charleston, SC 29419-9010 843/820-5939
DOROTHY OKAMOTO, COTR	As above 843/820-5940
BARBARA NWOKIKE, RPM	BRAC PMO SE 4130 Faber Place Drive, Suite 202 North Charleston, SC 29405 843/743-2141
Arthur Mosley, NTR/FEAD	Engineering Field Activity Southeast Environmental Programs Coordinator / Facilities Engineering and Acquisition Division P. O. Box 5, Building 27 NAS Jacksonville, FL 32212-0139 904/542-5571 ext.234

2.6 Subcontractor Responsibilities

All subcontractors are responsible for their own health and safety programs and the health and safety of their own employees. This requirement is based on OSHA regulations, which recognize the employer-to-employee responsibility for health and safety. A copy of their written program must be submitted to CH2M HILL for review. In an effort to assist the subcontractors, and to comply with hazard communication requirements, CH2M HILL will provide a copy of this HSP to each subcontractor for implementation by the subcontractor's employees.

3.0 Hazard Analysis and Risk Assessment

Reasonably anticipated potential hazards to personnel at the site include: MEC, other physical hazards (slips and trips [working on uneven surface], noise, working around heavy equipment, traffic, heat/cold, and sunburn); and infectious biological agents (snakes, spiders, insects, rodents, and plants). Each potential hazard and the potential for exposure are discussed below.

3.1 MEC

MEC are known to be present onsite and appropriate safety measures will be used during all fieldwork. The primary hazard associated with MEC is the possibility of injury as a result of an explosion. When an MEC item is identified at the site, the SUXOS will secure the site and notify the CH2M HILL PM, who in turn will notify the NAVFAC EFD SOUTH Remedial Project Manager (RPM). The site will remain secured until disposal operations can be performed. Determination of appropriate safety distances will be in accordance with the approved Explosives Siting Plan in the project WPA.

The safest and most expeditious methods of disposal will be utilized in every case. All demolition operations will be in compliance with NAVSEA SW060-AA-MMA-010 Volumes I and II, NAVSEA OP 5 Volume 1, all applicable DoD regulations, and the procedures outlined in the project WPA.

3.2 Uneven walking surfaces

- Employees walking in ditches, swales and other drainage structures adjacent to roads or across undeveloped land must use caution to prevent slips and falls which can result in twisted or sprained ankles, knees, and backs.
- Whenever possible operate from a flat surface and do not enter a steep ditch or hillside.
- If steep terrain must be negotiated, sturdy leather safety shoes or boots with that provide a high degree of traction and ankle support should be used. The need for ladders or ropes to provide stability should be evaluated.
- Avoid extremely tall grass/vegetation areas where the ground surface level can not readily be anticipated or directly observed.
- Clear and grub heavily covered areas where possible prior to conducting regular activities in the work area.

3.3 Excavation Activities

- CH2M HILL personnel must notify and be granted authorization from the excavation competent person prior to entering any excavation. CH2M HILL personnel must follow all excavation requirements established by the competent person.

- The competent person must inspect the trench and/or excavation everyday and after everyday hazard increasing event. Documentation of this inspection must be maintained onsite at al times.
- Excavations must be protected from cave-ins by adequate protective systems unless the excavation is less than 5 feet in depth and a competent person determines there is no indication of cave-in or the excavation is made entirely in stable rock that is not fractured.
- Prior to excavating at a location, buried utilities in the area must be identified; refer to Section 2.2.8 "Procedures for locating buried utilities".
- CH2M HILL personnel must not enter any excavation where protective systems are deficient at any time, for any reason. The competent person must be notified of such conditions.
- Refer to CH2M HILL SOP HS-32 "Excavations and Trenching" for more specific details on excavation requirements.

3.4 Other Physical Hazards

Slips, trips (working on uneven surface), noise, working around heavy equipment, traffic, heat/cold, and sunburn generally constitute the physical hazards that may be encountered.

3.4.1 Slips, Trips, and Falls

Slipping hazards may exist due to uneven terrain or wet surfaces. Tripping hazards may be present from elevation changes, debris, poor housekeeping, or equipment. Collectively, these types of injuries account for nearly 50 percent of all occupational injuries and accepted disabling claims. Prevention requires alertness, following and enforcing proper procedures, and appropriate protective equipment.

3.4.2 Noise

Heavy construction equipment may generate hazardous levels of noise. Hearing protection with the appropriate noise reduction ratio (NRR) shall be worn in areas with high noise. A good rule of thumb to determine if hearing protection is needed is the inability to have a conversation at arm's length without raising voice levels.

3.4.3 Working Around Heavy Equipment

Vehicles, dump trucks, concrete trucks, cranes, backhoes, carts, and other construction equipment may be present at the site. When working near this equipment, stay alert to what the equipment is doing, especially when a backup alarm is sounding. Maintain eye contact with operator at all times and wear an orange vest to increase visibility. Never enter the swing radius of articulating equipment and be aware of pinch points.

3.4.4 Traffic Control and Safety

Vehicular traffic, in the form of large trucks and other heavy equipment, may be present. It is important to be conscious of all vehicular traffic that may be present during conduct of field operations. If necessary, use caution tape, barricades, or safety cones to denote the boundaries of the work area and to alert vehicle operators to the presence of operations that are non-routine

to them. Be careful when exiting the work area and especially when walking out from between parked vehicles to avoid vehicular traffic.

3.4.5 Sunburn

Working outdoors with the skin unprotected for extended periods of time can cause sunburn to the skin. Excessive exposure to sunlight is associated with the development of skin cancer. Project team members should take precautions to prevent sunburn by using sunscreen lotion and/or wearing hats and long-sleeved garments.

3.4.6 Heat Stress

The potential for heat stress is a concern when field activities are performed on warm, sunny days. Although the field work for this project is to be performed during some of the cooler months of the year, the project is located in Florida so site workers should be monitored for signs of heat stress on warmer days.

3.4.7 Sanitation

Sanitation has to do with promoting personal hygiene, protecting general public health, preserving the cleanliness of drinking water, and controlling sewage.

Adequate sanitation facilities will be located at the site.

Portable containers of drinking water will be provided and located at the site. The containers will be capable of being tightly closed and equipped with a tap. Drinking water will not be dipped from containers. The drinking water dispenser will be clearly marked as to the nature of the contents and will not be used for any other purpose.

For single service cups, there will be a sanitary container to hold the unused cups and a trash container for disposing of the used cups. Sanitary trash that is generated will be double-bagged and transported from the installation for disposal as solid waste.

3.5 Biological Hazards and Controls

Various insects, reptiles, and poison ivy/oak could potentially be encountered during the course of completing the work covered by this HSP. Precautions will be taken by all on-site personnel to avoid prime snake and insect habitats, to protect one's self, and assist other personnel from attack or encounter.

WARNING
AN ENCOUNTER WITH A POISONOUS SNAKE REQUIRES IMMEDIATE PROFESSIONAL MEDICAL ATTENTION.

3.5.1 Insect Bites

Mosquitoes, ants, bees, and wasps are considered to be the most common insects that may be encountered. Although their bite/sting is not considered life threatening, an allergic reaction to these bites/stings could occur. Avoid insect habitats whenever possible. If bitten/stung by insects, remove the stinger by gently scraping it out by using a credit card or driver license (do not use tweezers). Apply ice to the affected area. Instant ice packs are to be kept in the work

area. If an insect bites/stings the worker, immediately apply an ice pack to the affected area, wash area with soap, and apply antiseptic. If an allergic reaction occurs, transport worker to the closest medical facility for treatment. Also, use protection against bacteria and other microbiota that could be present in the water and sediment. Be aware that mosquitoes are a common vector for human diseases.

3.5.2 Spiders and Other Insects

Almost all spiders produce toxic venoms, but their fangs are too small and weak to penetrate the skin, the venom is too weak, or the volume of venom is too small to pose a significant threat to humans. The black widow is the only spider found in the United States (U.S.) that is capable of routinely producing serious illness by its bite.

The female black widow typically is coal black and has a prominent, spherical abdomen that may be as large as 0.5 inch in diameter. A red or orange marking resembling an hourglass shape is present on the underside of the abdomen. The black widow weaves a coarse, crudely constructed web in dark corners, both indoors and out. They exist in secluded areas beneath objects, under toilet seats, in dark corners of buildings, windowsills, etc.

The black widow bite may feel like a pinprick, may produce a mild burning, or may not be noticed at all. Small puncture wounds, slight redness, or no visible marks may be found at the site of the bite. Within about 15 minutes painful muscle cramps develop at the point of the bite and rapidly spread to involve the entire body. Weakness and tremors may also be present.

Treatment for black widows consists of efforts to relieve the painful muscle spasms and antivenin for small children. No treatment at all should be directed to the site of the bite, with the possible exception of applying an ice cube to relieve pain. Incision and suction is damaging and useless, and should not be performed. Essentially, nothing can be done outside of a hospital. This applies to other types of spider bites too.

The brown recluse spider is one of six poisonous kinds of spiders in the U.S. It has long, skinny legs and is about 0.5 inch long overall. Its entire body is brown, except for a dark mark in the shape of a violin on its head.

When they are outside, they are typically found in piles of rocks, wood, or leaves. If they come inside, brown recluse spiders will go to dark closets, attics, or basements. They are non-aggressive and bite only when disturbed.

A person who gets bitten by a brown recluse spider may not notice anything at first or only feel a little sting at first. After about 4 to 8 hours, the sting will start to hurt a little more. It might look like a bruise or might form a blister surrounded by a bluish-purple area that turns black or brown and becomes crusty after a few days.

If you ever think that you have been bitten by a brown recluse spider, **notify the SUXOS, immediately**. Brown recluse spider bites rarely kill people, but it is important to get medical attention as soon as possible. Wash the bite well with soap and water. You can also apply ice to the area, elevate it, and keep it still. If it is possible, catch and bring the spider to the medical center with you; this is important because it can sometimes be hard to diagnose a spider bite correctly. The spider may be killed before bringing it in, but be sure not to damage it beyond recognition.

3.5.3 Snakes

The most common poisonous snake is the rattlesnake (pit viper). Any snake that inflicts a bite should be precisely identified if possible. Many people are injured by unnecessary treatment for bites of nonpoisonous snakes. More significantly, a bite by a rattlesnake may produce very little reaction in the hours immediately after it occurs, when treatment is most effective. Only if the species of snake is known can optimal therapy be started without delay. Preferably, the snake should be killed and brought to a medical center with the person who was bitten so that the exact species can be determined.

Pit vipers are so named because they have a small pit located between the eye and the nostril, a feature found only in these poisonous species. The pit is an infrared sensing organ instrumental in detecting the small, warm-blooded animals these snakes eat. They have a characteristic triangle head and heavy body. Rattlesnakes belong to the pit viper family. If fangs are present, the snake is undoubtedly poisonous; however, searching for fangs is hazardous. If they have rattles, they are obviously rattlesnakes and poisonous. However, the absence of rattles is not a good indicator because the rattles can get broken off, or even shed with the skin.

The reaction following the bite (envenomation) from a pit viper is one of the best indications that the snake was poisonous and is the only indication that envenomation has occurred and treatment may be needed. This reaction begins within minutes after the bite, but is usually less marked after other pit viper bites. The severity of the reaction varies depending on the species of snake. The earliest symptom is pain or burning at the site of the bite, although some people experience relatively little pain. Shortly afterward the area begins to swell as fluid pours into the tissues. Bleeding usually produces a purple or green discoloration, but this change may take several hours to appear.

Following moderate envenomation, the swelling and discoloration extends farther from the site of the bite, large blisters containing clear or bloody fluid appear, and the regional lymph nodes (particularly in the armpit or the inguinal crease) become enlarged and tender. Severe envenomation is indicated by the development of a systemic reaction. The individual becomes weak and dizzy and develops signs of shock, particularly cold, clammy skin and a weak pulse.

When the individual can be hospitalized within 2 hours time, the only treatment needed is limiting the spread of the venom and immobilizing the extremity. No other measures, particularly incision and suction, should be attempted. Tourniquets are not recommended to help reduce the spread of the venom because they are rarely applied correctly and commonly do more harm than good. The immobilized extremity should be kept at the same level as the heart, and the individual must be transported to a hospital with as little effort on his or her part as possible. No other treatment should be attempted. Wrapping should not be applied to the wound unless envenomation is known to be moderate or severe.

3.5.4 Lyme Disease Prevention

The prevention of Lyme disease is important during spring, summer, and fall months. Lyme disease is a bacterial infection transmitted by the bite of a deer tick. About 50 percent of deer ticks carry the Lyme disease bacteria.

To prevent the bite of a deer tick, avoid grassy areas when possible. Wear protective clothing (light colored) with long sleeves, and tuck pant cuffs inside socks. Apply repellent containing

"Peamethrin" or "Deet" to clothing but **not directly on skin**. Make a habit of self-inspection after exposure to an area that may contain deer ticks.

- **Symptoms**: Headache, flu-like symptoms, a spreading ring-like rash, and swelling and joint pain
- **Tick removal**: Remove attached tick immediately. Use tweezers to grasp the tick's head near the skin and slowly pull straight out. If possible, save the tick for laboratory analysis.
- **Tick Analysis Procedure for Lyme disease:**

  1. For tick removal, follow the instructions in your tick removal kit using a fine pointed pair of tweezers. If the tick is alive, place it in two layered zip-lock bags. It is highly recommended that you wear gloves when removing the tick from the skin to avoid infection.

  2. It is important to remove the entire tick and place it in a zip lock bag.

  3. Place the zip-lock bag in an envelope and fill out the sample submission form from the Clongen website. Please identify yourself as a CH2M HILL employee by completing all the contact information in the form. The cost of the analysis will be paid for; you do not have to use a credit card or check. The account will be assigned a blanket PO and billed directly to Health Resources for payment.

  4. In 1 – 3 days, you will be contacted to discuss the results of your tick testing and any necessary treatment. In the mean time, should your current condition change in any way, please contact the Health Resources Nurse Case Manager who assisted you.

Report any incident involving deer tick bites to the SUXOS.

3.5.5 Poisonous Plants

Contact with poisonous plants such as poison oak, poison ivy, and poison sumac can cause irritation with symptoms such as itching and inflammation, skin rash, swelling, and weeping sores. Contamination can occur through direct or indirect contact with any part of the plant or by exposure to smoke from burning plants. Contact with clothes that have been contaminated can also cause an allergic reaction.

Plant Identification

Poison ivy is a trailing or climbing woody vine or a shrub-like plant with leaves that are each divided into three broad, pointed leaflets. The leaflets are commonly dark glossy green on top and slightly hairy underneath. They produce small yellowish or greenish flowers followed by berry-like drupes.

Poison oak is a member of the same family as poison ivy and has very similar appearances. Poison oak has leaves divided into three leaflets and generally has three to seven distinct lobes. Typically, they are a shrubby-type plant that can grow to 8 feet in height, or sometimes can be a climbing plant.

Exposure Prevention

The best way to prevent exposure is the ability to recognize these plants, conduct an initial survey of the area to determine if the plants are present in the work area, and avoid contact with them.

If plants are located and work must be conducted in that area, have the plants removed if possible. If this is not possible, wear long-sleeved shirts, gloves, and a heavy material type pants. Remember not to touch contaminated clothing. There are products available on the market that can be applied to exposed skin (similar to sunscreen products) prior to working around the plants.

Symptoms and Treatment

The first symptoms are reddening skin and itching. This usually occurs several hours after contact. Small watery blisters soon appear and itching becomes intense. In severe cases, large watery swellings appear and coalesce.

To care for poison plant contact, immediately wash the affected area thoroughly with soap and water. If a rash or weeping sore has already begun to develop, you may apply a boric acid solution, a paste of sodium bicarbonate (baking soda), and calamine or Caladryl lotion to help soothe the area. Antihistamines, such as Benadryl®, may also help dry up the sores.

A physician should be consulted in severe cases, if sensitive parts of the body, such as eyelids and face, or if the condition gets worse and effects large parts of the body.

4.0 Training Requirements

Prior to commencement of site activities, the PM will ensure that all employees engaged in site operations are informed of the nature and degree of exposure to hazards that are likely to result from participation in site operations. The SUXOS will accomplish this by ensuring that all site workers have received the appropriate OSHA and site-specific training prior to participating in site activities.

Employee Name	Office	Responsibility	SSC/FA-CPR
Mike Halil	JAX	Deputy Program Manager	SC-C; FA-CPR
Jeffrey Marks	JAX	Project Manager	SC-C, SC-HW; FA-CPR
TBD		SUXOS	HW- FA-CPR
Rich Rathnow	ORO	Health and Safety Manager	SC-C, SC-HW; FA-CPR
TBD		Quality Control Manager	SC-C, SC-HW; FA-CPR
TBD	ATL	Project Superintendant	SC-C, SC-HW; FA-CPR

4.1 OSHA Training for General Site Workers

All employees involved in hazardous waste site activities receive 40 hours of OSHA HAZWOPER training. They must also have current HAZWOPER 8-Hour Refresher Training prior to working on the site. Any site worker entering the site will be required to have current HAZWOPER training.

4.2 OSHA HAZWOPER Manager and Supervisor Training

The on-site manager/supervisor, the SUXOS, will receive the same training as the general site workers for whom he/she is responsible. He/she will also receive an additional 8 hours of OSHA required supervisory training to enhance the ability to provide guidance and make informed decisions.

This additional training includes the following:

- Review of the HSP
- Review of the Corporate Safety and Health Program
- Management of hazardous waste site cleanup operations
- Management of site work zones
- How to communicate with the media and the public
- PPE selection and limitations
- Spill containment
- Monitoring site hazards
- MEC

4.3 UXO Personnel Training

Subcontractor UXO personnel assigned to positions UXOSO, UXO Technician I, UXO Technician II, or UXO Technician III will meet the minimum requirements of Department of Defense Explosives Safety Board (DDESB) Technical Publication (TP) 18, Minimum Qualifications for Unexploded Ordnance (UXO) Technicians and Personnel.

All MEC operations personnel will be qualified and certified in accordance with NAVSEAINST 8020.9B, Ammunition and Explosives Personnel Qualification and Certification Program; terms outlined by U.S. Department of Labor Employment Standards Administration Wage Hour Division for UXO Personnel; and DDESB TP-18, Minimum Qualifications for Unexploded Ordnance (UXO) Technicians and personnel."

4.4 MEC Awareness Training

Initial MEC awareness training is an appropriate safety precaution for all subcontractor personnel working on this project. MEC awareness consists of training in basic MEC characteristics, identification and reporting procedures.

4.5 Daily Site Operations Briefing

The daily site operations briefings consist of providing a short overview of the daily operations to be performed, and who is responsible for their completion. This will be completed by the SUXOS prior to commencing operations each day. This briefing will include such items as:

- Expected weather conditions
- General site hazards
- MEC hazards
- PPE required
- Emergency evacuation procedures
- Heat stress precautions
- Buddy system procedures
- A review of any safety violations from the previous day
- Any other significant events involving safety

Additional briefings will be provided as needed concerning the use of safety equipment, emergency medical procedures, emergency assistance notification procedures, accident prevention, the work plan, and site orientation to ensure that accomplishment of the project can be carried out in a safe and effective manner. Daily site safety briefings will be recorded daily in the field notes.

4.6 Periodic Site Training

On the first workday of each work week/period, or more frequently if needed, a pertinent topic will be selected and elaborated upon by the SUXOS during the Tailgate Safety Briefing. These safety meetings will help ensure the safety and health of field personnel in the performance of regular work activities and in emergency situations. Safety meetings will be documented.

4.7 Visitors

Visitors to the site may include representatives from the Navy or JAA. These personnel, even if escorted, must receive, as a minimum, a briefing on site conditions, hazards, and emergency response procedures. Visitors must possess the appropriate level of OSHA training. The SUXOS will provide the visitor briefing. All visitors to the site will be escorted at all times. Visitors not complying with the above requirements will not enter the site.

4.8 Training Documentation

Copies of all project team training certifications and medical screening will be kept on file at the site field office for the duration of the project.

5.0 Personal Protective Equipment

The minimum required level of personal protection on the site at all times is modified Level D.

Level D PPE is a work uniform affording minimal protection, used for nuisance contamination only. Excluding the wearing of steel-toed shoes for magnetometer operators, personnel will wear Level D. The following Level D PPE will be required on the site:

- Leather-palmed gloves
- Safety glasses with side shields. Protective eye and face devices purchased after July 5, 1994, shall comply with American National Standards Institute (ANSI) Z87.1-1989, *American National Standard Practice for Occupational and Educational Eye and Face Protection*, which is incorporated by reference as specified in 29 CFR 1910.6.
- Hard hat, where head injury hazards are present. Protective helmets purchased after July 5, 1994, shall comply with ANSI Z89.1-1986, *American National Standard for Personnel Protection-Protective Headwear for Industrial Workers-Requirements*, which is incorporated by reference as specified in 29 CFR 1910.6, or shall be demonstrated to be equally effective.
- Hearing protection, where required by high noise levels (when operating in areas where normal conversation cannot be heard at a distance of 3 feet).
- Sturdy leather work boots. Leather work boots consist of leather uppers that extend up past the ankle.
- Cotton work clothes.

6.0 Medical Surveillance Requirements

Medical surveillance of employees will be conducted in accordance with the requirements of OSHA 29 CFR 1910.120(f), 29 CFR 1910.134(b)(10), and other established guidelines. Personnel to be included in the Medical Surveillance Program will be those who perform hazardous waste operations that may potentially expose the worker to hazardous substances or other significant safety and health threats. All personnel on the project site, excluding visitors, and those not actually engaged in production on the project or performing hazardous waste operations that may potentially expose the worker to hazardous substances or other significant safety and health threats, will be part of the Medical Surveillance Program.

The purposes of the Medical Surveillance Program are to:

- Assess the individual's health status prior to participation in hazardous waste operations; determine the individual's ability to perform work assignments requiring the use of PPE and clothing.
- Establish baseline data for comparison to future medical data in order to provide a means of monitoring a worker's health status.
- Establish facilities and procedures for emergency and non-emergency medical treatment.
- Establish procedures for maintenance and storage of medical and exposure records.

Baseline and annual health assessments have been conducted for all workers participating in site operations to determine the worker's ability to perform hazardous waste operations in a safe and healthful manner. The PM, in conjunction with the SUXOS, will ensure that all health assessments are current and documented. Copies of health assessment records for all site workers will be maintained in the project trailer in accordance with OSHA 29 CFR 1910.120(d).

6.1 Emergencies and Non-Emergency Medical Treatment

The medical treatment facility for use at this site will be:

Baptist Medical Center
800 Prudential Dr. Jacksonville, FL
(904) 202-2000

For emergencies: The employee first recognizing the need for emergency medical treatment will immediately notify the SUXOS by the fastest means available. By no means should the injured person be left alone. The SUXOS will follow the established emergency procedures for acquiring emergency medical assistance.

For Non-Emergency Medical Treatment, contact the SUXOS. The SUXOS will evaluate the problem, provide minor first aid, and monitor for any changes. The SUXOS will document non-emergency incidents.

6.2 Record Keeping

Physician statements, exposure records, and associated information for employees involved in MEC operations at the site will be maintained in the site field office for the duration of site operations. When the site work is complete, the records will be retained by CH2M HILL. In accordance with OSHA 29 CFR 1910.20(d), all records, whether maintained by the employer or by the examining physician, will be kept on file for a period of 30 years beyond an employee's termination.

7.0 Site Control Measures

7.1 General Site Control Information

The CH2M HILL Project Team will adhere to and comply with security and other project control measures with respect to safety concerns during the conduct of all field activities. CH2M HILL will comply with all obligations and constraints routinely expected at DoD installations. As the contractor, it is CH2M HILL's responsibility to ensure that fire extinguishers are in each vehicle and that **at no time** will persons, including subcontractor personnel working in the limited area, possess fire-/flame-producing items or articles such as matches, torches, or lighters. No weapons will be carried at any time by contractor team members.

7.2 Communications

Communication between project team members will consist of verbal communications, hand signals, and communication with portable radios.

7.3 Work Practices

Safe work practices are part of ensuring a safe and healthful working environment. These practices are standardized for all field activities, and it is the responsibility of CH2M HILL and subcontractor employees to follow safe work practices when conducting field activities. Safe work practices to be employed during the entire progress of fieldwork are as follows:

1. The "**BUDDY SYSTEM"** will be used and enforced at all times while working onsite.
2. All fieldwork in the site will be conducted under UXO escort.
3. Set up, assemble, and check out all equipment for integrity and proper function before starting work activities.
4. Do not use faulty or suspect equipment.
5. Check in and out with the SUXOS upon arrival and departure from the site.
6. Notify the SUXOS immediately if there is an accident that causes an injury or illness.

8.0 Emergency Response and Contingency Procedures

8.1 General Information

In the event of an emergency onsite, the SUXOS will direct the necessary course of action. It may be necessary for the SUXOS to depend on the other on-site personnel for assistance.

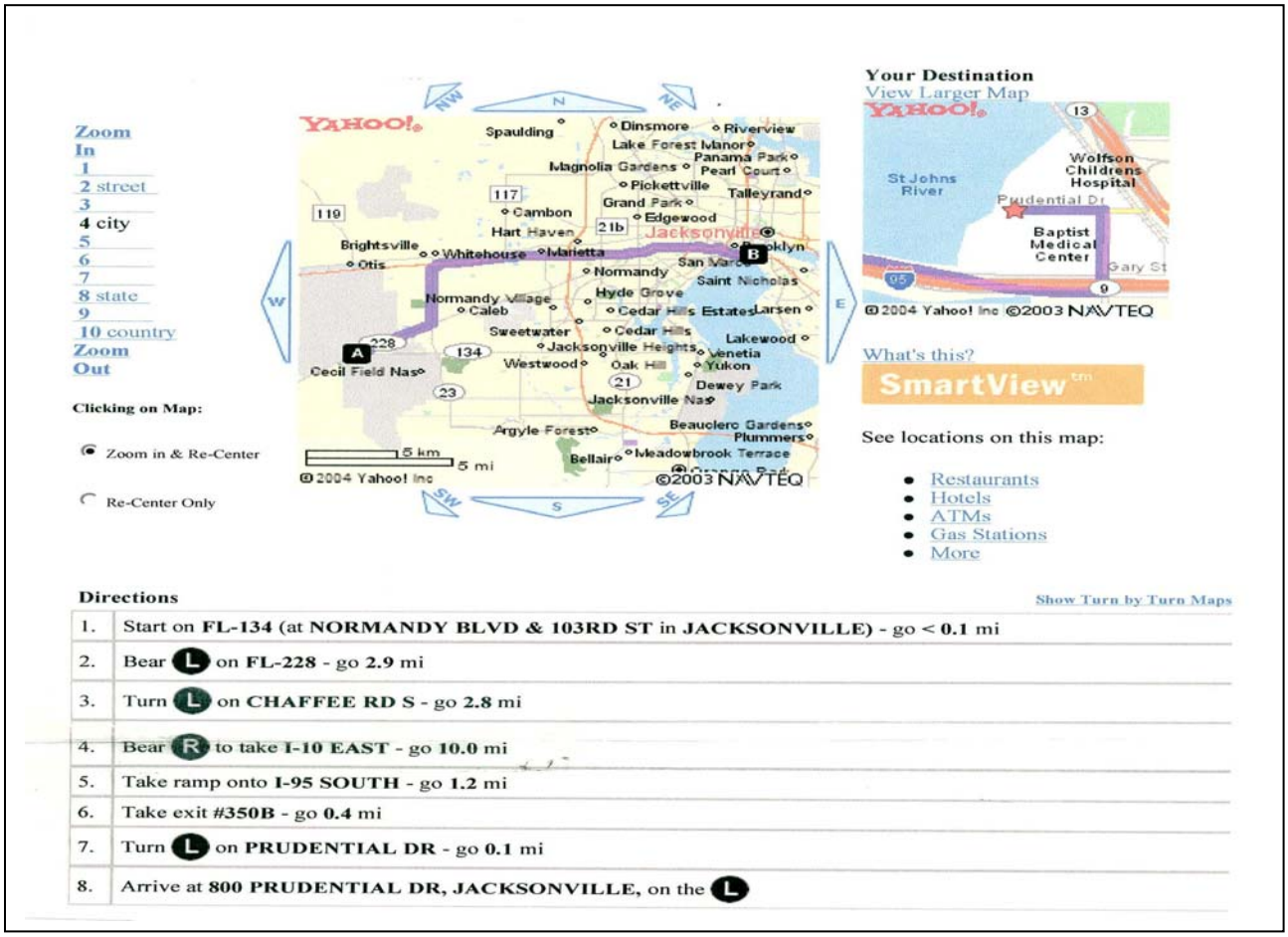
The nearest medical assistance center is the Baptist Medical Center. A map showing the route to the hospital is included in the following section.

The SUXOS is trained in first aid and cardiopulmonary resuscitation (CPR). A first-aid kit and fire extinguisher are located in his/her support vehicle.

The emergency shut-off switch for heavy equipment, will be identified, and all field personnel working in the area will be informed of its location and function during the site safety briefing.

8.2 Hospital Route

Driving directions from Cecil Field to Baptist Medical Center are as follows:



9.0 Accident Prevention

9.1 Pre-Emergency Planning

The SUXOS will perform the applicable pre-emergency planning tasks before starting field activities and coordinates emergency response with on-site parties, the facility, and local emergency service providers as appropriate. These tasks include:

- Review the facility emergency and contingency plans where applicable.
- Determine what onsite communication equipment is available (e.g., two-way radio, air horn, etc.).
- Determine what offsite communication equipment is needed (e.g., nearest telephone, cellular phone, etc.).
- Confirm and post emergency telephone numbers, evacuation routes, assembly areas, and route to hospital; communicate the information to on-site personnel.
- Review changed site conditions, on-site operations, and personnel availability in relation to emergency response procedures.
- Designate one vehicle as the emergency vehicle; place hospital directions and map inside; keep keys in ignition during field activities.
- Inventory and check site emergency equipment, supplies, and potable water.
- Communicate emergency procedures to the project team.
- Rehearse the emergency response plan before site activities begin, including driving route to the medical center.
- Brief new workers on the emergency response plan.
- The SUXOS will evaluate emergency response actions and initiate appropriate follow-up actions.

10.0 Emergency Equipment and First Aid Requirements

10.1 Emergency Equipment and Supplies

The SUXOS should mark the locations of emergency equipment on the site map and post the map, as illustrated in Table 10-1.

TABLE 10 –1
Sample Supply List and Locations

Emergency Equipment and Supplies	Location
20-lb (or two 10-lb) fire extinguisher (A, B, and C classes)	Support Zone/Heavy Equipment
First aid kit	Support Zone/Field Vehicle
Eye wash	Support & Decontamination Zone/Field Vehicle
Potable water	Support & Decontamination Zone/Field Vehicle
Blood borne pathogen kit	Support Zone/Field Vehicle
Additional equipment (specify)	N/A

10.2 Incident Response

In case of emergency, actions to be taken include the following:

- Shut down operations and evacuate the immediate work area.
- Notify appropriate response personnel.
- Account for personnel at the designated assembly area(s).
- Assess the need for site evacuation, and evacuate the site as warranted.
- Instead of implementing a work-area evacuation, note that small fires or spills posing minimal safety or health hazards may be controlled.

10.3 Emergency Medical Treatment

The procedures listed below may also be applied to non-emergency incidents. Injuries and illnesses must be reported to the Project Manager and Project Health & Safety Manager within 4 hours of occurrence. If there is doubt about whether medical treatment is necessary, or if the injured person is reluctant to accept medical treatment, contact the medical consultant. During non-emergencies, follow these procedures as appropriate.

- Notify appropriate emergency response authorities listed in Section 10.7 (e.g., 911).
- The SUXOS will assume charge during a medical emergency until the ambulance arrives or until the injured person is admitted to the emergency room.
- Prevent further injury.

- Initiate first aid and CPR where feasible.
- Get medical attention immediately.
- Make certain that the injured person is accompanied to the emergency room.
- When contacting the medical consultant, give your name and telephone number, the name of the injured person, the extent of the injury or exposure, and the name and location of the medical facility where the injured person was taken.
- Report incident as outlined in Section 10.6.

10.4 Evacuation

- Evacuation routes and assembly areas (and alternative routes and assembly areas) are specified on the site map.
- Evacuation route(s) and assembly area(s) will be designated by the SUXOS before work begins.
- Personnel will assemble at the assembly area(s) upon hearing the emergency signal for evacuation.
- The SUXOS and a "buddy" will remain onsite after the site has been evacuated (if safe) to assist local responders and advise them of the nature and location of the incident.
- The SUXOS will account for all personnel in the on-site assembly area.
- A designated person will account for personnel at alternate assembly area(s).
- The SUXOS will write up the incident as soon as possible after it occurs and submit a report to the Project Manager.

10.5 Evacuation Signals

Table 10-2 provides some samples of possible evacuation signals.

TABLE 10-2
Evacuation Signals

Signal	Meaning
Grasping throat with hand	Emergency-help me
Thumbs up	OK; understood
Grasping buddy's wrist	Leave area now
Continuous sounding of horn	Emergency; leave site now

10.6 Incident Notification and Reporting

For any accident meeting the definition of **Recordable Occupational Injuries or Illnesses or Significant Accidents**, the Southern Division, NAVFAC Contracting Officer and Navy

Technical Representative (NTR) shall be notified by the HSM or Program Manager soon as practical, **but not later than four hours after occurrence.** All other incidents must be reported to Southern Division, NAVFAC within 24 hours of incident occurrence.

Therefore in order for the incident to be assessed for reportability purposes it is imperative that according to CCI requirements, **all personal injuries, near-misses, or property damage incidents involving CCI or subcontractor project personnel be reported IMMEDIATELY to the HSM** Rich Rathnow/ORO, Program Manager Scott Newman/ATL, or CCI Corporate HSM Angelo Liberatore/ATL at the numbers identified in the emergency contact attachment contained in this plan.

The Site Manager or designee must **report the following incident information to the HSM immediately** after incident occurrence:

- Date and time of mishap
- Project name and project number
- Name and worker classification
- Extent of known injuries
- Level of medical attention
- Injury cause

A written incident investigation shall be performed and submitted to the HSM within 24 hours of incident occurrence by the completing the Incident Report, Near Loss Investigation and Root Cause Analysis provided in the HSP Attachments.

In fires, explosions, or chemical releases, actions to be taken include the following:

- Shut down CH2M HILL operations and evacuate the immediate work area.
- Notify appropriate response personnel.
- Account for personnel at the designated assembly area(s).
- Assess the need for site evacuation, and evacuate the site as warranted.

Instead of implementing a work-area evacuation, note that small fires or spills posing minimal safety or health hazards may be controlled.

10.7 Emergency Contacts

24-hour CH2M HILL Emergency Beeper – 800/756-1130	
Medical Emergency – 911 Facility Medical Response #: Local Ambulance #:	**CH2M HILL- Medical Consultant** Dr. Jerry H. Berke, M.D., M.P.H. Health Resources 600 West Cummings Park, Suite 3400 Woburn, MA 01801-6350 781/938-4653 800/350-4511 (After hours calls will be returned within 20 minutes)
Fire/Spill Emergency -- 911 Facility Fire Response #: Local Fire Dept #:	**Local Occupational Physician**
Security & Police – 911 Facility Security #: Local Police #:	**Navy RAC Program Manager** Name: Scott Smith/ATL Phone: 770/604-9095
Utilities Emergency Water: Gas: Electric:	**Navy RAC Health and Safety Manager (HSM)** Name: Rich Rathnow/ORO Phone: 865/483-9005 (Office); 865/607-6734 (Cell) 865/531-2933 (Home)
Site Health and Safety Specialist (SHSS) Name: Phone:	**CH2M HILL Human Resources Department** Name: Nancy Orr/COR Phone: 303/771-0952
Project Manager Name: Jeffery Marks Phone: (904) 777-4812 ext. 224 (office); (904) 219-6253 (Cell)	**Corporate Human Resources Department** Name: John Monark/COR Phone: 303/771-0900
Federal Express Dangerous Goods Shipping Phone: 800/238-5355 **Emergency Number for Shipping Dangerous Goods** Phone: 800/255-3924	**CH2M HILL Worker's Compensation and Auto Claims** Sterling Administration Services Phone: 800/420-8926 After hours: 800/497-4566 Report fatalities AND report vehicular accidents involving pedestrians, motorcycles, or more than two cars.
Contact the Project Manager. Generally, the Project Manager will contact relevant government agencies.	
Facility Alarms:	**Evacuation Assembly Area(s):**
Facility/Site Evacuation Route(s):	
Hospital Name/Address: **Baptist Medical Center**	**Hospital Phone #: Hospital Phone #:** (904) 202-2000
Directions to Hospital	
See map in section 8.2	

11.0 Logs, Reports, and Record Keeping

The implementation of the HSP will be documented to ensure employee participation and protection. In addition, the regulatory requirements will be met for record keeping on training, medical surveillance, injuries and illnesses, exposure monitoring, health risk information, and respirator fit-tests.

12.0 Behavior Based Loss Prevention

A Behavior Based Loss Prevention System (BBLPS) is a system to prevent or reduce losses using behavior-based tools and proven management techniques to focus on behaviors or acts that could lead to losses.

The four basic Loss Prevention tools that will be used on CH2M HILL projects to implement the BBLPS include:

- Activity Hazard Analysis (AHA)
- Pre-Task Safety Plans (PTSP)
- Loss Prevention Observations (LPO)
- Loss and Near Loss Investigations (NLI)

The Site Supervisor serves as the Site Health and Safety Specialist (SHSS) and is responsible for implementing the BBLPS on the project site. When a separate individual is assigned as the SHSS, the SHSS is delegated authority from the Site Supervisor to implement the BBLPS on the project site, but the Site Supervisor remains accountable for its implementation. The Site Supervisor/Safety Coordinator shall only oversee the subcontractor's implementation of their AHAs and PTSPs processes on the project.

12.1 Activity Hazard Analysis

An Activity Hazard Analysis (AHA) defines the activity being performed, the hazards posed and control measures required to perform the work safely. Workers are briefed on the AHA before doing the work and their input is solicited prior, during and after the performance of work to further identify the hazards posed and control measures required.

Activity Hazard Analysis will be prepared before beginning each project activity posing H&S hazards to project personnel using the AHA form provided in Attachment 4. The AHA shall identify the work tasks required to perform each activity, along with potential H&S hazards and recommended control measures for each work task. In addition, a listing of the equipment to be used to perform the activity, inspection requirements and training requirements for the safe operation of the equipment listed must be identified.

An AHA shall be prepared for all field activities performed by CH2M HILL and subcontractor during the course of the project by the Site Supervisor/SHSS. The Project-Specific and General Hazards of the HSP, the Hazard Analysis Table (Table 12-1), and applicable CH2M HILL Standards of Practice (SOPs) should be used as a basis for preparing CH2M HILL AHAs.

CH2M HILL subcontractors are required to provide AHAs specific to their scope of work on the project for acceptance by CH2M HILL. Each subcontractor shall submit AHAs for their field activities, as defined in their Work Plan/scope of work, along with their HSP. Additions or changes in CH2M HILL or subcontractor field activities, equipment, tools or material to perform work or additional/different hazard encountered that require additional/different hazard control measures requires either a new AHA to be prepared or an existing AHA to be revised.

TABLE 12-1
Task Hazard Analysis

(Refer to Section 2 of HSP for hazard controls)

	Task Breakdown								
Potential Hazards	**Survey**	**Vegetation Removal**	**Anomaly Detection and Intrusive Investigation**	**Draining of Standing Water in Drainage DItch**	**Disposal of Recovered MEC**	**Disposition of MPPEH**	**Waste Characterization Sampling**	**Decontamination**	**T&D of Generated Wastes**
Ordnance Explosives (HS-209)	X	X	X	X	X	X	X	X	X
Manual Lifting (HS-112)	X	X	X	X	X	X	X	X	X
Fire Prevention (HS-208)			X						X
Electrical Safety (HS-206)									
Lockout /Tagout (HS-310)									
Ladders & Stairs(HS-214)									X
Compressed Gas Cylinders			X						
Buried Utilities		X	X	X					
Excavations (HS-307)		X	X	X					
Fall Protection (HS-308)									X
Heavy Equipment (HS-306)			X	X					X
Confined Space Entry (HS-203)									
Concrete & Masonry Work (HS-302)									
Cranes and Hoisting (HS-303)		X	X						X
Demolition (HS-305)									
Scaffolding(HS-311)									
Steel erection (HS-312)									
Welding and cutting (HS-314)									
Aerial Lifts (HS-301)									
Hand & Power Tools (HS-210)	X	X	X	X	X	X	X	X	X
Forklifts (HS-309)									X
Drilling (HS-204)			X						
Noise (HS-108)	X	X	X						X
Pressurized Lines/Equipment			X						
Pressure Washing/Equip Decon								X	
Vacuum Truck/Pumping Operations				X					
Suspended Loads									X
Vehicle Traffic									X
Haul Truck Operations				X					
Visible Lighting	X	X	X	X	X	X	X	X	X
Mechanical Guarding Hazards									
Asbestos Hazard									
Lead Hazard			X						
Chemical Hazard-Dermal/Inhalation			X				X	X	X
Dust Hazard (Silica/Metals)		X	X	X					
Fire/Explosion Hazards			X	X					

12.2 Pre-Task Safety Plans

Daily safety meetings are held with all project personnel in attendance to review the hazards posed and required H&S procedures/AHAs, that apply for each day's project activities. The PTSPs serve the same purpose as these general assembly safety meetings, but the PTSPs are held between the crew supervisor and their work crews to focus on those hazards posed to individual work crews. At the start of each day's activities, the crew supervisor completes the PTSP, provided in Attachment 4, with input from the work crew, during their daily safety meeting. The day's tasks, personnel, tools and equipment that will be used to perform these tasks are listed, along with the hazards posed and required H&S procedures, as identified in the AHA. The use of PTSPs, better promotes worker participation in the hazard recognition and control process, while reinforcing the task-specific hazard and required H&S procedures with the crew each day. The use of PTSPs is a common safety practice in the construction industry.

12.3 Loss Prevention Observations

Loss Prevention Observations (LPOs) shall be conducted by Site Supervisor/SHSS for specific work tasks or operations comparing the actual work process against established safe work procedures identified in the project-specific HSP and AHAs. LPOs are a tool to be used by supervisors to provide positive reinforcement for work practices performed correctly, while also identifying and eliminating deviations from safe work procedures that could result in a loss. Site Supervisor/SHSS shall perform at least one LPO each week for a tasks/operations addressed in the project-specific HSP or AHA. The Site Supervisor/SHSS shall complete the LPO form in Attachment 6 for the task/operation being observed.

12.4 Loss/Near Loss Investigations

Loss/Near Loss Investigations shall be performed for the all CH2M HILL and subcontractor incidents involving:

- Person injuries/illnesses and near miss injuries
- Equipment/property damage
- Spills, leaks, regulatory violations
- Motor vehicle accidents

The cause of loss and near loss incidents are similar, so by identifying and correcting the causes of near loss causes, future loss incidents may be prevented. The following is the Loss/Near Loss Investigation Process:

- Gather all relevant facts, focusing on fact-finding, not fault-finding, while answering the who, what, when, where and how questions.
- Draw conclusions, pitting facts together into a probable scenario.
- Determine incident root cause(s), which are basic causes on why an unsafe act/condition existed.
- Develop and implement solutions, matching all identified root causes with solutions.

- Communicate incident as a Lesson Learned to all project personnel.
- Filed follow-up on implemented corrective active action to confirm solution is appropriate.

Site Supervisors/SHSS shall perform an incident investigation, as soon as practical after incident occurrence during the day of the incident, for all Loss and Near Loss Incidents that occur on the project. Loss and Near Loss incident investigations shall be performed using the following incident investigation forms provided in Attachment 4:

- Incident Report Form (IRF)
- Incident Investigation Form
- Root Cause Analysis Form

All Loss and Near Loss incident involving personal injury, property damage in excess of $1,000 or near loss incidents that could have resulted in serious consequences shall be investigated by completing the incident investigation forms and submitting them to the PM and HSM within 24 hours of incident occurrence. A preliminary Incident Investigation and Root Cause Analysis shall be submitted to the Project Manager and HSM within 24 hours of incident occurs. The final Incident Investigation and Root Cause Analysis shall be submitted after completing a comprehensive investigation of the incident.

13.0 Approval

This site-specific Health and Safety Plan has been written for use by CH2M HILL only. CH2M HILL claims no responsibility for its use by others unless that use has been specified and defined in project or contract documents. The plan is written for the specific site conditions, purposes, dates, and personnel specified and must be amended if those conditions change.

13.1 Original Plan

Written By: Jeff Marks **Date: February 11, 2008**

Approved By: **Michael Goldman** **Date: February 11, 2008**

13.2 Revisions

Revisions Made By: **Date:**

Revisions to Plan:

Revisions Approved By: **Date:**

Attachment 1

Employee Signoff Form

EMPLOYEE SIGNOFF FORM

Health and Safety Plan

The CH2M HILL project employees and subcontractors listed below have been provided with a copy of this HSP, have read and understood it, and agree to abide by its provisions.

Project Name: **Project Number:**

EMPLOYEE NAME (Please print)	**EMPLOYEE SIGNATURE**	**COMPANY**	**DATE**

Attachment 2

Hazard Communication Program Forms

Project-Specific Chemical Product Hazard Communication Form

This form must be completed prior to performing activities that expose personnel to hazardous chemicals products. Upon completion of this form, the SHSS shall verify that training is provided on the hazards associated with these chemicals and the control measures to be used to prevent exposure to CH2M HILL and subcontractor personnel. Labeling and MSDS systems will also be explained.

Project Name: **Project Number:**

MSDSs will be maintained at the following location(s):

Hazardous Chemical Products Inventory

Chemical	*Quantity*	Location	MSDS Available	*Container labels* Identity	Hazard
Methane	1 liter, compressed	Support Zone			
tylene	1 liter, compressed	Support Zone			
Pentane	1 liter, compressed	Support Zone			
Hydrochloric acid	< 500 ml	Support Zone / sample bottles			
Nitric acid	< 500 ml	Support Zone / sample bottles			
Sulfuric Acid	< 500 ml	Support Zone / sample bottles			
Sodium hydroxide	< 500 ml	Support Zone / sample bottles			
Methanol	< 1 Gallon	Support/Decon Zones			
Hexane	< 1 Gallon	Support/Decon Zones			
pH buffers	< 500 ml	Support Zone			
MSA Sanitizer	< 1 liter	Support/Decon Zones			
Alconox/Liquinox	< 1liter	Support/Decon Zones			

Refer to SOP HS-05 *Hazard Communication* for more detailed information.

CHEMICAL-SPECIFIC TRAINING FORM

Location:	Project # :
SHSS:	Trainer:

TRAINING PARTICIPANTS:

NAME	SIGNATURE	NAME	SIGNATURE

REGULATED PRODUCTS/TASKS COVERED BY THIS TRAINING:

The HCC shall use the product MSDS to provide the following information concerning each of the products listed above.

☐ Physical and health hazards

☐ Control measures that can be used to provide protection (including appropriate work practices, emergency procedures, and personal protective equipment to be used)

☐ Methods and observations used to detect the presence or release of the regulated product in the workplace (including periodic monitoring, continuous monitoring devices, visual appearance or odor of regulated product when being released, etc.)

Training participants shall have the opportunity to ask questions concerning these products and, upon completion of this training, will understand the product hazards and appropriate control measures available for their protection.

Copies of MSDSs, chemical inventories, and CH2M HILL's written hazard communication program shall be made available for employee review in the facility/project hazard communication file.

Attachment 3

Project Activity Self-Assessment Checklists/Permits

Hand and Power Tools
Earth Moving Equipment

H&S Self-Assessment Checklist – HAND AND POWER TOOLS

This checklist shall be used by CH2M HILL personnel **only** and shall be completed at the frequency specified in the project's HSP.

This checklist is to be used at locations where: 1) CH2M HILL employees are exposed to hand and power tool hazards and/or 2) CH2M HILL provides oversight of subcontractor personnel who are exposed to hand and power tool hazards.

SHSS may consult with subcontractors when completing this checklist, but shall not direct the means and methods of hand and power tool use nor direct the details of corrective actions. Subcontractors shall determine how to correct deficiencies and we must carefully rely on their expertise. Items considered to be imminently dangerous (possibility of serious injury or death) shall be corrected immediately or all exposed personnel shall be removed from the hazard until corrected.

Completed checklists shall be sent to the HS&E Staff for review.

Project Name: _____ Project No.: _____

Location: _____ PM: _____

Auditor: _____ Title: _____ Date: _____

This specific checklist has been completed to:

☐ Evaluate CH2M HILL employee exposure to hand and power tool hazards.
☐ Evaluate a CH2M HILL subcontractor's compliance with hand and power tool requirements.
Subcontractors Name: _____

Check "Yes" if an assessment item is complete/correct.

Check "No" if an item is incomplete/deficient. Deficiencies shall be brought to the immediate attention of the subcontractor. Section 3 must be completed for all items checked "No."

Check "N/A" if an item is not applicable.

Check "N/O" if an item is applicable but was not observed during the assessment.

Numbers in parentheses indicate where a description of this assessment item can be found in Standard of Practice HS-50.

SECTION 1

SAFE WORK PRACTICES (3.1)

	Yes	No	N/A	N/O
1. All tools operated according to manufacturer's instructions and design limitations.	☐	☐	☐	☐
2. All hand and power tools maintained in a safe condition and inspected and tested before use.	☐	☐	☐	☐
3. Defective tools are tagged and removed from service until repaired.	☐	☐	☐	☐
4. PPE is selected and used according to tool-specific hazards anticipated.	☐	☐	☐	☐
5. Power tools are not carried or lowered by their cord or hose.	☐	☐	☐	☐
6. Tools are disconnected from energy sources when not in use, servicing, cleaning, etc.	☐	☐	☐	☐
7. Safety guards remain installed or are promptly replaced after repair.	☐	☐	☐	☐
8. Tools are stored properly.	☐	☐	☐	☐
Cordless tools and recharging units both conform to electrical standards and specifications.	☐	☐	☐	☐
10. Tools used in explosive environments are rated for such use.	☐	☐	☐	☐
11. Knife or blade hand tools are used with the proper precautions.	☐	☐	☐	☐
12. Consider controls to avoid muscular skeletal, repetitive motion, and cumulative trauma stressors.	☐	☐	☐	☐

SECTION 2	Yes	No	N/A	N/O
GENERAL (3.2.1)				
13. PPE is selected and used according to tool-specific hazards anticipated.	☐	☐	☐	☐
14. Tools are tested daily to assure safety devices are operating properly.	☐	☐	☐	☐
15. Damaged tools are removed from service until repaired.	☐	☐	☐	☐
16. Power operated tools designed to accommodate guards have guards installed.	☐	☐	☐	☐
17. Rotating or moving parts on tools are properly guarded.	☐	☐	☐	☐
18. Machines designed for fixed locations are secured or anchored.	☐	☐	☐	☐
19. Floor and bench-mounted grinders are provided with properly positioned work rests.	☐	☐	☐	☐
20. Guards are provided at point of operation, nip points, rotating parts, etc.	☐	☐	☐	☐
21. Fluid used in hydraulic-powered tools is approved fire-resistant fluid.	☐	☐	☐	☐
ELECTRIC-POWERED TOOLS (3.2.2)				
22. Electric tools are approved double insulated or grounded and used according to SOP HS-23.	☐	☐	☐	☐
23. Electric cords are not used for hoisting or lowering tools.	☐	☐	☐	☐
24. Electric tools are used in damp/ wet locations are approved for such locations or GFCI installed.	☐	☐	☐	☐
25. Hand-held tools are equipped with appropriate on/off controls appropriate for the tool.	☐	☐	☐	☐
26. Portable, power-driven circular saws are equipped with proper guards.	☐	☐	☐	☐
ABRASIVE WHEEL TOOLS (3.2.3)				
27. All employees using abrasive wheel tools are wearing eye protection.	☐	☐	☐	☐
28. All grinding machines are supplied with sufficient power to maintain spindle speed.	☐	☐	☐	☐
29. Abrasive wheels are closely inspected and ring-tested before use.	☐	☐	☐	☐
30. Grinding wheels are properly installed.	☐	☐	☐	☐
31. Cup-type wheels for external grinding are protected by the proper guard or flanges.	☐	☐	☐	☐
32. Portable abrasive wheels used for internal grinding are protected by safety flanges.	☐	☐	☐	☐
33. Safety flanges are used only with wheels designed to fit the flanges.	☐	☐	☐	☐
34. Safety guards on abrasive wheel tools are mounted properly and of sufficient strength.	☐	☐	☐	☐
PNEUMATIC-POWERED TOOLS (3.2.4)				
35. Tools are secured to hoses or whip by positive means to prevent disconnection.	☐	☐	☐	☐
36. Safety clips or retainers are installed to prevent attachments being expelled.	☐	☐	☐	☐
37. Safety devices are installed on automatic fastener feed tools as required.	☐	☐	☐	☐
38. Compressed air is not used for cleaning unless reduced to < 30 psi, with PPE, and guarded.	☐	☐	☐	☐
39. Manufacturer's safe operating pressure for hoses, pipes, valves, etc. are not exceeded.	☐	☐	☐	☐
40. Hoses are not used for hoisting or lowering tools.	☐	☐	☐	☐
41. All hoses >1/2-inch diameter have safety device at source to reduce pressure upon hose failure.	☐	☐	☐	☐
42. Airless spray guns have required safety devices installed.	☐	☐	☐	☐
43. Blast cleaning nozzles are equipped with operating valves, which are held open manually.	☐	☐	☐	☐
44. Supports are provided for mounting nozzles when not in use.	☐	☐	☐	☐
45. Air receiver drains, handholes, and manholes are easily accessible.	☐	☐	☐	☐
46. Air receivers are equipped with drainpipes and valves for removal of accumulated oil and water.	☐	☐	☐	☐
47. Air receivers are completely drained at required intervals.	☐	☐	☐	☐
48. Air receivers are equipped with indicating pressure gauges.	☐	☐	☐	☐
49. Safety, indicating, and controlling devices are installed as required.	☐	☐	☐	☐
50. Safety valves are tested frequently and at regular intervals to assure good operating condition.	☐	☐	☐	☐

SECTION 2 (continued)

	Yes	No	N/A	N/O
LIQUID FUEL-POWERED TOOLS (3.2.5)				
51. Liquid fuel-powered tools are stopped when refueling, servicing, or maintaining.	☐	☐	☐	☐
52. Liquid fuels are stored, handled, and transported in accordance with SOP HS-21	☐	☐	☐	☐
53. Liquid fuel-powered tools are used in confined spaces in accordance with SOP HS-17.	☐	☐	☐	☐
54. Safe operating pressures of hoses, valves, pipes, filters, and other fittings are not exceeded.	☐	☐	☐	☐
POWDER-ACTUATED TOOLS (3.2.6)				
55. Only trained employee operates powder-actuated tools.	☐	☐	☐	☐
56. Powder-actuated tools are not loaded until just prior to intended firing time.	☐	☐	☐	☐
57. Tools are not pointed at any employee at any time.	☐	☐	☐	☐
58. Hands are kept clear of open barrel end.	☐	☐	☐	☐
59. Loaded tools are not left unattended.	☐	☐	☐	☐
60. Fasteners are not driven into very hard or brittle materials.	☐	☐	☐	☐
61. Fasteners are not driven into easily penetrated materials unless suitable backing is provided.	☐	☐	☐	☐
62. Fasteners are not driven into spalled areas.	☐	☐	☐	☐
63. Powder-actuated tools are not used in an explosive or flammable atmosphere.	☐	☐	☐	☐
64. All tools are used with correct shields, guards, or attachments recommended by manufacturer.	☐	☐	☐	☐
JACKING TOOLS (3.2.7)				
65. Rated capacities are legibly marked on jacks and not exceeded.	☐	☐	☐	☐
66. Jacks have a positive stop to prevent over-travel.	☐	☐	☐	☐
67. The base of jacks are blocked or cribbed to provide a firm foundation, when required.	☐	☐	☐	☐
68. Wood blocks are place between the cap and load to prevent slippage, when required.	☐	☐	☐	☐
69. After load is raised, it is cribbed, blocked, or otherwise secured immediately.	☐	☐	☐	☐
70 Antifreeze is used when hydraulic jacks are exposed to freezing temperatures.	☐	☐	☐	☐
71 All jacks are properly lubricated.	☐	☐	☐	☐
72 Jacks are inspected as required.	☐	☐	☐	☐
73 Repair or replacement parts are examined for possible defects.	☐	☐	☐	☐
74 Jacks not working properly are removed from service and repaired or replaced.	☐	☐	☐	☐
HAND TOOLS (3.2.8)				
75. Wrenches are not used when jaws are sprung to the point of slippage.	☐	☐	☐	☐
76. Impact tools are kept free of mushroomed heads.	☐	☐	☐	☐
77. Wooden handles of tools are kept free of splinters or cracks and are tightly fitted in tool.	☐	☐	☐	☐

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SECTION 3

Complete this section for all items checked "No" in Sections 1 or 2. Deficient items must be corrected in a timely manner.

Item #	**Corrective Action Planned/Taken**	**Date Corrected**

Auditor:________________________________ProjectManager:________________________________

CH2MHILL

HS&E Self-Assessment Checklist - EARTHMOVING EQUIPMENT

This checklist shall be used by CH2M HILL personnel **only** and shall be completed at the frequency specified in the project's HSP/FSI.

This checklist is to be used at locations where: 1) CH2M HILL employees are potentially exposed to the hazards of earthmoving equipment operations, 2) CH2M HILL employees are operating earthmoving equipment, and/or 3) CH2M HILL provides oversight of a subcontractor operating earthmoving equipment.

The CH2M HILL Safety Coordinator may consult with subcontractors operating earthmoving equipment when completing this checklist, but shall not direct the means and methods of equipment operations nor direct the details of corrective actions. Earthmoving equipment subcontractors shall determine how to correct deficiencies and we must carefully rely on their expertise. Items considered to be imminently dangerous (possibility of serious injury or death) shall be corrected immediately or all exposed personnel shall be removed from the hazard until corrected.

Project Name: _____ Project No.: _____

Location: _____ PM: _____

Auditor: _____ Title: _____ Date: _____

This specific checklist has been completed to:

☐ Evaluate CH2M HILL employee exposures to earthmoving equipment hazards (complete Section 1).
☐ Evaluate CH2M HILL employees operating earthmoving equipment (complete entire checklist).
☐ Evaluate CH2M HILL subcontractor's compliance with earthmoving equipment safety requirements (complete entire checklist).
Subcontractors Name: _____

Check "Yes" if an assessment item is complete/correct.

Check "No" if an item is incomplete/deficient. Deficiencies shall be brought to the immediate attention of the earthmoving equipment subcontractor. Section 3 must be completed for all items checked "No."

Check "N/A" if an item is not applicable.

Check "N/O" if an item is applicable but was not observed during the assessment.

Numbers in parentheses indicate where a description of this assessment item can be found in Standard of Practice HSE-27.

SAFE WORK PRACTICES (3.1)	**SECTION 1**	**Yes**	**No**	**N/A**	**N/O**
1.	Personnel maintaining safe distance from operating equipment	☐	☐	☐	☐
2.	Positioning personnel in close proximity to operating equipment is avoided	☐	☐	☐	☐
3.	Personnel wearing high-visibility and/or reflective vests when close to operating equipment	☐	☐	☐	☐
4.	Personnel approach operating equipment safely	☐	☐	☐	☐
5.	Personnel riding only in seats of equipment cab and using seat belts	☐	☐	☐	☐
6.	Personnel not positioned under elevated portions of equipment	☐	☐	☐	☐
7.	Personnel not positioned under hoisted loads	☐	☐	☐	☐
8.	Personnel not hoisted by equipment	☐	☐	☐	☐
9.	Personnel do not to approach equipment that has become electrically energized	☐	☐	☐	☐
10.	Personnel wearing appropriate PPE, per HSP/FSI	☐	☐	☐	☐

EQUIPMENT SAFETY REQUIREMENTS PRIOR TO OPERATING EQUIPMENT (3.2.1) SECTION 2	Yes	No	N/A	N/O
11. Only qualified and authorized personnel operating equipment	☐	☐	☐	☐
12. Daily safety briefing/meeting conducted with equipment operators	☐	☐	☐	☐
13. Daily inspection of equipment conducted and documented	☐	☐	☐	☐
14. Modifications and attachments used approved by equipment manufacturer	☐	☐	☐	☐
15. Backup alarm or spotter used when backing equipment	☐	☐	☐	☐
16. Operational horn provided on bi-directional equipment	☐	☐	☐	☐
17. Seat belts are provided and used	☐	☐	☐	☐
18. Rollover protective structures (ROPS) provided	☐	☐	☐	☐
19. Braking system capable of stopping full payload	☐	☐	☐	☐
20. Headlights and taillights operable when additional light required	☐	☐	☐	☐
21. Brake lights in operable condition	☐	☐	☐	☐
22. Cab glass provides no visible distortion to the operator	☐	☐	☐	☐
23. All machine guards are in place	☐	☐	☐	☐
24. Hauling equipment (dump trucks) provided with cab shield or canopy	☐	☐	☐	☐
25. Dump truck beds provided with positive means of support during maintenance or inspection	☐	☐	☐	☐
26. Dump truck operating levers provided with latch to prevent accidental dumping	☐	☐	☐	☐
27. Air monitoring conducted per HSP/FSI for hazardous atmospheres	☐	☐	☐	☐
EQUIPMENT PLACEMENT (3.2.2)				
28. Equipment position on firm/level surface, outriggers used	☐	☐	☐	☐
29. Location of underground utilities identified	☐	☐	☐	☐
30. Safe clearance distance maintained while working under overhead power lines	☐	☐	☐	☐
31. Safe distance is maintained while traveling under power lines	☐	☐	☐	☐
32. Warning system used to remind operator of excavation edge	☐	☐	☐	☐
33. Unattended equipment visibly marked at night	☐	☐	☐	☐
34. Tools lowered/parking brake set when not in use, wheels chocked when parked on incline	☐	☐	☐	☐
EQUIPMENT OPERATION (3.2.3)				
35. Equipment operated on safe roadways and grades	☐	☐	☐	☐
36. Equipment operated at safe speed	☐	☐	☐	☐
37. Operators maintain unobstructed view of travel path	☐	☐	☐	☐
38. Equipment not operated during inclement weather, lightning storms	☐	☐	☐	☐
39. Equipment started and moved safely	☐	☐	☐	☐
40. Operators keep body parts inside cab during operation	☐	☐	☐	☐
41. Vehicle occupants in safe position while loading/unloading	☐	☐	☐	☐
42. Signal person visible to operator when required	☐	☐	☐	☐
43. Equipment used for hoisting done according to equipment manufacturer specifications	☐	☐	☐	☐
44. Lifting and hauling capacities are not exceeded	☐	☐	☐	☐
EQUIPMENT MAINTENANCE (3.2.4)				
45. Defective components repaired immediately	☐	☐	☐	☐
46. Suspended equipment or attachments supported prior to work under or between	☐	☐	☐	☐
47. Lockout/tagout procedures used prior to maintenance	☐	☐	☐	☐
48. Tires on split rims removed using safety tire rack or cage	☐	☐	☐	☐
49. Good housekeeping maintained on and around equipment	☐	☐	☐	☐
EXCAVATING AT HAZARDOUS WASTE SITES (3.2.5)				
50. Waste disposed of according to HSP/FSI	☐	☐	☐	☐
51. Appropriate decontamination procedures being followed, per HSP/FSI	☐	☐	☐	☐

SECTION 3

Complete this section for all items checked "No" in Sections 1 or 2. Deficient items must be corrected in a timely manner.

Item #	Corrective Action Planned/Taken	Date Corrected

Auditor: ________________________________ Project Manager: __________________________________

Attachment 4

Behavior Based Loss Prevention System Forms

Activity Hazard Analysis
Pre-Task Safety Plans
Loss Prevention Observation
Incident Report and Investigation

Activity Hazard Form

Activity:	**Date:**
	Project:
Description of the work:	**Site Supervisor:**
	Site Safety Officer:
	Review for latest use: Before the job is performed.

Work Tasks	Identify & Analyze the Hazards	Identify Hazard Controls

Work Tasks	Identify & Analyze the Hazards	Identify Hazard Controls

Equipment to be used	Inspection Requirements	Training Requirements

PRINT	SIGNATURE		
Supervisor Name:	_____	_____	**Date/Time:**_____
Safety Officer Name:	_____	_____	**Date/Time:**_____
Employee Name(s):	_____	_____	**Date/Time:**_____
	_____	_____	**Date/Time:**_____
	_____	_____	**Date/Time:**_____
	_____	_____	**Date/Time:**_____
	_____	_____	**Date/Time:**_____
	_____	_____	**Date/Time:**_____
	_____	_____	**Date/Time:**_____
	_____	_____	**Date/Time:**_____
	_____	_____	**Date/Time:**_____
	_____	_____	**Date/Time:**_____
	_____	_____	**Date/Time:**_____
	_____	_____	**Date/Time:**_____

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PRE-TASK SAFETY PLAN

Project: _____ Location: _____Date:_____

Supervisor: _____Emergency Number(s):_____

Brief Job Descriptions:

1._____
2._____
3._____
4._____
5._____

List Specific Tasks for the Jobs (Match number from above).

1._____
2._____
3._____
4._____
5._____

Tools/Equipment required for Tasks, (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools)match number from above:

1._____
2._____
3._____
4._____
5._____

Potential H&S Hazards, including chemical, physical, safety, biological and environmental **(Check all that apply and review exposures as they will be encountered in the tasks above):**

__ Chemical burns/contact	__ Trench, excavations, cave-ins	__Ergonomics
__ Pressurized lines/equipment	__ Overexertion	__ Chemical splash
__ Thermal burns	__ Pinch points	__ Poisonous plants/insects
__ Electrical	__ Cuts/abrasions	___Eye hazards/flying projectile
__ Weather conditions	__ Spills	__ Inhalation hazard
__Heights/fall> 6'	__ Overhead Electrical hazards	__ Heat/cold stress
__ Noise	__ Elevated loads	__ Water/drowning hazard
__ Explosion/fire	__ Slips, trip and falls	__ Heavy equipment
__Radiation	__ Manual lifting	__ Aerial lifts/platforms
__ Confined space entry	__Welding/cutting	__ Demolition

Other Potential Hazards (Describe):

_____

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PRE-TASK SAFETY PLAN

Hazard Control Measures (Check all that apply):			
PPE __ Thermal/lined __ Eye __ Dermal/hand __ Hearing __ Respiratory __ Reflective vests __ Flotation device	Protective Systems __ Sloping __ Shoring __ Trench box __ Barricades __ Competent person __ Locate buried utilities __ Daily inspections	Fire Protection __ Fire extinguishers __ Fire watch __ Non-spark tools __ Grounding/bonding __ Intrinsically safe equipment	Electrical __ Lockout/tagout __ Grounded __ Panels covered __ GFCI/extension cords __ Power tools/cord inspected
Fall Protection __ Harness/lanyards __ Adequate anchorage __ Guardrail system __ Covered opening __ Fixed barricades __ Warning system	Air Monitoring __ PID/FID __ Detector tubes __ Radiation __ Personnel sampling __ LEL/O2 __ Other	Proper Equipment __ Aerial lift/ladders/scaffolds __ Forklift/ Heavy equipment __ Backup alarms __ Hand/power tools __ Crane w/current inspection __ Proper rigging __ Operator qualified	Welding & Cutting __ Cylinders secured/capped __ Cylinders separated/upright __ Flash-back arrestors __ No cylinders in CSE __ Flame retardant clothing __ Appropriate goggles
Confined Space Entry __ Isolation __ Air monitoring __ Trained personnel __ Permit completed __ Rescue	Medical/ER __ First-aid kit __ Eye wash __ FA-CPR trained personnel __ Route to hospital	Heat/Cold Stress __ Work/rest regime __ Rest area __ Liquids available __ Monitoring __ Training	Vehicle/Traffic __ Traffic control __ Barricades __ Flags __ Signs
Permits __ Hot work __ Confined space __ Lockout/tagout __ Excavation __ Demolition __ Energized work	Demolition __ Pre-demolition survey __ Structure condition __ Isolate area/utilities __ Competent person __ Hazmat present	Inspections: __ Ladders/aerial lifts __ Lanyards/harness __ Scaffolds __ Heavy equipment __Cranes and rigging	Training: __ Hazwaste __ Construction __ Competent person __ Task-specific (THA) __ Hazcom
FieldNotes:_____ _____ _____			

Supervisor signature:_____ Date:_____

List employees who reviewed hazards identified per the checklist.

Print Name	Badge No.	Signature	SS# (Unbadged Personnel)

CH2MHILL

LOSS PREVENTION OBSERVATION

Project:	Supervisor:	Date:
_____	_____	_____

Task/Operation Observed:	Job Title of Worker Observed:
_____	_____

Background Information/comments:	Task Hazard Analysis completed for task (Y/N):
_____	_____

Positive Observations/Safe Work Procedures

1._____

2._____

3._____

4._____

Questionable Activity/Unsafe Condition Observed

1._____

2._____

3._____

Observed Worker's Comment(s)

1._____

2._____

3._____

4._____

_____
Supervisor's Corrective Actions Taken: 1._____ _____ 2._____ _____ 3._____ _____ 4._____ _____

CH2MHILL

Loss Investigation Report Form

Employer Information

Company Name: _____

Project Name: _____ Project Number: _____

Project Location: _____

CHIL Project? Yes ☐ No ☐

Task Location:

_____

Job Assignment: _____ Business Group: _____

Preparer's Name: _____ Preparer's Employee Number: _____

Near Loss Incident Specific Information

Date of Incident: _____ Time of Incident: _____ a.m./p.m.

Location of incident:

☐Company premises
☐Field
☐In Transit
☐Other:_____

Address where the incident occurred: _____

Equipment Malfunction : Yes ☐ No ☐

Activity was a Routine Task: Yes ☐ No ☐

Describe any property damage: _____

Specific activity the employee was engaged in when the incident occurred:_____

_____

_____

All equipment, materials, or chemicals the employee was using when the incident occurred: _____

_____

_____

Describe the specific incident and how it occurred:

_____
_____
_____
_____

Describe how this incident may have been prevented:

_____
_____
_____

Contributing Factors (Describe in detail why incident occurred):

_____
_____
_____

Date employer notified of incident: _____ To whom reported: _____

Witness Information (First Witness)

Name: _____
Employee Number (for CH2M HILL employees):
_____
Address: _____
City: _____
Zip Code : _____
Phone: _____

Witness Information (Second Witness)

Name: _____
Employee Number (for CH2M HILL employees): _____
Address: _____
City: _____
Zip Code: _____
Phone : _____
Additional information or comments:_____
_____

COMPLETE ROOT CAUSE ANALYSIS FORM

Root Cause Analysis Form

Root Cause Analysis (RCA)

Lack of skill or knowledge
Lack of or inadequate operational procedures or work standards
Inadequate communication of expectations regarding procedures or work standards
Inadequate tools or equipment
Correct way takes more time and/or requires more effort
Short cutting standard procedures is positively reinforced or tolerated
Person thinks there is no personal benefit to always doing the job according to standards
Uncontrollable

RCA #	Solution(s): How to Prevent Loss From Occurring	RC[1]	CF[2]	Corrective Action Lead	Due Date	Completion Date	Date Verified

[1] RC = Root Cause; [2] CF = Contributing Factors (check which applies)

Investigation Team Members

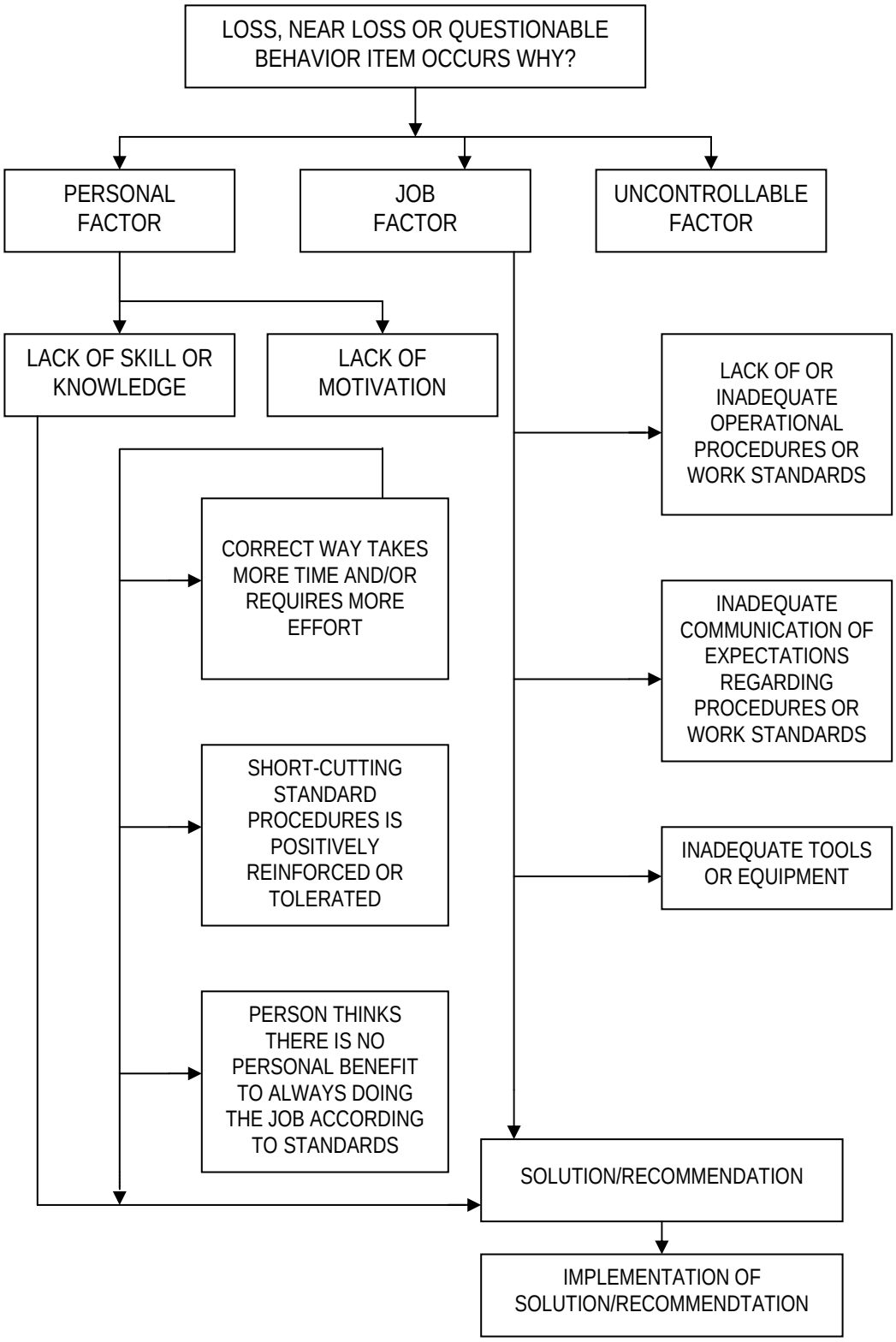
Name	Job Title	Date

Results of Solution Verification and Validation

Reviewed By

Name	Job Title	Date

Root Cause Analysis Flow Chart



Determination of Root Cause(s)

For minor losses or near losses the information may be gathered by the supervisor or other personnel immediately following the loss. Based on the complexity of the situation, this information may be all that is necessary to enable the investigation team to analyze the loss, to determine the root cause, and to develop recommendations. More complex situations may require the investigation team to revisit the loss site or re-interview key witnesses to obtain answers to questions that may arise during the investigation process.

Photographs or videotapes of the scene and damaged equipment should be taken from all sides and from various distances. This point is especially important when the investigation team will not be able to review the loss scene.

The investigation team must use the Root Cause Analysis Flow Chart to assist in identifying the root cause(s) of a loss. Any loss may have one or more "root causes" and "contributing factors". The "root cause" is the primary or immediate cause of the incident, while a "contributing factor" is a condition or event that contributes to the incident happening, but is not the primary cause of the incident. Root causes and contributing factors that relate to the *person* involved in the loss, his or her peers, or the supervisor should be referred to as "personal factors". Causes that pertain to the *system* within which the loss or injury occurred should be referred to as "job factors".

<u>Personal Factors</u>

Lack of skill of knowledge
Correct way takes more time and/or requires more effort
Short-cutting standard procedures is positively reinforced or tolerated
Person thinks that there is no personal benefit to always doing the job according to standards

<u>Job Factors</u>

Lack of or inadequate operational procedures or work standards.
Inadequate communication of expectations regarding procedures or standards
Inadequate tools or equipment

The root cause(s) could be any one or a combination of these seven possibilities or some other "uncontrollable factor". In the vast majority of losses, the root cause is very much related to one or more of these seven factors. Uncontrollable factors should be used rarely and only after a thorough review eliminates "all" seven other factors.

Incident Report Form

Fax completed form to:
425.462.5957
CH2M HILL Seattle Office
Attention: Corporate HS&E Department

Type of Incident (Select at least one)

- ☐ Injury/Illness
- ☐ Environmental/Permit Issue
- ☐ Property Damage
- ☐ Near Miss
- ☐ Spill/Release
- ☐ Other

General Information (Complete for all incident types)

Preparer's Name: _____ Preparer's Employee Number: _____
Date of Report: _____ Date of Incident: _____ Time of Incident: _____ am/pm

Type of Activity (Provide activity being performed that resulted in the incident)

- ☐ Asbestos Work
- ☐ Confined Space Entry
- ☐ Construction Mgmt- Haz Waste
- ☐ Construction Mgmt - Non-Haz Waste
- ☐ Demolition
- ☐ Drilling-Haz Waste
- ☐ Drilling-Non Haz Waste
- ☐ Drum Handling
- ☐ Electrical Work
- ☐ Excavation Trench-Haz Waste
- ☐ Excavation Trench-Non Haz
- ☐ Facility Walk Through
- ☐ General Office Work
- ☐ Keyboard Work
- ☐ Laboratory
- ☐ Lead Abatement
- ☐ Motor Vehicle Operation
- ☐ Moving Heavy Object
- ☐ Other (Specify) _____
- ☐ Process Safety Management
- ☐ Tunneling
- ☐ Welding
- ☐ Wetlands Survey
- ☐ Working from Heights
- ☐ Working in Roadways
- ☐ WWTP Operation

Location of Incident (Select one)

- ☐ Company Premises (CH2M HILL Office: _____)
- ☐ Field (Project #: _____ Project/Site Name: _____ Client: _____)
- ☐ In Transit (Traveling from: _____ Traveling to: _____)
- ☐ At Home

Geographic Location of Incident (Select region where the incident occurred)

- ☐ Northeast
- ☐ Southeast
- ☐ Northwest
- ☐ Southwest
- ☐ Corporate
- ☐ Canadian
- ☐ Asia Pacific
- ☐ Europe Middle East
- ☐ Latin America

If a CH2M HILL subcontractor was involved in the incident, provide their company name and phone number: _____

Describe the Incident (Provide a brief description of the incident): _____

_____

_____

Injured Employee Data (Complete for Injury/Illness incidents only)

If CH2M HILL employee injured

Employee Name: _____ Employee Number: _____

If CH2M HILL Subcontractor employee injured

Employee Name: _____ Company: _____

Injury Type

- ☐ Allergic Reaction
- ☐ Amputation
- ☐ Asphyxia
- ☐ Bruise/Contusion/Abrasion
- ☐ Burn (Chemical)
- ☐ Burn/Scald (Heat)
- ☐ Cancer
- ☐ Carpal Tunnel
- ☐ Concussion
- ☐ Cut/Laceration
- ☐ Dermatitis
- ☐ Dislocation
- ☐ Electric Shock
- ☐ Foreign Body in eye
- ☐ Fracture
- ☐ Freezing/Frost Bite
- ☐ Headache
- ☐ Hearing Loss
- ☐ Heat Exhaustion
- ☐ Hernia
- ☐ Infection
- ☐ Irritation to eye
- ☐ Ligament Damage
- ☐ Multiple (Specify) _____
- ☐ Muscle Spasms
- ☐ Other (Specify) _____
- ☐ Poisoning (Systemic)
- ☐ Puncture
- ☐ Radiation Effects
- ☐ Strain/Sprain
- ☐ Tendonitis
- ☐ Wrist Pain

Part of Body Injured

- ☐ Abdomen
- ☐ Ankle(s)
- ☐ Arms (Multiple)
- ☐ Back
- ☐ Blood
- ☐ Body System
- ☐ Buttocks
- ☐ Chest/Ribs
- ☐ Ear(s)
- ☐ Elbow(s)
- ☐ Eye(s)
- ☐ Face
- ☐ Finger(s)
- ☐ Foot/Feet
- ☐ Hand(s)
- ☐ Head
- ☐ Hip(s)
- ☐ Kidney
- ☐ Knee(s)
- ☐ Leg(s)
- ☐ Liver
- ☐ Lower (arms)
- ☐ Lower (legs)
- ☐ Lung
- ☐ Mind
- ☐ Multiple (Specify) _____
- ☐ Neck
- ☐ Nervous System
- ☐ Nose
- ☐ Other (Specify) _____
- ☐ Reproductive System
- ☐ Shoulder(s)
- ☐ Throat
- ☐ Toe(s)
- ☐ Upper Arm(s)
- ☐ Upper Leg(s)
- ☐ Wrist(s)

Nature of Injury

- ☐ Absorption
- ☐ Bite/Sting/Scratch
- ☐ Cardio-Vascular/Respiratory System Failure
- ☐ Caught In or Between
- ☐ Fall (From Elevation)
- ☐ Fall (Same Level)
- ☐ Ingestion
- ☐ Inhalation
- ☐ Lifting
- ☐ Mental Stress
- ☐ Motor Vehicle Accident
- ☐ Multiple (Specify) _____
- ☐ Other (Specify) _____
- ☐ Overexertion
- ☐ Repeated Motion/Pressure
- ☐ Rubbed/Abraded
- ☐ Shock
- ☐ Struck Against
- ☐ Struck By
- ☐ Work Place Violence

Initial Diagnosis/Treatment Date: _____

Type of Treatment

- ☐ Admission to hospital/medical facility
- ☐ Application of bandages
- ☐ Cold/Heat Compression/Multiple Treatment
- ☐ Cold/Heat Compression/One Treatment
- ☐ First Degree Burn Treatment
- ☐ Heat Therapy/Multiple treatment
- ☐ Multiple (Specify) _____
- ☐ Heat Therapy/One Treatment
- ☐ Non-Prescriptive medicine
- ☐ None
- ☐ Observation
- ☐ Other (Specify) _____
- ☐ Prescription- Multiple dose
- ☐ Prescription- Single dose
- ☐ Removal of foreign bodies
- ☐ Skin Removal
- ☐ Soaking therapy- Multiple Treatment
- ☐ Soaking Therapy- One Treatment
- ☐ Stitches/Sutures
- ☐ Tetanus
- ☐ Treatment for infection
- ☐ Treatment of 2nd /3rd degree burns
- ☐ Use of Antiseptics – multiple treatment
- ☐ Use of Antiseptics – single treatment
- ☐ Whirlpool bath therapy/multiple treatment
- ☐ Whirlpool therapy/single treatment
- ☐ X-rays negative
- ☐ X-rays positive/treatment of fracture

Number of days doctor required employee to be off work: _____
Number of days doctor restricted employee's work activity: _____
Equipment Malfunction : Yes ☐ No ☐ Activity was a Routine Task: Yes ☐ No ☐
Describe how you may have prevented this injury: _____
_____

Physician Information
Name: _____
Address: _____
City: _____
Zip Code: _____
Phone: _____

Hospital Information
Name: _____
Address: _____
City: _____
Zip Code: _____
Phone: _____

Property Damage (Complete for Property Damage incidents only)

Property Damaged: _____ Property Owner: _____
Damage Description: _____
Estimated Amount: $ _____

Spill or Release (Complete for Spill/Release incidents only)

Substance (attach MSDS): _____ Estimated Quantity: _____

Facility Name, Address, Phone No.: _____
Did the spill/release move off the property where work was performed?: _____
Spill/Release From: _____ Spill/Release To: _____

Environmental/Permit Issue (Complete for Environmental/Permit Issue incidents only)

Describe Environmental or Permit Issue: _____
Permit Type: _____
Permitted Level or Criteria (e.g., discharge limit): _____
Permit Name and Number (e.g., NPDES No. ST1234): _____
Substance and Estimated Quantity: _____
Duration of Permit Exceedence: _____

Verbal Notification (Complete for all incident types)(Provide names, dates and times)

CH2M HILL Personnel Notified: _____
Client Notified: _____

Witnesses (Complete for all incident types)

Witness Information (First Witness)
Name: _____
Employee Number (CH2M HILL):_____
Address: _____
City: _____
Zip Code:_____
Phone: _____

Witness Information (Second Witness)
Name: _____
Employee Number (CH2M HILL: _____
Address: _____
City: _____
Zip Code:_____
Phone :_____

Additional Comments:
_____
_____

NEAR LOSS INVESTIGATION FORM

Employer Information

Company Name: _____

Project Name: _____ Project Number: _____

Project Location: _____

CHIL Project? Yes ☐ No ☐

Task Location: _____

Job Assignment: _____ Business Group: _____

Preparer's Name: _____ Preparer's Employee Number: _____

Near Loss Incident Specific Information

Date of Incident: _____ Time of Incident: _____ a.m./p.m.

Location of incident:
☐Company premises ☐Field ☐In Transit ☐Other:_____

Address where the incident occurred: _____

Equipment Malfunction : Yes ☐ No ☐ Activity was a Routine Task: Yes ☐ No ☐

Describe any property damage: _____

Specific activity the employee was engaged in when the incident occurred:

_____

_____

All equipment, materials, or chemicals the employee was using when the incident occurred:

_____

_____

Describe the specific incident and how it occurred:

_____

_____

_____

Describe how this incident may have been prevented:

_____

_____

_____

Contributing Factors (Describe in detail why incident occurred):

_____

_____

_____

Date employer notified of incident: _____ To whom reported: _____

NEAR LOSS INVESTIGATION FORM

Witness Information (First Witness)

Name: _____

Employee Number (for CH2M HILL employees):_____

Address: _____

City: _____

Zip Code : _____

Phone: _____

Witness Information (Second Witness)

Name: _____

Employee Number (for CH2M HILL employees): _____

Address: _____

City: _____

Zip Code: _____

Phone : _____

Additional information or comments:_____

_____

Attachment 5

CH2M HILL Drug Policy and Forms

CH2MHILL

Drug-Free Workplace
Standard of Practice HSE-105

Drug-Free Work Place Program

Subcontractor has certified to CH2M HILL that it implements a drug policy which meets CH2M HILL's minimum standards for a drug-free workplace, which standards are incorporated into the Subcontract by this reference ("Standards"). CH2M HILL may conduct reasonable searches, including random searches, of Subcontractor's employees and employees of its lower tier subcontractors and suppliers and may require and receive the results of a 5-panel drug screen and blood alcohol tests for any employee of Subcontractor or its lower tier subcontractors. Any employee of Subcontractor, its lower tier subcontractors or suppliers found to possess or be under the influence of an article prohibited by the Standards, or refusing to test or to consent to a reasonable search by CH2M HILL may, in CH2M HILL's sole discretion, be immediately removed from the Project site and denied future access. Subcontractor agrees to enforce its drug policy and to bind its lower tier subcontractors to its policy and to the provisions of this paragraph. Any violation of the requirements of this paragraph may be grounds for withholding payment to Subcontractor or for termination for default pursuant to Article 10. Nothing in this paragraph shall require CH2M HILL to undertake testing or searches.

CH2MHILL

Policy Acknowledgement and Consent Form

Policy

CH2M HILL does not tolerate illegal drug use, or any use of drugs, controlled substances or alcohol that impairs an employee's work performance or behavior. CH2M HILL has established a policy whereby its employees and subcontractors shall not be involved in any manner with the unlawful manufacture, distribution, dispensation, possession, sale, or use of illegal drugs in the workplace. The use or possession of alcohol in the workplace is also prohibited except where alcohol on premises is allowed on limited occasions with approval by office managers. Any violation of these prohibitions may result in discipline or immediate discharge.

Additional details on CH2M HILL's drug policy can be found in the Employee Handbook, SOP HSE-105, or from the DFWPA or a Human Resources Manager (HRM).

Testing

The necessity for testing will be determined by the projects the employee works on. Certain clients require drug or alcohol testing as do certain types of projects (such as, CCI owned projects). An applicant or employee may have to submit to pre-employment or pre-assignment, random, or post-incident testing when there is cause or reasonable suspicion of a violation of CH2M HILL's Drug-Free Workplace Program, or when returning to work after participating in a rehabilitation program.

Drug testing may include, but is not limited to, the following compounds. Levels on initially screened urine specimens which are equal to or exceed the following will be considered as presumptively positive and submitted for confirmation testing. Each presumptive positive result must be confirmed by a second analysis using the Gas Chromatography/Mass Spectrometry (GC/MS) method.

	EMIT	GC/MS
Amphetamines	1,000 ng/ml	500 ng/ml
Marijuana (THC)	50 ng/ml	15 ng/ml
Cocaine	300 ng/ml	150 ng/ml
Phencyclidine (PCP)	25 ng/ml	25 ng/ml
Opiates	2000ng/ml	2000ng/ml

An employee is considered to be positive for alcohol if their breath or blood alcohol level is 0.04 or higher. Breath testing will be used unless applicable state licensing or other requirements mandate blood tests or unless testing facilities are not available for breath sampling. When blood testing is used, each presumptive positive result must be confirmed by a second analysis using a GC/MS.

Employees who have a "diluted" sample will be required to submit to an escorted test without prior warning.

Employees who test positive may be disciplined, up to and including dismissal and employees who refuse a test will be treated as if they tested positive and may be disciplined, up to and including dismissal.

Contesting Results

If an employee wishes to contest their results, they are required to notify the MRO, the Drug-Free Work Place Administrator (DFWPA) and the Human Resources Manger (HRM) in writing as soon as possible, but no later than 5 working days after notification of the test results. When notifying CH2M HILL that the results are being contested, the employee must provide, in writing, the reasons why the results are being contested. A portion of the original sample will be tested by an approved laboratory, at the employee's expense. The employee will be reimbursed if the original sample is found to be negative as a result of the retesting.

If the employee is planning on bringing on administrative or civil action against a laboratory, they are required to notify the MRO.

Medications that can interfere with Drug Testing Results

Employees will be required to inform the oversight physician, known as the MRO, of prescription and nonprescription medications which might affect the employee's ability to perform the essential functions of their job, pose a direct threat to the health and safety of the employee or that of others, or interfere with their drug or alcohol test results. They can either fax the information to Dr. Jim Ferguson at 301-571-2186 or call him at 800-275-7051 ex. 4603. Employees can also contact the MRO to discuss how medications they are taking may affect a drug test.

Confidentiality

Information and records associated with the CH2M HILL Drug-Free Workplace Program will be treated confidentiality.

Employee Assistance

CH2M HILL's Employee Assistant Program (EAP) can be contacted by: 1.800.888.2273. Local drug rehabilitation programs will be listed in the site-specific written safety plan.

Employee and Applicant Responsibilities

All employees who fall under the scope of CH2M HILL's Drug-Free Workplace Program are responsible for following its requirements. Each applicant must sign that they have received an overview of CH2M HILL's program and agree to its provisions. Employee responsibilities include, but are not limited to, never reporting to work while under the influence of illegal drugs or alcohol, notifying the CCOP of prescription drug and nonprescription medication use that could affect job performance and safety as noted above, and notifying a supervisor of any work-related drug- or alcohol-related convictions within 5 days following the event using the Drug- and Alcohol-Related Convictions Form. In the event that an employee wants to contest their results, they are responsible for notifying the MRO and laboratory of any administrative or civil actions brought about as the result of contesting their test results.

Employee and Applicant Acknowledgement

By signing below, you are acknowledging that you have been given a copy of the company's drug testing policy, have read and understand the requirements of this policy and program, agree to comply with all of its requirements, and understand that noncompliance with this program can result in dismissal.

You are also authorizing and requesting your prescribing physician(s) to discuss and disclose to CH2M HILL or their representatives any anticipated or normal side effects of medications and prescription drugs that may have an effect on your ability to perform the essential functions of your job or work safely as noted above.

Check One:

☐ New CH2M HILL Employee

☐ Other INC, OMI, or IDC Employee

☐ Other (Company Name): _____

_____ Signature

_____ Social Security Number

_____ Printed Name

_____ Date

_____ Witness Signature

Return completed form to the project DFWPA or HRM.
This form is part of CH2M HILL's Drug-Free Workplace Program described in SOP HSE-105.

Appendix C
Environmental Conditions

Example of vegetation that is characteristic of the Site 15 project area.

Example of vegetation that is characteristic of the Site 15 project area.

Example of concrete bunker located at Site 15

Metal structure located at Site 15, possible munitions burn chamber.

Example of MPPEH found at Site 15.

Example of gopher tortoise burrow located at Site 15.

Example of broken artifacts (Herdy cups) located at Site 15.

Example of wildlife located at Site 15 (gopher tortoise).

Example of wildlife located at Site 15 (Timber Rattlesnake).

Appendix D
Explosives Safety Submission

Comments from NOSSA Code N537

1. Page 1-9, Section 1.6.6 and Page 8-2, Section 8.1.6; Reference: "Excavations may be manual, or manual and mechanical aided, as required by depth of anomalies."

   The use of mechanical equipment to dig an anomaly is a mechanized operation, and as such, requires providing protection for the equipment operator (and all essential personnel) against fragments and blast overpressure (K24) from an accidental detonation of the munitions with the greatest fragment distance (MGFD). Exclusion zones for non-essential personnel would be at the distance for intentional detonations.

   The use of mechanical equipment to dig an anomaly can be considered a manual operation if measures are taken to avoid any contact with the anomaly. Two typical approaches are 1) dig to the side of the anomaly and use hand tools to move in horizontally to the anomaly, or 2) incrementally dig directly over the anomaly with periodic magnetometer checks and stopping mechanical digging a foot above the target. Final soil removal is done with hand tools.

   Mechanized equipment may have sufficient energy input to cause a munition to detonate/deflagrate. Therefore, additional safety precautions are required.

   Response: The following text has been added to follow "Excavations may be manual, or manual and mechanical aided, as required by depth of anomalies" to address the use of mechanical excavations: "If mechanical equipment is necessary based on the depth of anomaly, measures will be taken to avoid any contact with the anomaly. Two typical approaches will be: 1) to excavate to the side of the anomaly and use manual excavation with hand tools to move in horizontally to the anomaly, or 2) to incrementally excavate directly over the anomaly with periodic magnetometer checks, stopping mechanical excavation one-foot above the target, and completing excavation manually with hand tools."

2. Figure 2-1; indicate the exclusion zone (EZ) for unintentional detonations (hazardous fragment distance) of the MGFD (200 feet) as well as the indicated EZ for intentional detonations (maximum fragment distance). Indicate in the Legend that the ESQD arc for the intentional detonation area is reduced by the use of engineering controls.

   Non-mechanized removal operations allow for reduced ESQD arcs from what would be required for mechanized operations and intentional detonations. The basis for the reduced arc is that it is not expected that an accidental detonation will occur.

   Response: The two referenced exclusion zones have been added to Figure 2-1.

3. Page 3-2, Table 3-1; Remove current table and replace with table below (Site 15 Exclusion Zones). We are trying to standardize how the information for exclusion zones is presented.

TABLE 3-1
Exclusion Zones

MGFD				Maximum Detonation (includes demolition materials)		
Item	NEW (lbs)	HFD (feet)*	MFD (feet)**	NEW (lbs)	K328 (feet)	K40 (item only) (feet)
20 mm M56A4 HE Projectile	0.026	200	558	6	596	12

1) Unintentional detonation Exclusion Zone (EZ) for Team Separation Distance (TSD) for manual operations is K40 of the MGFD. Use 12 feet for the 20mm M56A4 HE Projectile.
2) Unintentional detonation EZ for TSD for mechanized operations is greater of HFD or K24 of the MGFD. Use 200 feet.
3) Unintentional detonation EZ for public & non-essential personnel for manual operations is the greater of K40 or HFD of the MGFD. Use 200 feet for the 20mm M56A4 HE Projectile.
4) Unintentional detonation EZ for public & non-essential personnel for mechanized operations is identical to the intentional detonation EZ for public & all personnel of the MGFD. Use 558 feet.
5) Intentional detonation EZ for public & all personnel is greater of K328 or MFD of the MGFD. For a single item shot use 558 feet for the 20mm M56A4 HE Projectile. For consolidated shots ≤6 lbs use 596 feet.
* Values from TP-16 Table B-2.
** Values from TP-16, Table B-2, as amended by Army (Huntsville) Safety Alert 01-06 of 28 Nov 2006.

Response: The provided table has been incorporated as Table 3-1 with slight site-specific edits and formatting.

4. Page 6-6, Table 6-1 and Page 8-2, Section 8.1.4; The QC pass/fail criterion for the surface removal is that no ferrous item larger than 2-inch by 2-inch be missed. These criteria would allow small arms and possibly 20 mm projectiles to remain (undetected) without a QC failure. The goal of the removal action should be to remove all of these smaller MEC items also. The 2-inch by 2-inch criterion is normally used on impact areas to define the smallest piece of frag that will be removed. This site was not an impact area nor was detonations of munitions conducted; therefore, the pass/fail criteria do not appear to support the type of remediation required for the site specific conditions. It is suggested that in addition to the 2 X 2 criteria, an additional criteria be added that no MEC (to include small arms) is allowed to be found during the QC effort.

   Response: The pass/fail criteria has been modified to include removing MEC (to include small arms) and ferrous items 2-inch by 2-inch and larger in Section 1.1.6, Table 6-1, and Section 8.1.4.

5. Page 6-1, Section 6.3; What are the DQOs for MEC detection and removal?

   Response: DQOs and pass/fail criteria for MEC detection and removal was added to Table 6-1. Audit procedures, pass/fail criteria, and subsequent required actions were added to the fourth and fifth Intrusive Investigation tasks.

6. Page 8-6, Section 8.3; The correct date for OP 5, Seventh Revision, Change 5 is 1 June 2006.

   Response: The date for OP 5, Seventh Revision, Change 5 has been corrected within the document where necessary.

7. Page 8-23, Section 8.6; Delete the first sentence and replace with: "Exclusion Zones for this project are shown in Table 3-1."

   Response: The above comment has been incorporated.

8. Page 8-23, Section 8.7; This section may be applicable – see Comment Number 1.

   Response: Based on response to Comment No. 1, this section remains not applicable.

9. Page 8-20, Section 8.5.1.2; There is discussion in this section that engineering controls may be required for blast/fragment mitigation while in the same section on Page 8-21, it is stated that all intentional detonations will be done with engineering controls. Correct this discrepancy.

   Response: The section has been revised to correct this discrepancy, and to state that "Intentional detonations at the planned detonation area (up to 10 MGFD items at one time or equivalent MPPEH NEW) will be affected employing engineering controls, and intentional detonations in place (BIP, one MEC/MPPEH item at one time) may be affected employing engineering controls for blast/fragment mitigation."

10. Page 8-19, Section 8.5; The current section uses the term Munitions Debris (MD) to mean MPPEH that is free of an explosive hazard. The Army uses this term; however, it is not proper DoD/Navy usage. The Navy has discussed this with the Army and will adopt it in the next revision to NAVSEA OP 5. In the meantime, OP 5 language should be used. Note: DoD 4160.21-M requires the verifier to be a qualified Government employee with U.S. citizenship. OP 5 allows a contractor to perform this task if the material is going directly to a scraper. In this instance, the certifier and the verifier must be independent of one another – e.g. UXO III (or higher) and the UXOSO or UXOQCS.

    Suggested new section is provided as follows:

    8.5 MEC, MPPEH, and Non-MPPEH Debris Disposition Processes

    8.5.1 Inspection and Segregation

    A systematic approach will be used for collecting, inspecting, and segregating site debris. The approach is designed so that materials undergo a continual evaluation/inspection process from the time they are acquired until the time they are removed from the site. Site debris will be classified and segregated into one of three categories: 1) MEC, 2) MPPEH, or 3) Non-MPPEH Debris.

    Segregation procedures begin at the time the metal item is discovered by the UXO Technician. At this point, the UXO Technician makes a preliminary determination as to the classification of the item. If the item is identified as Non-MPPEH debris, it is placed at a temporary Non-MPPEH debris accumulation point located within the current operating grid. If the item is identified as MPPEH, it is placed in a temporary MPPEH accumulation point located within the current operating grid. If the item is identified as MEC, it is handled as described in section 8.5.3.

8.5.2 Inspection, Certification, and Verification

The MEC Team will collect the scrap piles deposited at the grid corner markers and will perform an inspection to confirm that segregation of the items according to proper classification has occurred. The MPPEH items will be inspected and divided into three groups: 1) MPPEH items that require treatment/demilitarization, 2) MPPEH-Safe items that require further demilitarization, and 3) MPPEH-Safe items that do not require further demilitarization. Figure 8-1 is a logic diagram for the collection and disposition of MPPEH-related scrap.

Two scrap metal containers will be positioned at the site. One container will be marked "Non-MPPEH Scrap Metal Debris" and will be used to collect general metal debris. The other container will be marked "MPPEH-Safe Scrap Metal" and will be used to collect munitions related scrap metal that has been inspected, certified and verified that the material is free of explosives (i.e., metal components that do not contain any explosives that would present an explosives safety hazard) as described below. MPPEH that cannot be certified and verified as "Safe" will remain at the grid collection point and will be treated in the same manner as MEC (see section 8.5.3)?

MPPEH will be inspected, certified, and verified in accordance with the requirements of DoD 4160.21-M (Chapter 4, Paragraph B) and OP 5 Volume 1 (Chapter 13-15) and demilitarized, if necessary, in accordance with DoD 4160.21-M-1. Disposal of MPPEH-Safe material will occur in coordination with the nearest Defense Reutilization and Marketing Office (DRMO). Discussions are underway with the DRMO to establish protocols for disposition of munitions related scrap metal.

CH2M HILL will confirm that MPPEH is properly inspected in accordance with the procedures in the project Work Plans. Only UXO-qualified personnel will perform these inspections. The SUXOS will certify that the scrap metal is free of explosive hazards. A qualified Government representative will verify that the scrap metal is free of explosive hazards. DD Form 1348-1A will be used as certification/verification documentation. All DD Form 1348-A1 forms will clearly show the following information in typed or printed letters:

1. Name of CH2M HILL's SUXOS and the Government representative
2. Organization
3. Signatures
4. CH2M HILL's home office
5. Field office phone number(s) of the persons certifying and verifying the scrap metal

For scrap metal, the DD Form 1348-A1 will clearly indicate the following:

1. Basic material content (type of metal, for example, steel or mixed)
2. Estimated weight
3. Unique identification of each sealed container
4. Location where MPPEH was obtained
5. Seal identification, if different from the unique identification of the sealed container

As part of the transfer of MPPEH-Safe material for final disposition, the following certification/verification will be entered on each DD Form 1348-A1 and will be signed by the SUXOS and the qualified Government representative.

"This certifies and verifies that the AEDA residue, Range Residue and/or Explosive Contaminated property listed has been 100 percent properly inspected and to the best of our knowledge and belief, is inert and/or free of explosives or related materials."

[Alternative language if going directly to a metal recycler: "This certifies that the material potentially presenting an explosive hazard listed has been 100 percent properly inspected and to the best of our knowledge and belief, is inert and/or free of explosives or related materials".]

CH2M HILL will arrange for maintaining the chain of custody and final disposition of the certified and verified materials. The certified and verified material will be released only to an organization that will:

1. Provide signed documentation stating that the organization has received the containers, that each container has an unbroken seal and unique identification, and that after reviewing the documentation accompanying the containers, agrees that the sealed containers contained no explosive hazards when received. This documentation will be signed on company letterhead and state that the contents of these sealed containers will not be sold, traded, or otherwise given to another party until the contents have been smelted and are identifiable only by their basic content.

2. Send notification and supporting documentation to the generating contractor (CH2M HILL) documenting that the sealed containers have been smelted and are now identifiable only by their basic content. These documents will be incorporated into the final report.

8.5.3 Treatment of MEC and MPPEH

8.5.3.1 Planned or Established Demolition Area

In the event that MEC/MPPEH items are identified, the SUXOS and one other qualified UXO Technician will assess the items to determine if they are safe to move. If the items are determined to be safe to move, the MEC/MPPEH item(s) will be placed in a portable Type 2 HE storage magazine and secured for disposal by detonation at the end of the MR at the MEC demolition location shown on Figure 2-1. A maximum NEW of 6 lb, including explosives in the MEC/MPPEH and donor charges, will be used at any time in the detonation location. To safely perform the planned detonation of MEC/MPPEH at the demolition location shown on Figure 2-1, it is necessary to utilize engineering controls to reduce the blast effects to acceptable levels. The information provided in Attachment 2 together with the calculations from DDESB TP-16, Revision 2, were utilized to determine the necessary exclusion zones for a planned detonation of (10) each, 20-mm projectiles laid side by side. An estimate of residual explosive remaining on MPPEH items will be made to ensure that the 6 lb total NEW is not exceeded.

Based on the engineering controls calculations and referencing Table 7, HNC-ED-CS-S-98-7, an enclosure with 24 inches of sandbags on the roof and walls would have a maximum sandbag throw of 135 feet and would require an ESQD arc of 200 feet. The ESQD arc is shown on Figure 2-1. Attachment 3 provides the detailed engineering

controls and ESQD calculations. This approach and calculations were collaborated with Michelle Crull, Ph.D., PE, U.S. Army Corps of Engineers, Huntsville Center (USAESCH).

The MEC demolition location will not be utilized as an overnight or longer-term staging area; MEC/MPPEH will be moved to the location for demolition only.

8.5.3.2 Blow-in-Place Areas

If the SUXOS determines the MEC/MPPEH item(s) are not safe to move, the item will be flagged and security personnel will be posted at the end of the operating day. The site will remain secured until disposal operations can be performed, with disposal operations occurring within 24 hours.

When MEC and/or MPPEH are discovered and are not safe to transport, and the area can withstand a high-order detonation, these materials will be disposed of by detonation where found, or by blow-in-place (BIP). Engineering controls for blast/fragment mitigation may be required, including the evacuation of personnel and protection of property; construction of protective works such as trenching, barricades, or buttresses to protect fixed facilities; and/or tamping the shot with earth and sand to reduce fragmentation. UXO personnel will follow the protection procedures for personnel and property and determine the best methods to be used, and will advise the SUXOS of any coordination or assistance required to effect final disposal. Only pre-approved DDESB-approved engineering controls will be used.

The danger area will be marked off and evacuated. A sandbag enclosure with a minimum wall and roof thickness of 12 inches will be employed during any BIP where necessary to reduce the EZ. A 12-inch sandbag enclosure will reduce the minimum separation distance from 558 feet to 200 feet (refer to the Fragmentation Data Review Form included in Attachment 2). Any required BIP, including approach, timing, and required public notification, will be coordinated through the City of Jacksonville, Division of Forestry of the Florida Department of Agriculture and Consumer Services (FDACS), Jacksonville Airport Authority (JAA) and Federal Aviation Authority (FAA) air traffic controller, NAVFAC SE/BRAC PMO SE RPM, and the Resident Officer in Charge of Construction (ROICC) Project Office.

All intentional detonations, either in place (one MEC/MPPEH item at one time) or at the planned detonation area (up to 10 MGFD items at one time or equivalent MPPEH NEW) will be affected employing engineering controls. Based on the MGFD and distances to the nearest inhabited building/PTR, it is anticipated that the only engineering controls that will be needed are sandbags. Disposal will be conducted in accordance with EODB 60A 1-1-31, OP 5 Volume I, and NAVSEA SW060-AA-MMA-010 Volumes I and II. Engineering controls will conform with DDESB TP-16 Revision 2 and USAESCH, Use of Sandbags for Mitigation of Fragment and Blast Effects Due to Intentional Detonation of Munitions, HNC-ED-CS-S-98-7 dated August 1998 and approved by DDESB February 23, 1999.

Response: The provided text has been incorporated into Section 8.5.

Comments from NOSSA Code N54

1. Figure 2-1, Legend; Change ESQD arc distance from 538 feet to 558 feet.

Response: The ESQD arc distance in the legend on Figure 2-1 has been changed from 538 feet to 558 feet.

2. RSL must be at least intraline distance from any intrusive work (45 feet).

   Response: The location for the Type 2 high explosive storage magazine has been relocated and placed to have at least a 45-foot intraline distance from any intrusive work. The revised location is shown on Figure 2-1 with additional text added to Section 8.3.7.

3. Page 8-2, Section 8.1.7; delete thermal treatment as this process (oven heating) is not described anywhere in the ESS.

   Response: The reference to thermal treatment has been removed from Page 8-2, Section 8.1.7.

4. Add e-mail from Michelle Crull that validates the sandbag calculations.

   Response: The e-mail from Michelle Crull that validates the sandbag calculation has been added to Attachment 3 and referenced in Section 8.5.3.1.

Final

Explosives Safety Submission

Munitions Response for
Site 15, Blue 10 Ordnance Disposal Area
Former Naval Air Station Cecil Field
Jacksonville, Florida

Contract No. N62467-01-D-0331
Contract Task Order No. 0063

Prepared for

U.S. Navy Facilities Engineering Command, Southeast

Prepared by

CH2MHILL Constructors, Inc.

Northpark 400
1000 Abernathy Road
Suite 1600
Atlanta, Georgia 30328

October 2007

Contents

Acronyms and Abbreviations ..... **iv**
1.0 Background **1-1**
1.1 Responsible Project Manager 1-1
1.2 MRS Identifier and Description 1-1
1.2.1 Facility Description 1-1
1.2.2 Site Description 1-3
1.3 Regional Maps 1-3
1.4 Scope of Munitions Response 1-3
1.5 History of MEC Use 1-3
1.6 Previous Studies of Extent of MEC Contamination 1-6
1.6.1 Resource Conservation and Recovery Act Facilities Investigation 1-6
1.6.2 Remedial Investigation Field Screening 1-6
1.6.3 Explosive Ordnance Disposal Visual Survey 1-6
1.6.4 Recent Discoveries 1-7
1.6.5 Munitions Constituents 1-7
1.6.6 Preliminary Assessment/Site Inspection 1-8
1.7 Regulatory Statute, Phase, and Oversight 1-9
1.8 Justification for NDAI/NFA Decision 1-10
2.0 Site Approval Request (SAR) **2-1**
2.1 NAVFAC Form 11010/31, "Request for Project Site Approval" 2-1
2.2 Additional Information 2-1
3.0 Types of MEC **3-1**
3.1 Types and Quantities of MEC 3-1
3.2 Munition with the Greatest Fragmentation Distance 3-1
3.3 Explosive Soil and Contaminated Buildings 3-2
4.0 Project Dates **4-1**
4.1 Project Dates 4-1
5.0 MEC Migration **5-1**
5.1 MEC Migration 5-1
6.0 Quality Control/Quality Assurance (QC/QA) **6-1**
6.1 Quality Documentation 6-1
6.2 Personnel Qualifications 6-1
6.3 QC Implementation 6-1
6.3.1 Definable Features of Work 6-1
6.3.2 Three Phases of Control 6-2
6.3.3 Audit Procedures 6-4
6.3.4 Corrective/Preventive Action Procedures 6-8
6.4 QA Implementation 6-9
7.0 Detection Techniques **7-1**
7.1 Detection Equipment, Method, and Standards 7-1
7.1.1 Analog 7-1
7.1.2 Digital 7-1

7.2 Navigational Equipment, Method, and Standards 7-2
7.2.1 Real Time Kinematic Global Positioning System 7-2
7.2.2 Robotic Total Station 7-3
7.2.3 Fiducial 7-3
7.3 Equipment Check-Out and Calibration 7-3
7.4 Data Collection and Storage 7-4
7.4.1 Munitions Response Site Information Management System 7-4
7.4.2 EM61-MK2 Data 7-4
8.0 Response Actions 8-1
8.1 Response Technique 8-1
8.1.1 Mosquito Control 8-1
8.1.2 Site Survey 8-1
8.1.3 Tree and Vegetation Removal with MEC Support 8-2
8.1.4 Instrument-Assisted Surface Clearance 8-2
8.1.5 Digital Geophysical Mapping Survey 8-2
8.1.6 Subsurface Anomaly Investigation 8-2
8.1.7 On-site MEC Destruction and Munitions-related Scrap Metal Certification and Verification 8-3
8.2 Operational Risk Management 8-3
8.2.1 Process 8-3
8.2.2 Process Outline and Operations Hazard Analysis 8-3
8.3 MEC Hazard Classification, Storage and Transportation 8-6
8.3.1 Inspections 8-6
8.3.2 Physical Security 8-6
8.3.3 Placards 8-7
8.3.4 Lightning Protection System 8-19
8.3.5 Fire Protection 8-19
8.3.6 Housekeeping 8-19
8.3.7 Quantity-Distance 8-19
8.4 Transportation 8-20
8.4.1 Onsite Transportation Procedures 8-20
8.4.2 Vehicle Requirements 8-20
8.5 MEC, MPPEH, and Non-MPPEH Debris Disposition Processes 8-20
8.5.1 Inspection and Segregation 8-20
8.5.2 Inspection, Certification, and Verification 8-21
8.5.3 Treatment of MEC and MPPEH 8-23
8.6 EZ Access 8-24
8.7 Mechanized MEC Processing Operations 8-25
8.8 Explosives Soil 8-25
8.9 Contaminated Buildings 8-25
9.0 Environmental, Ecological, Cultural and/or Other Considerations Related to Management of MEC 9-1
9.1 Environmental Regulatory Considerations 9-1
9.2 Ecological and Cultural Environmental Considerations 9-1
10.0 Technical Support 10-1
10.1 EOD, UXO Contractor, or Other Munitions Response Personnel 10-1
10.1.1 UXO Contractor Personnel Qualifications 10-1

10.1.2 DGM Contractor Personnel Qualifications 10-1
10.2 Physical Security 10-2
11.0 Residual Risk Management 11-1
11.1 Land Use Controls 11-1
11.2 Long-term Management 11-1
12.0 Safety Education Program 12-1
12.1 Safety Education Program 12-1
13.0 Stakeholder Involvement 13-1
13.1 Stakeholder Involvement 13-1
14.0 Contingencies 14-1
14.1 Contingencies 14-1
15.0 References 15-1

Figures

1-1 Regional Map
1-2 Site Plan
1-3 Photographs of Munitions Burn Chamber
1-4 Photograph of Static Rocket Firing Pad
2-1 ESQD Arcs
8-1 MPPEH Logic Diagram

Tables

3-1 Exclusion Zones
6-1 Definable Features of Work Auditing Procedures and Responsibilities
8-1 Operations Hazard Analysis
8-2 Risk Assessment Codes

Attachments

1 NAVFAC Form 11010/31
2 U.S. Army Corps of Engineers Safety Alert 01-06 and Fragmentation Data Review Form
3 Calculations for Engineering Controls and ESQD

Acronyms and Abbreviations

ARARs	Applicable or Relevant and Appropriate Requirements
ATF	Alcohol, Tobacco, and Firearms
BaPEq	Benzo(a)pyrene Equivalents
BIP	Blow(n)-in-place
BRAC PMO SE	Base Realignment and Closure, Program Management Office Southeast
CAD	cartridge actuated device
CAP	Corrective Action Plan
CAR	Corrective Action Request
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CH2M HILL	CH2M HILL Constructors, Inc.
CFR	Code of Federal Regulations
COC	chemicals of concern
DDESB	Department of Defense Explosives Safety Board
DFOW	Definable Feature of Work
DGM	Digital Geophysical Mapping
DoD	Department of Defense
DQO	Data Quality Objective
DRMO	Defense Reutilization and Marketing Office
EMR	Electron Magnetic Response
EO	Executive Order
EOD	Explosive Ordnance Disposal
ESD	Electro-static Discharge
ESQD	Explosives Safety Quantity-Distance
ESS	Explosives Safety Submission
EZ	Exclusion Zone
FAA	Federal Aviation Authority
FDACS	Division of Forestry of the Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FID	Fiducial
GCTL	Groundwater Cleanup Target Level
GIP	Geophysical Investigation Plan
GIS	Geographical Information System
GPO	Geophysical Prove-out
GPS	Global Positioning System
HE	High Explosive
HFD	Hazardous Fragment Distance
HSP	Health and Safety Plan
IAW	in accordance with
IGS	Integrated Geophysical System
JAA	Jacksonville Airport Authority

lb	pound
LUC	Land Use Control
MFD	Maximum Fragment Distance
MC	Munitions Constituents
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
MGFD	Munition with the Greatest Fragmentation Distance
mm	millimeter(s)
MPPEH	Material Potentially Presenting an Explosive Hazard
MR	Munitions Response
MRS	Munitions Response Site
MRSIMS	Munitions Response Site Information Management System
NAS	Naval Air Station
NAVFAC SE	U.S. Naval Facilities Engineering Command Southeast
NAVSEA	Naval Sea Systems Command
NEW	Net Explosives Weight
NGVD	National Geodetic Vertical Datum
NOSSA	Naval Ordnance Safety and Security Activity
OP	Ordnance Publication
OSHA	Occupational Safety and Health Act
OU	Operable Unit
PA/SI	Preliminary Assessment/Site Inspection
PM	Project Manager
PPE	Personal Protective Equipment
PTR	Public Transportation Routes
QA	Quality Assurance
QC	Quality Control
QCP	Quality Control Plan
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
ROICC	Resident Officer in Charge of Construction
RPM	Remedial Project Manager
RTK	Real Time Kinematic
RTS	Robotic Total Station
SAR	Site Approval Request
Site 15	Site 15, Blue 10 Ordnance Disposal Area
SOP	Standard Operating Procedures
SUXOS	Senior UXO Supervisor
TRPH	Total Recoverable Petroleum Hydrocarbons
TSD	Team Separation Distance
TtNUS	Tetra Tech NUS, Inc.
USACE	U.S. Army Corps of Engineers
USAESCH	U.S. Army Corps of Engineers, Huntsville Center
UXO	Unexploded Ordnance

UXOQCS	UXO Quality Control Specialist
UXOSO	UXO Safety Officer
VLF	Very Low Frequency
YWWA	Yellow Water Weapons Area

1.0 Background

This Explosives Safety Submission (ESS) is in support of munitions response (MR) activities to locate and remove Munitions and Explosives of Concern (MEC) prior to contaminated soil excavation, and for on-site construction support during excavation operations at Site 15, Blue 10 Ordnance Disposal Area (Site 15) located at the former Naval Air Station (NAS) Cecil Field, Jacksonville, Florida.

1.1 Responsible Project Manager

The responsible U.S. Naval Facilities Engineering Command Southeast (NAVFAC SE)/Base Realignment and Closure, Program Management Office Southeast (BRAC PMO SE) Project Manager for this project is:

Mark E. Davidson
Remedial Project Manager (RPM)
BRAC PMO SE
(843) 743-2135 voice
(843) 743-2142 fax
mark.e.davidson@navy.mil

1.2 MRS Identifier and Description

The subject of the proposed MR action is Site 15 located at the former NAS Cecil Field, Jacksonville, Florida. The MR action is being implemented by CH2M HILL Constructors, Inc. (CH2M HILL) for NAVFAC SE/BRAC PMO SE under Response Action Contract No. N62467-01-D-0331, Contract Task Order No. 0063.

Site 15 was designated a Munitions Response Site (MRS) by the Naval Ordnance Safety and Security Activity (NOSSA) after receipt of a MRS Identification and Notification Report submitted by NAVFAC SE/BRAC PMO SE on October 31, 2006.

1.2.1 Facility Description

The former NAS Cecil Field, shown on Figure 1-1, is located in western Duval County, 14 miles southwest of Jacksonville, in northeastern Florida. It was established in 1941 to provide facilities, services, and material support for naval operations and maintenance of naval weapons, aircraft and other units of the operating forces as designated by the Chief of Naval Operations. The base was placed on the National Priorities List in 1989. In 1993 and 1995, the BRAC Commission recommended the closure of NAS Cecil Field. When Naval operations at the base ceased on September 30, 1999, it occupied over 31,000 acres. NAS Cecil Field was comprised of four separate facilities: the Cecil Field Complex (Cecil Field), the Outlying Field Whitehouse, the Pinecastle Electronic Warfare Target Area/Warfare Range (located approximately 80 miles south of Cecil Field), and the Yellow Water Weapons Area (YWWA).

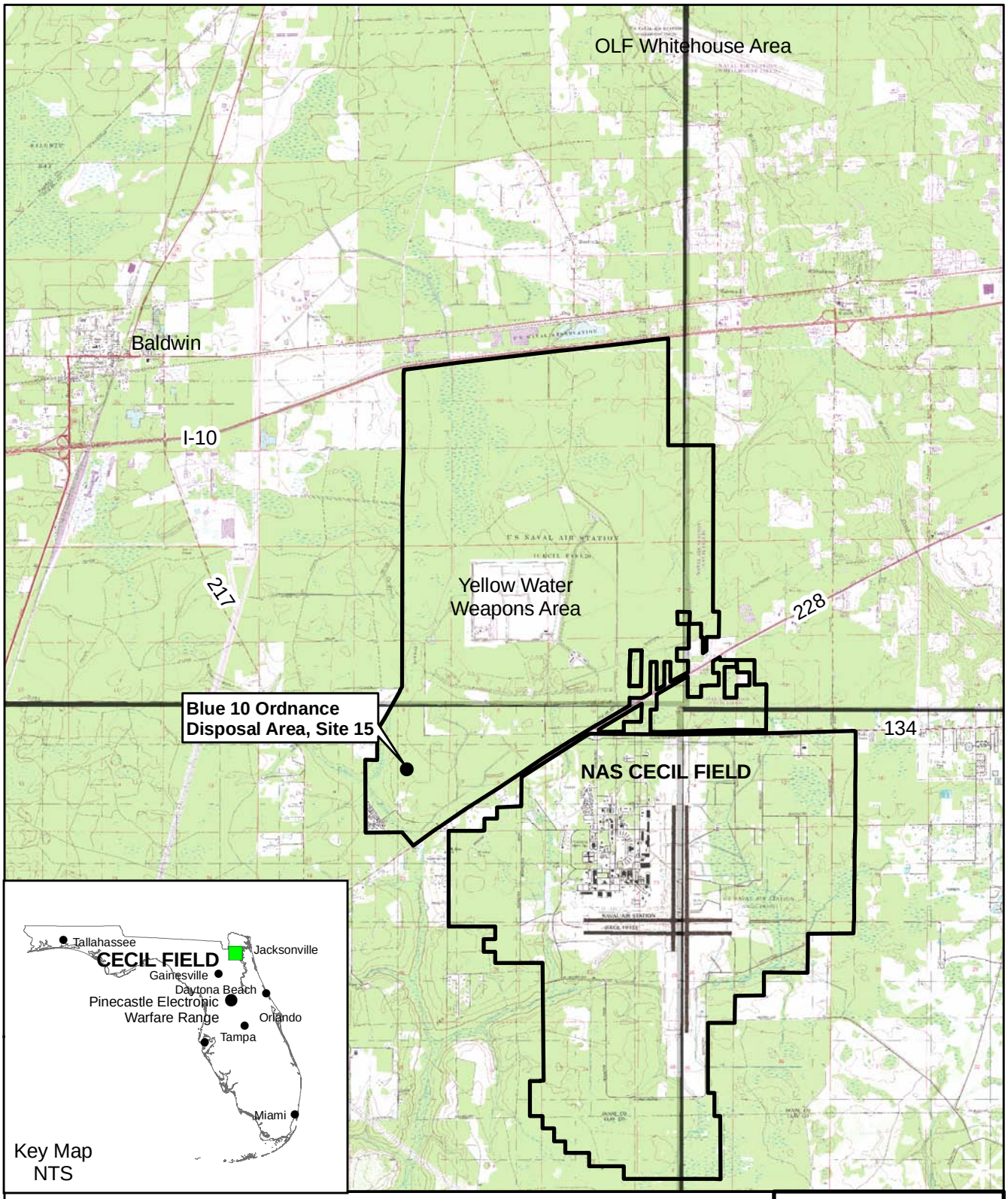


FIGURE 1-1
OU5
SITE 15
NAS CECIL FIELD

\\volunteer\public\cecil_field\mxd\Site15\Figure 1-1_OU5_Site 15.mxd

1.2.2 Site Description

Site 15 is located in the southwest section of YWWA, shown on Figure 1-1, and covers approximately 85 acres, with elevations ranging from approximately 79 feet National Geodetic Vertical Datum (NGVD) to 72 feet NGVD. The site is heavily forested, primarily with slash pine and understory vegetation. The areas within this site to be subjected to response actions encompass up to approximately 22 acres. This includes 7.2 acres affected by excavation operations, as discussed in Section 1.6.5, and potential buffers around those areas.

1.3 Regional Maps

Figure 1-1 is a regional map showing the State of Florida and the location of the former NAS Cecil Field. Figure 1-2 is a map showing the MRS covered by this submission within the former NAS Cecil Field.

1.4 Scope of Munitions Response

The scope of the MR at Site 15 is to perform MEC investigation and removal (if necessary), followed by MEC construction support activities during the excavation of soils at 17 areas within the site. The removal of soil (to a maximum depth of two feet below ground surface) is being performed to satisfy the remedial action requirements of the Draft Record of Decision (ROD) for Operable Unit (OU) 5, Site 15, Blue 10 Ordnance Disposal Area (Tetra Tech NUS Inc. [TtNUS], 2006). The MEC investigation and removal activities will be performed in order that the risk of encountering MEC during excavation activities is significantly reduced. In addition, on-site construction support will be performed during excavation activities.

Current and future land use is that of low-intensity recreational use. The reuse plan for NAS Cecil Field stipulates that Site 15 remain as a natural resource corridor. This natural resource corridor is defined as a green corridor that connects two state forests, and open space. Low-intensity recreational use activities such as hiking, biking, horseback riding, birding, and hunting are the only activities that are expected to be allowed in this area. No man-made attractions (picnic tables, campgrounds, playgrounds, etc.) that would entice people, particularly small children, to frequently visit the site would be provided.

1.5 History of MEC Use

From the early 1940s through the mid 1950s, Site 15 was used as a skeet range. The former skeet range, shown on Figure 1-2, was approximately 1,000 feet by 2,400 feet in size. From the mid 1960s through 1977, Site 15 was used for munitions disposal. This operation consisted of burning munitions materials in a large metal chamber and static firing of rockets. The munitions disposal structures (see Figure 1-2 for locations) were situated west of the skeet range. The majority of munitions disposed of at the site were burned and included small arms munitions, 20-millimeter (mm) projectiles (believed to be target practice), parachute and distress flares,

FIGURE 1-2
OU5 SITE 15
SITE PLAN
NAS CECIL FIELD
JACKSONVILLE, FL

\\volunteer\public\cecil_field\mxd\Site_15\Fig1-2_Site_Plan.mxd

Mark IV signal cartridges, rocket igniters, cartridge activated devices (CADs), 2.75-inch rockets, and 5-inch rockets. The rocket motors were reportedly either static fired for disposal or the rocket propellant was placed on the ground and ignited in the area of the burn chamber. An estimated 350 tons of munitions were disposed of at the site while in operation.

The munitions burn chamber and static rocket firing pad, photographs of which are provided as Figures 1-3 and 1-4, respectively, are the only structures currently at the site. The burn chamber is a rounded, steel, tank-like container, approximately 10 feet in length and 4 feet in height. The chamber has a burn stack that rises approximately 3 feet above the body of the chamber. Access to the chamber is through a 2-foot by 2-foot hinged door. When full, the burn chamber can accommodate 1.5 cubic yards of material. The static rocket firing pad is an L-shaped concrete structure approximately 10 feet long by 4 feet wide by 6 feet high. Steel firing rods are seated into the concrete at 45-degree angles. Several concrete building foundations, remnants of buildings that supported skeet range activities, are located in the area surrounding the burn chamber and firing pad.

FIGURE 1-3
Photographs of Munitions Burn Chamber

FIGURE 1-4
Photograph of Static Rocket Firing Pad

Review of aerial photographs from 1952, prior to the initiation of munitions disposal on Site 15, show an active trap and skeet range facility located at the site. The area covered by the skeet range appears to be approximately 50 acres in size, and is centered over the area in which the burn chamber and firing pad were constructed.

1.6 Previous Studies of Extent of MEC Contamination

The following subsections detail MEC-related findings from previous studies at the site.

1.6.1 Resource Conservation and Recovery Act Facilities Investigation

A site reconnaissance was conducted in March 1988 as part of the Resource Conservation and Recovery Act (RCRA) Facilities Investigation. During this reconnaissance, two large pieces of munitions described as 3 to 4 feet long by greater than one-foot in diameter were noted. No documentation has been found on whether a follow-up removal action was performed at this time on the munitions described.

A surface geophysical survey was also conducted at Site 15 to detect buried metal and attempt to delineate site boundaries. This geophysical survey was conducted using a Geonics Ltd. EM31 ground-conductivity meter and an Integrated Geophysical System (IGS) by Scintrex (instrument consisted of a magnetometer and a Very Low Frequency [VLF] electromagnetic sensor connected to a single microprocessor). The geophysical survey was carried out on a 100- by 100-foot grid measuring 600 feet by 700 feet. Only three geophysical anomalies were located. Two of the anomalies corresponded to surface debris while the third anomaly corresponded to a parked van. Three areas of VLF sensor readings above background were noted. Two of these were generally offsite and may represent natural changes in soil conductivity. Another area showed anomalously high VLF sensor readings, from both VLF sensor stations, and may represent a former trench area where debris was buried; however, the Scintrex IGS did not indicate a large quantity of metal in the vicinity.

1.6.2 Remedial Investigation Field Screening

Between August 1994 and April 1995, as part of the Remedial Investigation field screening process, a surface MEC survey was performed on the site before taking surface and subsurface soil samples, and the installation of piezometers. No MEC was found; however, several pieces of metal, shell casings, etc., were located and removed.

1.6.3 Explosive Ordnance Disposal Visual Survey

In February 1997, a thorough visual survey was conducted by Explosive Ordnance Disposal (EOD) and Weapons Department personnel at the request of the NAS Cecil Field BRAC Environmental Coordinator (Wilson, 1997a, 1997b). In the request for EOD services, the Environmental Coordinator stated that the munitions found at Site 15 was not considered inert and identified the approximate location of a MK 82 GP bomb and approximately one dozen old rockets with hulls rotted away with nothing left but the propellant. The propellant in the rockets had the appearance of chalk and was drummed by EOD personnel and taken back to EOD Mayport for analysis. Documents reviewed in the Administrative Record indicate that the analytical data from the analysis of the propellant would be available in June 1997. At the time of this publication, the results of this analysis have not

been located. EOD Mayport was contacted in an attempt to obtain additional information about the removal action that took place in 1997. EOD Mayport responded with no further information available other than the information included in the After Action Report dated June 19, 1997. The After Action Report contains no information on the analytical results of the propellant that was removed. The area was described in the After Action Report as "not heavily contaminated" with Unexploded Ordnance (UXO) and therefore "a magnetometer survey was not conducted."

1.6.4 Recent Discoveries

During a site visit completed by CH2M HILL on August 29, 2006 for the Preliminary Assessment/Site Inspection (PA/SI), two potential MEC items were observed on the ground surface. During a follow-up site visit completed on October 25, 2006, one of the two potential MEC items was identified as a 20-mm cartridge case with projectile and the other as a 20-mm projectile only. Identification was completed by one UXO Technician and because of the condition and location of the items, determination of whether the items were high explosive (HE) or target practice could not be made. Based on this, the items were assumed to be HE. The items were not moved during identification and are in a secured area. A removal response requested of EOD Mayport from BRAC PMO SE was denied and CH2M HILL was requested to provide the EOD response to identify, remove, and dispose of the potential MEC items. The response will be completed with the MR action described in this submission.

1.6.5 Munitions Constituents

The presence of munitions constituents (MC) at Site 15 is confirmed through sampling results of past environmental investigations in regard to previous site activities. Site 15 activities have resulted in contamination of the surface soil with polynuclear aromatic hydrocarbons that were evaluated collectively as benzo(a)pyrene equivalents (BaPEq), metals (arsenic and lead), and total recoverable petroleum hydrocarbons (TRPHs). BaPEq was found in concentrations of 2.60 to 1,573,000 micrograms per kilogram (µg/kg); arsenic concentrations ranged from 0.91 to 451 milligrams per kilogram (mg/kg); lead values ranged from 0 to 65,500 mg/kg; and TRPH ranged from 9.74 to 2,380 mg/kg. Based on these concentrations, there is no indication to suggest the presence of MC levels that could present an explosive hazard.

For groundwater, investigations have shown that unacceptable concentrations of the chemicals detected in soils were not detected in the groundwater, with the exception of arsenic. Groundwater samples were found to contain arsenic at concentrations (up to 22 micrograms per liter [µg/L]) that exceed the Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Level (GCTL) of 10 µg/L for a drinking water aquifer but less than the poor quality aquifer GCTL of 100 µg/L.

Based on the preferred remedial alternatives included in the Draft ROD (TtNUS, 2006) and Draft Proposed Plan (TtNUS, 2007b) for Site 15, it is believed that MC is being adequately addressed through the implementation of the proposed cleanup plan.

The preferred remedial alternatives include:

- Soil: Excavation to meet recreational remedial action objectives with offsite treatment and disposal and the implementation of land use controls (LUCs). Specifically, this alternative would remove soil from the areas of Site 15 where concentrations of the chemicals of concern (COCs) are greater than the recreational use pickup levels. A total of approximately 11,660 cubic yards of contaminated soil would be excavated from 20 areas totaling approximately 7.2 acres. Most of the excavated soil (approximately 10,900 cubic yards) would be disposed offsite at a permitted RCRA non-hazardous landfill and the balance (approximately 700 cubic yards) would be disposed at an offsite permitted RCRA Treatment Storage and Disposal Facility. The excavated areas would then be backfilled with 11,600 cubic yards of clean imported fill material, the site would be revegetated, and impacted wetlands would be restored. Because the soil remaining onsite would continue to contain concentrations of COCs that would not be protective of hypothetical future receptors, LUCs would have to be established and enforced. The LUCs would restrict site use to low-intensity recreational use, and prevent commercial/ industrial and residential development and medium- and high-intensity recreational use.
- Groundwater: One year of monitoring to support no further action with controls. Specifically, this alternative would consist of one year of quarterly groundwater monitoring conducted using five new groundwater wells. A site review would be conducted after the first year of monitoring to confirm that onsite arsenic groundwater concentrations continue to be lower than the FDEP poor quality aquifer GCTL (100 µg/L) and to demonstrate that offsite migration of arsenic at concentrations greater than the FDEP drinking water GCTL (10 µg/L) does not occur. After a successful review of monitoring data, the site would be deemed No Further Action with controls. These controls would be LUCs to prohibit the use of the surficial aquifer from human consumption, dewatering, irrigation, heating/cooling purposes, and industrial purposes. Regular site inspections would be performed to verify continued implementation of the LUCs.

1.6.6 Preliminary Assessment/Site Inspection

CH2M HILL recently completed and submitted a PA/SI (CH2M HILL, 2007a) with respect to past use of MEC at Site 15 at the former NAS Cecil Field. Findings of the PA/SI indicate the potential for contact with MEC during the planned excavation and removal of contaminated soil. The planned phased approach to address site MEC hazards is summarized below.

Three (3) phases are planned. Phase I consists of a geophysical instrument assisted search of the surface and digital geophysical mapping (DGM) of the subsurface. This phase would be supported with vegetation reduction efforts where required. Phase II requires intrusive actions for reacquisition and investigation of a statistically representative subset of subsurface DGM anomalies. Both Phases I and II include the identification, disposition, and or storage of material potentially presenting an explosive hazard (MPPEH). Phase III activities are yet to be determined. The results of Phase I and II will influence Phase III activities and actions.

Within the footprint of the proposed excavation areas, Phase I will include a visual search of the surface augmented with the addition of handheld magnetometers (Schonstedt Ga-52Cx)

to locate and remove MEC (to include small arms) and ferrous items 2-inch by 2-inch and larger. Surface/near-surface search efforts shall: 1) identify MEC for assessment and disposition options, 2) recover MPPEH for consolidated storage and processing, 3) collect surface solid waste, and 4) flag-in place MEC determined unsafe to move. The surface search shall be supplemented with a DGM survey to record the location of ferrous and non-ferrous items potentially representing MEC in the subsurface. Identified MEC would be disposed of as required.

Phase II will be driven by Phase I DGM results. Phase II is currently planned to include intrusive investigation and characterization of a statistically representative subset of DGM anomalies within the footprint of the proposed excavation areas. Characterization will also include the identification of an additional ten (10) percent of the total number of anomalies for a focused investigation in high concentration areas. Anomaly investigation involves soil removal to identify the source of the anomaly. Focused investigations may also be applied where anomaly investigations do not provide sufficient information to fully identify the source of the anomaly; for example, if a geophysical signature remains following removal of the previously identified anomaly. Excavations may be manual, or manual and mechanical aided, as required by depth of anomalies. If mechanical equipment is necessary based on the depth of anomaly, measures will be taken to avoid any contact with the anomaly. Two typical approaches will be: 1) to excavate to the side of the anomaly and use manual excavation with hand tools to move in horizontally to the anomaly, or 2) to incrementally excavate directly over the anomaly with periodic magnetometer checks, stopping mechanical excavation one-foot above the target, and completing excavation manually with hand tools.

MEC items discovered during Phase I or II that are safe to move will be collected, segregated, and consolidated for later disposal. MEC items that are not safe to move will be flagged and avoided until a disposition or disposal action is selected. Based on the type and quantity of MEC discovered during Phase I and II, a planned MEC disposal event may occur on a daily, weekly, or single occasion.

Results of Phase II will drive the Phase III requirements. Depending on the MEC density observed in Phase II, Phase III activities may be limited to UXO construction support (two UXO technicians) to visually observe soil and vegetation removal activities or may require a removal action.

1.7 Regulatory Statute, Phase, and Oversight

The Navy will conduct this MEC response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) framework, as is consistent with Department of Defense (DoD) policy. OPNAVINST 8020.14, *Department of the Navy Explosives Safety Policy*, requires that all response actions involving real property known or suspected to contain military munitions have approved plans and/or appropriate documentation in accordance with an established process.

In addition, the response action is taken under the delegated authority of the Office of the President of United States by Executive Order (EO) 12580. This EO authorizes the Navy to conduct and finance removal actions. This response action is also appropriate based on

several of the applicable factors under 40 Code of Federal Regulations (CFR) Part 300.415(b)(2). The Navy is the lead agency for this action, and NAVFAC SE/BRAC PMO SE is the contracting agency responsible for completing the response action.

The response action will be conducted in accordance with the following health and safety regulations and requirements, in addition to the MEC-specific regulations and requirements to be provided in the project Work Plan (CH2M HILL, in preparation):

- 29 CFR, Occupational Safety and Health Act (OSHA) Regulations: Construction (29 CFR 1926) and General Industry (29 CFR 1910), applicable sections
- U.S. Army Corps of Engineers (USACE), 2003, EM 385-1-1, *Safety – Safety and Health Requirements*

1.8 Justification for NDAI/NFA Decision

Not Applicable.

2.0 Site Approval Request (SAR)

2.1 NAVFAC Form 11010/31, "Request for Project Site Approval"

NAVFAC Form 11010/31 is included as Attachment 1. The associated explosives safety quantity-distance (ESQD) arcs map is presented as Figure 2-1. It should be noted that there are no buildings or public transportation routes (PTR) within the ESQD arcs of the project site, the portable Type 2 HE storage magazine, or the planned intentional detonation area.

2.2 Additional Information

Current and future land use is that of low-intensity recreational use. The reuse plan for NAS Cecil Field stipulates that Site 15 remain as a natural resource corridor. This natural resource corridor is defined as a green corridor that connects two state forests, and open space. Low-intensity recreational use activities such as hiking, biking, horseback riding, birding, and hunting are the only activities that are expected to be allowed in this area. No man-made attractions (picnic tables, campgrounds, playgrounds, etc.) that would entice people, particularly small children, to frequently visit the site would be provided.

FIGURE 2-1
ESQD ARCS
OU5 SITE 15
NAS CECIL FIELD
JACKSONVILLE, FL

Legend

- Installation Boundary
- Maximum extent of project operations
- ESQD ARC Exclusion Zone for intentional detonations (maximum fragment distance) of the MGFD (558 ft)
- Location of Intentional Detonation Area
- ESQD ARC (200 ft) for Intentional Detonation Area - ESQD ARC is reduced by the use of engineering controls
- Temporary Magazine Location
- ESQD ARC (506 ft) for Temporary Magazine (Max 15lb NEW)
- Excavation Areas
- Exclusion Zone for unintentional detonations (hazardous fragment distance) of the MGFD (200 ft)

N
W E
S

0 200 400 Feet

\\volunteer\public\cecil_field\mxd\Site_15\Fig2-1_ESQD_Arc.mxd

3.0 Types of MEC

3.1 Types and Quantities of MEC

Much of the munitions disposed at Site 15 was burned in a heavy metal tank (burn chamber). This included small arms, 20-mm projectiles, parachute and distress flares, Mark IV signal cartridges, rocket ignitors, and CADs. Burns were conducted in the burn chamber approximately once every 4 to 6 weeks. Typically, 6,000 to 8,000 rounds of ammunition which had accumulated were burned per episode. Approximately 110 gallons of diesel fuel were used to ignite the burn chamber. Following a burn, the tank required approximately 24 hours to cool down. The resulting metal and ash left in the tank was periodically cleaned out and buried onsite.

Also burned at the site were 2.75- and 5-inch solid double-base propellant (nitroglycerin-based) rockets. The rockets were taken apart at the site and the solid propellant laid out on the ground surface in a crow-footed pattern (branched out with each touching the other). Thus, when the first rocket propellant was ignited, the fire spread throughout all the rockets laid out on the ground. The exact location of where this ground burning operation took place is unknown; however, it is expected to have occurred on the north end of Site 15 where rocket tube debris was removed in 1997.

The 2.75- and 5-inch rockets were also static fired at the site. Rockets were loaded into a static firing stand at the site and the propellant ignited and allowed to burn. Static firing was primarily limited to 5-inch rockets, as it was easier to tear apart the 2.75-inch rockets and burn them laid out on the ground. Over the time period that the site was operational, hundreds of 2.75- and 5-inch rockets were disposed at the site. For the 3-year period from 1969 to 1971, EOD personnel estimated 500 to 600 of the 2.75-inch rockets and 40 of the 5-inch rockets were disposed at the site. The rocket tubes were reportedly turned in to the Defense Property Disposal Office for steel scrap. It is considered unlikely that any intact rockets remain at the site.

While the amount of munitions disposed at the site was variable, it was estimated by EOD personnel that approximately 2.5 tons per month was disposed at the site. Throughout the time period that the site was operational, it is estimated that 350 tons of munitions material was burned at the site.

No historical record evidence suggests the presence of MEC resulting from open detonation at Site 15. Open detonation was reportedly only conducted at a different site on NAS Cecil Field, Blue 5 Ordnance Disposal Area (Site 14), which received a ROD in August 2000.

3.2 Munition with the Greatest Fragmentation Distance

Based on the facts that 1) there is a high likelihood that the MK 82 GP bomb found at the site was a training item, 2) the 2.75-inch and 5-inch rocket motors were either static fired or taken apart at the site and the solid propellant laid out on the ground surface for disposal,

and 3) there were two 20-mm projectiles recently found at the site, the Munition with the Greatest Fragmentation Distance (MGFD) assumed for the site is a M56A4 20-mm HE round.

According to USACE Safety Alert 01-06, included as Attachment 2, the maximum fragment throw range for a 20-mm projectile is 558 feet. If, during the course of this project, an MEC item with a greater fragmentation range is encountered, the ESQD arcs will be adjusted and an amendment to this ESS will be prepared. Table 3-1 shows the MGFD and Exclusion Zone (EZ) parameters for the 20-mm projectile.

TABLE 3-1
Exclusion Zones

MGFD				Maximum Detonation (includes demolition materials)		
Item	NEW (lbs)	HFD (feet)*	MFD (feet)**	NEW (lbs)	K328 (feet)	K40 (item only) (feet)
20-mm M56A4 HE Projectile	0.026	200	558	6	596	12

NEW = net explosive weight

lbs = pounds

HFD = Hazardous Fragment Distance (team separation distance)

MFD = Maximum Fragment Distance (EZ distance)

1) Unintentional detonation EZ for Team Separation Distance (TSD) for manual operations is K40 of the MGFD. Use 12 feet for the 20-mm M56A4 HE Projectile.
2) Unintentional detonation EZ for TSD for mechanized operations is greater of HFD or K24 of the MGFD. Use 200 feet.
3) Unintentional detonation EZ for public and non-essential personnel for manual operations is the greater of K40 or HFD of the MGFD. Use 200 feet for the 20-mm M56A4 HE Projectile.
4) Unintentional detonation EZ for public and non-essential personnel for mechanized operations is identical to the intentional detonation EZ for public and all personnel of the MGFD. Use 558 feet.
5) Intentional detonation EZ for public and all personnel is greater of K328 or MFD of the MGFD. For a single item shot, use 558 feet for the 20-mm M56A4 HE Projectile. For consolidated shots $\leq$6 lbs NEW, use 596 feet.

* Value from TP-16, Table B-2.

** Value from TP-16, Table B-2, as amended by USACE Safety Alert 01-06 (included as Attachment 2).

3.3 Explosive Soil and Contaminated Buildings

Not applicable.

4.0 Project Dates

4.1 Project Dates

Mobilization and site work in the MRS work area will be conducted as soon as approval of this ESS is received with an anticipated start date of November 26, 2007. The project is anticipated to be completed within 6 months of the start date.

5.0 MEC Migration

5.1 MEC Migration

Because of the climatic conditions in Florida, the site does not have a frostline and has not experienced frost heave. No other phenomena (e.g., drought, flooding, erosion, or tidal changes) exist for this area. Therefore, migration of MEC (other than through human transport) is not considered likely.

6.0 Quality Control/Quality Assurance (QC/QA)

6.1 Quality Documentation

The project Work Plan will include a Quality Control Plan (QCP) that discusses all aspects of project QC.

6.2 Personnel Qualifications

All MEC operations personnel will be qualified and certified in accordance with NAVSEAINST 8020.9B, Ammunition and Explosives Personnel Qualification and Certification Program; terms outlined by U.S. Department of Labor Employment Standards Administration Wage Hour Division for UXO Personnel; and Department of Defense Explosives Safety Board (DDESB) TP-18, Minimum Qualifications for UXO Technicians and personnel.

6.3 QC Implementation

An extensive QC program will be applied to the project and, in particular, to the field operations and data processing. Controls QC will be implemented strictly through the establishment of data quality objectives (DQOs), QC tests, and acceptance criteria and monitoring of those items by CH2M HILL's UXO Quality Control Specialist (UXOQCS) and QC Geophysicist. Any QC failure will result in immediate notification of the CH2M HILL Project Manager (PM), who will promptly notify the NAVFAC SE/BRAC PMO SE RPM. The failure will then be analyzed through a root-cause analysis process and the results and recommended corrective action(s) will be discussed with NAVFAC SE/BRAC PMO SE prior to implementation.

QC will be monitored through the Definable Features of Work (DFOW) using a three-phase control process.

6.3.1 Definable Features of Work

The DFOW for this project are divided into activities related to planning, field operations, and final project reports and closeout.

1. Planning
   - Pre-Mobilization Activities: System setup for Geographical Information System (GIS), document management and control, data management and subcontracting
   - Preparing Work Plan
2. Field Operations
   - Site Preparation: Mobilization

- Site Preparation: Survey
- Site Preparation: Surface Clearance
- Site Preparation: Tree and Vegetation Removal
- DGM Survey
- Intrusive Investigation of DGM Anomalies
- Construction Support
- Demobilization

3. Final Project Reports and Closeout
   - Draft and Final Reports: preparing and obtaining approval
   - Data archiving and project closeout

6.3.2 Three Phases of Control

The UXOQCS is responsible for ensuring that the three-phase control process, including the Preparatory Phase, Initial Phase, and Follow-up Phase, is implemented for each DFOW listed in the QCP, regardless of whether it is performed by CH2M HILL or its subcontractors. Each control phase is important for obtaining a quality product and meeting the project objectives; however, the preparatory and initial audits are particularly valuable in preventing problems. Production work is not to be performed on a DFOW until successful Preparatory and Initial Phases have been completed.

6.3.2.1 Preparatory Phase

The Preparatory Phase culminates with the planning and design process leading up to actual field activities. Successful completion of the Preparatory Phase verifies that the project delivery, QC, and safety plans have been completed. The following actions will be performed as applicable for each DFOW:

1. Confirm that the appropriate technical procedures are incorporated into the project Work Plan and review procedures.
2. Confirm that adequate testing is called for to ensure quality delivery.
3. Ensure equipment testing procedures are in place, with control limits and frequency, for each piece of equipment.
4. Confirm qualifications/training of personnel and verify roles/responsibilities are well-defined and communicated.
5. Confirm with the UXO Safety Officer (UXOSO) that the site Health and Safety Plan (HSP) adequately address the work operations and that applicable safety requirements have been incorporated into the plan.
6. Discuss methods to be employed during the field activities.
7. Confirm any required permits and other regulatory requirements are met.
8. Verify that lessons learned during previous similar work have been incorporated as appropriate into the project procedures to prevent recurrence of past problems.

Project staff must correct or resolve discrepancies between existing conditions and the approved plans/procedures identified by the UXOQCS and the team during the Preparatory Phase. The UXOQCS must verify that unsatisfactory and nonconforming conditions have been corrected prior to granting approval to begin work.

Results of the activity are to be documented in a Preparatory Inspection Checklist specific for the DFOW.

6.3.2.2 Initial Phase

The Initial Phase occurs at the startup of field activities associated with a specific DFOW. The Initial Phase confirms that the QCP, other applicable Work Plan sections, and procedures are being effectively implemented and the desired results are being achieved.

During the Initial Phase, the initial segment of the DFOW is observed and inspected to ensure that the work complies with contract and Work Plan requirements. The Initial Phase should be repeated if acceptable levels of specified quality are not met. The following shall be performed for each DFOW:

1. Establish the quality of work required to properly deliver the project in accordance with contractual requirements. The UXOQCS will ensure that the field teams are aware of expectations associated with the field methods established under the Preparatory Phase by observing the initial work activities and interacting with the PM, Senior UXO Supervisor (SUXOS), and responsible subcontractors' supervisors.

2. Resolve conflicts. The UXOQCS will guide the PM and responsible supervisor(s) in resolving conflicts. Should conflicts arise in establishing the baseline quality for the DFOW, the responsibility to resolve the conflict falls to the PM. Should the conflict not be resolved in a manner that satisfies the project requirements, the UXOQCS must elevate the conflict to the corporate level (i.e., the Corporate QC Manager) and issue a non-conformance report. The UXOQCS may direct a cessation of work activity when a non-conformance to a DFOW is observed. The UXOQCS will determine whether retraining of personnel and adjustment of equipment and/or plans and procedures are necessary.

3. Verify with the UXOSO that the site HSP was developed to ensure that the identified hazards adequately address field conditions. Confirm that applicable safety requirements are being implemented during field activities.

On completion of Initial Phase activities, the results are to be documented in an Initial Phase Inspection Checklist and a QC logbook. Should results be unsatisfactory, the Initial Phase will be rescheduled and performed again.

6.3.2.3 Follow-up Phase

Completion of the Initial Phase of QC activity leads directly into the Follow-up Phase, which addresses the routine day-to-day activities at the site. Inspection and audit activities associated with each DFOW are addressed in Section 6.3.3. Specific concerns associated with the Follow-up Phase include:

1. Inspection of the work activity to ensure work complies with the contract and Work Plan.

2. Evaluation and confirmation that the quality of work is being maintained at least at the level established during the Initial Phase.
3. Evaluation and confirmation that required testing is being performed in accordance with procedures established during the Preparatory Phase and confirmed during the Initial Phase.
4. Confirmation that nonconforming work is being corrected promptly and in accordance with the direction provided by the UXOQCS.

To conduct and document these inspections, the UXOQCS is to generate a Follow-up Phase Inspection Checklist. The Follow-up Phase inspections will be performed daily or as otherwise identified in the QCP until the completion of each DFOW.

The UXOQCS is responsible for onsite monitoring of the practices and operations taking place and verifying continued compliance with the specifications and requirements of the contract, project, and approved project plans and procedures. The UXOQCS is also responsible for verifying that a daily health and safety inspection is performed and documented as prescribed in the HSP. Discrepancies between site practices and approved plans and procedures are to be resolved and corrective actions for unsatisfactory and nonconforming conditions or practices are to be verified by the UXOQCS prior to granting approval to continue work. Follow-up Phase re-inspection results are to be documented in a QC logbook.

6.3.2.4 Additional Audits

Additional audits performed on the same DFOW may be required at the discretion of the UXOQCS. Additional preparatory and initial audits are generally warranted under any of the following conditions: unsatisfactory work, changes in key personnel, resumption of work after a substantial period of inactivity (e.g., 2 weeks or more), or changes to the project scope of work/specifications. In addition Corporate-level QC audits will be conducted.

6.3.2.5 Final Acceptance Audit

Upon conclusion of the DFOW and prior to closeout, the Final Acceptance Inspection must be performed to verify that project requirements relevant to the work are satisfied. Outstanding and nonconforming items are to be documented on a Final Inspection Checklist. Resolution of each item must be noted on the checklist. Contractor acceptance and closeout of each DFOW is a prerequisite to project closeout.

6.3.3 Audit Procedures

The UXOQCS is responsible for verifying compliance with the QCP through audits and surveillance. A table of each DFOW auditing procedures and responsibilities is presented as Table 6-1. The UXOQCS is to inspect/audit the quality of work being performed for the DFOW. The UXOQCS is to verify that procedures conform to applicable specifications stated in the project Work Plan or other applicable guidance. Identified deficiencies are to be communicated to the responsible individual and documented in a QC logbook and Daily QC Report. Corrective actions are to be verified by the UXOQCS and recorded in the Daily QC Report.

TABLE 6-1
Definable Features of Work Auditing Procedures and Responsibilities

Definable Feature of Work with Auditable Function	Responsible Person(s)[1]	Audit Procedure	QC Phase[2]	Freq. of Audit	Pass/Fail Criteria	Action if Failure Occurs
Planning						
GIS Setup (Pre-mobilization Activities)	Project GIS Manager	Verify GIS system has been set up and is ready for site data.	PP	O	GIS system has been set up and is ready for site data.	Do not proceed with field activities until criterion is passed.
Document management and control (Pre-mobilization Activities)	Project Manager	Verify appropriate measures are in place to manage and control project documents.	PP	O	Appropriate measures are in place to manage and control project documents.	Do not proceed with field activities until criterion is passed.
Data Management (Pre-mobilization Activities)	Project Manager, QC Geophysicist	Verify appropriate measures are in place to manage and control project data.	PP	O	Appropriate measures are in place to manage and control project data.	Do not proceed with field activities until criterion is passed.
Subcontracting (Pre-mobilization Activities)	Project Manager, UXOQCS	Verify subcontractor qualifications, training, and licenses.	PP/IP	O	Subcontractors' qualifications, training, and licenses are up to date and acceptable.	Ensure subcontractor provides the qualifications, training, and licenses or change subcontractor.
Technical and Operational approach (Project Planning)	Project Manager	Verify technical and operational approaches have been agreed on by the project team.	PP/IP	O	Technical and operational approaches have been agreed on by project team and incorporated into the Work Plan.	Do not proceed with field activities until criterion is passed
GPO Work Plan preparation and approval (Project Planning)	Project Manager	Verify GPO Plan has been prepared and approved.	PP/IP	O	GPO Work Plan has been approved.	Do not proceed with field activities until criterion is passed.
Survey Work Plan (Mobilization)	Project Manager	Verify Work Plan has been prepared and approved.	PP/IP	O	Work Plan has been approved	Do not proceed with field activities (excluding site mobilization) until criterion is passed.
Field Operations						
Site Preparation (Mobilization)	UXOQCS	Verify local agencies are coordinated.	PP/IP	O	Local agencies are coordinated.	Do not proceed with field activities until criterion is passed.
Site Preparation (Mobilization)	UXOQCS	Verify equipment has been inspected and tested.	PP/IP	E	Equipment passes inspection and testing.	Proceed only with activities for which equipment has passed inspection and testing.
Site Preparation (Mobilization)	UXOQCS	Verify communications and other logistical support are coordinated.	PP/IP	O	Communications and other logistical support are coordinated.	Do not proceed with field activities until criterion is passed.
Site Preparation (Mobilization)	UXOQCS	Verify emergency services have been coordinated.	PP/IP	O	Emergency services are coordinated.	Do not proceed with field activities until criterion is passed.
Site Preparation (Mobilization)	UXOQCS	Verify site-specific training is performed and acknowledged.	PP/IP	O	Site-specific training is performed and acknowledged.	Do not proceed with field activities until criterion is passed.
Site Preparation – (Site Survey)	Site Manager	Verify surveyor qualifications.	PP/IP	O	Surveyor's qualifications are up to date and acceptable.	Ensure surveyor provides the qualifications prior to starting work or change surveyor.
Site Preparation - (Site Survey)	Site Manager	Verify surveyor licenses.	PP/IP	O	Surveyor's licenses are up to date and acceptable.	Ensure surveyor provides the licenses prior to starting work or change surveyor.
Site Preparation – (Site Survey)	Site Manager	Verify benchmarks for survey have been established and documented.	PP/IP	O	Benchmarks for survey have been established and documented.	Ensure benchmarks for survey are established and documented prior to performing survey.
Site Preparation – (Site Survey)	Site Manger	Verify site boundaries and grids have been established.	PP/IP	O	Site boundaries and grids have been established.	Do not proceed with dependent field activities until criterion is passed.
Site Preparation – (Site Survey)	Site Manager	Verify surveyor notes are legible, accurate, and complete.	IP	O	Surveyor notes are legible, accurate and complete.	Ensure surveyor replaces deficient notes with legible, accurate and complete notes.

TABLE 6-1
Definable Features of Work Auditing Procedures and Responsibilities

Definable Feature of Work with Auditable Function	Responsible Person(s)[1]	Audit Procedure	QC Phase[2]	Freq. of Audit	Pass/Fail Criteria	Action if Failure Occurs
Site Preparation – (Tree/Vegetation Removal)	Site Manager	Verify personnel qualifications and training.	PP/IP	O	Personnel qualifications and training are appropriate.	Ensure subcontractor provides appropriately trained and qualified personnel or replace with properly trained personnel.
Site Preparation – (Tree/Vegetation Removal)	Site Manager	Verify environmental controls are correct and functional.	IP/FP	O	Environmental controls are correct and functional.	Ensure that appropriate environmental controls are in place prior to proceeding with tree/vegetation removal.
Site Preparation – (Tree/Vegetation Removal)	Site Manager, UXOQCS	Verify tree/vegetation removal is conducted IAW Work Plan.	FP	D	Tree/vegetation removal is conducted IAW Work Plan.	Stop tree/vegetation removal activities until full compliance can be assured and any activities not performed within compliance are re-evaluated and re-performed if necessary.
Site Preparation – (Surface Clearance)	UXOQCS	Verify equipment testing is performed per QCP.	IP/FP	O/D	Equipment passes daily function test in equipment check area.	Repair or replace instrument.
Site Preparation – (Surface Clearance)	UXOQCS	Verify area/boundary.	PP/IP	O	Area/boundary is marked.	Stop activities until area/boundary can be verified.
Site Preparation – (Surface Clearance)	UXOQCS, Project Geophysicist	Verify work methods are conducted IAW Work Plan – Survey/Sweeps – MEC Surface Sweeps – Anomaly Detection and Removal Actions – Ammunition and Explosives Transportation – Explosives Storage and Accountability – Disposal/Demolition Operations – Scrap Inspection Operations	IP/FP	D	Work methods are being performed IAW the Work Plan and SOPs.	Stop activities until Work Plan and SOPs are being followed and any activities not performed within compliance are re-evaluated and re-performed if necessary.
Site Preparation – (Surface Clearance)	UXOQCS	Verify team separation distance IAW Work Plan.	IP/FP	D	Team separation distance is appropriate for work being performed and the site MGFD (Explosives Siting Plan of Work Plan).	Stop activities until appropriate separation distance is being followed.
Site Preparation – (Surface Clearance)	UXOQCS	Check at least 10% of each grid for any remaining MEC or metal.	FP	E	No MEC (to include small arms) and ferrous item equal to 2-inch by 2-inch and larger is found.	Perform additional 20% quality control (QC) check in grid, and if additional item is found, grid must be redone.
GPO Execution (Mobilization)	QC Geophysicist	Verify DQOs established in GPO Work Plan have been accomplished.	PP/IP	O	DQOs identified in GPO Work Plan have been achieved	Continue with GPO until DQOs are achieved.
DGM Survey	QC Geophysicist	Verify DGM Survey conducted IAW GIP and GPO Work Plan	IP/FP	O/D	DGM Survey conducted IAW Geophysical Investigation Plan	Stop activity until full compliance can be assured and any activities not performed within compliance are re-evaluated and re-performed if necessary.
DGM Survey	QC Geophysicist	Check results of QC tests performed as specified in GIP	FP	E	QC tests must pass IAW standards determined during the GPO and referenced SOPs.	If a QC test does not pass, a root-cause analysis must be performed and the project team must meet to discuss and determine appropriate action.
DGM Survey	QC Geophysicist	Confirm that DGM survey DQOs established during GPO are being met.	FP	E	DGM survey DQOs are being met.	If the DQOs are not being met, a root-cause analysis must be performed and the project team must meet to discuss and determine appropriate action.
DGM Data Processing	QC Geophysicist	Verify data checks specified in GIP and GPO Work Plan.	FP	E	Data checks must pass in accordance with standards determined during the GPO and referenced SOPs.	If a QC test does not pass, a root-cause analysis must be performed and the project team must meet to discuss and determine appropriate action.
Intrusive Investigation	UXOQCS	Verify equipment tested IAW QCP.	IP/FP	D	Equipment testing performed and tests passed.	Repair or replace instrument.

TABLE 6-1
Definable Features of Work Auditing Procedures and Responsibilities

Definable Feature of Work with Auditable Function	Responsible Person(s)[1]	Audit Procedure	QC Phase[2]	Freq. of Audit	Pass/Fail Criteria	Action if Failure Occurs
Intrusive Investigation	UXOQCS	Verify target anomaly investigations IAW Work Plan.	IP/FP	D	Work performed IAW Work Plan.	Stop activity until full compliance can be assured and any activities not performed within compliance are re-evaluated and re-performed if necessary.
Intrusive Investigation	UXOQCS	Verify team separation distance is as established in Work Plan.	IP/FP	D	Team separation distance is appropriate for work being performed.	Stop activities until appropriate separation distance is being followed.
Intrusive Investigation	QC Geophysicist	QC seed items to be placed at detectable depths (as determined from the GPO).	IP/FP	E	All QC seed items in area of operation recovered. One seed item will be placed per grid.	A root-cause analysis must be performed and the project team must meet to discuss and determine appropriate action.
Intrusive Investigation	UXOQCS	Check at least 10% of each grid for any remaining MEC or metal.	FP	E	No MEC (to include small arms) and ferrous item equal to 2-inch by 2-inch and larger is found.	Perform additional 20% quality control (QC) check in grid, and if additional item is found, grid must be redone.
Demobilization	Field Supervisor	Verify facilities-support infrastructures are dismantled and shipped to appropriate location and area is returned to original condition.	FP	O	Facilities-support infrastructures are dismantled and shipped to appropriate location and site is returned to original condition.	Ensure that all support facilities are removed and that the site is returned to original condition.
Final Project Reports and Closeout						
Report preparation and approval	Project Manager	Verify tabulations of all items identified during the field actions are accurate and complete.	IP	O	Tabulations of all items identified during the field actions are accurate and complete.	Ensure tabulation of all MEC, MD, and other material recovered during the field actions are accurate and complete.

Notes:
GIP = Geophysical Investigation Plan
GPO = Geophysical Prove-out
IAW = in accordance with
MD = Munitions Debris
SOP = Standard Operating Procedure

QC Phase	Frequency
PP = Preparatory Phase	O = Once
IP = Initial Phase	D = Daily
FP = Follow-up Phase	W = Weekly
	E = Each occurrence

[1] The responsible person (if other than the UXOQCS) is the individual with whom the UXOQCS will coordinate with to ensure compliance with requirements and to verify that any necessary follow-up actions are taken.
[2] Documentation to be in accordance with the three-phase control process as outlined in the Quality Control Plan.

Detailed QC procedures for DGM activities will be outlined in the project Work Plan. The QC performed for the DGM activities will be tracked in the Munitions Response Site Information Management System (MRSIMS) and will be audited by the Project QC Geophysicist or his designee.

6.3.4 Corrective/Preventive Action Procedures

The corrective and preventive action procedures are designed to prevent quality problems and to facilitate process improvements, as well as identify, document, and track deficiencies until corrective action has been verified.

6.3.4.1 Preventive Measures

While the entire QC program is directed toward problem prevention, certain elements of the program have greater potential to be proactive. Should preventive measures fail, tracking and communicating deficiencies provide a mechanism for preventing their recurrence.

6.3.4.2 Continual Improvement

Project staff at all levels are encouraged to provide recommendations for improvements in established work processes and techniques. The intent is to identify activities that are compliant but can be performed in a more efficient or cost-effective manner. Typical quality improvement recommendations include identifying an existing practice that should be improved and/or recommending an alternate practice that provides a benefit without compromising prescribed standards of quality. Project staff is to bring their recommendations to the attention of project management or the UXOQCS through verbal or written means. However, deviations from established protocols are not to be implemented without prior written approval by the PM and concurrence of the UXOQCS. Where a staff-initiated recommendation results in a tangible benefit to the project, public acknowledgment is to be given by the PM.

6.3.4.3 Deficiency Identification and Resolution

While deficiency identification and resolution occurs primarily at the operational level, QC audits provide a backup mechanism to address problems that either are not identified or cannot be resolved at the operational level. Through implementation of the audit program prescribed in the QCP, the UXOQCS is responsible for verifying that deficiencies are identified, documented as prescribed herein, and corrected in a timely manner. Deficiencies identified by the UXOQCS are to be corrected by the PM and SUXOS and documented by the UXOQCS.

6.3.4.4 Corrective Action Request

A Corrective Action Request (CAR) can be issued by any member of the project staff, including CH2M HILL and subcontractor employees. If the individual issuing the CAR is also responsible for correcting the problem, then that individual should do so and document the results on the CAR. Otherwise, the CAR should be forwarded to the PM and SUXOS, who are then responsible for evaluating the validity of the request, formulating a resolution and prevention strategy, assigning personnel and resources, and specifying and enforcing a schedule for corrective actions. Once a corrective action

has been completed, the CAR and supporting information are to be forwarded to the UXOQCS for closure. Sufficient information is to be provided to allow the QA reviewer to verify the effectiveness of the corrective actions.

In addition to observing actual work operations, CARs are to be reviewed during follow-up QC/QA audits. The purposes of this review are as follows: 1) to ensure that established protocols are implemented properly; 2) to verify that corrective action commitments are met; 3) to ensure that corrective actions are effective in resolving problems; 4) to identify trends within and among similar work units; and 5) to facilitate system root cause analysis of larger problems. Particular attention is to be given by the UXOQCS to work units that generate either an unusually large or unusually small number of CARs.

The UXOQCS will determine whether a written Corrective Action Plan (CAP) is necessary, based on whether or not any of the following are met: the CAR priority is high; deficiency requires a rigorous corrective action planning process to identify similar work product or activities affected by the deficiency; or deficiency requires extensive resources and planning to correct the deficiency and to prevent recurrence. The CAP is developed by a PM designee and approved and signed by the PM. The CAP is to indicate whether it is submitted for informational purposes or for review and approval. In either event, the PM and SUXOS are encouraged to discuss the corrective action strategy with the UXOQCS throughout the process.

6.3.4.5 Deficiency and Corrective Action Tracking

Each CAR must be given a unique identification number and tracked until corrective actions have been taken and documented and the CAR is submitted to the UXOQCS for verification and closure.

6.4 QA Implementation

All QA will be performed by CH2M HILL on subcontractors performing the various activities. The QC audits described in Section 6.3 are performed by CH2M HILL quality personnel after QC has been performed by the various subcontractors on their own services and products. The audits serve as a secondary level of quality checks and act in the capacity of QA for the Navy. A QA audit will also be performed by NOSSA to validate that the work was done in accordance with the ESS.

7.0 Detection Techniques

7.1 Detection Equipment, Method, and Standards

7.1.1 Analog

The instrument-assisted surface clearance will be performed using Schonstedt GA-52Cx magnetometers, "analog" instruments that indicate detection through audible responses as opposed to through data collection and mapping of collected data. A typical search lane will be approximately five (5) feet wide. The lanes may or may not be established prior to sweeping. If temporary lanes are marked prior to sweeping, it will be done by a UXO technician to ensure safety. Sweep lane boundaries may be marked while sweeping. For example, the sweep line would begin sweeping with a grid boundary on one side and place pin flags on the opposite side of the line as they sweep. This would provide a boundary for the return sweep and ensure 100% coverage.

7.1.2 Digital

Digital geophysical mapping will be completed using EM61-MK2 time-domain metal detectors. The EM61-MK2 is a high-resolution time-domain electromagnetic instrument designed to detect, with high spatial resolution, shallow ferrous and non-ferrous metallic objects. The Standard EM61-MK2 system consists of two air-cored coils, a digital data recorder, batteries and processing electronics. The EM61-MK2's transmitter generates a pulsed primary magnetic field, which then induces eddy currents in nearby metallic objects. Each of the two spatially separated receiver coils measures these eddy currents. The EM61-MK2 offers the ability to measure the eddy currents at three distinct time intervals in the bottom coil, or four intervals if no top coil measurements are recorded. Earlier time gates provide enhanced detection of smaller metallic objects. Secondary voltages induced in both coils are measured in millivolts. The arrangement of coils is such that there is a vertical separation of 40 centimeters. Assuming accurate data positioning, target resolution of approximately 0.5 meters can be expected.

The EM61-MK2 is the best available technology based on the sandy soils, gentle topography and need for the detection of 20-mm projectiles. The other industry standard DGM instrument, the Geometrics G-858, is also a reasonable option for the site, however typically the smaller items such as 20-mm projectiles are better detected using the EM61-MK2. The use of the time-domain electromagnetic technology, as opposed to magnetics, will also allow the detection of non-ferrous MEC items should they be present at the site.

Detection capabilities of the EM61-MK2 have been thoroughly established in the industry through many different geophysical prove-out (GPO) demonstrations and studies (see *Survey of Munitions Response Technologies*, SERDP/ESTCP/ITRC, 2006); however, a limited site-specific GPO will also be performed to demonstrate and validate the actual system to be used at the site. Detection of 20-mm projectiles had been

demonstrated to be highly variable but can generally be expected down to a depth of approximately 6-8 inches.

Instrument-specific software will be used for initial data processing and the output will be imported into Geosoft Oasis Montaj™ for additional processing, graphical display, anomaly selections, and QA/QC. General processing steps that may be performed on the data include the following:

- Positional offset correction
- Sensor bias, background leveling, and/or standardization adjustment
- Sensor drift removal
- Latency or lag correction
- Geophysical noise identification and removal (spatial, temporal, motional, terrain induced)
- Contour level selection with background shading
- Digital filtering and enhancement (low pass, high pass, band pass, convolution, correlation, non-linear, etc.)

MEC-experienced data processing geophysicists will use the following criteria, supplemented by site- and system-specific criteria established during the GPO, for selecting and locating anomalies:

- Maximum amplitude of the response with respect to local background conditions
- Lateral extent (plan size) of the area of response
- Three-dimensional shape of the response
- Decay curve characteristics
- Location of the response with respect to the edge of the grid, unsurveyable areas, land features, cultural features, or utilities within or adjacent to the grid
- Shape and amplitude of the response with respect to the response of known targets buried in the GPO test plot
- Potential distortions in the response due to interference from nearby cultural features

7.2 Navigational Equipment, Method, and Standards

Depending on the level of tree and vegetation removal performed and the location within the site, positioning of DGM data will be accomplished through either Real Time Kinematic (RTK) Global Positioning System (GPS), Robotic Total Station (RTS), or fiducial (FID) methods.

7.2.1 Real Time Kinematic Global Positioning System

The RTK GPS is a differential global positioning system that utilizes satellites to determine the position of rover antenna placed on the DGM instrument and correction data from a base station setup on a control point to determine the system position. Corrections from the base station are sent via radio link to the rover receiver and linked

in real-time to the geophysical data. Accuracy of the RTK GPS system is sub-centimeter; however, when combined with the motion of the geophysical system over terrain and other aspects of the system, final accuracies of the entire system are typically in the range of 0.25 to 0.5 meters.

7.2.2 Robotic Total Station

RTS is a survey device that uses a survey "gun" setup over a known point that tracks a prism situated on the geophysical instrument to record its position. The survey gun is initially set up at a known point and a prism is positioned over another known point so the gun, via laser, can back sight to locate itself in space. The prism is then mounted over the center of the DGM instrument and tracked by the laser on the base unit. Positioning information is transferred via radio link to the DGM system and positions are linked to the data in real-time. The level of accuracy of the system is similar to RTK GPS.

7.2.3 Fiducial

FID methods use a time-marking procedure to determine the spatial location of the collected data. Using this approach, a series of survey lanes are established over a grid. Marked survey ropes are then placed laterally across the grid at evenly spaced intervals. Alternating colored markers on the ropes facilitate straight-line profiling and identify locations for the placement of FID marks within the recorded data. The operator walks down the lane while the data logger collects sensor readings at a prescribed sampling internal (10 times per second, for example) and as the operator walks past the ropes in the survey lane, he hits a button on the data logger that places a FID time mark in the data stream. By assuming the operator walked in a straight line at a constant velocity, the location of each data point can be estimated.

7.3 Equipment Check-Out and Calibration

Prior to commencing the DGM survey, the selected geophysical equipment and survey methodologies will be demonstrated as meeting project DQOs using a GPO prior to use for site surveys. The GPO provides an opportunity to ensure that the appropriate DGM and navigation equipment has been selected for the site geology, vegetation, and terrain features that may affect the survey. The GPO will be conducted in an area outside of the site that is representative of site conditions.

Daily equipment checks will be performed over static items in an equipment check area on both the Schonstedt GA-52Cx magnetometers and EM61-MK2 metal detectors to ensure the equipment is operating appropriately. Equipment checks will be documented in the system described in Section 7.4. Any equipment not passing system checks will be fixed or removed from site.

7.4 Data Collection and Storage

7.4.1 Munitions Response Site Information Management System

CH2M HILL strictly controls the entire MR project process, documentation, and QC through the use of our MRSIMS. MRSIMS is a "cradle-to-grave" data management system designed to track and query all data for MR projects. MRSIMS digitally captures, tracks, and creates automated reports on:

- Project Information (e.g., personnel, teams, instrument serial numbers, grid IDs and locations)
- Field Team Leader Notes (e.g., safety meetings, logbooks, field requests to management)
- DGM and UXO Team notes (e.g., grids, files, personnel, methods, instruments, GPS coordinates and descriptions of items found)
- DGM Data Processing Notes and Delivery Data (e.g., file names, processing performed, QC of data, delivery dates)
- Grid Statuses (e.g., activities performed by grid and by area, percents and quantities complete or remaining)
- Demolition Tracking
- Quality Control (e.g., QC on notes, processing, data, comparison of DGM Results to intrusive results and field activities)

Field operations data is captured using GPS-enabled handheld devices running mobile GIS/Forms-based software (CartoPac). The data is transferred daily to a centralized relational database, where it is then validated (QC checks). Data elements are not allowed to progress to the next stage of the process until appropriate QC is performed, digitally "signed," and dated as checked. An example of this is that the data delivery report cannot be created in the system until the QC Geophysicist has approved the data and documentation associated with it.

7.4.2 EM61-MK2 Data

EM61-MK2 data are temporarily stored in an instrument data logger and then downloaded into a laptop computer for further on-site processing. Initial data processing is performed by the field team and includes reviewing data for integrity and repeatability. In the case of traditional surveying methods, positional data are edited based on the known locations of FID marks. Data is then uploaded to a project ftp site for download and processing by MEC-experienced data processing geophysicists. All data will be archived on DVD ROM or hard drives and provided for the Administrative Record as part of the After Action Report.

8.0 Response Actions

8.1 Response Technique

This section describes the techniques used to detect, recover, and dispose of any MEC discovered at the site during the project, and discusses associated elements of the field work.

The proposed work approach is to determine whether additional MEC are present at the site through an instrument-assisted surface clearance and a DGM survey and intrusive investigation. The following general steps are included:

- Mosquito Control
- Site Survey
- Tree and Vegetation Removal with MEC Support
- Temporary MEC Storage Magazine
- Instrument-Assisted Surface Clearance
- DGM Survey
- Subsurface Anomaly Investigation
- On-site MEC Destruction (if necessary)
- Munitions Debris Certification and Verification

8.1.1 Mosquito Control

A local pest control company, supported by a UXO escort for UXO avoidance, will be used to spray the heavily vegetated areas to provide an appropriate working environment for UXO technicians and site workers. This task is required because of the nature of the operations to be conducted by the UXO technicians. The tasks to be performed require individuals to be focused and concentrated on visual and audible observations (from handheld geophysical instruments). Based on experience, the heavy concentration of mosquitoes at the site will be a significant distraction for personnel if not alleviated or reduced.

8.1.2 Site Survey

A local Professional Land Surveyor will perform a boundary survey and establish a uniform system of operational grids across the investigation areas. The boundary survey will include placement of colored flagging on stakes along the perimeter of the site to establish work area limits for field personnel. A system of operational grids coinciding with the Florida State Plane coordinate system will be established across the investigation areas using labeled wooden stakes.

8.1.3 Tree and Vegetation Removal with MEC Support

A local vegetation removal contractor will be used to remove existing trees and vegetation over the investigation areas. This task is necessary to complete the surface/near-surface sweep, geophysical survey, and subsurface anomaly investigations. Trees and vegetation will be removed to approximately six inches above the ground surface. MEC avoidance will be performed during tree and vegetation removal. This includes visual observation of the ground surface by UXO Technicians prior to and during vegetation removal and instrument-assisted detection using a handheld magnetometer (Schonstedt Ga-52Cx). The instrument will be used to check inside heavy vegetation (for example, a thick bush) where it is not possible for the UXO Technician to visually check the area.

8.1.4 Instrument-Assisted Surface Clearance

Within the footprint of the investigation areas, Phase I will include a visual search of the surface augmented with the addition of handheld magnetometers (Schonstedt Ga-52Cx) to locate and remove MEC (to include small arms) and ferrous items 2-inch by 2-inch and larger from the soil surface. Surface/near-surface search efforts shall: 1) identify MEC for assessment and disposition options; 2) recover MPPEH for consolidated storage and processing; 3) collect surface solid waste; and 4) flag-in place MEC determined unsafe to move.

8.1.5 Digital Geophysical Mapping Survey

The surface/near-surface search shall be supplemented with a subsurface DGM of the investigation areas to record the location of ferrous and non-ferrous items possibly representing MEC.

DGM will be completed using EM61-MK2 time-domain metal detectors to map the investigation areas and select geophysical anomalies that could potentially represent subsurface MEC while developing a clear, defensible and complete Administrative Record containing all recorded and developed data. Prior to commencing the DGM survey, the selected geophysical equipment and survey methodologies will be demonstrated as meeting project DQOs using a GPO prior to use for site surveys. The GPO provides an opportunity to ensure that the appropriate DGM and navigation equipment has been selected for the site geology, vegetation, and terrain features that may affect the survey. The GPO will be conducted in an area outside of the site that is representative of site conditions.

8.1.6 Subsurface Anomaly Investigation

Intrusive investigation will involve the excavation of a statistically representative number of anomalies. Anomaly investigation involves soil removal to identify the source of the anomaly. Focused investigations may also be applied where anomaly investigations do not provide sufficient information to fully identify the source of the anomaly; for example, if a geophysical signature remains following removal of the previously identified anomaly. Excavations may be manual, or manual and mechanical aided, as required by depth of anomalies. If mechanical equipment is necessary based on the depth of anomaly, measures will be taken to avoid any contact with the anomaly.

Two typical approaches will be: 1) to excavate to the side of the anomaly and use manual excavation with hand tools to move in horizontally to the anomaly, or 2) to incrementally excavate directly over the anomaly with periodic magnetometer checks, stopping mechanical excavation one-foot above the target, and completing excavation manually with hand tools.

8.1.7 On-site MEC Destruction and Munitions-related Scrap Metal Certification and Verification

This task includes the destruction of MEC recovered during site activities and the inspection and certification of MPPEH that it is free from explosives hazards. Additional discussion on this task is provided in Section 8.4, MEC, MPPEH, and Non-MPPEH Debris Disposition Processes.

8.2 Operational Risk Management

8.2.1 Process

All MEC items will be disposed of by electrically initiated detonation utilizing engineering controls designed in compliance with DDESB TP-16, Chapter 5, Multiple Round Detonations, and HNC-ED-CS-S-98-7, Use of Sandbags for Mitigation of Fragmentation and Blast Effects Due to Intentional Detonation of Munitions.

8.2.2 Process Outline and Operations Hazard Analysis

Steps involved in the MEC management process and preliminary hazards associated with each step of the process are outlined in the following Process Outline. Table 8-1 presents a detailed Operations Hazard Analysis.

8.2.2.1 Process Outline

I – Movement of MEC from Storage to Detonation Area

Step 1: Inspect MEC to ensure they are safe to move

a) Functioning of munitions from heat/shock/friction

b) Hand injuries from sharp metal edges

Step 2: Place MEC items into a proper container for transportation

a) Functioning of munitions from heat/shock/friction

b) Hand injuries from sharp metal edges

Step 3: Use appropriate materials to ensure MEC will not have excess movement during transport

Step 4: Secure container in a proper transport vehicle

a) Functioning of munitions from heat/shock/friction

b) Walking across uneven surfaces, tripping/falling

Step 5: Drive vehicle to detonation area

a) Functioning of munitions from heat/shock/friction

b) Accidents from improper vehicle operations

II – Construction of Engineering Controls

Step 1: Place appropriate amount of sandbags on the ground, connecting them to make a complete enclosure which is at least 24 inches thick

a) Lifting sandbags up to 50 lbs in weight

b) Walking across uneven surfaces, tripping/falling

Step 2: Place the MEC and detonation materials into the center in accordance with Process III

a) Functioning of munitions and explosives from heat/shock/friction

b) Walking across uneven surfaces, tripping/falling

Step 3: Place the ¾-inch thick plywood sheet across the top of the sandbag wall

a) Functioning of munitions and explosives from heat/shock/friction

b) Walking across uneven surfaces, tripping/falling

c) Hand injuries from splinters and uneven wooden edges

Step 4: Place sandbags on top of the plywood to finish the enclosure which will be at least 24 inches thick on top and the sides.

a) Functioning of munitions and explosives from heat/shock/friction

b) Walking across uneven surfaces, tripping/falling

c) Hand injuries from splinters and uneven wooden edges

III – Preparation of the MEC for detonation

Step 1: Remove the MEC container from the transport vehicle

a) Functioning of munitions and explosives from heat/shock/friction

b) Walking across uneven surfaces, tripping/falling

Step 2: Place no more than (10) each 20-mm projectiles in a single layer, side to side in the center of the sandbag enclosure.

a) Functioning of munitions and explosives from heat/shock/friction

b) Walking across uneven surfaces, tripping/falling

c) Hand injuries from sharp metal edges

Step 3: Place the appropriate amount of donor explosives (not to exceed 4 lbs) onto the MEC items.

a) Functioning of munitions and explosives from heat/shock/friction

b) Walking across uneven surfaces, tripping/falling

Step 4: Prime the charge in accordance with applicable demolition procedures

a) Functioning of munitions and explosives from heat/shock/friction

b) Walking across uneven surfaces, tripping/falling

c) Electro-static discharge (ESD) functioning of electric detonators

IV – Receive Ammunition and Explosives

Step 1: Prepare staging areas

Step 2: Note any discrepancies prior to signing for receipt

a) Initiation of explosives from heat/shock or friction

b) Hand/eye injuries from removal of banding materials

Step 3: Place ammunition and explosives in staging areas

a) Initiation of explosives from heat/shock or friction

b) Lifting heavy items

c) Walking across uneven surfaces

d) Receiving incorrect amount of explosives or ammunition

e) Receiving damaged or deteriorated explosive or ammunition

V – Detonation of MEC

Step 1: Ensure the evacuation area is cleared and secured

Step 2: Receive clearance to perform detonation in accordance with local policies and procedures

Step 3: Prime the explosive package in accordance with applicable demolition procedures

a) Functioning of munitions and explosives from heat/shock/friction

b) Walking across uneven surfaces, tripping/falling

c) ESD functioning of electric detonators.

Step 4: Sound an audible alarm within one minute of the detonation

Step 5: Function the primed explosive package in accordance with applicable demolition procedures.

a) Flying debris from detonation

b) Blast wave from detonation

Step 6: Disconnect the firing device and make notifications as required

VI – Misfire Procedures

WARNING

All personnel must observe the OSHA mandatory 30-minute wait time for all electrical demolition misfires.

Step 1: Immediately notify all personnel in operational area

Step 2: Disconnect the firing device from the circuit

Step 3: Follow applicable demolition misfire procedures

a) Flying debris from detonation

b) Blast wave from detonation

Step 4: If it still does not fire, record time, and begin 30-minute wait time

Step 5: After 30-minute wait, SUXOS will approach and investigate misfire

Step 6: Remove detonator from explosive train

a) Functioning of munitions and explosives from heat/shock/friction

b) Walking across uneven surfaces, tripping/falling

c) ESD functioning of electric detonators.

Step 7: Attach another detonator to the explosive train and follow applicable demolition procedures outlined in Process Step V.

a) Functioning of munitions and explosives from heat/shock/friction

b) Walking across uneven surfaces, tripping/falling

c) ESD functioning of electric detonators

VII – Post Detonation Procedures

Step 1: Carefully uncover the engineering controls

a) Functioning of munitions and explosives from heat/shock/friction

b) Hand injuries from damaged wood and sharp metal edges

c) Eye hazards from detonation debris

d) Walking across uneven surfaces/tripping/falling

Step 2: Check for any MEC items which may still be intact

a) Functioning of munitions and explosives from heat/shock/friction

b) Hand injuries from damaged wood and sharp metal edges

c) Eye hazards from detonation debris

d) Walking across uneven surfaces/tripping/falling

Step 3: If any MEC items are discovered intact-determine if they are safe to move in accordance with applicable procedures

a) Functioning of munitions and explosives from heat/shock/friction

b) Hand injuries from damaged wood and sharp metal edges

c) Eye hazards from detonation debris
d) Walking across uneven surfaces/tripping/falling

Step 4: Separate and remove all MEC related scrap for inspection

a) Hand injuries from damaged wood and sharp metal edges
b) Eye hazards from detonation debris
c) Walking across uneven surfaces/tripping/falling

Step 5: Remove all other debris and fill in any disturbed ground

a) Lifting heavy object up to 50 lbs
b) Hand injuries from damaged wood and sharp metal edges
c) Eye hazards from detonation debris
d) Walking across uneven surfaces/tripping/falling

8.3 MEC Hazard Classification, Storage and Transportation

Recovered MEC that is safe to move will be stored within a portable Type 2 HE storage magazine. The Type 2 HE storage magazine will be a skid-mounted 5.5-foot by 5-foot by 5-foot box Type 2 magazine as described in Section 55.208(a) of Alcohol, Tobacco, and Firearms (ATF) P 5400.7, Alcohol, Tobacco, and Firearms Explosives Law and Regulations. This explosives storage area will meet the requirements of:

- Title 27 CFR, Alcohol, Tobacco Products and Firearms, Part 55, Commerce in Explosives
- DoD, 2004, 6055.9-STD – DoD Ammunition and Explosives Safety Standards
- Naval Sea Systems Command (NAVSEA), June 1, 2006 Ordnance Publication (OP) 5 Volume 1 - Ammunition and Explosives Ashore: Safety Regulations for Handling, Storing, Production, Renovation, and Shipping of Ammunition and Explosives Ashore, Seventh Revision, Change 5

The magazine will be located as shown on Figure 2-1, and secured within a fence.

Items will not be transported for off-site storage or treatment.

8.3.1 Inspections

The magazine will be inspected at least every 7 days to determine whether there has been unauthorized entry or attempted entry into the magazine, or unauthorized removal of the contents of the magazine.

8.3.2 Physical Security

Magazine locks will meet the standards for ATF Type 2 magazines, as specified in 27 CFR Section 55.208(a) (4). The magazine will have two locks. The SUXOS will hold a key to one of the locks, and the UXOSO will hold the key to the other. Access to the magazine will require both individuals.

8.3.3 Placards

The magazine will display the placards required by Department of Transportation 49 CFR Part 172, Subpart F, for the appropriate hazard division and class. A hazard identification for fire fighting personnel will also be displayed at the magazine storage area. Signs stating “EXPLOSIVES” and "NO SMOKING" will be posted on the fence surrounding the magazine.

TABLE 8-1
Operations Hazard Analysis

PROCESS STEP NUMBER	PROCEDURE		BRANCH		REVISION NUMBER		Page __ of __
	HAZARD	MISHAP TRIGGERING EVENT	POTENTIAL MISHAP	PRELIM RISK INDEX[1]	HAZARD MITIGATION REQTS	FINAL RISK INDEX[1]	EMERGENCY/PREVENTATIVE ACTIONS
I – Movement of MEC Items from Storage							
Step 1	Functioning of Munitions	Dropping of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
		MEC Items not safe to move	Initiation of ammunition and/or explosives	I B	• MEC Items will be determined safe to move IAW approved Work Plan and HSP	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
		Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
	Hand Injuries	Handling MEC items with sharp metal edges	Cuts and abrasions	III B	• Wearing of Leather work gloves	IV B	• Personnel will be required to wear appropriate hand protection while performing operations
Step 2	Functioning of Munitions	Dropping of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
		MEC Items not safe to move	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
		Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC

TABLE 8-1
Operations Hazard Analysis

PROCESS STEP NUMBER	PROCEDURE		BRANCH		REVISION NUMBER		Page __ of __
	HAZARD	MISHAP TRIGGERING EVENT	POTENTIAL MISHAP	PRELIM RISK INDEX[1]	HAZARD MITIGATION REQTS	FINAL RISK INDEX[1]	EMERGENCY/PREVENTATIVE ACTIONS
	Hand Injuries	Handling MEC items with sharp metal edges	Cuts and abrasions	III B	• Wearing of Leather work gloves	IV B	• Personnel will be required to wear appropriate hand protection while performing operations
Step 3	Functioning of Munitions	Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
	Hand Injuries	Handling MEC items with sharp metal edges	Cuts and abrasions	III B	• Wearing of Leather work gloves	IV B	• Personnel will be required to wear appropriate hand protection while performing operations
Step 4	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Functioning of Munitions	Dropping of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
		Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
Step 5	Functioning of Munitions	Dropping of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
		Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC

TABLE 8-1
Operations Hazard Analysis

PROCESS STEP NUMBER	PROCEDURE		BRANCH		REVISION NUMBER		Page __ of __
	HAZARD	MISHAP TRIGGERING EVENT	POTENTIAL MISHAP	PRELIM RISK INDEX[1]	HAZARD MITIGATION REQTS	FINAL RISK INDEX[1]	EMERGENCY/PREVENTATIVE ACTIONS
	Vehicle Accident	Improper vehicle operations or vehicle malfunction	Injuries to vehicle operators, pedestrians or property	III C	• Only licensed operators can operate vehicle • Performance of daily inspections and maintenance	IV C	• Document daily safety inspections and maintenance • Conduct daily safety briefings for operators
II - Construct Engineering Controls							
Step 1	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Lifting & Carrying Heavy Loads	Bending to lift heavy items Turning while lifting heavy items	Disabling back injury Disabling back injury Disabling leg, knee and ankle injury	III B	• Keep operational area free to debris or unnecessary objects that could create tripping hazards • Limit single person lifting to below 40 lbs	IV B	• All personnel will receive back safety and proper lifting technique training • Operations personnel will be certified IAW local command directives
Step 2	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Functioning of Munitions	Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
Step 3	Functioning of Munitions	Dropping plywood on MEC and Explosives	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
	Walking across uneven round	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated

TABLE 8-1
Operations Hazard Analysis

PROCESS STEP NUMBER	PROCEDURE		BRANCH		REVISION NUMBER		Page __ of __
	HAZARD	MISHAP TRIGGERING EVENT	POTENTIAL MISHAP	PRELIM RISK INDEX[1]	HAZARD MITIGATION REQTS	FINAL RISK INDEX[1]	EMERGENCY/PREVENTATIVE ACTIONS
	Hand Injuries	Handling plywood with rough edges	Minor Cuts , splinters and abrasions	III B	• Wearing of Leather work gloves	IV B	• Personnel will be required to wear appropriate hand protection while performing operations
Step 4	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Functioning of Munitions	Dropping sandbags on MEC and Explosives	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
	Hand Injuries	Handling plywood with rough edges	Minor Cuts , splinters and abrasions	III B	• Wearing of Leather work gloves	IV B	• Personnel will be required to wear appropriate hand protection while performing operations
III - Prep of MEC for Detonation							
Step 1	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Functioning of Munitions	Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
Step 2	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Functioning of Munitions	Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC

TABLE 8-1
Operations Hazard Analysis

PROCESS STEP NUMBER	PROCEDURE		BRANCH		REVISION NUMBER		Page __ of __
	HAZARD	MISHAP TRIGGERING EVENT	POTENTIAL MISHAP	PRELIM RISK INDEX[1]	HAZARD MITIGATION REQTS	FINAL RISK INDEX[1]	EMERGENCY/PREVENTATIVE ACTIONS
	Hand Injuries	Handling MEC items with sharp metal edges	Cuts and abrasions	III B	• Wearing of Leather work gloves	IV B	• Personnel will be required to wear appropriate hand protection while performing operations
Step 3	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Functioning of Munitions	Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
Step 4	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Functioning of Munitions	Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
	Functioning of Electric Detonators	ESD	Initiation of explosive detonators	II B	• Proper grounding techniques • Enforcement of approved EMR procedures	II D	• Conduct Daily safety briefing on hazards of EMR and proper grounding techniques • Training of personnel on approved EMR procedures
V – Receive Ammunition and Explosives							
Step 1	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated

TABLE 8-1
Operations Hazard Analysis

PROCESS STEP NUMBER	PROCEDURE		BRANCH		REVISION NUMBER		Page __ of __
	HAZARD	MISHAP TRIGGERING EVENT	POTENTIAL MISHAP	PRELIM RISK INDEX[1]	HAZARD MITIGATION REQTS	FINAL RISK INDEX[1]	EMERGENCY/PREVENTATIVE ACTIONS
Step 2	Initiation of explosives from shock or friction	Dropping or mishandling ammunition and explosives	Initiation of ammunition and/or explosives	I B	• Allow only qualified and certified personnel to handle ammunition and explosives	II D	• Operations personnel will be certified IAW local command directives
	Sharp banding under tension	Cutting banding without PPE or using a non-standard cutting device	Hand, arm, head or eye injury from banding when cut and hits operator	III B	• Provide PPE and standard band cutting device	IV B	
Step 3	Initiation of explosives from shock or friction	Dropping or mishandling ammunition and explosives	Initiation of ammunition and/or explosives	I B	• Allow only qualified and certified personnel to handle ammunition and explosives	II D	• Operations personnel will be certified IAW local command directives
	Lifting Heavy Items	Bending to lift heavy items Turning while lifting heavy items Tripping while carrying explosives Dropping ammunition and explosive items	Disabling back injury Disabling back injury Disabling leg, knee and ankle injury Initiation of explosives from shock and friction	III B	• Place explosives storage boxes on elevated platforms to prevent having to bend • Keep operational area free to debris or unnecessary objects that could create tripping hazards • Allow only certified personnel to handle ammunition and explosives	IV B	• All personnel will receive back safety and proper lifting technique training • Operations personnel will be certified IAW local command directives
	Walking across uneven surfaces	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Receiving incorrect amount of explosives	Contract carrier having incorrect amount of explosives	Exceeding explosive limits and requiring work stoppage	IV B	• Do not accept delivery of more explosives than required	IV D	• Verify amount of explosives ordered with amount of explosives delivered.
	Receiving damaged or deteriorated explosives or ammunition	Contract Carrier delivering damaged or deteriorated explosives	Hazardous explosives which requires evacuation	IV B	• SUXOS will inspect all explosives prior to accepting delivery from contract carrier	IV D	• Document the condition of explosives prior to accepting delivery

TABLE 8-1
Operations Hazard Analysis

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	HAZARD	MISHAP TRIGGERING EVENT	POTENTIAL MISHAP	PRELIM RISK INDEX[1]	HAZARD MITIGATION REQTS	FINAL RISK INDEX[1]	EMERGENCY/PREVENTATIVE ACTIONS
V - Detonation of MEC							
Step 1	Walking across uneven surfaces	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
Step 2	NO HAZARDS						
Step 3	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Functioning of Munitions/ Explosives	Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
	Functioning of Electric Detonators	ESD	Initiation of explosive detonators	II B	• Proper grounding techniques • Enforcement of approved EMR procedures	II D	• Conduct Daily safety briefing on hazards of EMR and proper grounding techniques • Training of personnel on approved EMR procedures
Step 4	NO HAZARDS						
Step 5	Flying debris	Intentional Detonation of MEC and Explosives	Injury from flying debris	II B	• All personnel will be out to the established ESQD Distance	IV D	• Brief personnel on the ESQD distances • Visual check of area for personnel prior to the detonation
	Blast wave	Intentional Detonation of MEC and Explosives	Injury from blast wave	II B	• All personnel will be out to the established ESQD Distance	IV D	• Brief personnel on the ESQD distances • Visual check of area for personnel prior to the detonation
Step 6	NO HAZARDS						

TABLE 8-1
Operations Hazard Analysis

PROCESS STEP NUMBER	PROCEDURE		BRANCH		REVISION NUMBER		Page __ of __
	HAZARD	MISHAP TRIGGERING EVENT	POTENTIAL MISHAP	PRELIM RISK INDEX[1]	HAZARD MITIGATION REQTS	FINAL RISK INDEX[1]	EMERGENCY/PREVENTATIVE ACTIONS
VI - Miss-Fire Procedures							
Step 1	NO HAZARDS						
Step 2	NO HAZARDS						
Step 3	Flying debris	Intentional Detonation of MEC and Explosives	Injury from flying debris	II B	• All personnel will be out to the established ESQD Distance	IV D	• Brief personnel on the ESQD distances • Visual check of area for personnel prior to the detonation
	Blast wave	Intentional Detonation of MEC and Explosives	Injury from blast wave	II B	• All personnel will be out to the established ESQD Distance	IV D	• Brief personnel on the ESQD distances • Visual check of area for personnel prior to the detonation
Step 4	NO HAZARDS						
Step 5	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
Step 6	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Functioning of Munitions/ Explosives	Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
	Functioning of Electric Detonators	ESD	Initiation of explosive detonators	I B	• Proper grounding techniques • Enforcement of approved EMR procedures	II D	• Conduct Daily safety briefing on hazards of EMR and proper grounding techniques • Training of personnel on approved EMR procedures

TABLE 8-1
Operations Hazard Analysis

PROCESS STEP NUMBER	PROCEDURE		BRANCH		REVISION NUMBER		Page __ of __
	HAZARD	MISHAP TRIGGERING EVENT	POTENTIAL MISHAP	PRELIM RISK INDEX[1]	HAZARD MITIGATION REQTS	FINAL RISK INDEX[1]	EMERGENCY/PREVENTATIVE ACTIONS
Step 7	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Functioning of Munitions/ Explosives	Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
	Functioning of Electric Detonators	ESD	Initiation of explosive detonators	II B	• Proper grounding techniques • Enforcement of approved EMR procedures	II D	• Conduct Daily safety briefing on hazards of EMR and proper grounding techniques • Training of personnel on approved EMR procedures
VII - Post Detonation Procedures							
Step 1	Functioning of Munitions/ Explosives	Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
	Hand Injuries	Handling MEC items with sharp metal edges, demolition debris	Cuts, splinters and abrasions	III B	• Wearing of Leather work gloves	IV B	• Personnel will be required to wear appropriate hand protection while performing operations
	Flying debris	Moving demolition debris	Eye hazards	III B	• Personnel will be required to wear ANSI approved safety glasses.	IV C	• Personnel will be required to wear appropriate eye protection while performing operations
	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated

TABLE 8-1
Operations Hazard Analysis

PROCESS STEP NUMBER	PROCEDURE		BRANCH		REVISION NUMBER		Page __ of __
	HAZARD	MISHAP TRIGGERING EVENT	POTENTIAL MISHAP	PRELIM RISK INDEX[1]	HAZARD MITIGATION REQTS	FINAL RISK INDEX[1]	EMERGENCY/PREVENTATIVE ACTIONS
Step 2	Functioning of Munitions/ Explosives	Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
	Hand Injuries	Handling MEC items with sharp metal edges, demolition debris	Cuts, splinters and abrasions	III B	• Wearing of Leather work gloves	IV B	• Personnel will be required to wear appropriate hand protection while performing operations
	Flying debris	Moving demolition debris	Eye hazards	III B	• Personnel will be required to wear ANSI approved safety glasses.	IV C	• Personnel will be required to wear appropriate eye protection while performing operations
	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
Step 3	Functioning of Munitions/ Explosives	Mishandling of MEC items	Initiation of ammunition and/or explosives	I B	• Only qualified UXO personnel will handle MEC • Limit number of personnel handling MEC Items	II D	• UXO personnel will be certified IAW DoD Policy • Conduct Daily Safety Briefing for the type and hazards of MEC
	Hand Injuries	Handling MEC items with sharp metal edges, demolition debris	Cuts, splinters and abrasions	III B	• Wearing of Leather work gloves	IV B	• Personnel will be required to wear appropriate hand protection while performing operations
	Flying debris	Moving demolition debris	Eye hazards	III B	• Personnel will be required to wear ANSI approved safety glasses.	IV C	• Personnel will be required to wear appropriate eye protection while performing operations
	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
Step 4	Hand Injuries	Handling MEC items with sharp metal edges, demolition debris	Cuts, splinters and abrasions	I B	• Wearing of Leather work gloves	II D	• Personnel will be required to wear appropriate hand protection while performing operations

TABLE 8-1
Operations Hazard Analysis

PROCESS STEP NUMBER	PROCEDURE		BRANCH		REVISION NUMBER		Page __ of __
	HAZARD	MISHAP TRIGGERING EVENT	POTENTIAL MISHAP	PRELIM RISK INDEX[1]	HAZARD MITIGATION REQTS	FINAL RISK INDEX[1]	EMERGENCY/PREVENTATIVE ACTIONS
Step 5	Flying debris	Moving demolition debris	Eye hazards	III B	• Personnel will be required to wear ANSI approved safety glasses.	IV B	• Personnel will be required to wear appropriate eye protection while performing operations
	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated
	Lifting & Carrying Heavy Loads	Bending to lift heavy items	Disabling back injury	I B	• Place explosives storage boxes on elevated platforms to prevent having to bend • Keep operational area free to debris or unnecessary objects that could create tripping hazards • Allow only certified personnel to handle ammunition and explosives	II D	• All personnel will receive back safety and proper lifting technique training • Operations personnel will be certified IAW local command directives
		Turning while lifting heavy items	Disabling back injury				
		Tripping while carrying explosives	Disabling leg, knee and ankle injury				
		Dropping ammunition and explosive items	Initiation of explosives from shock and friction				
	Hand Injuries	Handling MEC items with sharp metal edges, demolition debris	Cuts, splinters and abrasions	III B	• Wearing of Leather work gloves	IV B	• Personnel will be required to wear appropriate hand protection while performing operations
	Flying debris	Moving demolition debris	Eye hazards	III B	• Personnel will be required to wear ANSI approved safety glasses.	IV C	• Personnel will be required to wear appropriate eye protection while performing operations
	Walking across uneven ground	Tripping while walking across uneven surfaces	Disabling knee, leg or ankle injury	III B	• Keep operational area free from debris and tripping hazards	IV C	• Remind operational personnel to remove debris as it is generated

Notes:
[1] See Table 8-2 for description of Risk Index, Hazard Severity, Mishap Probability, and corresponding Risk Assessment Codes.
EMR = Electron Magnetic Response
IAW = in accordance with
PPE = personal protective equipment

TABLE 8-2
Risk Assessment Codes

		Mishap Probability[1]			
		A	**B**	**C**	**D**
Hazard Severity[2]	**I**	1	1	2	3
	II	1	2	3	4
	III	2	3	4	5
	IV	3	4	5	5

Mishap Probability[1]:	Hazard Severity[2]:	Risk Assessment Codes:
A Likely to occur immediately	**I** May cause death	**1** Critical } High
B Probably will occur in time	**II** May cause severe injury	**2** Serious } High
C May occur in time	**III** May cause minor injury	**3** Moderate
D Unlikely to occur	**IV** Presents a minimal threat	**4** Minor } Low
		5 Negligible } Low

Notes:
Table 8-2 obtained from NOSSAINST 8020.15A.
[1] "Mishap Probability" is the probability that a hazard will result in a mishap or loss, based on an assessment of such factors as location exposure, affected populations, experience, or previously established statistical information.
[2] "Hazard Severity" is an assessment of the worst credible consequence that can occur as a result of a hazard. Severity is defined by potential degree of injury, illness, property damage, loss of assets, or effect on mission. The combination of two or more hazards may increase the overall level of risk. For the munitions encountered or believed to be present, consider the munitions and fuzing type and configuration, and its armed/unarmed status.

8.3.4 Lightning Protection System

The magazine will be grounded for lightning protection.

8.3.5 Fire Protection

Fire extinguishers of 10 pounds and type BC will be located in the magazine area. Smoking, matches, open flames, spark-producing devices, and firearms will not be permitted within 50 feet of the magazine. The land surrounding the magazine will be kept clear of all volatile materials for a distance of at least 50 feet.

8.3.6 Housekeeping

The area surrounding the magazine will be kept clear of rubbish, dry grass, or trees (except live trees more than 10 feet tall), for not less than 25 feet in all directions.

8.3.7 Quantity-Distance

Based on Table 7-9 in OP 5 Volume 1 (NAVSEA, 2006), the hazardous fragment distance ESQD for a max NEW of 15 lbs for Division 1, Class 1 Explosives is 506 feet. The ESQD arc for the magazine is shown on Figure 2-1. No buildings or PTRs are located within the ESQD for the Type 2 HE storage magazine. The Type 2 HE storage magazine will placed to have at least a 45-foot intraline distance from any intrusive work.

If the SUXOS and one other qualified UXO Technician determines the MEC item(s) safe to move, the MEC item(s) will be placed in the portable Type 2 HE storage magazine and secured for disposal by detonation at the end of the project. A maximum NEW of 15 lbs will be stored at one time. Arrangements for delivery of explosives to countercharge discovered MEC have been made with a local explosives distributor and the explosives will be

delivered within 24 hours. Once the explosives materials are onsite, they will immediately be prepared and used without storage.

8.4 Transportation

8.4.1 Onsite Transportation Procedures

MEC items that are required to be moved on-site (i.e., to the temporary Type 2 HE storage magazine or from the storage magazine to the demolition site) will primarily be moved by hand, however may be moved by vehicle across the open areas within the MRS. The terrain within the MRS is flat and vegetation is either mowed or will be removed as part of site preparation activities. All vehicle movements of MEC within the MRS will comply with the requirements of SW023-AG-WHM-010, On-Station Movement of Ammunition and Explosives by Truck and Railcar.

Explosive donor charges will be delivered by a commercial explosives vendor properly licensed in accordance with NAVSEA SW020-AF-HBK-010, Motor Vehicle Driver and Shipping Inspector's Manual for Ammunition, Explosives, and Related Hazardous Materials. Explosives will be delivered directly to the MRS work area as needed and will be immediately prepared and used to perform detonation of recovered MEC.

8.4.2 Vehicle Requirements

Vehicles transporting explosives on the project site must comply with NAVSEA SW023-AG-WHM-010, On-Station Movement of Ammunition and Explosives by Truck and Railcar, and the following requirements:

- Vehicles transporting explosives must be marked with appropriate placards when carrying all Class 1 explosives.
- All vehicles transporting explosives must be equipped with reliable communications, a first-aid kit, and two 10-lb type-BC fire extinguishers.
- Vehicles transporting explosives must be inspected daily when in use, and the inspections must be documented using a Motor Vehicle Inspection Form.
- A vehicle used to transport explosives must have a non-sparking bed liner, and all explosive loads must be covered prior to departure.
- Vehicles transporting explosives must be operated by a qualified driver with a Commercial Drivers License that includes an explosives certification.

8.5 MEC, MPPEH, and Non-MPPEH Debris Disposition Processes

8.5.1 Inspection and Segregation

A systematic approach will be used for collecting, inspecting, and segregating site debris. The approach is designed so that materials undergo a continual evaluation/inspection

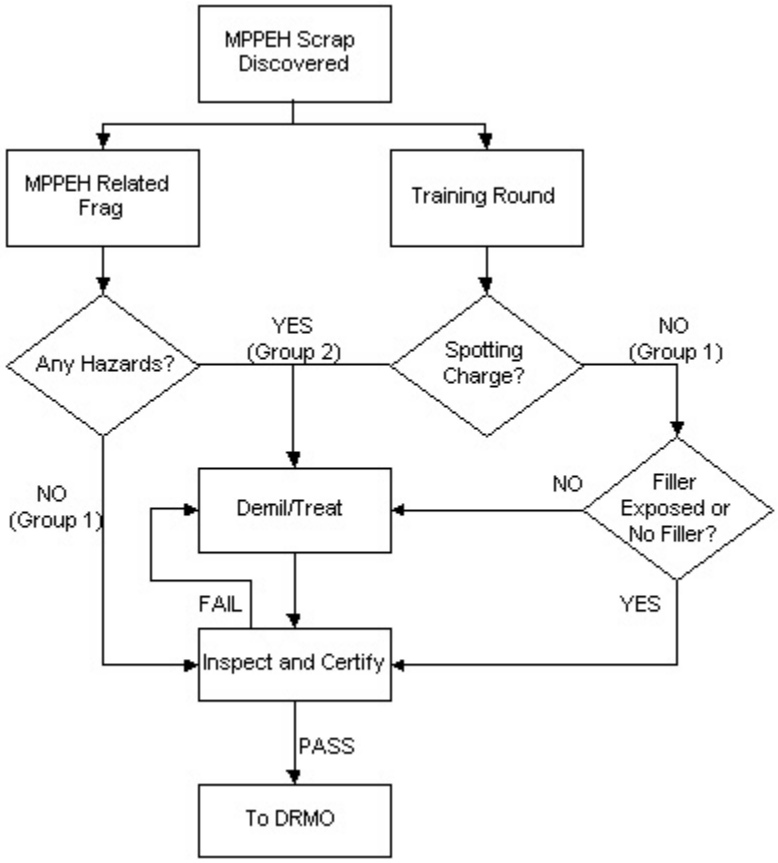
process from the time they are acquired until the time they are removed from the site. Site debris will be classified and segregated into one of three categories: 1) MEC, 2) MPPEH, or 3) Non-MPPEH Debris.

Segregation procedures begin at the time the metal item is discovered by the UXO Technician. At this point, the UXO Technician makes a preliminary determination as to the classification of the item. If the item is identified as Non-MPPEH debris, it is placed at a temporary Non-MPPEH debris accumulation point located within the current operating grid. If the item is identified as MPPEH, it is placed in a temporary MPPEH accumulation point located within the current operating grid. If the item is identified as MEC, it is handled as described in Section 8.5.3.

8.5.2 Inspection, Certification, and Verification

The MEC Team will collect the scrap piles deposited at the grid corner markers and will perform an inspection to confirm that segregation of the items according to proper classification has occurred. The MPPEH items will be inspected and divided into three groups: 1) MPPEH items that require treatment/demilitarization; 2) MPPEH-Safe items that require further demilitarization; and 3) MPPEH-Safe items that do not require further demilitarization. Figure 8-1 is a logic diagram for the collection and disposition of MPPEH-related scrap.

FIGURE 8-1
MPPEH Logic Diagram



Two scrap metal containers will be positioned at the site. One container will be marked "Non-MPPEH Scrap Metal Debris" and will be used to collect general metal debris. The other container will be marked "MPPEH-Safe Scrap Metal" and will be used to collect munitions-related scrap metal that has been inspected, certified, and verified that the material is free of explosives (i.e., metal components that do not contain any explosives that would present an explosives safety hazard) as described below. MPPEH that cannot be certified and verified as "Safe" will remain at the grid collection point and will be treated in the same manner as MEC (see Section 8.5.3).

MPPEH will be inspected, certified, and verified in accordance with the requirements of DoD 4160.21-M (Chapter 4, Paragraph B) and OP 5 Volume 1 (Chapter 13-15) and demilitarized, if necessary, in accordance with DoD 4160.21-M-1. Disposal of MPPEH-Safe material will occur in coordination with the nearest Defense Reutilization and Marketing Office (DRMO). Discussions are underway with the DRMO to establish protocols for disposition of munitions related scrap metal.

CH2M HILL will confirm that MPPEH is properly inspected in accordance with the procedures in the project Work Plans. Only UXO-qualified personnel will perform these inspections. The SUXOS will certify that the scrap metal is free of explosive hazards. A qualified Government representative will verify that the scrap metal is free of explosive hazards. DD Form 1348-1A will be used as certification/verification documentation. All DD Form 1348-A1 forms will clearly show the following information in typed or printed letters:

1. Name of CH2M HILL's SUXOS and the Government representative;
2. Organization;
3. Signatures;
4. CH2M HILL's home office; and
5. Field office phone number(s) of the persons certifying and verifying the scrap metal.

For scrap metal, the DD Form 1348-A1 will clearly indicate the following:

1. Basic material content (type of metal, for example, steel or mixed).
2. Estimated weight.
3. Unique identification of each sealed container.
4. Location where MPPEH was obtained.
5. Seal identification, if different from the unique identification of the sealed container.

As part of the transfer of MPPEH-Safe material for final disposition, the following certification/verification will be entered on each DD Form 1348-A1 and will be signed by the SUXOS and the qualified Government representative.

> "This certifies and verifies that the AEDA residue, Range Residue and/or Explosive Contaminated property listed has been 100 percent properly inspected and to the best of our knowledge and belief, is inert and/or free of explosives or related materials."
>
> *[Alternative language if going directly to a metal recycler: "This certifies that the material potentially presenting an explosive hazard listed has been 100 percent properly*

inspected and to the best of our knowledge and belief, is inert and/or free of explosives or related materials".]

CH2M HILL will arrange for maintaining the chain of custody and final disposition of the certified and verified materials. The certified and verified material will be released only to an organization that will:

1. Provide signed documentation stating that the organization has received the containers, that each container has an unbroken seal and unique identification, and that after reviewing the documentation accompanying the containers, agrees that the sealed containers contained no explosive hazards when received. This documentation will be signed on company letterhead and state that the contents of these sealed containers will not be sold, traded, or otherwise given to another party until the contents have been smelted and are identifiable only by their basic content.
2. Send notification and supporting documentation to the generating contractor (CH2M HILL) documenting that the sealed containers have been smelted and are now identifiable only by their basic content. These documents will be incorporated into the final report.

8.5.3 Treatment of MEC and MPPEH

8.5.3.1 Planned or Established Demolition Area

In the event that MEC/MPPEH items are identified, the SUXOS and one other qualified UXO Technician will assess the items to determine if they are safe to move. If the items are determined to be safe to move, the MEC/MPPEH item(s) will be placed in a portable Type 2 HE storage magazine and secured for disposal by detonation at the end of the MR at the MEC demolition location shown on Figure 2-1. A maximum NEW of 6 lbs, including explosives in the MEC/MPPEH and donor charges, will be used at any time in the detonation location. To safely perform the planned detonation of MEC/MPPEH at the demolition location shown on Figure 2-1, it is necessary to utilize engineering controls to reduce the blast effects to acceptable levels. The information provided in Attachment 2 together with the calculations from DDESB TP-16, Revision 2, were utilized to determine the necessary exclusion zones for a planned detonation of (10) each, 20-mm projectiles laid side by side. An estimate of residual explosive remaining on MPPEH items will be made to ensure that the 6 lbs total NEW is not exceeded.

Based on the engineering controls calculations and referencing Table 7, HNC-ED-CS-S-98-7, an enclosure with 24 inches of sandbags on the roof and walls would have a maximum sandbag throw of 135 feet and would require an ESQD arc of 200 feet. The ESQD arc is shown on Figure 2-1. Attachment 3 provides the detailed engineering controls and ESQD calculations. This approach and calculations were collaborated with Michelle Crull, Ph.D., PE, U.S. Army Corps of Engineers, Huntsville Center (USAESCH). Correspondence related to the engineering controls and calculations between NOSSA and Ms. Crull is also included in Attachment 3.

The MEC demolition location will not be utilized as an overnight or longer-term staging area; MEC/MPPEH will be moved to the location for demolition only.

Any required detonation at the demolition location shown on Figure 2-1, including approach, timing, and required public notification, will be coordinated through the City of Jacksonville, Division of Forestry of the Florida Department of Agriculture and Consumer Services (FDACS), Jacksonville Airport Authority (JAA) and Federal Aviation Authority (FAA) air traffic controller, NAVFAC SE/BRAC PMO SE RPM, and the Resident Officer in Charge of Construction (ROICC) Project Office.

8.5.3.2 Blow-in-Place Areas

If the SUXOS determines the MEC/MPPEH item(s) are not safe to move, the item will be flagged and security personnel will be posted at the end of the operating day, as necessary. The site will remain secured until disposal operations can be performed, with disposal operations occurring within 24 hours.

When MEC and/or MPPEH are discovered and are not safe to transport, and the area can withstand a high-order detonation, these materials will be disposed of by detonation where found, or by blow-in-place (BIP). Engineering controls for blast/fragment mitigation may be required, including the evacuation of personnel and protection of property; construction of protective works such as trenching, barricades, or buttresses to protect fixed facilities; and/or tamping the shot with earth and sand to reduce fragmentation. UXO personnel will follow the protection procedures for personnel and property and determine the best methods to be used, and will advise the SUXOS of any coordination or assistance required to effect final disposal. Only pre-approved DDESB-approved engineering controls will be used.

The danger area will be marked off and evacuated. A sandbag enclosure with a minimum wall and roof thickness of 12 inches will be employed during any BIP where necessary to reduce the EZ. A 12-inch sandbag enclosure will reduce the minimum separation distance from 558 feet to 200 feet (refer to the Fragmentation Data Review Form included in Attachment 2). Any required BIP, including approach, timing, and required public notification, will be coordinated through the City of Jacksonville, FDACS, JAA and FAA air traffic controller, NAVFAC SE/BRAC PMO SE RPM, and the ROICC Project Office.

Intentional detonations at the planned detonation area (up to 10 MGFD items at one time or equivalent MPPEH NEW) will be affected employing engineering controls, and intentional detonations in place (BIP, one MEC/MPPEH item at one time) may be affected employing engineering controls for blast/fragment mitigation. Based on the MGFD and distances to the nearest inhabited building/PTR, it is anticipated that the only engineering controls that will be needed are sandbags. Disposal will be conducted in accordance with EODB 60A 1-1-31, OP 5 Volume I, and NAVSEA SW060-AA-MMA-010 Volumes I and II. Engineering controls will conform with DDESB TP-16 Revision 2 and USAESCH, Use of Sandbags for Mitigation of Fragment and Blast Effects Due to Intentional Detonation of Munitions, HNC-ED-CS-S-98-7 dated August 1998 and approved by DDESB February 23, 1999.

8.6 EZ Access

Exclusion Zones for this project are shown in Table 3-1. Only essential project personnel will be allowed within the EZ.

Coordination of all work activities at the MRS with the City of Jacksonville, FDACS, JAA and FAA air traffic controller, NAVFAC SE/BRAC PMO SE RPM, and the ROICC Project Office will be the responsibility of the CH2M HILL PM and SUXOS. In addition, any required intentional detonations, including approach, timing, and required public notification, will be coordinated by the CH2M HILL PM with the same parties.

8.7 Mechanized MEC Processing Operations

Not applicable.

8.8 Explosives Soil

Not applicable.

8.9 Contaminated Buildings

Not applicable.

9.0 Environmental, Ecological, Cultural and/or Other Considerations Related to Management of MEC

9.1 Environmental Regulatory Considerations

Section 121(d) of CERCLA requires that remedial actions implemented at CERCLA sites attain any federal or more stringent state environmental standards, requirements, criteria, or limitations that are determined to be Applicable or Relevant and Appropriate Requirements (ARARs). Potential ARARs for the MEC response action at the site are being developed as part of the planning process and will be discussed in detail in the project Work Plan (CH2M HILL, in preparation).

9.2 Ecological and Cultural Environmental Considerations

USACE Conceptual Permit No. 199801374 (IP-BL), June 2002, indicates that a protection plan is in place for the Eastern Indigo Snake.

A gopher tortoise survey will be conducted prior to site activities to determine if any burrows of this species will be affected by the munitions response. The Florida Fish and Wildlife Conservation Commission has established guidelines for the protection of the gopher tortoise under Florida Administrative Code Rules 68A-25.002 and 68A-27.002.

No cultural sites are known or suspected to be on the MRS.

10.0 Technical Support

This section summarizes UXO contractor and DGM personnel qualifications for the project. EOD support is not anticipated to be required; however the nearest EOD Team that is available for technical support and/or emergency response is the Navy EOD Detachment at Mayport, Florida.

10.1 EOD, UXO Contractor, or Other Munitions Response Personnel

10.1.1 UXO Contractor Personnel Qualifications

All MEC operations personnel will be qualified and certified in accordance with NAVSEAINST 8020.9B, Ammunition and Explosives Personnel Qualification and Certification Program; terms outlined by U.S. Department of Labor Employment Standards Administration Wage Hour Division for UXO Personnel; and DDESB TP-18, Minimum Qualifications for UXO Technicians and personnel.

10.1.2 DGM Contractor Personnel Qualifications

DGM operations personnel will have the following qualifications:

10.1.2.1 Project Geophysicist

The Project Geophysicist will have a degree in geophysics, geology, geological engineering, or a closely related field, and will have a minimum of 5 years of directly related geophysical experience. This individual will be capable of managing a geophysical data collection and processing project/program including several task orders/sites and will have at least one year of experience in managing geophysical operations for an MEC site.

10.1.2.2 Site Geophysicist

The Site Geophysicist will have a degree in geophysics, geology, geological engineering, or a closely related field, and will have a minimum of 5 years of directly related geophysical experience. This individual will be capable of competently managing personnel, equipment and data on projects requiring multiple (three or more) geophysical field teams and geophysical data processors and will have at least one year of experience in performing geophysical operations on an MEC site.

10.1.2.3 Geophysical Data Processor

The Geophysical Data Processor will have a degree in geophysics, geology, geological engineering, or a closely related field, and will have at least six months experience in processing geophysical data related to MEC projects.

10.1.2.4 Field Geophysicist

The Field Geophysicist will have a degree in geophysics, geology, geological engineering, or a closely related field, and will have a minimum of 2 years of directly related geophysical experience.

10.1.2.5 Geophysical Technician

The Geophysical Technician will have at least six months experience in geophysical data collection on MEC-related projects.

10.2 Physical Security

The project site is located in an area that is accessible only through locked-gate secured roads or thickly vegetated woods. A fence will be placed around the temporary magazine and the magazine and gate will be locked at all times. Access to the MRS will be controlled by use of locked gates, barriers, and security guards (if necessary) to prevent entry of unauthorized personnel during MR operations.

11.0 Residual Risk Management

11.1 Land Use Controls

The site is surrounded by signs warning that entry is not allowed into the area because of the risk of UXO. Current and future land use is that of low-intensity recreational use. The reuse plan for NAS Cecil Field stipulates that Site 15 remain as a natural resource corridor. This natural resource corridor is defined as a green corridor that connects two state forests, and open space. Low-intensity recreational use activities such as hiking, biking, horseback riding, birding, and hunting are the only activities that are expected to be allowed in this area. No man-made attractions (picnic tables, campgrounds, playgrounds, etc.) that would entice people, particularly small children, to frequently visit the site would be provided.

11.2 Long-term Management

The Draft ROD (TtNUS, 2006) stipulates a five-year review requirement to ensure that the remedy is, or will be, protective of human health and the environment.

12.0 Safety Education Program

12.1 Safety Education Program

NAVFAC SE/BRAC PMO SE will brief the receiving entities of the property (U.S. Department of the Interior and the City of Jacksonville, Department of Parks, Recreation, Entertainment, and Conservation) on the site conditions, completed removal action, and the hazards and risks associated with MEC that may remain following the MR action. In addition, NAVFAC SE/BRAC PMO SE will prepare a fact sheet including the above referenced site information for distribution to the receiving entities, and subsequently the public.

13.0 Stakeholder Involvement

13.1 Stakeholder Involvement

The NAS Cecil Field Restoration Advisory Board, consisting of public citizens from the local community and impacted stakeholders, will be kept updated by the NAVFAC SE/BRAC PMO SE RPM of the site conditions, proposed removal plan, and progress of the removal action.

Regulatory agencies (U.S Environmental Protection Agency and FDEP) are being kept updated of the site conditions, proposed removal plan, and progress of the removal action through bi-monthly NAS Cecil Field BRAC Cleanup Team Meetings.

14.0 Contingencies

14.1 Contingencies

There are currently no anticipated contingencies required.

15.0 References

The following references were consulted during the preparation of this ESS. Not all are cited in the text.

ABB Environmental Services, Inc. October 1997. Remedial Investigation, Operable Unit 5, Sites 14 and 15.

CH2M HILL. February 2007. *Preliminary Assessment/Site Inspection Report for Past Use of Munitions and Explosives of Concern, Blue 10 Ordnance Disposal Area (Site 15), Former Naval Air Station, Cecil Field, Jacksonville, Florida.*

CH2M HILL. May 2007. *Explosives Safety Submission for Munitions Response for Discarded Military Munitions at Hangar 860, Former Naval Air Station Cecil Field, Jacksonville, Florida*. Amendment No. 01.

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DDESB. TP-18, Minimum Qualifications for Unexploded Ordnance (UXO) Technicians and personnel.

DDESB. October 17, 2005. Technical Paper 16, Revision 1, *Methodologies for Calculating Primary Fragment Distances.*

DoD. October 21, 1991. DoD 4160.21-M-1, *Defense Demilitarization Manual*.

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DoD. January 5, 2004. DoD 6055.9-STD, *DoD Ammunition and Explosives Safety Standards*, Rewrite Version, Revision 4.

NAVFAC. 1990. P-397, Structures to Resist the Effects of Accidental Explosions.

NAVSEA. Revised May 1994. Publication SW060-AA-MMA-010, Volumes I and II. *Technical Manual Explosive Ordnance Disposal Procedures*, Naval Explosive Ordnance Disposal Technology Center.

NAVSEA. January 15, 2001. SWO20-AF-ABK-010, *Motor Vehicle Driver and Shipping Inspector's Manual for Ammunition, Explosives, and Related Hazardous Materials*.

NAVSEA. 2004. SW023-AG-WHM-010, *On-Station Movement of Ammunition and Explosives by Truck and Railcar*

NAVSEA. June 1, 2006. Ordnance Publication 5 Volume 1, *Ammunition and Explosives Ashore: Safety Regulations for Handling, Storing, Production, Renovation, and Shipping of Ammunition and Explosives Ashore, Seventh Revision, Change 5.*

NAVSEAINST 8020.9B, Ammunition and Explosives Personnel Qualification and Certification Program.

NOSSA. 2007. Instruction 8020.15a, *Explosives Safety Review, Oversight, and Verification of Munitions Responses*.

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SERDP/ESTCP/ITRC. 2006. *Survey of Munitions Response Technologies.*

Tetra Tech NUS, Inc. December 2006. *Draft Record of Decision for Operable Unit 5, Site 15 Blue 10 Ordnance Disposal Area, Naval Air Station Cecil Field, Jacksonville, Florida.*

Tetra Tech NUS, Inc. April 2007. *Feasibility Study Report for Site 15 Blue 10 Ordnance Disposal Area, Naval Air Station Cecil Field, Jacksonville, Florida.*

Tetra Tech NUS, Inc. April 2007. *Proposed Plan for Operable Unit 5, Site 15, Naval Air Station Cecil Field, Jacksonville, Florida.*

Title 27 Code of Federal Regulations (CFR), Alcohol, Tobacco Products and Firearms (ATF), Part 55, Commerce in Explosives.

U.S. Army Corps of Engineers. June 23, 2000. *Engineering and Design, Ordnance and Explosives Response* (EM 1110-1-4009).

U.S. Army Corps of Engineers, Engineering and Support Center, Huntsville. August 1998. *Use of Sandbags for Mitigation of Fragmentation and Blast Effects Due to Intentional Detonation of Munitions* (HNC-ED-CS-S-98-7).

U.S. Bureau of Alcohol, Tobacco, and Firearms (ATF) and U.S. Department of the Treasury. 1990. ATF P 5400.7, *ATF Explosives Laws and Regulations.*

U.S. Department of the Navy, Chief of Naval Operations. 1999. OPNAVINST 8020.14, *Department of the Navy Explosives Safety Policy.*

UXO After Action Report 8026 N0017/043 19JUN97.

Wilson, Steve M. 1997. Email correspondence from February 6.

Wilson, Steve M. 1997. Email correspondence from February 14.

ATTACHMENT 1

NAVFAC Form 11010/31

REQUEST FOR PROJECT SITE APPROVAL/EXPLOSIVES SAFETY CERTIFICATION NAVFAC 11010/31 (REV. 5-2001)

PART I

INSTRUCTIONS IN NAVFACINST 11010.45

SECTION A – INSTALLATION SUBMISSION

1. To: Naval Ordnance Safety and Security Activity (N7)

2. From: NAVFAC SE/BRAC PMO SE

3. Program Year: 2007

4. Cost ($000):

5. Type Funding

6. Activity UIC

7. Date:

8. Category Code and Project Title: **Munitions Response and On-Site Construction support for Site 15, Blue 10 Ordnance Disposal Area, Former Naval Air Station Cecil Field, Jacksonville, Florida**

9. Project Number: N/A

10. Type of Project:

- ☐ New Construction
- ☐ Relocation of Structure
- ☒ **Other**
- ☐ Change Use
- ☐ Maintenance and/or Repairs
- ☐ Addition to Existing Facility
- ☐ Repair by Replacement
- ☐ Major Modification to Existing Facility
- ☐ Demolition

11. Type of Request:

- ☐ Airfield Safety Site Approval
- ☒ **Explosives Site/Safety Certification**
- ☐ EMR Site Approval
- ☐ Resubmittal or Standard Site Approval (No Safety Criteria Involved)

12. Project Description

The scope of the munitions response at Site 15 is to perform MEC investigation and removal (if necessary) followed by MEC construction support activities for the excavation of soils at 17 areas within the site. The removal of soil (to a maximum depth of two feet below ground surface) is being performed to satisfy requirements of the December 2006 Record of Decision specifying remedial action for contaminated soil and groundwater at OU 5, Site 15, NAS Cecil Field. The MEC investigation and removal activities will be performed in order that the risk of encountering MEC during excavation activities is significantly reduced.

13. 3 Sets of Project Maps Attached

14. 3 Sets Part II Division(s) A Attached

SECTION B – EFD REVIEW

1. Name/Code/Phone No. of Reviewer/E-Mail Address:

2. Date Received:

3. Evaluation:

4. Safety Review Requested: (check appropriate box(es))

☒ **NOSSA** ☐ DDESB ☐ SPAWAR ☐ NAVAIR ☐ CNO ☐ OTHER

5. Date Forwarded:

6. Date of Safety Certification: _____ NOSSA _____ DDESB _____ SPAWAR _____ NAVAIR _____ CNO _____ OTHER

SECTION C – FINAL SITE APPROVAL ACTION

1. Approvals:

- ☐ Site Approved
- ☐ Site Disapproved
- ☐ Deferred/Returned
- ☐ Explosives Safety Certification Approved
- ☐ Explosives Safety Certification DISAPPROVED
- ☐ Interim Construction Waiver Approved

2. Certification Identification:

3. Remarks

4. Other Approvals Required

- ☐ Airfield Safety Waiver Required
- ☐ Final Explosives Safety Review Required

5. Approving Official:

6. Date:

REQUEST FOR PROJECT SITE APPROVAL/EXPLOSIVES SAFETY CERTIFICATION NAVFAC 11010/31 (REV. 5-2001)

PART II DIVISION A-EXPLOSIVES SAFETY

INSTRUCTIONS IN NAVFACINST 11010.45

1. NEW/Class/Division/ESQD arcs of project:

a. MRS Work Area: NEW <0.1 lb based on MGFD (20mm HE projectile); Class/Hazard Division (HD) 1.1; ESQD Arc 558-ft IBD*. The location of the area is shown in Figure 2-1.

b. BIP Detonation Area: NEW <0.1 lb based on MGFD (20mm HE projectile); Class/Hazard Division (HD) 1.1; ESQD Arc 558-ft IBD* (no engineering controls) or 200-ft IBD (with engineering controls**). The location of the area is shown in Figure 2-1.

c. Planned Intentional MEC Demolition/Detonation Area: NEW <6lbs; Class/Hazard Division (HD) 1.1; ESQD Arc 200-ft (based on engineering controls***). The location of the area is shown in Figure 2-1.

d. Portable Type 2 HE Storage Magazine: NEW <15 lbs; Class/Hazard Division (HD) 1.1; IBD/PTR 506-ft/303-ft****. The location is shown in Figure 2-1.

* IBD based on USACE Safety Alert 01-06 and maximum theoretical horizontal fragment range of 558 feet. See Attachment 2.
** BIP IBD based on the use of engineering controls as described in Section 8.5.3.2, assuming a single 20mm projectile and the use of a 12-inch sandbag enclosure.
*** The required distance for planned detonations is based on the use of engineering controls as described in Section 8.5.3.1 and Attachment 3, assuming a maximum of (10) 20mm projectiles and the use of a 24-inch sandbag enclosure.
**** Based on Table 7-9 in OP5, Volume 1 as described in Section 8.3.7.

Engineering controls will conform with DDESB Technical Paper 16, Revision 1 and U.S. Army Corps of Engineers, Engineering and Support Center, Huntsville, Use of Sandbags for Mitigation of Fragment and Blast Effects Due to Intentional Detonation of Munitions, HNC-ED-CS-S-98-7 dated August 1998, and approved by DDESB February 23, 1999.

Security measures will be implemented during MPPEH-related operations during the project. The location of the area is shown in Figure 2-1.

2. CNO Waivers and Exemptions: N/A

3. Personnel (numbers):

Munitions Response/On-Site Construction Support: The number of personnel that may be located within the ESQD during operations includes the 6-man proposed contractor UXO team operating in the MRS work area.

BIP Detonation Area: Up to 5 proposed contractor UXO personnel conducting BIP may be exposed during munitions operations. All nonessential personnel will be evacuated from within the IBD ESQD/EZ for detonation operations.

MEC Disposal by Detonation Operations: Up to 5 proposed contractor personnel conducting MEC disposal operations will be exposed during such operations.

Explosives Storage (Type II Temporary Storage): Up to 6 proposed contractor personnel conducting response actions may be located within the ESQD of the storage facilities at any one time.

NOTE: All personnel are the same persons relocating from one ESQD to another.

	Proposed	Existing
Military:		
Civilian:	6	
Other:		
Total:	6	

4. Facility Number/Type	Personnel	NEW	Class/Division	Distance* Actual/Required
MRS Work Area	6	<0.1 lb	1.1	700 feet/558 feet
BIP Detonation Area	5	<0.1 lb	1.1	700 feet/200 feet
Planned Intentional MEC Demolition Area	5	<6 lbs	1.1	1,200 feet/200 feet
Portable Type II HE Storage Magazine	6	<15 lbs	1.1	2,000 feet/506 feet

5. Siting Rationale: The location of the munitions response/on-site construction support area has been determined by the requirements of the current project footprint and the discovery of 20mm projectiles. An exclusion zone of 558-ft based on U.S. Army Corps of Engineers Safety Alert 01-06 for the 20mm HE projectile is depicted on Figure 2-1. Access to the work site is restricted by gates, signs and security patrols.

The closest inhabited building is approximately 700 feet from the edge of the site footprint (The majority of operations will be considerably further from the inhabited building).

The closest PTR is over 1,000 feet from the edge of the site footprint (The majority of operations will be considerably further from the PTR).

* Distance from project. Specify IB (Inhabited Building); IL (Intraline); IM (Intermagazine); PTR (Public Transportation Route); B (Barricaded); UB (Unbarricaded)

6. Signature of Public Works/Base Civil Engineer (Name/Code) Incl E-Mail Address		9. Signature of Explosive Safety Officer/Installation Safety Officer Incl. E-Mail Address	
7. Telephone Numbers: ( ) DSN	8. Date:	10. Telephone Numbers: ( ) DSN	11. Date:

ATTACHMENT 2

U.S. Army Corps of Engineers Safety Alert 01-06 and Fragmentation Data Review Form

DEPARTMENT OF THE ARMY
HUNTSVILLE CENTER, CORPS OF ENGINEERS
P.O. BOX 1600
HUNTSVILLE, ALABAMA 35807-4301

REPLY TO
ATTENTION OF:

November 28, 2006

Safety Division for Ordnance
and Explosives Directorate

SUBJECT: Safety Alert 01-06, 20mm Minimum Separation Distance (MSD) Change

Dear Sir/Madam:

This Safety Alert applies to government and contractor personnel working on U.S. Army Engineering and Support Center, Huntsville, Military Munitions Response sites.

It has come to our attention that an error has occurred with the MSD calculations concerning the M56A4 20mm HE projectiles. The newly calculated MSD for this projectile is now 558 feet. The previous distance of 318 feet should not be used and changes to applicable documents should be requested as soon as possible.

Comments or questions about this Safety Alert can be directed to Mr. Greg Parsons, Safety Division, Ordnance and Explosives Directorate at 256-895-1598.

Sincerely,

Wayne H. Galloway
Chief, Safety Division for
Ordnance and Explosives Directorate

FRAGMENTATION DATA REVIEW FORM

Category:	HE Rounds	DODIC:	A890
Munition:	20 mm M56A4	Date Record Created:	7/30/2004
		Last Date Record Updated:	11/9/2006
Primary Database Category:	projectile	Individual Last Updated Record:	Crull
Secondary Database Category:	20 mm	Date Record Retired:	
Tertiary Database Category:	H761 (RDX)		

Munition Information and Fragmentation Characteristics

Explosive Type:	H-761 (RDX)
Explosive Weight (lb):	0.02640
Diameter (in):	0.7874
Max Fragment Weight (lb):	0.002681
Critical Fragment Velocity (fps):	4941

Theoretical Calculated Fragment Range

Range to No More Than 1 Hazardous Fragment/600 Square FeetA (ft):	200
Vertical Range of Maximum Weight Fragment (ft):	447
Horizontal Range of Maximum Weight Fragment (ft):	558

Overpressure Distances

Inhabited Building Distance (12 psi), K40 Distance:	13
Inhabited Building Distance (09 psi), K50 Distance:	16
Intentional MSD (0065 psi), K328 Distance:	107

Minimum Thickness to Prevent Perforation

4000 psi Concrete (Prevent Spall):	1.09
Mild Steel:	0.21
Hard Steel:	0.17
Aluminum:	0.47
LEXAN:	2.16
Plexi-glass:	1.13
Bullet Resist Glass:	0.83

Required Sandbag Thickness

Max Fragment Weight (lb)SB:	0.002681
Critical Fragment Velocity (fps)SB:	4941
Kinetic Energy 106 (lb-ft2/s2)SB:	0.0327
Required Wall _Roof Sandbag Thickness (in)SB:	12
Expected Maximum Sandbag Throw Distance (ft)SB:	25
Minimum Separation Distance (ft)SB:	200

Water Containment System and Minimum Separation Distance:

Max Fragment Weight (lb)W:	0.002681
Critical Fragment Velocity (fps)W:	4941
Kinetic Energy 106 (lb-ft2/s2)W:	0.0327
Water Containment System:	5 gal carboys/ inflatable pool
Minimum Separation Distance (ft)W:	200/200

Print This Form

Close Form

SOURCE: Frag Database(MARCORSYSCOM), DERIVED FROM DDESB TP-16 (12/15/2006) AND DDESB Fragmentation Characteristics Database IN COORDINATION WITH USACE.

ATTACHMENT 3

Calculations for Engineering Controls and ESQD

Calculations for Engineering Controls and ESQD

1.0 References:

a. Safety Alert 01-06, 20mm Minimum Separation Distance (MSD) Change, issued by US Army Corps of Engineers, Huntsville Center, Safety Division for Ordnance and Explosives Directorate (refer to Attachment 1)

b. Fragmentation Data Review Form (refer to Attachment 2)

c. Department of Defense Explosive Safety Board (DDESB) Technical Publication 16, Revision 1, Methodologies for Calculating Primary Fragment Characteristics, dated December 1 , 2003

d. Department of the Army Technical Manual 43-0001-27, Army Ammunition Data Sheets – Small Caliber Ammunition, dated April 29, 1994

e. U.S. Army Corps of Engineers, Engineering and Support Center, Huntsville, Use of Sandbags for Mitigation of Fragment and Blast Effects Due to Intentional Detonation of Munitions, HNC-ED-CS-S-98-7 dated August 1998 and approved by DDESB February 23, 1999

2.0 Background: To safely detonate recovered DMM within the work area for Cecil Field it is necessary to utilize engineering controls to reduce the blast effects to acceptable levels. To develop the appropriate level of engineering controls the fragment velocity and mass must be determine for comparison with tested engineering controls that effectively reduce the blast effects to an acceptable distance. Reference (a) has the current approved explosive safety quantity distance (ESQD) arcs for Cecil Field as 558 feet for an intentional detonation based on the munition with the greatest fragment distance (MGFD), a M56A4, 20mm HE projectile.

3.0 Calculation of Engineering Controls: To determine the specifications for engineering controls for planned detonation activities, the munitions specific information from reference (b) and the calculation from Chapter 5, reference (c) were utilized to determine the expected maximum fragmentation weight and velocity from a detonation of (10) each, 20mm projectiles laid side by side.

The following is an excerpt from Chapter 5, of reference (c) for calculating maximum fragment ranges for multiple round detonations:

> "**Maximum Fragment Ranges**
> As indicated above, the effect of detonating stacks of munitions is to increase the fragment initial velocity by as much as a factor of 2 and to increase the fragment mass by as much as 50%."

Reference (b) provides the following data for a M56A4, 20mm HE projectile:

- Explosive Weight: 0.02640 lb
- Max Fragment Weight: 0.002681 lb
- Critical Fragment Velocity: 4,941 feet/second

Reference (b) identifies the explosive filler for the M56A4, 20mm projectile as H761 explosives as the explosive filler. H761 explosives is a member of the A-3 explosives family which has a explosives equivalent of 1.09 of the TNT standard of 1.00 as listed in Table A-2, of reference (c).

The donor charge will consist of .75-lb PETN boosters with a total explosive weight 3.75-lbs. PETN has a explosive equivalent of 1.27 of the TNT standard of 1.00 as listed in Table A-2 of reference (c).

Therefore the calculations for maximum fragment weight, expected initial velocity, and NEW are:

- The **maximum fragment weight** = 1.5 x weight from Reference (b) (1.5 x 0.002681 lbs. = **0.0040 lbs.**)
- The **expected initial velocity** = 2.0 x velocity from Reference (b) (2.0 x 4,941 feet/second = **9,882 feet/second**)
- **NEW** = NEW Donor (TNT Eq) + NEW Projectiles (TNT Eq.) (3.75 (1.27) + 10(0.02640)(1.09) = **5.0503 lbs. of TNT Eq**

Reference (e) has the following directions for determining the thickness of sand bags for protection:

> "To determine the minimum wall and roof thickness for a particular shell other than those found in Table 5, the approach is as follows:
>
> (1) Determine the initial fragment velocity (V_F) in ft/s, the maximum fragment weight (W_F) in pounds, and the kinetic energy ($W_F V_F^2/2$) in lb-ft^2/s^2 for the particular munition.
> (2) Identify the munition with the next largest kinetic energy, from Table 6.
> (3) Use the sandbag wall and roof thickness from Table 5 for the munition with the next largest kinetic energy shown in Table 6."

Therefore the calculations for a M56A4, 20mm HE projectile are:

Kinetic Energy ($W_F V_F^2/2$) = (0.0040 x 9,882^2 / 2) = 195,307.8480 or 0.195307 x 10^6 lb-ft^2/s^2

Take into account for the total NEW of the planned detonation (**5.0503 lbs. of TNT Eq**) and use Table 7 of reference (d) for the NEW and the closest Kinetic Energy to determine the wall and roof thickness for sand bags, sandbag throw, and withdrawal distances. This would be either the 105mm M1 or the 4.2 inch M39A2.

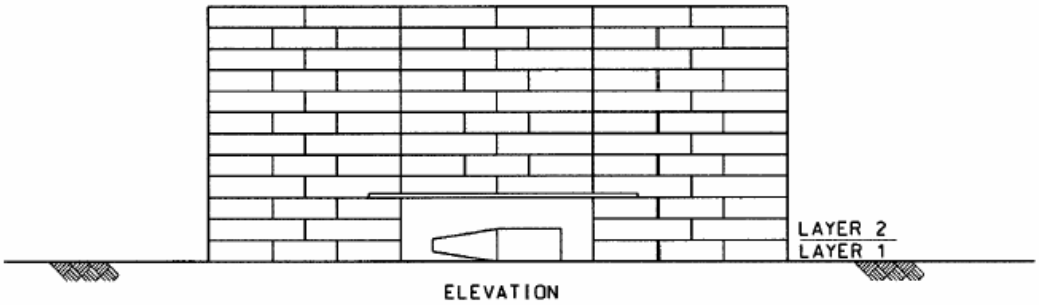
A withdrawal zone is necessary for any detonation. This withdrawal zone applies to everyone, both public and operational personnel. The **withdrawal zone is the maximum of the sandbag throw distance, the distance to a sound level of 140 decibels, or 200 feet**. For all munitions tested, the sound level at 100 feet was substantially less than 140 decibels. At 200 feet, the sound level will be even less. The withdrawal zones are also listed in Table 7 of reference (e).

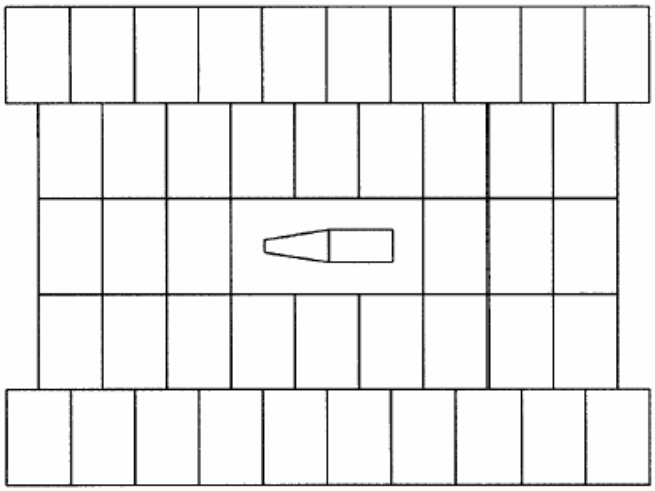
According to Table 7, reference (e), an enclosure which has **24 inches of sandbags on the roof and walls**, would have a **maximum sandbag throw of 135 feet**, and would require a **ESQD arc of 200 feet**.

This approach and calculations were collaborated with Michelle Crull, Ph.D., PE, USAESCH**.** Correspondence related to the engineering controls and calculations between NOSSA and Ms. Crull is also included in Attachment 3.

4.0 Example Engineering Controls: An example of proper sandbag construction was obtained from U.S. Army Corps of Engineers, Engineering and Support Center, Huntsville, Use of Sandbags for Mitigation of Fragment and Blast Effects Due to Intentional Detonation of Munitions, HNC-ED-CS-S-98-7 dated August 1998 and approved by DDESB February 23, 1999 and is shown below.

Figure 5 – Sandbag Enclosure for an 81 mm M374A2 mortar.





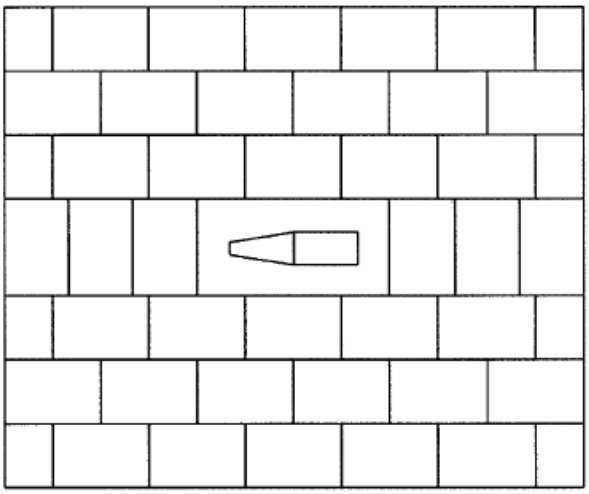


Figure 6 - Interlocking Alternate Layers of Sandbags

FRAGMENTATION DATA REVIEW FORM

Category:	HE Rounds	DODIC:	A890
Munition:	20 mm M56A4	Date Record Created:	7/30/2004
		Last Date Record Updated:	11/9/2006
Primary Database Category:	projectile	Individual Last Updated Record:	Crull
Secondary Database Category:	20 mm	Date Record Retired:	
Tertiary Database Category:	H761 (RDX)		

Munition Information and Fragmentation Characteristics

Explosive Type:	H-761 (RDX)
Explosive Weight (lb):	0.02640
Diameter (in):	0.7874
Max Fragment Weight (lb):	0.002681
Critical Fragment Velocity (fps):	4941

Theoretical Calculated Fragment Range

Range to No More Than 1 Hazardous Fragment/600 Square FeetA (ft):	200
Vertical Range of Maximum Weight Fragment (ft):	447
Horizontal Range of Maximum Weight Fragment (ft):	558

Overpressure Distances

Inhabited Building Distance (12 psi), K40 Distance:	13
Inhabited Building Distance (09 psi), K50 Distance:	16
Intentional MSD (0065 psi), K328 Distance:	107

Minimum Thickness to Prevent Perforation

4000 psi Concrete (Prevent Spall):	1.09
Mild Steel:	0.21
Hard Steel:	0.17
Aluminum:	0.47
LEXAN:	2.16
Plexi-glass:	1.13
Bullet Resist Glass:	0.83

Required Sandbag Thickness

Max Fragment Weight (lb)SB:	0.002681
Critical Fragment Velocity (fps)SB:	4941
Kinetic Energy 106 (lb-ft2/s2)SB:	0.0327
Required Wall _Roof Sandbag Thickness (in)SB:	12
Expected Maximum Sandbag Throw Distance (ft)SB:	25
Minimum Separation Distance (ft)SB:	200

Water Containment System and Minimum Separation Distance:

Max Fragment Weight (lb)W:	0.002681
Critical Fragment Velocity (fps)W:	4941
Kinetic Energy 106 (lb-ft2/s2)W:	0.0327
Water Containment System:	5 gal carboys/ inflatable pool
Minimum Separation Distance (ft)W:	200/200

Print This Form

Close Form

Halil, Michael/JAX

From: Davidson, Mark E CIV NAVFAC SE [mark.e.davidson@navy.mil]
Sent: Tuesday, July 31, 2007 12:15 PM
To: Halil, Michael/JAX; Nwokike, Barbara R CIV NAVFAC SE
Subject: FW: some questions - NOSSA addn comments 365, 860, site 15

Attachments: BEM V5.xlt

BEM V5.xlt (2 MB)

-----Original Message-----
From: Urbanski, Richard CIV NOSSA
Sent: Tuesday, July 31, 2007 11:08
To: Davidson, Mark E CIV NAVFAC SE
Subject: FW: Some questions

Mark,

Below is the e-mail from Michelle Crull confirming the sandbag calculations in your ESS. Suggest you incorporate her e-mail into the ESS as a reference to Attachment 2.

Rick

-----Original Message-----
From: Crull, Michelle M HNC
[mailto:Michelle.M.Crull@hnd01.usace.army.mil]
Sent: Monday, July 09, 2007 10:10
To: Beard, Jarrett CIV NOSSA; Urbanski, Richard CIV NOSSA
Cc: Stacy, Johnathan R CIV NOSSA; Dunay, Anthony CIV NOSSA
Subject: RE: Some questions

1.If they use the increase on the fragment weight and velocity (per TP 16) for multiple rounds and calculate the kinetic energy, they can use this kinetic energy and the total NEW to get a sandbag solution. With the scenario you discuss, this would be the solution for the 105mm M1 (i.e. 24" of sandbags, 135 ft sandbag throw, 200 ft MSD).

2. You can use the buried explosion module attached to calculate the overpressure. The equivalent K328 distance under 2 ft of sand is 91 ft.

Michelle Crull, PhD, PE
US Army Engineering & Support Center, Huntsville
Attn: CEHNC-ED-SC-T (Crull)
4820 University Square
Huntsville, AL 35816-1822

Commercial (256) 895-1653 DSN 760-1653
Fax (256) 895-1737

-----Original Message-----
From: Beard, Jarrett CIV NOSSA [mailto:jarrett.beard@navy.mil]
Sent: Tuesday, June 12, 2007 6:41 AM
To: Crull, Michelle M HNC
Cc: Stacy, Johnathan R CIV NOSSA; Dunay, Anthony CIV NOSSA

Subject: RE: Some questions

Michelle,

I work for the Naval Ordnance Safety and Security Activity (NOSSA). I am reviewing three explosives safety submissions (ESSs) for the former NAS Cecil Field and had two questions. If there isn't an easy answer for this, please give me a call and we can discuss.

1. The Munition with the Greatest Fragmentation Distance (MGFD) is a M56A4 20-mm HE Round. They plan on gathering up 10 of these, sandbagging them, and then blowing all 10 at once. From the write up, it appears that they are attempting to use your document "Use of Sandbags for Mitigation of Fragment and Blast Effects Due to Intentional Detonation of Munitions", HNC-ED-CS-S-98-7, to obtain a 200-foot arc. However, I believe that in order to use that document, they can only detonate one item at a time. The part that made me second guess this or think there is another document they are using to obtain this distance is in the package they state "this approach and calculations were collaborated with Michelle Crull, Ph.D., PE, USAESCH." My question is can they have a 200-foot arc for blowing 10 at a time? If so, does HNC-ED-CS-S-98-7 permit this or is it another document?

2. To detonate 10 items at a time (.29 pounds NEW), they are planning on using 3.75 lbs PETN (4.76 pounds NEW). In HNC-ED-CS-S-87-7, is there a maximum donor charge that is permitted to use those distances? It seems like the extra NEW would cause a greater sandbag throw and at some point the overpressure would dominate. Do the sandbags reduce only the fragment throw or does it also reduce the overpressure?

Thanks,
Jarrett
DSN 354-1904
(301) 744-1904
-----Original Message-----
From: Dunay, Anthony CIV NOSSA
Sent: Tuesday, June 12, 2007 7:16 AM
To: Crull, Michelle M HNC; Beard, Jarrett CIV NOSSA
Cc: Stacy, Johnathan R CIV NOSSA
Subject: Some questions

Michelle, Jarrett Beard has the dubious honor of picking up some of my ESS work here at NOSSA and he has some questions regarding the use of sandbags. We'd all appreciate any help you can provide. Thanks, Tony

Michelle Crull, PhD, PE
US Army Engineering & Support Center, Huntsville
Attn: CEHNC-ED-SC-T (Crull)
4820 University Square
Huntsville, AL 35816-1822

Commercial (256) 895-1653 DSN 760-1653
Fax (256) 895-1737

BURIED EXPLOSION MODULE

(Version 5.0)

Based on DDESB Technical Paper 16, Revision 2 and EARTHEX software

(ENGLISH UNITS)

SELECT ITEM DESCRIPTION

20 mm M56A4

SINGLE ITEM NEW (lbs)	0.03
SINGLE ITEM TNT EQUIVALENCE (lbs)	0.04
MAXIMUM FRAGMENT WEIGHT (lbs)	0.0027
MAXIMUM FRAGMENT VELOCITY (ft/s)	4,941
ENTER TOTAL NUMBER OF ITEMS	10
ENTER WEIGHT OF BOOSTER (lbs)	3.75
TOTAL TNT WEIGHT (lbs)	4.14
ENTER DEPTH OF BURIAL (ft)	2.00
ENTER RANGE (for pressure calculation) (ft)	200

SELECT SOIL TYPE

(See TP 16, Revision 2 for soil details)

Dry Sand

CRATER OR CAMOUFLET?

CRATER

TRUE CRATER RADIUS (ft)	3.76
MAXIMUM SOIL EJECTA RANGE (ft)	212
FRAGMENT EXIT VELOCITY (ft/s)	3
FRAGMENT LAUNCH ANGLE (°)	28.0
MAXIMUM FRAGMENT RANGE (ft)	12
RANGE AT WHICH PRESSURE IS 0.066 PSI ($328W^{1/3}$ EQUIVALENT) (ft)	91
FRAGMENT HAZARD RANGE (ft)	212
PRESSURE AT FRAGMENT HAZARD RANGE (psi)	0.0250
PRESSURE AT FRAGMENT HAZARD RANGE (dB)	138.7
PRESSURE AT RANGE ENTERED (psi)	0.0267
PRESSURE AT RANGE ENTERED (dB)	139.3

Appendix E
Example FDEP Emergency Permits for Detonation

- Example Emergency Permit Request
- Example Emergency Permit Order
- Example Emergency Permit Order Public Notice

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 190010
2155 EAGLE DRIVE
NORTH CHARLESTON, S.C. 29419-9010

ES32MD
4 Feb 2005

Florida Department of Environmental Protection
ATTN: Mr. Douglas Outlaw
2600 Blairstone Road, Twin Towers
Mail Stop 4560
Tallahassee, Florida 32399

Request by Naval Facilities Engineering Command, Engineering Field Division South (NAVFAC EFD SOUTH) for an emergency permit from the Florida Department of Environmental Protection (FDEP) to allow the thermal treatment/destruction of hazardous waste. The treatment will be carried out by the Naval Ordnance Safety and Security Activity (NOSSA), NAVFAC EFD SOUTH, and the NAVFAC EFD SOUTH Munitions Response/Explosive Ordnance Disposal (EOD) Contractor (CH2M HILL Constructors, Inc. [CH2M HILL] with USA Environmental, Inc. [USA]) at the munitions response site located at the intersection of Loop Road and Skymaster Drive, former Naval Air Station Cecil Field, Jacksonville, Florida. The treatment involves deactivation or destruction of a reactive waste, (i.e., recovered munitions and explosives of concern that present an unacceptable hazard for transportation to a disposal site). This permit is for the detonation of munitions and explosives of concern (MEC) found during the initial, or Phase I, five-acre investigation completed on December 17, 2004. A Phase II MEC investigation is currently being planned for an additional 15 acres. Please recognize that after the completion of the Phase II investigation that an additional detonation, and permit, will likely be required.

FINDINGS OF FACT

1. The specific waste to be thermally treated/destroyed by detonation is the following:

   - (77) each 20-mm high explosive projectiles (unfired/fuzed with cartridge intact) consisting of a primer which initiates the smokeless powder (approx. 0.07 lbs.) contained in a steel or brass cartridge case, which in turn propels a projectile constructed of steel; copper in the rotating band and an aluminum ogive.

   - (191) each Cartridge Actuated Devices (CADs) consisting of a primer which initiates a nitro cellulose (black powder) (0.0021 - 0.01014 lbs.) charge that is contained in an aluminum cartridge.

   - (33) each Small Arms Blanks (5.56-mm and 7.62-mm) consisting of a primer which initiates a smokeless powder charge that is contained in a brass cartridge case.

   - (8) each Spotting Charges consisting of a primer which initiates smokeless powder charge (10 gauge shotgun) that in turns expels a smoke mixture, all of which is contained in a cardboard or aluminum case.

- (1) each suspect aircraft part suspected to contain (2) each CADs/impulse cartridges (determined to be type of actuator with two ports labeled for CAD use with caps and leads intact).

CH2M HILL and USA have determined the above waste to be unsafe to transport for disposal. Because of the flammable, shock-sensitive, reactive, and explosive nature of this hazardous waste, there is a potential danger to the health and welfare of those persons coming in contact with this waste if the waste is not handled in the proper manner. Based on the above, the hazardous waste presents an imminent hazard to persons and property in its proximity.

2. NOSSA, NAVFAC EFD SOUTH, CH2M HILL, and USA will abate the imminent hazard identified in Findings of Fact #1 by thermal destruction of the unstable, flammable, shock-sensitive, and potentially explosive hazardous waste.

3. Only the waste specified in Findings of Fact #1 will be thermally treated to deactivate or destroy the hazardous nature of the waste. The treatment operation will be accomplished in accordance with this request; "Work Plan Addendum No. 01 Munitions Response and Onsite Construction Support for Discarded Military Munitions," dated November 30, 2004; and Revision No. 01 to the project Explosives Safety Submission and Explosives Siting Plan, dated January 2005.

4. All other local, state, and federal approvals and licenses will be obtained prior to conducting thermal treatment activities.

5. The hazardous waste will be treated/destroyed via detonation in a field (latitude: 30.2350° North; longitude: 81.8808° West) within the munitions response site located at the intersection of Loop Road and Skymaster Drive, former Naval Air Station Cecil Field, Jacksonville, Florida. The treatment site is owned by:

   Jacksonville Airport Authority – Cecil Field
   ATTN: Russel Chandler, Cecil Field Airport Manager
   13365 Aeronautical Circle
   Jacksonville, Florida 32221
   (904) 573-1630

   Written permission to use the treatment site will be received from the Jacksonville Airport Authority prior to thermal treatment/destruction.

   The closest permanent residences are the Cecil Pines senior housing complex that is located approximately 3,300 feet from the treatment site. Additionally, a Jacksonville Sheriff's Office Duty Officer for Cecil Field is currently using Building 823 as his temporary residence. Building 823 is approximately 1,250 feet from the treatment site

6. Thermal treatment/destruction will be accomplished according to the procedures specified in the "Work Plan Addendum No. 01 Munitions Response and Onsite Construction Support for Discarded Military Munitions," dated November 30, 2004 and Revision No. 01 to the project Explosives Safety Submission and Explosives Siting Plan, dated January 2005. The general procedure will be to use 0.75-lb PETN boosters to thermally treat and destroy the items listed in Findings of Fact #1. Multiple items listed in Findings of Fact #1 will be secured around

the boosters. The boosters will then be segregated into treatment/detonation events not to exceed 6 lbs. Net Explosives Weight. The boosters will be initiated with a detonation cord and/or blasting caps depending on the composition of the treatment/detonation event. All treatment/detonation events will be done with protective works/engineering controls by surrounding with an enclosure which has 24 inches of sand bags on the roof and walls.

7. The hazardous waste will be thermally treated under the supervision and control of NOSSA, NAVFAC EFD SOUTH, CH2M HILL, and USA. These officials are experienced in the handling and disposal of explosives.

8. Any visible residue or debris resulting from the treatment process will be removed and properly disposed of offsite by approved methods. Post-treatment soil sampling will be completed to ensure no contamination remains following residue/debris removal. Collection and laboratory analysis of one soil sample from the treatment site for metals and nitro aromatics (explosives) only are planned.

9. Adequate fire and personal protection to assure confinement and control of any fire resulting from the operation, and to prevent injuries of personnel present, will be provided.

10. Prior to the thermal treatment, the treatment site in Findings of Fact #5 will be secured and access restricted except to authorized personnel. Additionally, prior to the treatment operation, a visual inspection will be performed within a minimum 200-foot radius of the treatment site described in Findings of Fact #5 to assure that no unauthorized personnel are on site. Based on the engineering controls calculations provided in Revision No. 01 to the project Explosives Safety Submission and Explosives Siting Plan, dated January 2005, an enclosure which has 24 inches of sand bags on the roof and walls would have a maximum sandbag throw of 135 feet and would require a safety arc of 200 feet. Revision No. 01 to the project Explosives Safety Submission and Explosives Siting Plan, dated January 2005 provides the detailed engineering controls and calculations, risk assessment, and operational hazard analysis, as well as sand bag construction examples.

11. A detailed written summary of the actual procedures used for treatment, details on the reasons for any deviations from the plans and information submitted for this request, the disposition of any residues from the treatment process, as well as any additional pertinent information will be submitted within 60 days of field work completion to both:

    Florida Department of Environmental Protection, Northeast District
    ATTN: Waste Program Administrator
    7825 Baymeadows Way, Suite B200
    Jacksonville, Florida 32256

    and

    Florida Department of Environmental Protection
    ATTN: Mr. Douglas Outlaw
    2600 Blairstone Road, Twin Towers
    Mail Stop 4560
    Tallahassee, Florida 32399

12. Thermal treatment of the waste as specified above in Findings of Fact #1 will occur in an open field as described in Findings of Fact #5 within the next 120 days.

13. FDEP Northeast District will be notified at least 5 days before the beginning of the disposal operation.

Sincerely,

MARK E. DAVIDSON
Restoration II Branch

Copy to:
CH2M Hill (Michael Halil)
EPA Region IV (Doyle Brittain)
FDEP (Dave Grabka)

Department of
Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

February 14, 2005

CERTIFIED – RETURN RECEIPT

Mark E. Davidson, Environmental Engineer
U. S. Naval Facilities Engineering Command
Engineering Field Division South
P. O. Box 190010
North Charleston, S.C. 29419-9010

SUBJECT: Naval Facilities Engineering Command – Cecil Field
EPA ID No. FL5 170 022 474
Emergency Permit 13526-HE-005
Duval County

Dear Mr. Davidson:

Enclosed you will find a Department Emergency Permit Order, along with the public notice. Please ensure publication is within the time allotted.

Please contact John Griffin at (850)245-8785 if you have any questions.

Sincerely,

Tim Bahr, Administrator
Hazardous Waste Regulation Section

TJB/jeg

Enclosure

cc (with enclosure):

Don Webster, EPA/Region 4
Ashwin B. Patel, DEP/Jacksonville
David Grabka, DEP/Federal Facilities

Department of
Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

BEFORE THE STATE OF
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

In Re:
Request for an Emergency Permit by
U. S. Naval Facilities Engineering Command
Engineering Field Division South
P.O. Box 190010
2155 Eagle Drive
North Charleston, S.C. 29419-9010

Date: February 14, 2005

Permit Number: 13526-HE-005

FINAL ORDER

BY THE DEPARTMENT:

On January 31, 2005, the Department received a request from Mark E. Davidson of the U. S. Naval Facilities Engineering Command for an emergency permit to allow the thermal treatment and disposal of waste. The treatment of the waste will be carried out by the Naval Ordnance Safety and Security Activity (NOSSA), NAVFAC EFD SOUTH, and the NAVFAC EFD SOUTH Munitions Response/Explosive Ordnance Disposal (EOD) Contractor (CH2M HILL Constructors, Inc. (CH2M HILL) with USA Environmental, Inc. (USA) at the munitions response site located at the intersection of Loop Road and Skymaster Drive, Former Naval Air Station Cecil Field, Jacksonville, Florida. The treatment involves deactivation or destruction of reactive waste, (i.e., recovered munitions and explosives of concern (MEC)) that present a shock-sensitive characteristic, which could create an imminent danger to persons handling the waste and to the general public. This permit is for the detonation of MEC found during the initial, or Phase I, five-acre investigation completed on December 17, 2004. A Phase II MEC investigation is currently being planned for an additional 15 acres. After completion of the Phase II investigation an additional detonation, and permit, will likely be required.

FINDINGS OF FACT

The waste came into the possession of the Department of Navy. Because of the flammable, shock-sensitive, reactive, and explosive nature of the material, there was a potential danger to the

health and welfare of those persons coming in contact with this waste if the waste was not handled in a proper manner.

1. The specific waste to be thermally treated/destroyed by detonation is the following:

77 - 20-mm high explosive projectiles
191 – Cartridge Actuated Devices (CADs)
33 – Small Arms Blanks
8- Spotting Charges
1 – Suspect aircraft part
2- CADs/impulse cartridges

Based on the above-stated facts, the Department finds that the hazardous waste presents an imminent hazard to persons and property in proximity to it.

2. NOSSA, NAVFAC EFD SOUTH, CH2M HILL, and USA will abate the imminent hazard identified in Findings of Fact #1 of this permit by thermal destruction of the unstable, flammable, shock-sensitive, and potentially explosive hazardous waste.

3. Thermal treatment/destruction will be accomplished according to the procedures specified in the "Work Plan Addendum No. 01 Munitions Response and Onsite Construction Support for Discarded Military Munitions," dated November 30, 2004,("Work Plan") and Revision No. 01 to the project Explosives Safety Submission and Explosives Siting Plan, dated January 2005 ("Revision No. 01"). The general procedure will be to use 0.75-lb PETN boosters to thermally treat and destroy the items listed in Finding of Fact #1. Multiple items listed in Finding of Fact #1 will be secured around the boosters. The boosters will then be segregated into treatment/detonation events not to exceed 6 lbs. Net Explosives Weight. The boosters will be initiated with a detonation cord and /or blasting caps depending on the composition of the treatment/detonation event. All treatment/detonation events will be done with protective works/engineering controls by surrounding with an enclosure which has 24 inches of sand bags on the roof and walls.

4. Based on the engineering controls calculations provided in Revision No. 01, an enclosure which has 24 inches of sand bags on the roof and walls would have a maximum sandbag throw of 135 feet and would require a safety arc of 200 feet. Revision No. 01 provides the detailed engineering controls and calculations, risk assessment, and operational hazard analysis, as well as sand bag construction examples.

5. The hazardous waste will be thermally treated under the supervision and control of personnel from NOSSA, NAVFAC EFD SOUTH, CH2M HILL and USA. These officials are experienced in the handling and disposal of explosives.

CONCLUSION

NOSSA, NAVFAC EFD SOUTH, CH2M HILL, and USA will conduct this thermal treatment operation in an environmentally sound and a Department-approved manner. Therefore, pursuant to Sections 403.726(5) and 120.59(3), Florida Statutes, it is

ORDERED

1. This Permit authorizes thermal treatment of the waste as specified above in Findings of Fact #1, in accordance with the Work Plan and Revision No. 01.

2. The hazardous waste will be treated/destroyed via detonation in a field (latitude: 30^0 23' 50''North; longitude: 81^0 88' 08''West) within the munitions response site located at the intersection of Loop Road and Skymaster Drive, former Naval Air Station Cecil Field, Jacksonville, Florida ("the treatment site") between February 20 through March 11, 2005.

3. Any visible material resulting from the treatment process will be removed within 24 hours of detonation and properly disposed of by approved methods. Post-treatment soil sampling will be completed to ensure no contamination remains following residue/debris removal, by collection and laboratory analysis of one surface soil sample from the center of the treatment site for metals and nitro aromatics (explosives) only.

4. Adequate fire and personal protection to assure confinement and control of any fire resulting from the operation, and to prevent injuries of personnel present will be provided.

5. Prior to the thermal treatment, the treatment site will be secured and access restricted except to authorized personnel. Additionally, prior to the treatment operation, a visual inspection will be performed within a minimum 200-foot radius of the treatment site to assure that no unauthorized personnel are on site.

6. The Permittee will notify the local FDEP Northeast District representative or its designee to offer the option of being present to observe the thermal treatment operation.

7. The Permittee is required to obtain all other local, state and federal approvals and licenses required for conducting the activities in this permit.

8. Within 60 days of completion of the thermal treatment authorized by this permit, the Permittee shall submit a detailed written summary of the specific description of the actual procedures used for treatment, and the disposition of any residues from the treatment process, as well as any additional pertinent information shall be submitted to the Waste Program Administrator, Department of Environmental Protection, Northeast District Office, 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256; Environmental Administrator, Federal Facilities Group, Bureau of Waste Cleanup, M.S. 4535, Department of Environmental

Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and to the Environmental Administrator, Hazardous Waste Regulation Section, M.S. 4560, Bureau of Solid and Hazardous Waste, Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

The Permittee shall undertake whatever action necessary to comply with Rule 62-730.320, F.A.C.

Issued this 4th day of February

DOTTY DILTZ, ASSISTANT DIRECTOR
DIVISION OF WASTE MANAGEMENT

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing FINAL ORDER has been furnished by U.S. Mail to:

1. Mark E. Davidson, NAVFAC EFD SOUTH
2. Ashin Patel, DEP/Jacksonville
3. David Grabka, DEP/Federal Facilities
4. Don Webster, EPA/Atlanta

on this _____ day of _____, _____ in Tallahassee, Florida.

Filing and Acknowledgment
Filed on this date, pursuant to
Section 120.52, Florida Statutes,
with the designated Clerk, receipt
of which is acknowledged.

_____ _____
CLERK DATE

STATE OF FLORIDA
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
TWIN TOWERS OFFICE BUILDING
2700 BLAIRSTONE RD
TALLAHASSEE, FLORIDA 32399

PERMIT NO. 13526/HE/005

NOTICE OF ISSUANCE OF AN EMERGENCY PERMIT UNDER
THE RESOURCE CONSERVATION AND RECOVERY ACT
AND THE FLORIDA RESOURCE RECOVERY AND MANAGEMENT ACT.

On February 14, 2005, the Department of Environmental Protection (DEP) issued an Emergency Permit to U. S. Naval Facilities Engineering Command.

The treatment site is in an open field, now owned by Jacksonville Airport Authority – Cecil Field, located at the intersection of Loop Road and Skymaster Drive, former Naval Air Station Cecil Field, Jacksonville, Florida.

The permit authorized detonation and treatment of unstable, reactive, flammable, shock-sensitive or explosive materials.

An emergency permit pursuant to Sections 403.726(5) and 120.59(3), F.S., and Rule 62-730.320, F.A.C., was warranted because there was an imminent and substantial endangerment to human health and the environment. The issuance of this permit resulted in environmental benefits as compared with the previous storage conditions of the waste. The permit was drafted in accordance with the provisions of the Resource Conservation and Recovery Act and the Florida Resource Recovery and Management Act, and were designed to protect human health and the environment.

The permit files are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at Department of Environmental Protection, Northeast District, 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256.

Persons wishing to comment upon the permit issuance or to the permit conditions are invited to submit same in writing within forty-five (45) days of the date of this notice to the address given in above paragraph, Attention: Ashwin Patel (Northeast District). The public notice number should be included in the first page of the comment.

All comments received within the 45-day period will be considered in the formulation of future emergency permits.

STATE OF FLORIDA
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
TWIN TOWERS OFFICE BUILDING
2700 BLAIRSTONE RD
TALLAHASSEE, FLORIDA 32399

PERMIT NO. 13526/HE/005

NOTICE OF ISSUANCE OF AN EMERGENCY PERMIT UNDER
THE RESOURCE CONSERVATION AND RECOVERY ACT
AND THE FLORIDA RESOURCE RECOVERY AND MANAGEMENT ACT.

On February 14, 2005, the Department of Environmental Protection (DEP) issued an Emergency Permit to U. S. Naval Facilities Engineering Command.

The treatment site is in an open field, now owned by Jacksonville Airport Authority – Cecil Field, located at the intersection of Loop Road and Skymaster Drive, former Naval Air Station Cecil Field, Jacksonville, Florida.

The permit authorized detonation and treatment of unstable, reactive, flammable, shock-sensitive or explosive materials.

An emergency permit pursuant to Sections 403.726(5) and 120.59(3), F.S., and Rule 62-730.320, F.A.C., was warranted because there was an imminent and substantial endangerment to human health and the environment. The issuance of this permit resulted in environmental benefits as compared with the previous storage conditions of the waste. The permit was drafted in accordance with the provisions of the Resource Conservation and Recovery Act and the Florida Resource Recovery and Management Act, and were designed to protect human health and the environment.

The permit files are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at Department of Environmental Protection, Northeast District, 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256.

Persons wishing to comment upon the permit issuance or to the permit conditions are invited to submit same in writing within forty-five (45) days of the date of this notice to the address given in above paragraph, Attention: Ashwin Patel (Northeast District). The public notice number should be included in the first page of the comment.

All comments received within the 45-day period will be considered in the formulation of future emergency permits.

Appendix F
Munitions Response Operations Forms

- MEC Information
- MEC Disposal Checklist
- Misfire Checklist
- BATF Form 5400.5

MEC INFORMATION FORM

DATE/TIME: _____ **TRACKING NUMBER:** _____
LOCATION: _____

1. **ITEMS REMOVED FROM SITE (YES/NO)**

2. **WHO REMOVED THE ITEM(S)?**
   Name:_____ **Organization:** _____

3. **IF ITEMS WERE REMOVED, WHERE WERE THEY TAKEN?** _____
   _____

4. **ITEMS DESTROYED ONSITE (YES/NO)**

5. **WHO DESTROYED ITEM(S)?**
   Name: _____ **Organization:** _____
   Time of Detonation:_____ **MEC Down Time:**_____

6. **MEC ENCOUNTERED:**

Type	Quantity	Condition	Disposition

7. **NAVY NOTIFIED AT (TIME):** _____ **REP:** _____

8. **PERSONNEL NOTIFIED AT (TIME):** _____ **REP:** _____

9. **COMMENTS (Significant events or findings):** _____
   _____
   _____
   _____

_____ _____
CH2M HILL UXO Representative (Signature) (Print Name) **CH2M HILL MEC Representative**

CHECKED BY _____	APPROVED BY _____

MUNITIONS AND EXPLOSIVES OF CONCERN (MEC) DISPOSAL CHECKLIST

Be sure to equalize electrical potential "Ground" wherever appropriate.

_____ A. Approval of disposal plan from Senior UXO Supervisor, Government Safety Representative, and Site Authorities.

_____ B. Site is secure. Appropriate EZ per work plan.

_____ C. Ensure the blasting machine is in control of the downrange team.

_____ D. Test the firing cable for continuity and short the wires or clips.

_____ E. Barricade the electric blasting caps (EBCs).

_____ F. Remove the shunt on an EBC.

_____ G. Facing away from the barricade, test the continuity of the EBC with a galvanometer.

_____ H. Replace the shunt or short the EBC.

_____ I. Repeat steps F, G, and H for the second EBC.

_____ J. Recheck the firing cable to ensure the cable is shorted.

_____ K. Make a parallel circuit and connect the leg wires of the EBCs to the firing cable.

_____ L. Connect the EBCs to the main charge. Return to the firing point.

_____ M. Using binoculars, ensure the area is clear and blow the air or vehicle horn three times.

_____ N. Fire the charge.

_____ O. Conduct a destruction site inspection

GENERAL DEMOLITION ELECTRIC MISFIRE CHECKLIST

_____ A. Repeat firing attempts.

_____ B. Check circuit with galvanometer.

_____ C. Switch blasting machines, if possible.

_____ D. Repeat firing attempts.

_____ E. Check circuit with galvanometer.

_____ F. Short firing cable wires.

_____ G. Wait 60 minutes before going downrange.

_____ H. Using new EBCs, countercharge the main charge.

GENERAL DEMOLITION NON-ELECTRIC MISFIRE CHECKLIST

_____ A. Wait 60 minutes plus time fuze burn time before going downrange.

_____ B. Using new firing train, countercharge the main charge.

OMB No. 1512-0185 (09/30/2002)

DEPARTMENT OF THE TREASURY

BUREAU OF ALCOHOL, TOBACCO AND FIREARMS

REPORT OF THEFT OR LOSS-EXPLOSIVE MATERIALS

DATE

Upon discovery of any theft or loss of any of your explosive materials:

-First, contact ATF toll free at 1-800-461-8841 between 8:00 a.m. - 5:00 p.m. EST (or after-hours and weekends contact ATF collect at 1-888-283-2662) to report the theft or loss;
-Second, contact your local law enforcement office to report the theft or loss to obtain a police report; and
-Third, complete this form and attach any additional reports, sheets or invoices necessary to provide the required information, and fax then mail the form with additional material(s) to the nearest ATF office listed on the reverse. We suggest you retain a copy of the completed form. Please complete each item, as applicable, to the best of your ability.
NOTE: Section 842(k), 18 U.S.C., Chapter 40, states, "It shall be unlawful for any person who has knowledge of the theft or loss of any explosive materials from his stock to fail to report such theft or loss within twenty-four hours of discovery thereof to the Secretary and to appropriate local authorities." Codified at 27 C.F.R., Section 55.30.

1. NAME, ADDRESS AND TELEPHONE NUMBER OF PERSON MAKING REPORT *(Include corporate or business name, if applicable)*

2. LOCATION OF THEFT OR LOSS *(If different from item 1)*

3. THEFT OR LOSS	DATE	TIME
a. DISCOVERED		
b. OCCURRED *(Show approximate if exact not known)*		
c. REPORTED TO ATF BY TELEPHONE		
d. REPORTED TO LOCAL AUTHORITIES		

4. NAME AND ADDRESS OF LOCAL AUTHORITY TO WHOM REPORTED

POLICE REPORT NUMBER: _____

5. EXPLOSIVE MATERIALS LOST OR STOLEN *(Attach invoices or additional sheets, if necessary)*

a. MANUFACTURER OR BRAND NAME *(Include date and shift code)*	b. QUANTITY *(Pounds of Explosives, Number of Caps)*	c. TYPE AND DESCRIPTION *(Dynamite, Blasting Agents, Detonators, etc. Include for each type, size, MS delay or length of legwire, as applicable)*

6. THEFT OR LOSS OCCURRED FROM *(Check applicable box)*

☐ PERMANENT MAGAZINE ☐ PORTABLE MAGAZINE ☐ TRUCK ☐ WORK SITE ☐ OTHER *(Explain)* _____

7. ENTRY TO MAGAZINE MADE THROUGH *(Complete if applicable)*

☐ DOOR ☐ ROOF ☐ FLOOR ☐ FOUNDATION

☐ WALL ☐ CEILING ☐ VENTS ☐ OTHER *(Explain)* _____

8. NUMBER AND TYPE OF LOCKS FORCED *(Complete if applicable)*

9. OTHER INFORMATION PERTINENT OT THE THEFT OR LOSS

10. SIGNATURE AND TITLE OF PERSON MAKING REPORT

11. FEDERAL EXPLOSIVES LICENSE OR PERMIT, IF ANY

FOR ATF USE ONLY

DATE RECEIVED	TIME RECEIVED	UNIQUE IDENTIFIER

ATF F 5400.5 (6-2002) PREVIOUS EDITIONS ARE OBSOLETE

REPORTING INSTRUCTIONS

Forward or Fax this completed form to the ATF address listed below:

Bureau of Alcohol, Tobacco and Firearms
Arson and Explosives National Repository Branch (AENRB)
P.O. Box #50980
Washington, DC 20077-8001
Toll Free Fax: 1-866-927-4570

Questions regarding the completion of this form should be referred to the AENRB toll free at 1-800-461-8841.

PRIVACY ACT INFORMATION

The following information is provided pursuant to section 3 of the Privacy Act of 1974 (5 U.S.C. § 522a(e)(3).

1. **Authority.** Solicitation of this information is made pursuant to Title XI of the Organized Crime Control Act of 1970 (18 U.S.C. Chapter 40). Disclosure of a theft or loss of explosive materials is mandatory pursuant to 18 U.S.C. § 842(k) for any person who has knowledge of such theft or loss from his stock.

2. **Purpose.** The purpose for the collection of this information is to give ATF notice of the theft or loss of explosive materials, and to furnish ATF with the pertinent facts surrounding such theft or loss. In addition, the information is used to confirm and verify prior notification of this theft or loss of explosive materials.

3. **Routine Uses.** The information will be used by ATF to aid in the administration of laws within its jurisdiction concerning the regulation of explosive materials and other related areas. In addition, the information may be disclosed to other Federal, State, foreign, and local law enforcement of laws within their jurisdiction.

4. **Effects of not supplying information requested.** 18 U.S.C. § 842(k) makes it unlawful for any person, who has knowledge of the theft or loss of explosive materials from his stock, to fail to report such theft or loss within twenty-four hours of discovery thereof, to the Secretary and to appropriate local authorities. The penalty for violation of this section is a fine of not more than $1,000 or imprisonment for not more than one year, or both. 18 U.S.C. § 844(b).

PAPERWORK REDUCTION ACT NOTICE

This request in accordance with the Paperwork Reduction Act of 1995. The purpose of this information collection is to report the theft or loss of explosive materials. The information is used for investigative purposes by ATF officials. This information is mandatory by stature. (18 U.S.C. § 842)

The estimated average burden associated with this collection of information is 1 hour and 48 minutes per respondent or recordkeeper, depending on individual circumstances. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be addressed to Reports Management Officer, Document Services Branch, Bureau of Alcohol, Tobacco and Firearms, Washington, D. C. 20226.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

ATF F 5400.5 (6-2002)

Appendix G
Materials that Present a Potential Explosive Hazard/ Munitions Debris Collection and Inspection Procedures

Materials that Presents a Potential Explosive Hazard (MPPEH)/Munitions Debris (MD) Collection and Inspection Procedures

Table of Contents

1.0 Purpose 10-4

2.0 Background 10-4

3.0 Collection Procedures 10-4

4.0 Removal of Scrap Metal/Range Residue 10-5
- **4.1 Segregation of Scrap Metal/Range Residue 10-5**
  - **4.1.1 Group 1 Scrap Metal/Range Residue 10-5**
    - **4.1.1.1 Group 1a Scrap Metal/Range Residue 10-5**
    - **4.1.1.2 Group 1b Scrap Metal/Range Residue 10-5**
  - **4.1.2 Group 2 Scrap Metal/Range Residue 10-6**

5.0 Disposition of Munitions List Items (MLI) 10-6
- **5.1 Assignment of Demilitarization Codes 10-6**
- **5.2 Demilitarization Requirements 10-6**
  - **5.2.1 Category III. Ammunition 10-8**
  - **5.2.2 Category V. Military Explosives, Solid and Liquid Propellants, Bombs, Mines, Incendiary Agents, and their Constituents 10-9**
  - **5.2.3 Venting of MPPEH Related Scrap 10-12**

6.0 Certification/Disposal of Scrap Metal 10-13

List of Figures

Figure	*Title*
Figure 1	**Logic Diagram for the Collection and Disposition of MPPEH Related Scrap**

1.0 Purpose

This SOP is intended to guide Project Delivery Managers, Health & Safety personnel, and UXO Technicians in the safe and efficient handling and disposal of materials that present a potential explosive hazard (MPPEH)/munitions debris (MD) related scrap metal found at CH2M HILL project sites. The inherently dangerous characteristics of Ammunition Explosives Dangerous Articles (AEDA) dictate that special precaution be taken to ensure that demilitarization is performed only by properly trained and technically qualified personnel.

2.0 Background

During excavation and investigation operations, UXO Technicians will encounter the following types of metallic contamination: UXO items; ordnance related scrap that is contaminated with explosives or other hazardous materials; non-hazardous ordnance related scrap metal; and general metallic debris. Because the metal scrap recovered will ultimately be disposed of off-site, it is imperative that procedures be established to preclude live ordnance or hazardous materials from becoming intermingled with other non-hazardous metal scrap.

Current and past practices have only required the inspection of MPPEH/MD related scrap and a certification by a qualified EOD/UXO technician that it is safe to the best of their knowledge. There are several pitfalls with this approach depending on the type of ordnance being inspected. The following paragraphs provide guidance for avoiding these pitfalls.

References:

DOD 4160.21-M	Department of Defense Reutilization and Marketing Manual
DOD 4160.21-M-1	Department of Defense Demilitarization Manual
TB 700-4	Department of the Army Technical Bulletin - Decontamination of Facilities and Equipment

3.0 Collection Procedures

We will use a systematic approach for collecting and inspecting metal scrap. Our approach is designed to ensure that the materials undergo a continual evaluation/inspection process from the time acquired until finally removed from the site.

At the operating site, we will preposition two scrap metal containers. One container will be marked "Non-MPPEH/MD Scrap Metal" and will be used to collect general metal debris. The other container will be marked "MD Related Scrap Metal" and will be used to collect non-hazardous ordnance related scrap metal (i.e. Metal components that <u>do not</u> contain any explosives or other hazardous materials).

Collection procedures begin at the time the metal item is discovered by the UXO Technician. At this point the UXO Technician makes a preliminary determination as to the classification of the item. If the item is identified as non-ordnance related scrap it is placed in a temporary Non-

MPPEH/MD scrap accumulation point located within the current operating grid. If the item is identified as ordnance related scrap it is placed in a temporary MPPEH related scrap accumulation point, again this point is located within the current operating grid.

Upon completion of operations within a grid, the UXO Supervisor for the team that cleared the grid will inspect each of the scrap piles and direct movement of the scrap into the appropriate site collection container. To preclude migration of the material from one pile to the other during movement to the scrap containers, each pile will be moved as a distinct and separate vehicle load.

4.0 Removal of Scrap Metal/Range Residue

The UXO Excavation and Disposal Team will collect the scrap piles deposited at the gird corner markers by the UXO Clearance Team, perform an inspection to confirm that segregation of the MPPEH/MD related scrap had been done correctly and that no live MEC has been placed in the MPPEH/MD related scrap pile. The MPPEH/MD related scrap will be inspected and divided into two groups: 1) MPPEH related scrap requiring further demilitarization; and 2) MD related scrap that does not require further demilitarization. **Figure 1** is a Logic Diagram for the Collection and Disposition of MPPEH Related Scrap.

4.1 Segregation of Scrap Metal/Range Residue

For purposes of disposal, it shall be segregated and defined as either Group 1a, Group1b, or Group 2.

4.1.1 Group 1 Scrap Metal/Range Residue

Group 1 includes property that previously contained explosives or that does not contain items of a dangerous nature and can be certified inert and/or free of explosives or other dangerous materials such as targets, certain expended ordnance, etc.

4.1.1.1 Group 1a Scrap Metal/Range Residue

Group 1a includes firing range expended small arms cartridge and inert metals gleaned from range clean up. Metals gleaned include material for which the only use is for its basic material content (e.g. clean shrapnel, target metal, etc.) And does not include material with any residual utility or capability or that is considered to be MLI or CCLI. Such material is eligible under the Resource Recovery and Recycling Program for disposition by a QRP in accordance with DODI 7514.1, Pollution Prevention. DOD Components may exercise direct sale authority for firing range expended small arms cartridge cases provided that it is crushed, shredded or otherwise destroyed prior to release from DOD control.

4.1.1.2 Group 1b Scrap Metal/Range Residue

Group 1b includes any certifiable material or item not meeting the criteria in 1a above. A determination shall be made as to whether the material/item requires demilitarization. Damaged sustained does not necessarily constitute demilitarization. Destruction shall, at a minimum, satisfy the provisions of DOD 4160.21-M-1. This material is not eligible for a QRP.

4.1.2 Group 2 Scrap Metal/Range Residue

Group 2 includes inherently dangerous items that may potentially contain munitions residue and cannot be certified as inert, such as practice bombs (that is, duds, unexploded ordnance (UXO), BDU-33, MK-106, etc.)

5.0 Disposition of Munitions List Items (MLI)

Demilitarization should be accomplished by the most cost effective method consistent with adequate security and surveillance as economically as practical in accordance with existing environmental standards, safety and operational regulations, to the point of assuring freedom from explosives, toxic or incendiary materials, smoke content or design hazards by one of the following methods:

a. By a sales contractor, as a condition of sale. Unless otherwise authorized, property to be demilitarized in accordance with DOD 4160.21-M-1 must be demilitarized prior to transfer of title to a purchaser.

b. By the DRMO, generating activity, designated Military Service/Defense Agency or contractor personnel (having qualified UXO personnel).

c. Under a service/performance contract.

5.1 Assignment of Demilitarization Codes

The proper procedure requires that MPPEH scrap be assigned a demilitarization code and that code determines the type of processing required. For almost all MPPEH scrap the assigned code should be “A”. Assignment of this code is the responsibility of the generating activity (for range maintenance contracts such as Fort Irwin it is the National Training Command; for BRAC removal actions it is the BRAC office; and for FUDS it is the Corp of Engineers). CH2M HILL as the contractor and expert in munitions response (MR) should assist the generating activity in determining the demilitarization code to be assigned and the method and degree of demilitarization required.

Definition of Demilitarization Code G:

“G” MLI -- Demilitarization required - AEDA, Demilitarization, and if required, declassification and/or removal of sensitive markings or information, will be accomplished prior to physical transfer to a DRMO. This code will be used for all ADEA items, including those which also require declassification and/or removal of sensitive marking or information. [When in doubt assign Demilitarization Code “G” for all recovered OE related scrap.]

5.2 Demilitarization Requirements

Demilitarization and decontamination of MPPEH scrap is based on a system that assigns decontamination levels commensurate with the post treatment use. For metal that is being released to the public as recyclable, 5X is the acceptable degree of decontamination.

Past practices for recovery and certification of MPPEH scrap from range maintenance contracts, BRAC and FUDS removal actions have improperly certified MPPEH scrap as safe for turn-in to DRMO for recycling based on inspection and certification by UXO/EOD technicians. In most cases this achieves a 3X level of decontamination by de facto. This is not sufficient for resale to the public. Three X=s indicate the equipment or facilities (in this case OE scrap) have been examined and decontaminated by approved procedures and no contamination can be detected by appropriate instrumentation, test solutions, or by visual inspections on easily accessible surfaces or in concealed housings, etc. and are considered safe for the intended use. Items decontaminated to this degree can not be furnished to qualified DOD or Industry users or subjected directly to open flame cutting, welding, high temperature heating devices), or operations which generate extreme heat, such as drilling and machining. Newly implemented certification procedures require two signatures for certification of which only one signature may be from a government contractor.

The only acceptable way to get to 5X decontamination is by partial or complete removal, neutralization, or destruction of explosives/explosive residue by flashing, steaming, neutralization, or other approved desensitizing methods such as shredding. This is often expensive and nullifies the value of the scrap. However to leave MPPEH scrap on a range site increases the possibility of residues such as RDX, HBX, and TNT entering the ground water and causing a more expensive problem.

Technical instructions issued by the Defense Agency or Military Service having procurement responsibility for the item involved and/or instructions provided through the DOD demilitarization Bulletin Board System, will determine and identify the method of demilitarization and the degree to which additional demilitarization is necessary to meet the requirements in their respective areas. For additional information contact the following:

a. For ammunition procured by the Department of the Army, technical instructions relating to ballistic missiles, and large rockets, will be furnished by the Commander, U.S. Army Aviation and Missile Command (AMCOM), Attn: AMSAM-DSA-WO, Redstone Arsenal, AL 35898-5239

b. For conventional, chemical, and all other types of ammunition excluding lethal chemical agents and waste munitions, technical instructions will be provided by the U.S. Army Industrial Operations Command, Attn: AMSIO-SMK, Rock Island, IL 61299-6000

c. For lethal chemical agents including vesicants and nerve agents and their carriers, technical instructions will be furnished by the U.S. Army Armament Material Readiness Command Program Manager for the demilitarization of Chemical Material, Edgewood Arsenal, Aberdeen proving Ground, Maryland 21010

d. For ammunition procured by the Department of the Navy, technical instructions will be issued by the Commander, Naval Sea Systems Commander or by the

Commander Naval Air Systems Command, department of the Navy, Washington, D.C.

e. For ammunition procured by the Department of the Air Force, technical instructions will be issued by the Engineering and Reliability Branch (MMWR), Ogden Air Logistics Center, Ogden, UT 84056-5609.

The following paragraphs provide guidance for the method and degree of required demilitarization for most types of OE items:

5.2.1 Category III. Ammunition - Method and Degree of Required Demilitarization

a. **Artillery/Mortar Ammunition Components and Similar Items of All Types** including but not limited to high explosive, practice, inert loaded, incendiary, and smoke fillers. Remove explosive filler from projectile (wash out, burn out, etc.). Remove rotating band and deform fuze cavity threads or score or deform bourrelet or gas check band. Burn propellant unless otherwise instructed to retain for sale or other purposes. Deform fin assembly threads or fin blades. Cartridge cases will be deformed by off-center punch-out of primer or split case neck or puncture the lower sidewall with a minimum of 3/4 inch hole or deform lower sidewall, which will prevent chambering, or crush or press. Burn out smoke mixture or detonate smoke canister.

b. **Inert Loaded Ammunition, Projectiles, and Similar Items of All Types** loaded with inert filler to simulate service item. Remove rotating band from artillery projectiles and open the closure of the projectile body to expose the inert filler. On items without rotating bands, open the body closure to expose the inert filler and damage the closure surface to prevent reloading or resealing.
NOTE: For inert loaded items (concrete, sand, plaster) a potential explosive safety hazard exists when the internal filler is not exposed or unconfined during burning, melting, or cutting. Heat generated from a demilitarization process can cause the filler, moisture and air to expand and burst sealed casings causing a mechanical explosion. For this reason, DRMOs will not accept inert loaded items unless the internal filler is exposed and unconfined. The internal filler may be exposed by removal of the fuze well from the cavity, removal of base plates, or by puncturing/drilling holes in the casing.

c. **Ammunition and Components Which Have Been Fired or Expended, Range Residue and Other Non-Explosive Items.** All items will be rendered free of energetic materials prior to accomplishment of demilitarization. Range residue will be processed in accordance with the defense Material Disposition Manual, DOD 4160.21-M, Chapter 4, paragraph B.3, after all required demilitarization is accomplished.

1. **Artillery/Mortar Ammunition Components and Similar Items of All Types.** Remove rotating band and deform fuze cavity threads or score or deform bourrelet or gas check band. Score practice round with a torch, displacing a minimum of one cubic inch of metal or shear into two pieces. Deform fin assembly threads and fin blades.

2. **Inert Loaded Ammunition, Projectiles, and Similar Items of All Types** loaded with inert filler to simulate service item. Remove rotating band from artillery projectiles and open the enclosure of the projectile body to expose the inert filler. On items without rotating bands, open the body closure to expose the inert filler and damage the closure surface to prevent relocating or resealing. **NOTE:** For inert loaded items (concrete, sand, plaster) a potential explosive safety hazard exists when the internal filler is not exposed or unconfined during burning, melting, or cutting. Heat generated from a demilitarization process can cause the filler, moisture and air to expand and burst sealed casings causing a mechanical explosion. For this reason, DRMOs will not accept inert loaded items unless the internal filler is exposed and unconfined. The internal filler may be exposed by removal of the fuze well from the cavity, removal of base plates, or by puncturing/drilling holes in the casing.

3. **Other Nonexplosive Filled Items** which perform a major function essential to the basic mission of the end item. Cut, crush, or process through a deactivation furnace. Burn or cut cartridge case lines and propelling charge bags. Cut, burn, or crush aircraft and ground signal cases. Crush or detonate piezoelectric (lucky) elements.

d. **Technical data** will be demilitarized by burning, shredding, or pulping.

5.2.2 Category V. Military Explosives, Solid and Liquid Propellants, Bombs, Mines, Incendiary Agents, and their Constituents - Method and Degree of Required Demilitarization

a. **Artillery/Mortar Ammunition Components and Similar Items of All Types** including but not limited to high explosive, practice, inert loaded, incendiary, and smoke fillers. Remove explosive filler from projectile (wash out, burn out, etc.). Remove rotating band and deform fuze cavity threads or score or deform bourrelet or gas check band. Burn propellant unless otherwise instructed to retain for sale or other purposes. Deform fin assembly threads or fin blades. Cartridge cases will be deformed by off-center punch-out of primer or split case neck or puncture the lower sidewall with a minimum of 3/4 inch hole or deform lower sidewall, which will prevent chambering, or crush or press. Burn out smoke mixture or detonate smoke canister.

b. **Inert Loaded Projectiles, Warheads and Similar Items of All Types** loaded with inert filler to simulate service item. Remove fuze and/or spotting charge, where applicable, and burn or detonate. Remove rotating band from artillery projectiles and open the enclosure of the projectile body to expose inert filler. On items without rotating bands, open the body closure to expose the inert filler and damage the closure surface to prevent reloading or resealing.

c. **Bombs and Similar Items of All Types,** including but not limited to high explosive, practice, inert loaded, incendiary and photo flash fillers, military explosive excavating devices, demolition blocks, and grenades. Demilitarization will be accomplished by removal of explosive filler in an approved manner (e.g., wash-out, burn-out, etc.) And by deforming fuze cavity threads or removing base plate by other than normal disassembly (such as sawing) or by detonation. Grenades will be demilitarized by cutting or crushing (a minimum of 75% compression) the grenade body after item has been defuzed and explosive removed or by detonation.

d. **Small Explosive Items**, including but not limited to fuzes, boosters, primers, detonators, firing devices, ignition cartridges, blasting caps, grenade cartridges, tracer assemblies, and similar components. Demilitarization can be accomplished by processing through a deactivation furnace at settings of 1150 degrees at burner end and 450 to 500 degrees at stack end or by mutilation. Incendiary projectiles will normally be decored to expose and assist in the compete burning of the incendiary composition. Where decoring of projectile is not necessary, processing through the deactivation furnace is adequate. Burn out 20mm HE projectiles by processing through the deactivation furnace or detonate. Processing complete small arms ammunition cartridges, all caliber's, through the deactivation furnace at controlled temperatures will result in adequate demilitarization. Fuzes and boosters can be disposed of by disassembly and cutting, drilling, or punching to deform metal parts. Explosive components generated through disassembly are to be burned or detonated. Fuzes may also be processed through a deactivation furnace as a complete item when disassembly is not feasible. For grenades demilitarization may be accomplished by removal of explosive components by crushing, cutting, breaking, melting, burning, or otherwise to fully preclude their rehabilitation or further use as grenade components. Demilitarization may also be accomplished by detonation or burning as appropriate for the particular item involved.

e. **Rocket Motors, Warheads, Components and Similar Items of All Types,** including high explosive, inert, loaded, practice and smoke. Wash out or burn out rocket warhead filler and mutilate casing by crushing or cutting by torch and deforming threaded area. Disassemble and remove or burn out rocket motor propellant and cut or crush case, and deform threaded area of cases. Rocket motors and warheads may also be detonated.

f. **Mines, Anti-Personnel/Anti-Tank Explosive, Components and Similar Items of All Types** including high explosive, practice, inert loaded associated explosive components. Wash out or burn out filler and mutilate by crushing, cutting by torch, deforming threaded area or detonate. Process mine fuzes, activators, and firing devices through a deactivation furnace, burn in a cage or detonate. Mine firing such as the M56 or M61 types should be crushed, cut, or burned.

g. **Ammunition and Components Which Have Been Fired or Expended, Range Residue and Other Non-Explosive Items.** All items will be rendered free of energetic materials prior to accomplishment of demilitarization. Range residue will be processed in accordance with the defense Material Disposition Manual, DOD 4160.21-M, Chapter 4, paragraph B.3, after all required demilitarization is accomplished.

1. **Artillery/Mortar Ammunition Components and Similar Items of All Types** including but not limited to high explosive, practice, inert loaded, incendiary, and smoke fillers. Remove explosive filler from projectile (wash out, burn out, etc.). Remove rotating band and deform fuze cavity threads or score or deform bourrelet or gas check band. Score practice round with a torch, displacing a minimum of one cubic inch of metal or shear into two pieces. Deform fin assembly threads and fin blades. Defective cartridge cases will be deformed by off-center punch-out of primer or split case neck or puncture the lower sidewall with a minimum of ¾ inch hole or deform lower sidewall, which will prevent chambering, or crush or press. Burn out smoke mixture or detonate smoke canister.

2. **Inert Loaded Ammunition, Projectiles, and Similar Items of All Types** loaded with inert filler to simulate service item. Remove rotating band from artillery projectiles and open the enclosure of the projectile body to expose the inert filler. On items without rotating bands, open the body closure to expose the inert filler and damage the closure surface to prevent relocating or resealing. **NOTE:** For inert loaded items (concrete, sand, plaster) a potential explosive safety hazard exists when the internal filler is not exposed or unconfined during burning, melting, or cutting. Heat generated from a demilitarization process can cause the filler, moisture and air to expand and burst sealed casings. For this reason, DRMOs will not accept inert loaded items unless the internal filler is exposed and unconfined. The internal filler may be exposed by removal of the fuze well from the cavity, removal of base plates, or by puncturing/drilling holes in the casing.

3. **Bombs and Similar Items of All Types**, including but not limited to high explosive, practice, inert loaded, incendiary and photoflash fillers, military explosive excavating devices, demolition blocks and grenades.

Demilitarization will be accomplished by deforming fuze cavity threads or removing base plate by other than normal disassembly (such as sawing) or by detonation. Grenades will be demilitarized by cutting or crushing (a minimum of 75% compression) the grenade body after item has been defuzed and explosive removed or by detonation.

4. **Rocket Motors, warheads, Components and Similar Items of All Types**, including high explosive, inert loaded, practice and smoke. Demilitarize casing by crushing or cutting by torch or deforming threaded area. Cut, crush case, or deform threaded area of rocket motor cases.

5. **Mines, Anti-Personnel/Anti-Tank, and Similar Items of All Types** including high explosive, practice, inert loaded and associated components. Demilitarize casing by crushing, or cutting by torch, and deforming threaded area or detonate. Mine firing devices such as the M56 or M61 types should be crushed, cut, or burned.

h. **Instructions For Specific Ordnance Items:**

1. **BDU-50 Practice Bomb:**

(a) Each bomb must be inspected by qualified EOD/UXO personnel to ensure that bombs are BDU-50s and that the bomb is expended. If the EOD/UXO personnel cannot verify both fuze wells, or absence thereof, it must be op-opened remotely by detonation.

(b) A 1/4 inch hole will be punched in each of the two spanner wrench receptacles, fracturing the metal to a depth in excess of 1/10 inch into the concrete filler material..

(c) A 1/4 inch punch will be utilized to further damage the threads of the nose plate, ensuring that the plate cannot be removed and replaced.

(d) Fins will be deformed or broken and paint will then be used to place a mark of contrasting color on the bomb or near the nose.

i. **Technical data** will be demilitarized by burning, shredding, or pulping.

5.2.3 Venting of MPPEH Related Scrap

Prior and current practices have taken this to mean that if the MPPEH item is intact and resembles a piece of military ordnance, such as a 105mm HEAT (Practice) projectile, it should have a hole punched through the side to expose the filler as non-explosive. This is typically accomplished through the use of a shape charge attack or vented using remotely operated water

jet cutting technology. The explosively created hole exposes the filler and disfigures the projectile so that it could not be used again. For a 105mm HEAT (Practice) round this approach is sufficient because the projectile never contained any explosives or energetic material used as a spotting charge. For a MK- 82 LDGP Bomb (Practice) this approach may not be sufficient because the bomb can contain various types of explosively activated spotting charges that have the capability to cause injury or death if exposed to the right elements such as flame from a cutting torch. And their is always the possibility that a shape charge attack may punch a hole in an explosive ordnance item exposing the filler but not causing a detonation. Because some explosive fillers look like inert fillers the possibility for misidentification and improper certification is real.

Munitions and explosives of concern (MEC) known or suspected to be inert (filled with an inert substance to simulate the weight of an explosive filler) will be explosively vented with conical-shaped charges or vented using a remotely operated water jet cutter. For the purpose of determining the fragmentation hazard area for venting, it will be assumed that the MEC has an explosive filler and that a high-order detonation will occur. Venting will be considered successful when the inert filler is exposed. The vented inert ordnance item can be treated and disposed as scrap after the venting and demilitarization process is complete.

6.0 Certification/Disposal of Scrap Metal

Generating activities shall have a Memorandum of Agreement (MOA) with the nearest DRMO for the disposal processing of ORS. DRMO will assist with the identification of a recycler that is Qualified Recycling Program (QRP) eligible. The generating activity will ensure that the quantities of demilitarized property turned in to the DRMO are accurate and that these quantities are readily verifiable by the DRMO. DRMOs will not accept any property unless the DD Form 1348-1A contains the demilitarization code or clear text statement of the demilitarization required. The generating activity is responsible for issuing a letter specifying who is authorized to sign the statement of inert certification. This letter will be kept in the project files, at the local DRMO, and with the generating activity. It must be update as needed. Personnel designated as authorized to sign on behalf of CH2M HILL must have a authorization letter from the MR Market Segment Leader.

All material generated from the firing and/or demilitarization of AEDA will be rendered **free from explosives** before being referred to a DRMO for sale. All scrap metal, generated at the site, will be disposed of through the local Defense Reutilization and Marketing Office (DRMO) or when appropriate and approved to a local scrap metal dealer, and will be transferred using DD Form 1348-1A. Prior to release of the material, the Senior UXO Supervisor will physically inspect the material in the containers to ensure that they are free of dangerous items or conduct demilitarization operations. The Senior UXO Supervisor will sign the certificate, typed on the DD Form 1348-1A, which states:

"I certify that the property listed hereon has been inspected
by me and, to the best of my knowledge and belief, contains
no items of a dangerous nature."

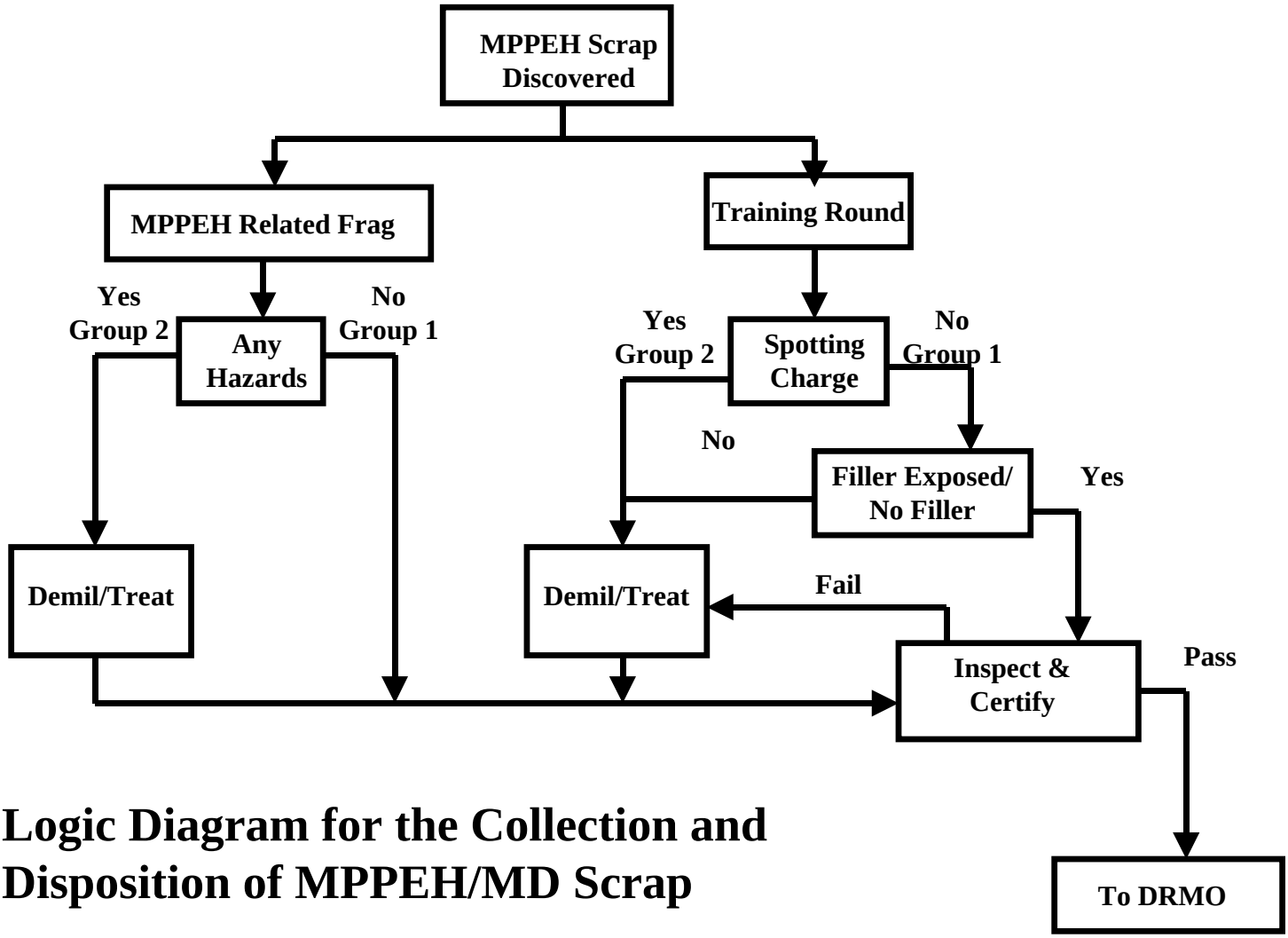
or

"I certify that (identify items) were demilitarized in accordance
with (cite specific instructions (Appendix and Item number)
that were complied with in the DOD 4160.21-M-1
and other applicable regulations."

The certification will be verified (countersigned) by a technically qualified U.S. government representative (U.S. citizen) designated by the responsible commander/generating activity. The government may delegate the responsibility for the second signature (verification) to a contractor. The delegation must be in writing and signed by the contracting officer.

Scrap will be segregated into like metals (mainly steel, aluminum, and mixed metal) and placed into palletized wooden shipping boxes. Each item placed into an inert-certified box will be inspected. The boxes will be filled, the covers will be nailed on, and a lead seal will be affixed. A Statement of Inert Certification will then be attached to the box. The box can then be picked up by a local scrap yard for disposal or recycling.

Using these procedures ensures that the collected scrap metal is properly inspected and classified. Our method includes three distinct inspections which are performed by persons of increasing levels of responsibility. The first inspection is performed at the operating grid by a qualified UXO Technician, the second is performed by the supervisor responsible for the operating grid, and the final inspection is performed by the Senior UXO Supervisor who is vested with overall responsibility.



Logic Diagram for the Collection and Disposition of MPPEH/MD Scrap

Figure 1

Appendix H
In-situ Waste Characterization Sampling

- Data Summary Table
- Laboratory Analytical Report

CTO57R3
Data Summary Table
Site 15 Waste Char 2007 TCLP

StationID	5715A01S030607	5715B01S030607	5715B02S030607	5715B03S030607	5715C01S030707	5715D01S030707	5715D02S030707	5715D03S030707	5715D04S030707	5715E01S031207	5715E02S031207	5715E03S031207	5715E04S031207
SampleID	5715A01S030607	5715B01S030607	5715B02S030607	5715B03S030607	5715C01S030707	5715D01S030707	5715D02S030707	5715D03S030707	5715D04S030707	5715E01S031207	5715E02S031207	5715E03S031207	5715E04S031207
Sample Date	3/6/2007	3/6/2007	3/6/2007	3/6/2007	3/7/2007	3/7/2007	3/7/2007	3/7/2007	3/7/2007	3/12/2007	3/12/2007	3/12/2007	3/12/2007
Units in mg/L													
Parameter													
SW6010B													
Arsenic	**0.0963**	**0.0265 J**	0.05 U	**0.054**	**0.0348 B**	**0.316 B**	0.05 U	**0.0341 B**	**0.0313 B**	0.05 U	0.05 U	0.05 U	0.05 U
Barium	**0.0252 B**	**0.0128 B**	**0.0292 B**	**0.0275 B**	**0.0122 J**	**0.0465 J**	**0.0168 J**	**0.0144 J**	**0.0305 J**	**0.0691 J**	**0.169 J**	**0.0339 J**	**0.0858 J**
Cadmium	0.05 U	0.05 U	0.05 U	**0.00455 B**	0.05 U	**0.00395 B**	0.05 U	0.05 U	0.05 U	**0.0109 J**	**0.0114 J**	**0.00586 J**	**0.0297 J**
Chromium, total	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Lead	**8.7 B**	**8.62 B**	**4.28 B**	**7.33 B**	**9.26**	**22.2**	**4.82**	**3.34**	**4.92**	0.5 U	**0.0698 J**	0.5 U	0.5 U
Selenium	**0.0451 B**	**0.0298 B**	**0.0352 B**	0.1 U	**0.0456 B**	**0.0363 B**	**0.0458 B**	**0.0683 B**	**0.0433 B**	**0.0603 B**	**0.0316 B**	**0.0325 B**	0.1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
SW7470A													
Mercury	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
SW8081													
chlordane	0.011 U	0.012 U	0.012 U	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U
endrin	0.000023 U	0.000024 U	0.000024 U	0.000024 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.00002 U	0.000021 U	0.00002 U
gamma bhc (lindane)	0.000023 U	0.000024 U	0.000024 U	0.000024 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.00002 U	0.000021 U	0.00002 U
heptachlor	**0.000019 J**	**0.00001 J**	**0.000012 J**	**0.000011 J**	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.00002 U	0.000021 U	**0.0000099 J**
heptachlor epoxide	0.000023 U	0.000024 U	0.000024 U	0.000024 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.00002 U	0.000021 U	0.00002 U
methoxychlor	0.000023 U	0.000024 U	0.000024 U	0.000024 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000021 U	0.00002 U	0.000021 U	0.00002 U
toxaphene	0.011 U	0.012 U	0.012 U	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U
SW8151													
2,4-d (dichlorophenoxyacetic acid)	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.00031 U	0.00033 U	0.00033 U	0.00033 U
silvex (2,4,5-tp)	0.000084 U	0.000083 U	0.000084 U	0.000084 U	0.000076 U	0.000076 U	0.000076 U	0.000076 U	0.000076 U	0.000079 U	0.000084 U	0.000083 U	0.000084 U
SW8260B													
1,1-Dichloroethene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichloroethane	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carbon tetrachloride	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chlorobenzene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chloroform	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl ethyl ketone (2-butanone)	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Tetrachloroethene (PCE)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Trichloroethene (TCE)	0.01 U	**0.0039 J**	0.01 U	**0.0052 J**	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Vinyl chloride	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SW8270C													
1,4-Dichlorobenzene	0.00784 U	0.008 U	0.008 U	0.008 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00816 U	0.0087 U	0.00909 U
2,4,5-Trichlorophenol	0.00784 U	0.008 U	0.008 U	0.008 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00816 U	0.0087 U	0.00909 U
2,4,6-Trichlorophenol	0.00784 U	0.008 U	0.008 U	0.008 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00816 U	0.0087 U	0.00909 U
2,4-Dinitrotoluene	0.00784 U	0.008 U	0.008 U	0.008 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00816 U	0.0087 U	0.00909 U
2-Methylphenol (o-Cresol)	0.00784 U	0.008 U	0.008 U	0.008 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00816 U	0.0087 U	0.00909 U
4-Methylphenol (p-Cresol)	0.012 U	0.0122 U	0.0122 U	0.0122 U	0.0136 U	0.0136 U	0.0136 U	0.0136 U	0.0136 U	0.0136 U	0.0124 U	0.0133 U	0.0139 U
Hexachlorobenzene	0.00784 U	0.008 U	0.008 U	0.008 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00816 U	0.0087 U	0.00909 U
Hexachlorobutadiene	0.00784 U	0.008 U	0.008 U	0.008 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00816 U	0.0087 U	0.00909 U
Hexachloroethane	0.00784 U	0.008 U	0.008 U	0.008 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00816 U	0.0087 U	0.00909 U
Nitrobenzene	0.00784 U	0.008 U	0.008 U	0.008 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00816 U	0.0087 U	0.00909 U
Pentachlorophenol	0.0196 U	0.02 U	0.02 U	0.02 U	0.0222 U	0.0222 U	0.0222 U	0.0222 U	0.0222 U	0.0222 U	0.0204 U	0.0217 U	0.0227 U
pyridine	0.00784 U	0.008 U	0.008 U	0.008 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00889 U	0.00816 U	0.0087 U	0.00909 U

Notes:
Values Bold and Shaded are Hits
U - The analyte was analyzed for , but not detected.
J - estimated value
B-The analyte was detected in the associated method and/or calibration blank.
UJ- Value non-detected estimated.
JB- Estimate value..The analyte was detected in the associated Field Blank, Method and/or calibration blank.

CTO57R3
Data Summary Table
Site 15 Waste Char 2007 TCLP

StationID	5715E05S031207	5715E06S031207	5715E07S031207	5715E08S031207	5715E09S031207	5715E10S031207	5715E11S031207	5715E12S031207	5715F01S031307	5715F02S031307	5715F03S031307	5715F04S031307	5715G01S030707
SampleID	**5715E05S031207**	**5715E06S031207**	**5715E07S031207**	**5715E08S031207**	**5715E09S031207**	**5715E10S031207**	**5715E11S031207**	**5715E12S031207**	**5715F01S031307**	**5715F02S031307**	**5715F03S031307**	**5715F04S031307**	**5715G01S030707**
Sample Date	**3/12/2007**	**3/12/2007**	**3/12/2007**	**3/12/2007**	**3/12/2007**	**3/12/2007**	**3/12/2007**	**3/12/2007**	**3/13/2007**	**3/13/2007**	**3/13/2007**	**3/13/2007**	**3/7/2007**
Units in mg/L													
Parameter													
SW6010B													
Arsenic	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.0283 J**	**0.0244 B**
Barium	**0.163 J**	**0.0845 J**	**0.0636 J**	**0.0417 J**	**0.199 J**	**0.0728 J**	**0.165 J**	**0.038 J**	**0.0216 J**	**0.0248 J**	**0.0222 J**	**0.019 J**	**0.0358 J**
Cadmium	**0.00454 J**	**0.0148 J**	**0.00476 J**	**0.00693 J**	**0.017 J**	**0.0123 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.00787 J**	**0.00688 B**
Chromium, total	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Lead	**0.084 J**	**0.18 J**	**0.0309 J**	**0.193 J**	**1.86**	0.5 U	**0.114 J**	0.5 U	**8.88**	**7.48**	**9.08**	**3.88**	0.5 U
Selenium	**0.0678 B**	0.1 U	**0.0339 B**	**0.082 B**	0.1 U	**0.0591 B**	**0.0484 B**	**0.0286 B**	**0.0499 B**	0.1 U	0.1 U	**0.0591 B**	**0.0456 B**
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
SW7470A													
Mercury	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
SW8081													
chlordane	0.011 U	0.011 U	0.011 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U
endrin	0.000022 U	0.000022 U	0.000022 U	0.00002 U	0.000021 U	0.000023 U	0.000022 U	0.000021 U	0.000021 U	0.000022 U	0.000022 U	0.000022 U	0.00002 U
gamma bhc (lindane)	0.000022 U	0.000022 U	0.000022 U	0.00002 U	0.000021 U	0.000023 U	0.000022 U	0.000021 U	**0.000017 J**	0.000022 U	0.000022 U	0.000022 U	0.00002 U
heptachlor	0.000022 U	0.000022 U	0.000022 U	0.00002 U	0.000021 U	0.000023 U	0.000022 U	0.000021 U	0.000021 U	0.000022 U	0.000022 U	0.000022 U	0.00002 U
heptachlor epoxide	0.000022 U	0.000022 U	0.000022 U	0.00002 U	0.000021 U	0.000023 U	0.000022 U	0.000021 U	0.000021 U	0.000022 U	0.000022 U	0.000022 U	0.00002 U
methoxychlor	0.000022 U	0.000022 U	0.000022 U	0.00002 U	0.000021 U	0.000023 U	0.000022 U	0.000021 U	0.000021 U	0.000022 U	0.000022 U	0.000022 U	0.00002 U
toxaphene	0.011 U	0.011 U	0.011 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U
SW8151													
2,4-d (dichlorophenoxyacetic acid)	0.00033 U	0.00033 U	0.00031 U	0.00031 U	0.00031 U	0.00031 U	0.00031 UJ	0.00032 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.0003 U
silvex (2,4,5-tp)	0.000084 U	0.000083 U	0.000079 U	0.000079 U	0.000079 U	0.000079 U	0.000079 UJ	0.000081 U	0.000083 U	0.000083 U	0.000084 U	0.000083 U	0.000076 U
SW8260B													
1,1-Dichloroethene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichloroethane	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carbon tetrachloride	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chlorobenzene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chloroform	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl ethyl ketone (2-butanone)	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Tetrachloroethene (PCE)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Trichloroethene (TCE)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Vinyl chloride	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SW8270C													
1,4-Dichlorobenzene	0.008 U	0.0087 U	0.0087 U	0.00889 U	0.0087 U	0.00833 U	0.00851 U	0.00889 U	0.0087 U	0.0093 U	0.0087 U	0.00851 U	0.00889 U
2,4,5-Trichlorophenol	0.008 U	0.0087 U	0.0087 U	0.00889 U	0.0087 U	0.00833 U	0.00851 U	0.00889 U	0.0087 U	0.0093 U	0.0087 U	0.00851 U	0.00889 U
2,4,6-Trichlorophenol	0.008 U	0.0087 U	0.0087 U	0.00889 U	0.0087 U	0.00833 U	0.00851 U	0.00889 U	0.0087 U	0.0093 U	0.0087 U	0.00851 U	0.00889 U
2,4-Dinitrotoluene	0.008 U	0.0087 U	0.0087 U	0.00889 U	0.0087 U	0.00833 U	0.00851 U	0.00889 U	0.0087 U	0.0093 U	0.0087 U	0.00851 U	0.00889 U
2-Methylphenol (o-Cresol)	0.008 U	0.0087 U	0.0087 U	0.00889 U	0.0087 U	0.00833 U	0.00851 U	0.00889 U	0.0087 U	0.0093 U	0.0087 U	0.00851 U	0.00889 U
4-Methylphenol (p-Cresol)	0.0122 U	0.0133 U	0.0133 U	0.0136 U	0.0133 U	0.0127 U	0.013 U	0.0136 U	0.0133 U	0.0142 U	0.0133 U	0.013 U	0.0136 U
Hexachlorobenzene	0.008 U	0.0087 U	0.0087 U	0.00889 U	0.0087 U	0.00833 U	0.00851 U	0.00889 U	0.0087 U	0.0093 U	0.0087 U	0.00851 U	0.00889 U
Hexachlorobutadiene	0.008 U	0.0087 U	0.0087 U	0.00889 U	0.0087 U	0.00833 U	0.00851 U	0.00889 U	0.0087 U	0.0093 U	0.0087 U	0.00851 U	0.00889 U
Hexachloroethane	0.008 U	0.0087 U	0.0087 U	0.00889 U	0.0087 U	0.00833 U	0.00851 U	0.00889 U	0.0087 U	0.0093 U	0.0087 U	0.00851 U	0.00889 U
Nitrobenzene	0.008 U	0.0087 U	0.0087 U	0.00889 U	0.0087 U	0.00833 U	0.00851 U	0.00889 U	0.0087 U	0.0093 U	0.0087 U	0.00851 U	0.00889 U
Pentachlorophenol	0.02 U	0.0217 U	0.0217 U	0.0222 U	0.0217 U	0.0208 U	0.0213 U	0.0222 U	0.0217 U	0.0232 U	0.0217 U	0.0213 U	0.0222 U
pyridine	0.008 U	0.0087 U	0.0087 U	0.00889 U	0.0087 U	0.00833 U	0.00851 U	0.00889 U	0.0087 U	0.0093 U	0.0087 U	0.00851 U	0.00889 U

Notes:
Values Bold and Shaded are Hits
U - The analyte was analyzed for , but not d
J - estimated value
B-The analyte was detected in the associat
UJ- Value non-detected estimated.
JB- Estimate value..The analyte was detect

CTO57R3
Data Summary Table
Site 15 Waste Char 2007 TCLP

StationID	5715G02S030707	5715G03S030707	5715H01S030607	5715H02S030607	5715H03S030607	5715I01S031307	5715I02S031307	5715I03S031307	5715I04S031307	5715J01S030607	5715K01S030807	5715L01S031507	5715L02S031407
SampleID	5715G02S030707	5715G03S030707	5715H01S030607	5715H02S030607	5715H03S030607	5715I01S031307	5715I02S031307	5715I03S031307	5715I04S031307	5715J01S030607	5715K01S030807	5715L01S031507	5715L02S031407
Sample Date	3/7/2007	3/7/2007	3/6/2007	3/6/2007	3/6/2007	3/13/2007	3/13/2007	3/13/2007	3/13/2007	3/6/2007	3/8/2007	3/15/2007	3/15/2007
Units in mg/L													
Parameter													
SW6010B													
Arsenic	**0.0191 B**	**0.0219 B**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.0261 J**	0.05 U	0.05 U	**0.0282 B**	0.05 U
Barium	**0.0364 J**	**0.0223 J**	**0.075 B**	**0.149 B**	**0.248 B**	**0.117 J**	**0.128 J**	**0.108 J**	**0.0271 J**	**0.0674 B**	**0.0705 J**	**0.487 J**	**0.408 J**
Cadmium	0.05 U	**0.00569 B**	**0.00693 B**	**0.0107 B**	**0.013 B**	0.05 U	0.05 U	**0.00436 J**	0.05 U	**0.00876 B**	0.05 U	**0.0111 J**	**0.0144 J**
Chromium, total	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.0141 J**
Lead	**0.231 J**	**0.0351 J**	0.5 U	**0.0671 B**	**0.119 B**	**0.118 J**	**0.169 J**	**0.362 J**	**0.0374 J**	**0.0309 B**	**0.942**	**3.35**	**2.29**
Selenium	**0.0734 B**	**0.0516 B**	0.1 U	0.1 U	**0.0273 B**	**0.0466 B**	0.1 U	**0.0491 B**	**0.0452 B**	**0.0276 B**	**0.0342 J**	0.1 U	0.1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
SW7470A													
Mercury	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
SW8081													
chlordane	0.01 U	0.011 U	0.012 U	0.012 U	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.01 U	0.0096 U	0.0096 U
endrin	0.00002 U	0.000023 U	0.000024 U	0.000024 U	0.000025 U	0.000021 U	0.000022 U	0.000021 U	0.000021 U	0.000025 U	0.00002 U	0.000019 U	0.000019 U
gamma bhc (lindane)	0.00002 U	0.000023 U	0.000024 U	0.000024 U	0.000025 U	0.000021 U	0.000022 U	0.000021 U	0.000021 U	0.000025 U	0.00002 U	0.000019 U	0.000019 U
heptachlor	0.00002 U	0.000023 U	**0.0000093 J**	**0.000014 J**	**0.000012 J**	0.000021 U	0.000022 U	0.000021 U	**0.0000054 J**	**0.000014 J**	**0.000013 J**	**0.0000031 J**	0.000019 U
heptachlor epoxide	0.00002 U	0.000023 U	0.000024 U	0.000024 U	0.000025 U	0.000021 U	0.000022 U	0.000021 U	0.000021 U	0.000025 U	0.00002 U	0.000019 U	0.000019 U
methoxychlor	0.00002 U	0.000023 U	0.000024 U	0.000024 U	0.000025 U	0.000021 U	0.000022 U	0.000021 U	0.000021 U	0.000025 U	0.00002 U	0.000019 U	0.000019 U
toxaphene	0.01 U	0.011 U	0.012 U	0.012 U	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.01 U	0.0096 U	0.0096 U
SW8151													
2,4-d (dichlorophenoxyacetic acid)	0.0003 U	0.00031 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.0003 U	0.00035 U	0.00034 U
silvex (2,4,5-tp)	0.000076 U	0.000079 U	0.000084 U	0.000084 U	0.000084 U	0.000084 U	0.000083 U	0.000083 U	0.000083 U	0.000083 U	0.000076 U	0.000088 U	0.000086 U
SW8260B													
1,1-Dichloroethene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichloroethane	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carbon tetrachloride	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chlorobenzene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chloroform	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl ethyl ketone (2-butanone)	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Tetrachloroethene (PCE)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Trichloroethene (TCE)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Vinyl chloride	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SW8270C													
1,4-Dichlorobenzene	0.00889 U	0.00941 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00851 U	0.00833 U	0.0087 U	0.00889 U	0.008 U	0.008 U	0.008 U
2,4,5-Trichlorophenol	0.00889 U	0.00941 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00851 U	0.00833 U	0.0087 U	0.00889 U	0.008 U	0.008 U	0.008 U
2,4,6-Trichlorophenol	0.00889 U	0.00941 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00851 U	0.00833 U	0.0087 U	0.00889 U	0.008 U	0.008 U	0.008 U
2,4-Dinitrotoluene	0.00889 U	0.00941 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00851 U	0.00833 U	0.0087 U	0.00889 U	0.008 U	0.008 U	0.008 U
2-Methylphenol (o-Cresol)	0.00889 U	0.00941 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00851 U	0.00833 U	0.0087 U	0.00889 U	0.008 U	0.008 U	0.008 U
4-Methylphenol (p-Cresol)	0.0136 U	0.0144 U	0.0122 U	0.0122 U	0.0122 U	0.0133 U	0.013 U	0.0127 U	0.0133 U	0.0136 U	0.0122 U	0.0122 U	0.0122 U
Hexachlorobenzene	0.00889 U	0.00941 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00851 U	0.00833 U	0.0087 U	0.00889 U	0.008 U	0.008 U	0.008 U
Hexachlorobutadiene	0.00889 U	0.00941 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00851 U	0.00833 U	0.0087 U	0.00889 U	0.008 U	0.008 U	0.008 U
Hexachloroethane	0.00889 U	0.00941 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00851 U	0.00833 U	0.0087 U	0.00889 U	0.008 U	0.008 U	0.008 U
Nitrobenzene	0.00889 U	0.00941 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00851 U	0.00833 U	0.0087 U	0.00889 U	0.008 U	0.008 U	0.008 U
Pentachlorophenol	0.0222 U	0.0235 U	0.02 U	0.02 U	0.02 U	0.0217 U	0.0213 U	0.0208 U	0.0217 U	0.0222 U	0.02 U	0.02 U	0.02 U
pyridine	0.00889 U	0.00941 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00851 U	0.00833 U	0.0087 U	0.00889 U	0.008 U	0.008 U	0.008 U

Notes:
Values Bold and Shaded are Hits
U - The analyte was analyzed for , but not d
J - estimated value
B-The analyte was detected in the associate
UJ- Value non-detected estimated.
JB- Estimate value..The analyte was detect

CTO57R3
Data Summary Table
Site 15 Waste Char 2007 TCLP

StationID	**5715L03S031507**	**5715L04S031507**	**5715L05S031507**	**5715L06S031507**	**5715L07S031507**	**5715L08S031507**	**5715L09S031507**	**5715L10S031407**	**5715L11S031407**	**5715L12S031407**	**5715L13S031407**	**5715L14S031407**	**5715L15S031407**
SampleID	**5715L03S031507**	**5715L04S031507**	**5715L05S031507**	**5715L06S031507**	**5715L07S031507**	**5715L08S031507**	**5715L09S031507**	**5715L10S031407**	**5715L11S031407**	**5715L12S031407**	**5715L13S031407**	**5715L14S031407**	**5715L15S031407**
Sample Date	**3/15/2007**	**3/15/2007**	**3/15/2007**	**3/15/2007**	**3/15/2007**	**3/15/2007**	**3/15/2007**	**3/14/2007**	**3/14/2007**	**3/14/2007**	**3/14/2007**	**3/14/2007**	**3/14/2007**
Units in mg/L													
Parameter													
SW6010B													
Arsenic	**0.23 B**	**0.043 B**	**0.0417 B**	**0.0464 B**	**0.0342 B**	**0.0816 B**	**0.0522 B**	**0.32**	**0.284**	**0.0205 J**	**0.0272 J**	0.05 U	0.05 U
Barium	**0.293 J**	**0.14 J**	**0.266 J**	**0.337 J**	**0.711 J**	**3.42 J**	**2.98 J**	**1.4 J**	**3.64 J**	**0.809 J**	**0.905 J**	**1.92 J**	**2.65 J**
Cadmium	**0.0122 J**	0.05 U	**0.00426 J**	**0.00728 J**	0.05 U	**0.00705 J**	**0.0112 J**	**0.0063 B**	**0.0367 B**	0.05 U	0.05 U	**0.0162 B**	**0.0305 B**
Chromium, total	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Lead	**15.8**	**3.33**	**5.29**	**5.48**	**3.17**	**5.91**	**5.62**	**9.6**	**33.1**	**0.0528 J**	0.5 U	**1.66**	**0.7**
Selenium	**0.0389 B**	0.1 U	0.1 U	**0.0665 B**	**0.0333 B**	0.1 U	**0.0264 B**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
SW7470A													
Mercury	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
SW8081													
chlordane	0.0098 U	**0.00038 J**	0.0098 U	0.0098 U	0.0096 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
endrin	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000019 U	0.00002 U	0.00002 U	0.000022 U	0.00002 U	0.000022 U	0.000021 U	0.000021 U	0.000021 U
gamma bhc (lindane)	0.00002 U	**0.000023 J**	0.00002 U	0.00002 U	0.000019 U	0.00002 U	0.00002 U	0.000022 U	0.00002 U	0.000022 U	0.000021 U	0.000021 U	0.000021 U
heptachlor	0.00002 U	**0.000027 J**	0.00002 U	**0.0000094 J**	0.000019 U	0.00002 U	0.00002 U	0.000022 U	0.00002 U	0.000022 U	0.000021 U	0.000021 U	0.000021 U
heptachlor epoxide	0.00002 U	**0.000027 J**	0.00002 U	0.00002 U	0.000019 U	0.00002 U	0.00002 U	0.000022 U	0.00002 U	0.000022 U	0.000021 U	0.000021 U	0.000021 U
methoxychlor	0.00002 U	**0.000032 J**	0.00002 U	0.00002 U	0.000019 U	0.00002 U	0.00002 U	0.000022 U	0.00002 U	0.000022 U	0.000021 U	0.000021 U	0.000021 U
toxaphene	0.0098 U	0.0098 U	0.0098 U	0.0098 U	0.0096 U	0.01 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U
SW8151													
2,4-d (dichlorophenoxyacetic acid)	0.00034 U	0.00035 U	0.00035 U	0.00035 U	0.00036 U	0.00033 U	0.00033 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U
silvex (2,4,5-tp)	0.000086 U	0.000088 U	0.000088 U	0.000088 U	0.00009 U	0.000084 U	0.000084 U	0.000076 U	0.000076 U	0.000076 U	0.000076 U	0.000076 U	0.000076 U
SW8260B													
1,1-Dichloroethene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichloroethane	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carbon tetrachloride	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chlorobenzene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chloroform	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl ethyl ketone (2-butanone)	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Tetrachloroethene (PCE)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Trichloroethene (TCE)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Vinyl chloride	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SW8270C													
1,4-Dichlorobenzene	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00909 U	0.00851 U	0.00909 U	0.0087 U	0.00889 U
2,4,5-Trichlorophenol	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00909 U	0.00851 U	0.00909 U	0.0087 U	0.00889 U
2,4,6-Trichlorophenol	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00909 U	0.00851 U	0.00909 U	0.0087 U	0.00889 U
2,4-Dinitrotoluene	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00909 U	0.00851 U	0.00909 U	0.0087 U	0.00889 U
2-Methylphenol (o-Cresol)	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00909 U	0.00851 U	0.00909 U	0.0087 U	0.00889 U
4-Methylphenol (p-Cresol)	0.0122 U	0.0122 U	0.0122 U	0.0122 U	0.0122 U	0.0122 U	0.0122 U	0.0133 U	0.0139 U	0.013 U	0.0139 U	0.0133 U	0.0136 U
Hexachlorobenzene	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00909 U	0.00851 U	0.00909 U	0.0087 U	0.00889 U
Hexachlorobutadiene	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00909 U	0.00851 U	0.00909 U	0.0087 U	0.00889 U
Hexachloroethane	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00909 U	0.00851 U	0.00909 U	0.0087 U	0.00889 U
Nitrobenzene	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00909 U	0.00851 U	0.00909 U	0.0087 U	0.00889 U
Pentachlorophenol	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.0435 U	0.0454 U	0.0426 U	0.0454 U	0.0435 U	0.0444 U
pyridine	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.0087 U	0.00909 U	0.00851 U	0.00909 U	0.0087 U	0.00889 U

Notes:
Values Bold and Shaded are Hits
U - The analyte was analyzed for , but not d
J - estimated value
B-The analyte was detected in the associate
UJ- Value non-detected estimated.
JB- Estimate value..The analyte was detect

CTO57R3
Data Summary Table
Site 15 Waste Char 2007 TCLP

StationID	5715L16S031407	5715L17S031407	5715L18S031407	5715M01S030907	5715N01S030907	5715N02S030907	5715N03S030907	5715O01S030807	5715O02S030807	5715P01S030807	5715P02S030807	5715P03S030807	5715Q01S030907
SampleID	5715L16S031407	5715L17S031407	5715L18S031407	5715M01S030907	5715N01S030907	5715N02S030907	5715N03S030907	5715O01S030807	5715O02S030807	5715P01S030807	5715P02S030807	5715P03S030807	5715Q01S030907
Sample Date	3/14/2007	3/14/2007	3/14/2007	3/9/2007	3/9/2007	3/9/2007	3/9/2007	3/8/2007	3/8/2007	3/8/2007	3/8/2007	3/8/2007	3/9/2007
Units in mg/L													
Parameter													
SW6010B													
Arsenic	0.05 U	0.0386 J	0.05 U	0.272	0.219	0.0756	0.12	0.05 U	0.05 U	0.121	0.0792	0.0225 J	0.0336 J
Barium	1.39 J	1.48 J	0.074 J	0.0174 J	0.0197 J	0.00754 J	0.0147 J	0.152 J	0.449 J	0.0143 J	0.00976 J	0.0126 J	0.0152 J
Cadmium	0.05 U	0.0176 B	0.05 U	0.00435 J	0.05 U	0.05 U	0.05 U	0.00575 J	0.00528 J	0.05 U	0.00706 J	0.00646 J	0.00456 J
Chromium, total	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Lead	0.275 J	0.558	0.0581 J	28.2	22.6	9.46	16.4	0.163 J	0.951	18.2	15.7	14.1	6.97
Selenium	0.0415 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.045 J	0.1 U	0.0276 J	0.0288 J	0.0292 J	0.0337 J	0.1 U
Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
SW7470A													
Mercury	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
SW8081													
chlordane	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U
endrin	0.000022 U	0.000021 U	0.000022 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000023 U	0.00002 U	0.00002 U
gamma bhc (lindane)	0.000022 U	0.000021 U	0.000022 U	0.00002 U	0.000013 J	0.000052	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000023 U	0.00002 U	0.00002 U
heptachlor	0.000022 U	0.000021 U	0.000022 U	0.000016 J	0.000024	0.000017 J	0.000021	0.000032	0.000039	0.000046	0.000018 J	0.00001 J	0.000017 J
heptachlor epoxide	0.000022 U	0.000021 U	0.000022 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000023 U	0.00002 U	0.00002 U
methoxychlor	0.000022 U	0.000021 U	0.000022 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.00002 U	0.000023 U	0.00002 U	0.00002 U
toxaphene	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U
SW8151													
2,4-d (dichlorophenoxyacetic acid)	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.00033 U	0.0003 U	0.0003 U	0.00031 U	0.00029 U	0.00032 U	0.00031 U	0.00035 U	0.00032 U
silvex (2,4,5-tp)	0.000076 U	0.000076 U	0.000076 U	0.000076 U	0.000084 U	0.000076 U	0.000076 U	0.000078 U	0.000074 U	0.00008 U	0.000079 U	0.000089 U	0.00008 U
SW8260B													
1,1-Dichloroethene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichloroethane	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carbon tetrachloride	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chlorobenzene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chloroform	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methyl ethyl ketone (2-butanone)	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Tetrachloroethene (PCE)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Trichloroethene (TCE)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Vinyl chloride	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SW8270C													
1,4-Dichlorobenzene	0.0087 U	0.00889 U	0.0087 U	0.00889 U	0.00816 U	0.008 U	0.00808 U	0.008 U	0.008 U	0.008 U	0.008 U	0.01 U	0.00816 U
2,4,5-Trichlorophenol	0.0087 U	0.00889 U	0.0087 U	0.00889 U	0.00816 U	0.008 U	0.00808 U	0.008 U	0.008 U	0.008 U	0.008 U	0.01 U	0.00816 U
2,4,6-Trichlorophenol	0.0087 U	0.00889 U	0.0087 U	0.00889 U	0.00816 U	0.008 U	0.00808 U	0.008 U	0.008 U	0.008 U	0.008 U	0.01 U	0.00816 U
2,4-Dinitrotoluene	0.0087 U	0.00889 U	0.0087 U	0.00889 U	0.00816 U	0.008 U	0.00808 U	0.008 U	0.008 U	0.008 U	0.008 U	0.01 U	0.00816 U
2-Methylphenol (o-Cresol)	0.0087 U	0.00889 U	0.0087 U	0.00889 U	0.00816 U	0.008 U	0.00808 U	0.008 U	0.008 U	0.008 U	0.008 U	0.01 U	0.00816 U
4-Methylphenol (p-Cresol)	0.0133 U	0.0136 U	0.0133 U	0.0136 U	0.0124 U	0.0122 U	0.0123 U	0.0122 U	0.0122 U	0.0122 U	0.0122 U	0.0152 U	0.0124 U
Hexachlorobenzene	0.0087 U	0.00889 U	0.0087 U	0.00889 U	0.00816 U	0.008 U	0.00808 U	0.008 U	0.008 U	0.008 U	0.008 U	0.01 U	0.00816 U
Hexachlorobutadiene	0.0087 U	0.00889 U	0.0087 U	0.00889 U	0.00816 U	0.008 U	0.00808 U	0.008 U	0.008 U	0.008 U	0.008 U	0.01 U	0.00816 U
Hexachloroethane	0.0087 U	0.00889 U	0.0087 U	0.00889 U	0.00816 U	0.008 U	0.00808 U	0.008 U	0.008 U	0.008 U	0.008 U	0.01 U	0.00816 U
Nitrobenzene	0.0087 U	0.00889 U	0.0087 U	0.00889 U	0.00816 U	0.008 U	0.00808 U	0.008 U	0.008 U	0.008 U	0.008 U	0.01 U	0.00816 U
Pentachlorophenol	0.0435 U	0.0444 U	0.0435 U	0.0222 U	0.0204 U	0.02 U	0.0202 U	0.02 U	0.02 U	0.02 U	0.02 U	0.025 U	0.0204 U
pyridine	0.0087 U	0.00889 U	0.0087 U	0.00889 U	0.00816 U	0.008 U	0.00808 U	0.008 U	0.008 U	0.008 U	0.008 U	0.01 U	0.00816 U

Notes:
Values Bold and Shaded are Hits
U - The analyte was analyzed for , but not d
J - estimated value
B-The analyte was detected in the associat
UJ- Value non-detected estimated.
JB- Estimate value..The analyte was detect

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	NAS Cecil Field / CTO-57
EPA Sample No.	5715WW1W031507		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506237
Matrix:	WATER	Lab Sample ID:	250623701
Lab File ID:	23701.D	Sample wt/vol:	5
Units:	ML	Date Received:	03/16/07
Concentrated Extract Volume:	5	Date Extracted:	
Level:(low/med)	LOW	Date Analyzed:	03/19/07
Time:	1559	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	PURGETRAP	Station ID:	Decon Drum
Method:	8260	GPC Cleanup : (Y/N)	
pH:		Column(1):	DB-624
ID:	0.18 (mm)	*CONCENTRATION UNITS:*	UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
75-35-4	1,1-Dichloroethene	1	U
75-15-0	Carbon disulfide	1	U
75-09-2	Methylene chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
67-64-1	Acetone	6	U
156-59-2	cis-1,2-Dichloroethene	1	U
74-97-5	Bromochloromethane	1	U
78-93-3	2-Butanone	4	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	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
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	2	U
108-88-3	Toluene	51	
10061-02-6	trans-1,3-Dichloropropene	1	U

R-D

300307 1540

Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701 Lab File ID: 23701.D

Sample wt/vol: 5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1559

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Decon Drum Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	1	U
591-78-6	2-Hexanone	2	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane(EDB)	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene (Cumene)	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
87-61-6	1,2,3-Trichlorobenzene	1	U
1330-20-7	Xylene (total)	1.5	J
1634-04-4	MTBE	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
108-87-2	Methyl Cyclohexane	1	U
79-20-9	Methyl Acetate	2.4	U
110-82-7	Cyclohexane	1	U

R-D

300307 1540

Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507DL1

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701DL1 Lab File ID: 23701R1.D

Sample wt/vol: 5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 1227

PercentSolids: 0 decanted : Dilution Factor: 10

Extraction: PURGETRAP Station ID: Decon Drum Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon disulfide	10	U
75-09-2	Methylene chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
67-64-1	Acetone	6650	~~E~~ R-D
156-59-2	cis-1,2-Dichloroethene	10	U
74-97-5	Bromochloromethane	10	U
78-93-3	2-Butanone	40	U
67-66-3	Chloroform	5.4	J
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
71-43-2	Benzene	10	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	20	U
108-88-3	Toluene	46.6	
10061-02-6	trans-1,3-Dichloropropene	10	U

ok

300307 1540

Form I

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	NAS Cecil Field / CTO-57
EPA Sample No.	5715WW1W031507DL1		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506237
Matrix:	WATER	Lab Sample ID:	250623701DL1
Lab File ID:	23701R1.D		
Sample wt/vol:	5	Units:	ML
Date Received:	03/16/07		
Concentrated Extract Volume:	5	Date Extracted:	
Level:(low/med)	LOW	Date Analyzed:	03/20/07
Time:	1227		
PercentSolids:	0	decanted :	
Dilution Factor:	10		
Extraction:	PURGETRAP	Station ID:	Decon Drum
Method:	8260		
GPC Cleanup : (Y/N)		pH:	
Column(1):	DB-624	ID:	0.18 (mm)
CONCENTRATION UNITS:	UG/L		

CAS NO.	*ANALYTE*	*RESULT*	*Q*
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	20	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane(EDB)	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene (Cumene)	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U
1330-20-7	Xylene (total)	30	U
1634-04-4	MTBE	10	U
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U
108-87-2	Methyl Cyclohexane	10	U
79-20-9	Methyl Acetate	24	U
110-82-7	Cyclohexane	10	U

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Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507DL2

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701DL2 Lab File ID: 23701D.D

Sample wt/vol: 5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1401

PercentSolids: 0 decanted : Dilution Factor: 50

Extraction: PURGETRAP Station ID: Decon Drum Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-71-8	Dichlorodifluoromethane	50	U R-D
74-87-3	Chloromethane	50	U
75-01-4	Vinyl chloride	50	U
74-83-9	Bromomethane	50	U
75-00-3	Chloroethane	50	U
75-69-4	Trichlorofluoromethane	50	U
75-35-4	1,1-Dichloroethene	50	U
75-15-0	Carbon disulfide	50	U
75-09-2	Methylene chloride	50	U
156-60-5	trans-1,2-Dichloroethene	50	U
75-34-3	1,1-Dichloroethane	50	U
67-64-1	Acetone	4980	E
156-59-2	cis-1,2-Dichloroethene	50	U R-D
74-97-5	Bromochloromethane	50	U
78-93-3	2-Butanone	200	U
67-66-3	Chloroform	50	U
71-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon tetrachloride	50	U
71-43-2	Benzene	50	U
107-06-2	1,2-Dichloroethane	50	U
79-01-6	Trichloroethene	50	U
78-87-5	1,2-Dichloropropane	50	U
75-27-4	Bromodichloromethane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	51	
10061-02-6	trans-1,3-Dichloropropene	50	U

ok

300307 1540

Form I

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507DL2

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701DL2 Lab File ID: 23701D.D

Sample wt/vol: 5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1401

PercentSolids: 0 decanted : Dilution Factor: 50

Extraction: PURGETRAP Station ID: Decon Drum Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
79-00-5	1,1,2-Trichloroethane	50	U R-D
127-18-4	Tetrachloroethene	50	U
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	50	U
106-93-4	1,2-Dibromoethane(EDB)	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
75-25-2	Bromoform	50	U
98-82-8	Isopropylbenzene (Cumene)	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
541-73-1	1,3-Dichlorobenzene	50	U
106-46-7	1,4-Dichlorobenzene	50	U
95-50-1	1,2-Dichlorobenzene	50	U
96-12-8	1,2-Dibromo-3-chloropropane	50	U
120-82-1	1,2,4-Trichlorobenzene	50	U
87-61-6	1,2,3-Trichlorobenzene	50	U
1330-20-7	Xylene (total)	150	U
1634-04-4	MTBE	50	U
76-13-1	1,1,2-Trichlorotrifluoroethane	50	U
108-87-2	Methyl Cyclohexane	50	U
79-20-9	Methyl Acetate	120	U
110-82-7	Cyclohexane	50	U

300307 1540

Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Trip Blank

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623702 Lab File ID: 23702.D

Sample wt/vol: 5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1251

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Trip Blank Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-71-8	Dichlorodifluoromethane	1	U
74-87-3	Chloromethane	1	U
75-01-4	Vinyl chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-69-4	Trichlorofluoromethane	1	U
75-35-4	1,1-Dichloroethene	1	U
75-15-0	Carbon disulfide	1	U
75-09-2	Methylene chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
67-64-1	Acetone	6	U
156-59-2	cis-1,2-Dichloroethene	1	U
74-97-5	Bromochloromethane	1	U
78-93-3	2-Butanone	4	U
67-66-3	Chloroform	1	U
71-55-6	1,1,1-Trichloroethane	1	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
78-87-5	1,2-Dichloropropane	1	U
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	2	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U

300307 1540

Form I

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Trip Blank

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623702 Lab File ID: 23702.D

Sample wt/vol: 5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1251

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Trip Blank Method: 8260

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	1	U
591-78-6	2-Hexanone	2	U
124-48-1	Dibromochloromethane	1	U
106-93-4	1,2-Dibromoethane(EDB)	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	U
100-42-5	Styrene	1	U
75-25-2	Bromoform	1	U
98-82-8	Isopropylbenzene (Cumene)	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
541-73-1	1,3-Dichlorobenzene	1	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	1	U
96-12-8	1,2-Dibromo-3-chloropropane	1	U
120-82-1	1,2,4-Trichlorobenzene	1	U
87-61-6	1,2,3-Trichlorobenzene	1	U
1330-20-7	Xylene (total)	3	U
1634-04-4	MTBE	1	U
76-13-1	1,1,2-Trichlorotrifluoroethane	1	U
108-87-2	Methyl Cyclohexane	1	U
79-20-9	Methyl Acetate	2.4	U
110-82-7	Cyclohexane	1	U

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701 Lab File ID: 237-1.D

Sample wt/vol: 950 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 1 Date Extracted: 03/20/07

Level:(low/med) LOW Date Analyzed: 03/22/07 Time: 1911

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Decon Drum Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
111-44-4	Bis(2-Chloroethyl)ether	4.2	U
108-95-2	Phenol	4.2	U
95-57-8	2-Chlorophenol	4.2	U
108-60-1	2,2-Oxybis(1-chloropropane)	4.2	U
95-48-7	2-Methylphenol (o-Cresol)	4.2	U
67-72-1	Hexachloroethane	4.2	U
621-64-7	N-Nitroso-di-n-propylamine	4.2	U
106-44-5	4-Methylphenol	6.4	U
98-95-3	Nitrobenzene	4.2	U
78-59-1	Isophorone	4.2	U
88-75-5	2-Nitrophenol	4.2	U
105-67-9	2,4-Dimethylphenol	4.2	U
111-91-1	Bis(2-Chloroethoxy)methane	4.2	U
120-83-2	2,4-Dichlorophenol	4.2	U
91-20-3	Naphthalene	4.2	U
106-47-8	4-Chloroaniline	4.2	U
91-57-6	2-Methylnaphthalene	4.2	U
87-68-3	Hexachlorobutadiene	4.2	U
59-50-7	4-Chloro-3-methylphenol	4.2	U
77-47-4	Hexachlorocyclopentadiene	4.2	U
88-06-2	2,4,6-Trichlorophenol	4.2	U
95-95-4	2,4,5-Trichlorophenol	4.2	U
91-58-7	2-Chloronaphthalene	4.2	U
88-74-4	2-Nitroaniline	4.2	U
208-96-8	Acenaphthylene	4.2	U
131-11-3	Dimethyl-phthalate	4.2	U
606-20-2	2,6-Dinitrotoluene	4.2	U

C.R

300307 1541

Form I

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701 Lab File ID: 237-1.D

Sample wt/vol: 950 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 1 Date Extracted: 03/20/07

Level:(low/med) LOW Date Analyzed: 03/22/07 Time: 1911

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Decon Drum Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
83-32-9	Acenaphthene	4.2	U
99-09-2	3-Nitroaniline	4.2	U
51-28-5	2,4-Dinitrophenol	21	U
132-64-9	Dibenzofuran	4.2	U
121-14-2	2,4-Dinitrotoluene	4.2	U
100-02-7	4-Nitrophenol	10.5	U
86-73-7	Fluorene	4.2	U
7005-72-3	4-Chlorophenyl-phenylether	4.2	U
84-66-2	Diethylphthalate	4.2	U
100-01-6	4-Nitroaniline	4.2	U
534-52-1	2-Methyl-4,6-dinitrophenol	4.2	U
86-30-6	N-Nitrosodiphenylamine	4.2	U
101-55-3	4-Bromophenyl-phenylether	4.2	U
118-74-1	Hexachlorobenzene	4.2	U
87-86-5	Pentachlorophenol	10.5	U
85-01-8	Phenanthrene	4.2	U
120-12-7	Anthracene	4.2	U
84-74-2	Di-n-butylphthalate	4.2	U
206-44-0	Fluoranthene	4.2	U
129-00-0	Pyrene	4.2	U
85-68-7	Butylbenzylphthalate	4.2	U
91-94-1	3,3'-Dichlorobenzidine	4.2	U
56-55-3	Benzo(a)anthracene	4.2	U
218-01-9	Chrysene	4.2	U
117-81-7	bis(2-ethylhexyl)phthalate	4.6	U
117-84-0	Di-n-octylphthalate	4.2	U
205-99-2	Benzo(b)fluoranthene	4.2	U

n.d

300307 1541

Form I

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701 Lab File ID: 237-1.D

Sample wt/vol: 950 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 1 Date Extracted: 03/20/07

Level:(low/med) LOW Date Analyzed: 03/22/07 Time: 1911

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Decon Drum Method: 8270

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
207-08-9	Benzo(k)fluoranthene	4.2	U
50-32-8	Benzo(a)pyrene	4.2	U
193-39-5	Indeno(1,2,3-cd)pyrene	4.2	U
53-70-3	Dibenz(a,h)anthracene	4.2	U
191-24-2	Benzo(g,h,i)perylene	4.2	U
98-86-2	Acetophenone	4.2	U
95-94-3	1,2,4,5-Tetrachlorobenzene	4.2	U
86-74-8	Carbazole	4.2	U
105-60-2	Caprolactam	4.2	U
92-52-4	Biphenyl	4.2	U
1912-24-9	Atrazine	10.5	U
100-52-7	Benzaldehyde	4.2	U

C-L

300307 1541

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701 Lab File ID: 237-1.D

Sample wt/vol: 900 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/19/07

Level:(low/med) LOW Date Analyzed: 03/22/07 Time: 1654

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Decon Drum Method: 8081

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
319-84-6	alpha-BHC	0.011	U J-S
319-85-7	beta-BHC	0.011	U
319-86-8	delta-BHC	0.011	U
58-89-9	gamma-BHC (Lindane)	0.011	U
76-44-8	Heptachlor	0.011	U
309-00-2	Aldrin	0.011	U
1024-57-3	Heptachlor epoxide	0.011	U
959-98-8	Endosulfan I	0.011	U
60-57-1	Dieldrin	0.011	U
72-55-9	4,4'-DDE	0.011	U
72-20-8	Endrin	0.011	U
33213-65-9	Endosulfan II	0.011	U
72-54-8	4,4'-DDD	0.011	U
1031-07-8	Endosulfan sulfate	0.011	U
50-29-3	4,4'-DDT	0.011	U
72-43-5	Methoxychlor	0.011	U
7421-93-4	Endrin aldehyde	0.011	U
5103-74-2	gamma-Chlordane	0.011	U
5103-71-9	alpha-Chlordane	0.011	U
53494-70-5	Endrin ketone	0.011	U
8001-35-2	Toxaphene	5.6	U

c.t

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

300307 1541

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701 Lab File ID: 237-1.D

Sample wt/vol: 900 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/19/07

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 1242

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Decon Drum Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	0.56	U J-S
11096-82-5	Aroclor-1260	0.56	U
11104-28-2	Aroclor-1221	5.6	U
11141-16-5	Aroclor-1232	5.6	U
53469-21-9	Aroclor-1242	5.6	U
12672-29-6	Aroclor-1248	5.6	U
11097-69-1	Aroclor-1254	5.6	U

o.k

300307 1542

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701 Lab File ID: 237-1.D

Sample wt/vol: 900 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/20/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 0819

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Decon Drum Method: 8151

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	*ANALYTE*	*RESULT*	*Q*
1918-00-9	Dicamba	0.038	U
75-99-0	Dalapon	0.41	U
93-65-2	MCPP	10	U
94-74-6	MCPA	20	U
120-36-5	Dichloroprop	0.2	U
94-75-7	2,4'-D	0.17	U
93-72-1	2,4,5-TP (Silvex)	0.042	U
93-76-5	2,4,5-T	0.12	U
94-82-6	2,4-DB	0.35	
88-85-7	Dinoseb	0.062	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

300307 1542

Form I

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Decon Drum

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7429-90-5	Aluminum	3390			P
7440-36-0	Antimony	12.6		B	P
7440-38-2	Arsenic	2.83	J		P
7440-39-3	Barium	34.6			P
7440-41-7	Beryllium	5	U		P
7440-43-9	Cadmium	0.625	J		P
7440-70-2	Calcium	17400			P
7440-47-3	Chromium	15.5			P
7440-48-4	Cobalt	5	U		P
7440-50-8	Copper	3.66	J		P
7439-89-6	Iron	12400			P
7439-92-1	Lead	1670			P
7439-95-4	Magnesium	7370			P
7439-96-5	Manganese	131			P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	10.3			P
7440-09-7	Potassium	6000			P
7782-49-2	Selenium	5	U		P
7440-22-4	Silver	5	U		P
7440-23-5	Sodium	21600			P
7440-28-0	Thallium	10	U		P

MB

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1542

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Decon Drum

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-62-2	Vanadium	4.52	J		P
7440-66-6	Zinc	57.1			P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1542

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Decon Drum

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	7.66			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1543

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715WW1W031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506237

Matrix: WATER Lab Sample ID: 250623701

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Decon Drum

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1544

CH2MHILL Constructors, 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

COC NUMBER: 263231-011

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.):
Former N.A.S. Cecil Field Site 15	263231	PEL Laboratories Inc. Darcy Weisman	Bethany Garvey / CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 770.604.9182, Fax:770.604.9282
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.):
Site 15 - Liquid Waste Characterization Sampling	0057	804705	Mike Halil / CH2M Hill Constuctors, Inc.	6121 Aviation Ave. Jacksonville, FL 32221 904.777.4812, Fax: 904.777.4262
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Mike Halil CH2M Hill Constuctors, Inc.	Ph: 904.777-4812 Fax: 904.777.4262	Ph:813.247.2805 Fax: 813.248.1537		2506237

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	TCL Volatiles by 8260B	TCL Semi-volatiles by 8270C	TAL Metals by 6010B	TCL Pesticides by 8081A	TCL Herbicides by 8151A	PCBs by 8082	Corrosivity by 9040B	Ignitability by 1010	SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
1	5715WW1W031507	Liquid Waste Characterization (Decon Drum)	W	03/15/07	1515	III/B	14	3	2	1	1	1	1	1	1	N		-01
2	Trip Blank							X				rec'd	but	not	on	coc.		-02
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

2506237

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:	
Randy Dumaop / Jeff Marks / Craig Haas AGVIQ / CH2M HILL	Federal Express Tracking Numbers: 7991 0478 1201.	pH<2 (vols, met) Temp upon rect (4c)

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	3/15/2007	18:00	Federal Express Tracking Numbers: 7991 0478 1201.	3/15/2007	18:00
Printed Name and Signature:			Printed Name and Signature:		
			Darcy Weisman	3/16/07	10:30
Printed Name and Signature:			Printed Name and Signature:		

Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PMO

Form CCI001, Rev 02/00

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715A01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614201 Lab File ID: 14201.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/12/07 Time: 2125

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area A - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

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210307 1556

Form I

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614202 Lab File ID: 14202.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/12/07 Time: 2153

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area B - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.0039	J
75-01-4	Vinyl chloride	0.01	U

ok

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614203 Lab File ID: 14203.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/12/07 Time: 2222

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area B - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614204 Lab File ID: 14204.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/12/07 Time: 2251

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area B - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.0052	J
75-01-4	Vinyl chloride	0.01	U

ok

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614205 Lab File ID: 14205.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/12/07 Time: 2319

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area H - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

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210307 1556

Form I

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614206 Lab File ID: 14206.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/12/07 Time: 2347

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area H - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

ok

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614207 Lab File ID: 14207.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/13/07 Time: 0015

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area H - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715J01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614208 Lab File ID: 14208.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/13/07 Time: 0043

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area J - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

210307 1556

Form I

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715A01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614201 Lab File ID: 142-1.D

Sample wt/vol: 510 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 1 Date Extracted: 03/16/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1703

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area A - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00784	U
106-46-7	1,4-Dichlorobenzene	0.00784	U
95-48-7	2-Methylphenol (o-Cresol)	0.00784	U
67-72-1	Hexachloroethane	0.00784	U
106-44-5	4-Methylphenol	0.012	U
98-95-3	Nitrobenzene	0.00784	U
87-68-3	Hexachlorobutadiene	0.00784	U
88-06-2	2,4,6-Trichlorophenol	0.00784	U
95-95-4	2,4,5-Trichlorophenol	0.00784	U
121-14-2	2,4-Dinitrotoluene	0.00784	U
118-74-1	Hexachlorobenzene	0.00784	U
87-86-5	Pentachlorophenol	0.0196	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614202 Lab File ID: 142-2.D

Sample wt/vol: 500 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 1 Date Extracted: 03/16/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1735

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area B - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614203 Lab File ID: 142-3.D

Sample wt/vol: 500 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 1 Date Extracted: 03/16/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1807

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area B - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614204 Lab File ID: 142-4.D

Sample wt/vol: 500 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 1 Date Extracted: 03/16/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1839

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area B - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614205 Lab File ID: 142-5.D

Sample wt/vol: 500 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 1 Date Extracted: 03/16/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1911

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area H - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614206 Lab File ID: 142-6.D

Sample wt/vol: 500 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 1 Date Extracted: 03/16/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1943

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area H - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

C-1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614207 Lab File ID: 142-7.D

Sample wt/vol: 500 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 1 Date Extracted: 03/16/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 2016

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area H - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715J01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614208 Lab File ID: 142-8.D

Sample wt/vol: 450 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 1 Date Extracted: 03/16/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 2048

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area J - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0222	U

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715A01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614201 Lab File ID: 142-1.D

Sample wt/vol: 435 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1940

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area A - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000023	U
76-44-8	Heptachlor	0.000019	J
1024-57-3	Heptachlor epoxide	0.000023	U
72-20-8	Endrin	0.000023	U
72-43-5	Methoxychlor	0.000023	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

c.l

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

210307 1556

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614202 Lab File ID: 142-2.D

Sample wt/vol: 415 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 2009

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area B - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000024	U
76-44-8	Heptachlor	0.00001	J
1024-57-3	Heptachlor epoxide	0.000024	U
72-20-8	Endrin	0.000024	U
72-43-5	Methoxychlor	0.000024	U
57-74-9	Chlordane	0.012	U
8001-35-2	Toxaphene	0.012	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614203 Lab File ID: 142-3.D

Sample wt/vol: 420 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 2039

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area B - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000024	U
76-44-8	Heptachlor	0.000012	J
1024-57-3	Heptachlor epoxide	0.000024	U
72-20-8	Endrin	0.000024	U
72-43-5	Methoxychlor	0.000024	U
57-74-9	Chlordane	0.012	U
8001-35-2	Toxaphene	0.012	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614204 Lab File ID: 142-4.D

Sample wt/vol: 410 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 2108

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area B - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000024	U
76-44-8	Heptachlor	0.000011	J
1024-57-3	Heptachlor epoxide	0.000024	U
72-20-8	Endrin	0.000024	U
72-43-5	Methoxychlor	0.000024	U
57-74-9	Chlordane	0.012	U
8001-35-2	Toxaphene	0.012	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614205 Lab File ID: 142-5.D

Sample wt/vol: 410 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 2137

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area H - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000024	U
76-44-8	Heptachlor	0.0000093	J
1024-57-3	Heptachlor epoxide	0.000024	U
72-20-8	Endrin	0.000024	U
72-43-5	Methoxychlor	0.000024	U
57-74-9	Chlordane	0.012	U
8001-35-2	Toxaphene	0.012	U

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Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614206 Lab File ID: 142-6.D

Sample wt/vol: 410 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 2206

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area H - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000024	U
76-44-8	Heptachlor	0.000014	J
1024-57-3	Heptachlor epoxide	0.000024	U
72-20-8	Endrin	0.000024	U
72-43-5	Methoxychlor	0.000024	U
57-74-9	Chlordane	0.012	U
8001-35-2	Toxaphene	0.012	U

CA

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614207 Lab File ID: 142-7.D

Sample wt/vol: 405 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 2236

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area H - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000025	U
76-44-8	Heptachlor	0.000012	J
1024-57-3	Heptachlor epoxide	0.000025	U
72-20-8	Endrin	0.000025	U
72-43-5	Methoxychlor	0.000025	U
57-74-9	Chlordane	0.012	U
8001-35-2	Toxaphene	0.012	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715J01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614208 Lab File ID: 142-8.D

Sample wt/vol: 405 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 2305

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area J - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000025	U
76-44-8	Heptachlor	0.000014	J
1024-57-3	Heptachlor epoxide	0.000025	U
72-20-8	Endrin	0.000025	U
72-43-5	Methoxychlor	0.000025	U
57-74-9	Chlordane	0.012	U
8001-35-2	Toxaphene	0.012	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715A01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614201 Lab File ID: 142-1.D

Sample wt/vol: 20.01 Units: G Date Received: 03/07/07

Concentrated Extract Volume: 2 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1044

PercentSolids: 90.6 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area A - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	5.5	U
11096-82-5	Aroclor-1260	5.5	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	55	U

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210307 1557

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614202 Lab File ID: 142-2.D

Sample wt/vol: 20.15 Units: G Date Received: 03/07/07

Concentrated Extract Volume: 2 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1110

PercentSolids: 92.6 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area B - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	5.3	U
11096-82-5	Aroclor-1260	5.3	U
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	53	U
11097-69-1	Aroclor-1254	53	U

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PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614203 Lab File ID: 142-3.D

Sample wt/vol: 20.12 Units: G Date Received: 03/07/07

Concentrated Extract Volume: 2 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1136

PercentSolids: 92.5 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area B - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	5.3	U
11096-82-5	Aroclor-1260	5.3	U
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	53	U
11097-69-1	Aroclor-1254	53	U

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614204 Lab File ID: 142-4.D

Sample wt/vol: 20.04 Units: G Date Received: 03/07/07

Concentrated Extract Volume: 2 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1202

PercentSolids: 90.8 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area B - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	5.4	U
11096-82-5	Aroclor-1260	5.4	U
11104-28-2	Aroclor-1221	54	U
11141-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	54	U
12672-29-6	Aroclor-1248	54	U
11097-69-1	Aroclor-1254	54	U

210307 1557

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614205 Lab File ID: 142-5.D

Sample wt/vol: 20.03 Units: G Date Received: 03/07/07

Concentrated Extract Volume: 2 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1229

PercentSolids: 89.9 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area H - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	5.5	U
11096-82-5	Aroclor-1260	5.5	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	55	U

C.A

210307 1557

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614206 Lab File ID: 142-6.D

Sample wt/vol: 20.12 Units: G Date Received: 03/07/07

Concentrated Extract Volume: 2 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1256

PercentSolids: 90.6 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area H - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	5.4	U
11096-82-5	Aroclor-1260	5.4	U
11104-28-2	Aroclor-1221	54	U
11141-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	54	U
12672-29-6	Aroclor-1248	54	U
11097-69-1	Aroclor-1254	54	U

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PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614207 Lab File ID: 142-7.D

Sample wt/vol: 20.11 Units: G Date Received: 03/07/07

Concentrated Extract Volume: 2 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1322

PercentSolids: 89.2 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area H - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	5.5	U
11096-82-5	Aroclor-1260	5.5	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	55	U

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715J01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614208 Lab File ID: 142-8.D

Sample wt/vol: 20.43 Units: G Date Received: 03/07/07

Concentrated Extract Volume: 2 Date Extracted: 03/14/07

Level:(low/med) LOW Date Analyzed: 03/16/07 Time: 1349

PercentSolids: 89.5 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area J - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	5.4	U
11096-82-5	Aroclor-1260	5.4	U
11104-28-2	Aroclor-1221	54	U
11141-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	54	U
12672-29-6	Aroclor-1248	54	U
11097-69-1	Aroclor-1254	54	U

C.X

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715A01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614201 Lab File ID: 142-1.D

Sample wt/vol: 450 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/20/07

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 0603

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area A - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000084	U
94-75-7	2,4'-D	0.00033	U

c.d

210307 1557

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614202 Lab File ID: 142-2.D

Sample wt/vol: 460 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/20/07

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 0646

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area B - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000083	U
94-75-7	2,4'-D	0.00033	U

ok

210307 1557

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614203 Lab File ID: 142-3.D

Sample wt/vol: 450 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/20/07

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 0729

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area B - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000084	U
94-75-7	2,4'-D	0.00033	U

210307 1557

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614204 Lab File ID: 142-4.D

Sample wt/vol: 450 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/20/07

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 0811

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area B - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000084	U
94-75-7	2,4'-D	0.00033	U

210307 1557

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614205 Lab File ID: 142-5.D

Sample wt/vol: 450 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/20/07

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 0854

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area H - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000084	U
94-75-7	2,4'-D	0.00033	U

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614206 Lab File ID: 142-6.D

Sample wt/vol: 450 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/20/07

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 0936

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area H - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000084	U
94-75-7	2,4'-D	0.00033	U

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614207 Lab File ID: 142-7.D

Sample wt/vol: 450 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/20/07

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 1019

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area H - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000084	U
94-75-7	2,4'-D	0.00033	U

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715J01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614208 Lab File ID: 142-8.D

Sample wt/vol: 460 Units: ML Date Received: 03/07/07

Concentrated Extract Volume: 10 Date Extracted: 03/20/07

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 1102

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area J - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000083	U
94-75-7	2,4'-D	0.00033	U

210307 1557

Form I

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715A01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614201

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area A - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0963			P	
7440-39-3	Barium	0.0252	J	B	P	MB
7440-43-9	Cadmium	0.05	U		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	8.7		B	P	MB
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0451	J	B	P	MB
7440-22-4	Silver	0.2	U		P	

cd

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614202

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area B - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0265	J		P	
7440-39-3	Barium	0.0128	~~J~~	B	P	mB
7440-43-9	Cadmium	0.05	U		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	8.62		B	P	mB
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0298	~~J~~	B	P	mB
7440-22-4	Silver	0.2	U		P	

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614203

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area B - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.05	U		P	
7440-39-3	Barium	0.0292	J	B	P	mB
7440-43-9	Cadmium	0.05	U		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	4.28		B	P	mB
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0352	J	B	P	mB
7440-22-4	Silver	0.2	U		P	

C.L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614204

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area B - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.054			P	
7440-39-3	Barium	0.0275	J	B	P	mB
7440-43-9	Cadmium	0.00455	J	B	P	mB
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	7.33		B	P	mB
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.1	U		P	
7440-22-4	Silver	0.2	U		P	

C. L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614205

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area H - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.05	U		P	
7440-39-3	Barium	0.075	~~J~~	B	P	mB
7440-43-9	Cadmium	0.00693	J	B	P	mB
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	0.5	U		P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.1	U		P	
7440-22-4	Silver	0.2	U		P	

c.t

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614206

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area H - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.05	U		P	
7440-39-3	Barium	0.149	J	B	P	mB
7440-43-9	Cadmium	0.0107	J	B	P	mB
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	0.0671	J	B	P	mB
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.1	U		P	
7440-22-4	Silver	0.2	U		P	

C.L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614207

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area H - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.05	U		P	
7440-39-3	Barium	0.248	J	B	P	mB
7440-43-9	Cadmium	0.013	J	B	P	mB
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	0.119	J	B	P	mB
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0273	J	B	P	mB
7440-22-4	Silver	0.2	U		P	

CH

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715J01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614208

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area J - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.05	U		P	
7440-39-3	Barium	0.0674	~~J~~	B	P	mB
7440-43-9	Cadmium	0.00876	~~J~~	B	P	mB
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	0.0309	~~J~~	B	P	mB
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0276	~~J~~	B	P	mB
7440-22-4	Silver	0.2	U		P	

CR

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715A01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614201

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area A - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.33			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614202

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area B - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.35			N/A

C.L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614203

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area B - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.48			N/A

C.L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614204

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area B - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.58			N/A

C.L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614205

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area H - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.3			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614206

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area H - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	7.03			N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614207

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area H - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	7.06			N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715J01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614208

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area J - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.95			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715A01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614201

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area A - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614202

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area B - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614203

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area B - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715B03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614204

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area B - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

C.L

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614205

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area H - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H02S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614206

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area H - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

210307 1558

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715H03S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614207

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area H - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

210307 1558

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715J01S030607

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO-57

Lab Code : PEL Case No. SAS No: SDG No.: 2506142

Matrix: SOIL Lab Sample ID: 250614208

Level:(low/med) LOW Date Received: 3/7/2007

PercentSolids: 0 Station ID: Area J - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

210307 1558

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715C01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615201 Lab File ID: 15201.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/15/07 Time: 1957

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area A - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

ck

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615202 Lab File ID: 15202.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/15/07 Time: 2024

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area D - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

C.L

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615203 Lab File ID: 15203.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/15/07 Time: 2051

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area D - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

C.K

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Form I

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615204 Lab File ID: 15204.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/15/07 Time: 2119

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area D - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

c.t

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D04S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615205 Lab File ID: 15205.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/15/07 Time: 2146

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area D - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

CK

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615206 Lab File ID: 15206.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/15/07 Time: 2213

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area G - Borin Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

C-2

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615207 Lab File ID: 15207.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/15/07 Time: 2240

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area G - Borin Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

c1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615208 Lab File ID: 15208.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/15/07 Time: 1929

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area G - Borin Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715C01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615201 Lab File ID: 152-1.D

Sample wt/vol: 450 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 1441

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area A - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0222	U

C.T

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615202 Lab File ID: 152-2.D

Sample wt/vol: 450 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 1513

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area D - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0222	U

ok

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615203 Lab File ID: 152-3.D

Sample wt/vol: 450 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 1546

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area D - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0222	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615204 Lab File ID: 152-4.D

Sample wt/vol: 450 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 1618

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area D - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0222	U

ok

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615206 Lab File ID: 152-6.D

Sample wt/vol: 450 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 1723

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area G - Borin Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0222	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615207 Lab File ID: 152-7.D

Sample wt/vol: 450 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 1755

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area G - Borin Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0222	U

CK

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615208 Lab File ID: 152-8.D

Sample wt/vol: 425 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 1828

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area G - Borin Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00941	U
106-46-7	1,4-Dichlorobenzene	0.00941	U
95-48-7	2-Methylphenol (o-Cresol)	0.00941	U
67-72-1	Hexachloroethane	0.00941	U
106-44-5	4-Methylphenol	0.0144	U
98-95-3	Nitrobenzene	0.00941	U
87-68-3	Hexachlorobutadiene	0.00941	U
88-06-2	2,4,6-Trichlorophenol	0.00941	U
95-95-4	2,4,5-Trichlorophenol	0.00941	U
121-14-2	2,4-Dinitrotoluene	0.00941	U
118-74-1	Hexachlorobenzene	0.00941	U
87-86-5	Pentachlorophenol	0.0235	U

C.L

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Cecil Field / CTO 57		5715C01S030707
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506152
Matrix:	SOIL			Lab Sample ID: 250615201	Lab File ID: 152-1.D
Sample wt/vol:	500	Units:	ML	Date Received:	03/08/07
Concentrated Extract Volume:	10			Date Extracted:	03/22/07
Level:(low/med)	LOW			Date Analyzed:	03/23/07 Time: 1052
PercentSolids:	0	decanted :		Dilution Factor:	1
Extraction:	SEPF			Station ID:	Area A - Boring Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2):	STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615202 Lab File ID: 152-2.D

Sample wt/vol: 500 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1123

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area D - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 5715D02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code: PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615203 Lab File ID: 152-3.D

Sample wt/vol: 500 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1154

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area D - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

ok

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1352

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615204 Lab File ID: 152-4.D

Sample wt/vol: 500 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1225

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area D - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

ck

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1352

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D04S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615205 Lab File ID: 152-5.D

Sample wt/vol: 500 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1256

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area D - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

c.k

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1352

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Cecil Field / CTO 57
EPA Sample No.	5715G01S030707		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506152
Matrix:	SOIL	Lab Sample ID:	250615206
Lab File ID:	152-6.D	Sample wt/vol:	500
Units:	ML	Date Received:	03/08/07
Concentrated Extract Volume:	10	Date Extracted:	03/22/07
Level:(low/med)	LOW	Date Analyzed:	03/23/07
Time:	1327	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	SEPF	Station ID:	Area G - Borin
Method:	8081 TCLP	GPC Cleanup : (Y/N)	N
pH:		Column(1):	STX-CLP1
ID:	0.32 (mm)	Column(2):	STX-CLP2
ID:	0.32 (mm)	*CONCENTRATION UNITS:*	MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1352

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615207 Lab File ID: 152-7.D

Sample wt/vol: 500 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1358

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area G - Borin Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

C.K

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1352

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615208 Lab File ID: 152-8.D

Sample wt/vol: 440 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1428

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area G - Borin Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000023	U
76-44-8	Heptachlor	0.000023	U
1024-57-3	Heptachlor epoxide	0.000023	U
72-20-8	Endrin	0.000023	U
72-43-5	Methoxychlor	0.000023	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

C.A

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1352

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715C01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615201 Lab File ID: 152-1.D

Sample wt/vol: 20.13 Units: G Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1030

PercentSolids: 94.7 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area A - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

C.L

260307 1353

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615202 Lab File ID: 152-2.D

Sample wt/vol: 20.1 Units: G Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1150

PercentSolids: 79 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area D - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	31	U
11096-82-5	Aroclor-1260	31	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	310	U
12672-29-6	Aroclor-1248	310	U
11097-69-1	Aroclor-1254	310	U

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260307 1353

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615203 Lab File ID: 152-3.D

Sample wt/vol: 20.02 Units: G Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1217

PercentSolids: 95.3 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area D - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

260307 1353

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615204 Lab File ID: 152-4.D

Sample wt/vol: 20.37 Units: G Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1243

PercentSolids: 97.3 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area D - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	25	U
11096-82-5	Aroclor-1260	25	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	250	U
11097-69-1	Aroclor-1254	250	U

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D04S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615205 Lab File ID: 152-5.D

Sample wt/vol: 20.07 Units: G Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1310

PercentSolids: 97.1 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area D - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	25	U
11096-82-5	Aroclor-1260	25	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	250	U
11097-69-1	Aroclor-1254	250	U

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615206 Lab File ID: 152-6.D

Sample wt/vol: 20.13 Units: G Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1336

PercentSolids: 96 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area G - Borin Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

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260307 1353

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615207 Lab File ID: 152-7.D

Sample wt/vol: 20.71 Units: G Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1445

PercentSolids: 80.5 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area G - Borin Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	30	U
11096-82-5	Aroclor-1260	30	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	300	U

C.A

260307 1353

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615208 Lab File ID: 152-8.D

Sample wt/vol: 20.11 Units: G Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1511

PercentSolids: 97.2 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area G - Borin Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	25	U
11096-82-5	Aroclor-1260	25	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	250	U
11097-69-1	Aroclor-1254	250	U

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715C01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615201 Lab File ID: 152-1.D

Sample wt/vol: 500 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1001

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area A - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.0003	U
93-72-1	2,4,5-TP (Silvex)	0.000076	U

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260307 1353

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615202 Lab File ID: 152-2.D

Sample wt/vol: 500 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1044

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area D - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.0003	U
93-72-1	2,4,5-TP (Silvex)	0.000076	U

ok

260307 1353

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615203 Lab File ID: 152-3.D

Sample wt/vol: 500 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1126

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area D - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.0003	U
93-72-1	2,4,5-TP (Silvex)	0.000076	U

260307 1353

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615204 Lab File ID: 152-4.D

Sample wt/vol: 500 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1209

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area D - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.0003	U
93-72-1	2,4,5-TP (Silvex)	0.000076	U

ne

260307 1353

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D04S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615205 Lab File ID: 152-5.D

Sample wt/vol: 500 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1251

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area D - Boring Method: 8151 TCLP

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

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.0003	U
93-72-1	2,4,5-TP (Silvex)	0.000076	U

260307 1353

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615206 Lab File ID: 152-6.D

Sample wt/vol: 500 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1334

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area G - Borin Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.0003	U
93-72-1	2,4,5-TP (Silvex)	0.000076	U

C.L

260307 1353

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615207 Lab File ID: 152-7.D

Sample wt/vol: 500 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1417

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area G - Borin Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.0003	U
93-72-1	2,4,5-TP (Silvex)	0.000076	U

260307 1353

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615208 Lab File ID: 152-8.D

Sample wt/vol: 480 Units: ML Date Received: 03/08/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 1500

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area G - Borin Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00031	U
93-72-1	2,4,5-TP (Silvex)	0.000079	U

CL

260307 1353

Form I

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715C01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615201

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area A - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0348	J	B	P	mB
7440-39-3	Barium	0.0122	J		P	
7440-43-9	Cadmium	0.05	U		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	9.26			P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0456	J	B	P	mD
7440-22-4	Silver	0.2	U		P	

C.K

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1354

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615202

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area D - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.316		B	P	mB
7440-39-3	Barium	0.0465	J		P	
7440-43-9	Cadmium	0.00395	J	B	P	mB
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	22.2			P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0363	J	B	P	mB
7440-22-4	Silver	0.2	U		P	

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1354

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615203

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area D - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.0168	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	4.82			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0458	J	B	P
7440-22-4	Silver	0.2	U		P

MB

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1354

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615204

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area D - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0341	J	B	P	mB
7440-39-3	Barium	0.0144	J		P	
7440-43-9	Cadmium	0.05	U		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	3.34			P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0683	J	B	P	mB
7440-22-4	Silver	0.2	U		P	

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1354

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D04S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615205

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area D - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0313	J	B	P	MB
7440-39-3	Barium	0.0305	J		P	
7440-43-9	Cadmium	0.05	U		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	4.92			P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0433	J	B	P	MB
7440-22-4	Silver	0.2	U		P	

N.R

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1354

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615206

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area G - Borin

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0244	J	B	P	mB
7440-39-3	Barium	0.0358	J		P	
7440-43-9	Cadmium	0.00688	J	B	P	mB
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	0.5	U		P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0456	J	B	P	mB
7440-22-4	Silver	0.2	U		P	

c-L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1354

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615207

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area G - Borin

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0191	J	B	P	MB
7440-39-3	Barium	0.0364	J		P	
7440-43-9	Cadmium	0.05	U		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	0.231	J		P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0734	J	B	P	MB
7440-22-4	Silver	0.2	U		P	

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1354

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615208

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area G - Borin

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0219	J	B	P	RB
7440-39-3	Barium	0.0223	J		P	
7440-43-9	Cadmium	0.00569	J	B	P	MB
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	0.0351	J		P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0516	J	B	P	MB
7440-22-4	Silver	0.2	U		P	

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1354

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715C01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615201

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area A - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.42			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1355

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615202

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area D - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.38			N/A

c.b

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1355

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615203

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area D - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.91			N/A

ct

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1355

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615204

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area D - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.81			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1355

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D04S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615205

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area D - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.74			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1355

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615206

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area G - Borin

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.33			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1355

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615207

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area G - Borin

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.84			N/A

c.k

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1355

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615208

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area G - Borin

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.83			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1355

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715C01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615201

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area A - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1356

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615202

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area D - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1356

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615203

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area D - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

c.k

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1356

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615204

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area D - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1356

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715D04S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615205

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area D - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

C-L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1356

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G01S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615206

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area G - Borin

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1356

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G02S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615207

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area G - Borin

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

c.k

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1356

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715G03S030707

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field / CTO 57

Lab Code : PEL Case No. SAS No: SDG No.: 2506152

Matrix: SOIL Lab Sample ID: 250615208

Level:(low/med) LOW Date Received: 3/8/07

PercentSolids: 0 Station ID: Area G - Borin

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1356

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715K01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616401 Lab File ID: 16401.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 2104

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area K - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

CT

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715O01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616402 Lab File ID: 16402.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 2127

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area O - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 5715O02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code: PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616403 Lab File ID: 16403.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 2151

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area O - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

CL

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616404 Lab File ID: 16404.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 2214

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area P - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

C.L

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616405 Lab File ID: 16405.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 2237

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area P - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

CK

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P03S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616406 Lab File ID: 16406.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 2300

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area P - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715K01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616401 Lab File ID: 164-1.D

Sample wt/vol: 500 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 2036

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area K - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715O01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616402 Lab File ID: 164-2.D

Sample wt/vol: 500 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 2108

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area O - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715O02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616403 Lab File ID: 164-3.D

Sample wt/vol: 500 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 2141

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area O - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616404 Lab File ID: 164-4.D

Sample wt/vol: 500 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 2213

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area P - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616405 Lab File ID: 164-5.D

Sample wt/vol: 500 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 2245

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area P - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P03S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616406 Lab File ID: 164-6.D

Sample wt/vol: 400 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 2317

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area P - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): 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 (o-Cresol)	0.01	U
67-72-1	Hexachloroethane	0.01	U
106-44-5	4-Methylphenol	0.0152	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	0.01	U
118-74-1	Hexachlorobenzene	0.01	U
87-86-5	Pentachlorophenol	0.025	U

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715K01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616401 Lab File ID: 164-1.D

Sample wt/vol: 500 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/23/07 Time: 2303

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area K - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.000013	J
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	NAS Cecil Field / Site 15		5715O01S030807
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506164
Matrix:	SOIL			Lab Sample ID:	250616402 Lab File ID: 164-2.D
Sample wt/vol:	500 Units: ML			Date Received:	03/09/07
Concentrated Extract Volume:	10			Date Extracted:	03/23/07
Level:(low/med)	LOW			Date Analyzed:	03/23/07 Time: 2334
PercentSolids:	0 decanted :			Dilution Factor:	1
Extraction:	SEPF			Station ID:	Area O - Boring Method: 8081 TCLP
GPC Cleanup : (Y/N)	N pH:				
Column(1):	STX-CLP1 ID: 0.32 (mm)			Column(2):	STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.000032	
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

CY

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1434

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	NAS Cecil Field / Site 15		5715O02S030807
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506164
Matrix:	SOIL			Lab Sample ID:	250616403 Lab File ID: 164-3.D
Sample wt/vol:	500 Units: ML			Date Received:	03/09/07
Concentrated Extract Volume:	10			Date Extracted:	03/23/07
Level:(low/med)	LOW			Date Analyzed:	03/24/07 Time: 0005
PercentSolids:	0 decanted :			Dilution Factor:	1
Extraction:	SEPF			Station ID:	Area O - Boring Method: 8081 TCLP
GPC Cleanup : (Y/N)	N pH:				
Column(1):	STX-CLP1 ID: 0.32 (mm)			Column(2):	STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.000039	
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616404 Lab File ID: 164-4.D

Sample wt/vol: 500 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0036

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area P - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.000046	
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1434

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616405 Lab File ID: 164-5.D

Sample wt/vol: 440 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0107

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area P - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000023	U
76-44-8	Heptachlor	0.000018	J
1024-57-3	Heptachlor epoxide	0.000023	U
72-20-8	Endrin	0.000023	U
72-43-5	Methoxychlor	0.000023	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P03S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616406 Lab File ID: 164-6.D

Sample wt/vol: 500 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0208

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area P - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00001	J
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1434

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715K01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616401 Lab File ID: 164-1.D

Sample wt/vol: 20.1 Units: G Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1538

PercentSolids: 91.8 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area K - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

260307 1435

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715O01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616402 Lab File ID: 164-2.D

Sample wt/vol: 20.08 Units: G Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1604

PercentSolids: 89.4 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area O - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	28	U
11096-82-5	Aroclor-1260	28	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	280	U

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715O02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616403 Lab File ID: 164-3.D

Sample wt/vol: 20.46 Units: G Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1630

PercentSolids: 89.2 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area O - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

C-R

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616404 Lab File ID: 164-4.D

Sample wt/vol: 20.26 Units: G Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1657

PercentSolids: 89.3 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area P - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

C.X

260307 1435

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616405 Lab File ID: 164-5.D

Sample wt/vol: 20.16 Units: G Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1723

PercentSolids: 83.5 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area P - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	29	U
11096-82-5	Aroclor-1260	29	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	290	U

260307 1435

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P03S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616406 Lab File ID: 164-6.D

Sample wt/vol: 20.26 Units: G Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1750

PercentSolids: 72 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area P - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	34	U
11096-82-5	Aroclor-1260	34	U
11104-28-2	Aroclor-1221	340	U
11141-16-5	Aroclor-1232	340	U
53469-21-9	Aroclor-1242	340	U
12672-29-6	Aroclor-1248	340	U
11097-69-1	Aroclor-1254	340	U

260307 1435

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715K01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616401 Lab File ID: 164-1.D

Sample wt/vol: 500 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0234

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area K - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.0003	U
93-72-1	2,4,5-TP (Silvex)	0.000076	U

C-1

260307 1435

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	NAS Cecil Field / Site 15		5715O01S030807
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506164
Matrix:	SOIL			Lab Sample ID: 250616402	Lab File ID: 164-2.D
Sample wt/vol:	485	Units:	ML	Date Received:	03/09/07
Concentrated Extract Volume:	10			Date Extracted:	03/23/07
Level:(low/med)	LOW			Date Analyzed:	03/24/07 Time: 0316
PercentSolids:	0	decanted :		Dilution Factor:	1
Extraction:	SEPF			Station ID:	Area O - Boring Method: 8151 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00031	U
93-72-1	2,4,5-TP (Silvex)	0.000078	U

260307 1435

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715O02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616403 Lab File ID: 164-3.D

Sample wt/vol: 510 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0359

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area O - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00029	U
93-72-1	2,4,5-TP (Silvex)	0.000074	U

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616404 Lab File ID: 164-4.D

Sample wt/vol: 475 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0442

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area P - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00032	U
93-72-1	2,4,5-TP (Silvex)	0.00008	U

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616405 Lab File ID: 164-5.D

Sample wt/vol: 480 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0524

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area P - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00031	U
93-72-1	2,4,5-TP (Silvex)	0.000079	U

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P03S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616406 Lab File ID: 164-6.D

Sample wt/vol: 425 Units: ML Date Received: 03/09/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0607

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area P - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00035	U
93-72-1	2,4,5-TP (Silvex)	0.000089	U

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Form I

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715K01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616401

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area K - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.0705	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.942			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0342	J		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1436

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715O01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616402

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area O - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.152	J		P
7440-43-9	Cadmium	0.00575	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.163	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1436

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715O02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616403

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area O - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.449	J		P
7440-43-9	Cadmium	0.00528	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.951			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0276	J		P
7440-22-4	Silver	0.2	U		P

C.L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616404

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area P - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.121			P
7440-39-3	Barium	0.0143	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	18.2			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0288	J		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1436

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616405

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area P - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.0792			P
7440-39-3	Barium	0.00976	J		P
7440-43-9	Cadmium	0.00706	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	15.7			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0292	J		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1436

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P03S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616406

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area P - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.0225	J		P
7440-39-3	Barium	0.0126	J		P
7440-43-9	Cadmium	0.00646	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	14.1			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0337	J		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1436

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715K01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616401

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area K - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.02			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1437

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715O01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616402

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area O - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.34			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1437

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715O02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616403

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area O - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.17			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1437

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616404

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area P - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.8			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1437

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616405

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area P - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.61			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1437

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P03S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616406

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area P - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.02			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1437

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715K01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616401

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area K - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1438

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715O01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616402

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area O - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1438

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715O02S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616403

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area O - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1438

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P01S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616404

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area P - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1438

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715P03S030807

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506164

Matrix: SOIL Lab Sample ID: 250616406

Level:(low/med) LOW Date Received: 3/9/07

PercentSolids: 0 Station ID: Area P - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

250307 1438

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715M01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617701 Lab File ID: 17701.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 2323

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area M - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

C.L

260307 1456

Form I

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617702 Lab File ID: 17702.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 2347

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area N - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

C.L

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N02S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617703 Lab File ID: 17703.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/22/07 Time: 0010

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area N - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

C.A

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N03S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617704 Lab File ID: 17704.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/22/07 Time: 0033

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area N - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

Ck

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715Q01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617705 Lab File ID: 17705.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/22/07 Time: 0056

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area Q - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

CL

260307 1456

Form I

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715M01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617701 Lab File ID: 77-1.D

Sample wt/vol: 450 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/25/07 Time: 0416

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area M - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0222	U

CL

260307 1457

Form I

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617702 Lab File ID: 77-2.D

Sample wt/vol: 490 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/25/07 Time: 0448

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area N - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00816	U
106-46-7	1,4-Dichlorobenzene	0.00816	U
95-48-7	2-Methylphenol (o-Cresol)	0.00816	U
67-72-1	Hexachloroethane	0.00816	U
106-44-5	4-Methylphenol	0.0124	U
98-95-3	Nitrobenzene	0.00816	U
87-68-3	Hexachlorobutadiene	0.00816	U
88-06-2	2,4,6-Trichlorophenol	0.00816	U
95-95-4	2,4,5-Trichlorophenol	0.00816	U
121-14-2	2,4-Dinitrotoluene	0.00816	U
118-74-1	Hexachlorobenzene	0.00816	U
87-86-5	Pentachlorophenol	0.0204	U

C.L

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	NAS Cecil Field / Site 15		5715N02S030907
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506177
Matrix:	SOIL			Lab Sample ID: 250617703	Lab File ID: 77-3.D
Sample wt/vol:	500	Units:	ML	Date Received:	03/10/07
Concentrated Extract Volume:	1			Date Extracted:	03/23/07
Level:(low/med)	LOW			Date Analyzed:	03/25/07 Time: 0520
PercentSolids:	0	decanted :		Dilution Factor:	1
Extraction:	SEPF			Station ID:	Area N - Boring Method: 8270 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	HPMS-5	ID: 0.25	(mm)		
CONCENTRATION UNITS:	MG/L				

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

C.R

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N03S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617704 Lab File ID: 77-4.D

Sample wt/vol: 495 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/25/07 Time: 0553

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area N - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00808	U
106-46-7	1,4-Dichlorobenzene	0.00808	U
95-48-7	2-Methylphenol (o-Cresol)	0.00808	U
67-72-1	Hexachloroethane	0.00808	U
106-44-5	4-Methylphenol	0.0123	U
98-95-3	Nitrobenzene	0.00808	U
87-68-3	Hexachlorobutadiene	0.00808	U
88-06-2	2,4,6-Trichlorophenol	0.00808	U
95-95-4	2,4,5-Trichlorophenol	0.00808	U
121-14-2	2,4-Dinitrotoluene	0.00808	U
118-74-1	Hexachlorobenzene	0.00808	U
87-86-5	Pentachlorophenol	0.0202	U

c.l

260307 1457

Form I

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715Q01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617705 Lab File ID: 77-5.D

Sample wt/vol: 490 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 1 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/25/07 Time: 0625

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area Q - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00816	U
106-46-7	1,4-Dichlorobenzene	0.00816	U
95-48-7	2-Methylphenol (o-Cresol)	0.00816	U
67-72-1	Hexachloroethane	0.00816	U
106-44-5	4-Methylphenol	0.0124	U
98-95-3	Nitrobenzene	0.00816	U
87-68-3	Hexachlorobutadiene	0.00816	U
88-06-2	2,4,6-Trichlorophenol	0.00816	U
95-95-4	2,4,5-Trichlorophenol	0.00816	U
121-14-2	2,4-Dinitrotoluene	0.00816	U
118-74-1	Hexachlorobenzene	0.00816	U
87-86-5	Pentachlorophenol	0.0204	U

C.L

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715M01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617701 Lab File ID: 177-1.D

Sample wt/vol: 500 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0501

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area M - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.000016	J
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1457

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617702 Lab File ID: 177-2.D

Sample wt/vol: 500 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0532

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area N - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000013	J
76-44-8	Heptachlor	0.000024	
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

C.L

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1457

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 5715N02S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617703 Lab File ID: 177-3.D

Sample wt/vol: 500 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0602

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area N - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000052	
76-44-8	Heptachlor	0.000017	J
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

C.L

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1457

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N03S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617704 Lab File ID: 177-4.D

Sample wt/vol: 500 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0633

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area N - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.000021	
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

ck

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1457

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715Q01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617705 Lab File ID: 177-5.D

Sample wt/vol: 500 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0704

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area Q - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.000017	J
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

260307 1457

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715M01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617701 Lab File ID: 177-1.D

Sample wt/vol: 20.26 Units: G Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1817

PercentSolids: 90.5 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area M - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

ck

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617702 Lab File ID: 177-2.D

Sample wt/vol: 20.36 Units: G Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1843

PercentSolids: 89.2 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area N - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

C.L

260307 1458

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N02S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617703 Lab File ID: 177-3.D

Sample wt/vol: 20.19 Units: G Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 1952

PercentSolids: 88.9 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area N - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	28	U
11096-82-5	Aroclor-1260	28	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	280	U

C.L

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N03S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617704 Lab File ID: 177-4.D

Sample wt/vol: 20.62 Units: G Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 2018

PercentSolids: 89.2 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area N - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

n.d

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715Q01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617705 Lab File ID: 177-5.D

Sample wt/vol: 20.13 Units: G Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/19/07 Time: 2045

PercentSolids: 89.1 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area Q - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	28	U
11096-82-5	Aroclor-1260	28	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	280	U

ok

260307 1458

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715M01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617701 Lab File ID: 177-1.D

Sample wt/vol: 500 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0831

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area M - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.0003	U
93-72-1	2,4,5-TP (Silvex)	0.000076	U

a.k

260307 1458

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617702 Lab File ID: 177-2.D

Sample wt/vol: 450 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 0914

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area N - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000084	U

c.l

260307 1458

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N02S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617703 Lab File ID: 177-3.D

Sample wt/vol: 500 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 1018

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area N - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.0003	U
93-72-1	2,4,5-TP (Silvex)	0.000076	U

C.K

260307 1458

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N03S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617704 Lab File ID: 177-4.D

Sample wt/vol: 500 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 1124

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area N - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.0003	U
93-72-1	2,4,5-TP (Silvex)	0.000076	U

C.A

260307 1458

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715Q01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617705 Lab File ID: 177-5.D

Sample wt/vol: 475 Units: ML Date Received: 03/10/07

Concentrated Extract Volume: 10 Date Extracted: 03/23/07

Level:(low/med) LOW Date Analyzed: 03/24/07 Time: 1207

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area Q - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00032	U
93-72-1	2,4,5-TP (Silvex)	0.00008	U

ok

260307 1458

Form I

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715M01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617701

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area M - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.272			P
7440-39-3	Barium	0.0174	J		P
7440-43-9	Cadmium	0.00435	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	28.2			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1459

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617702

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area N - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.219			P
7440-39-3	Barium	0.0197	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	22.6			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1459

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N02S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617703

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area N - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.0756			P
7440-39-3	Barium	0.00754	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	9.46			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

2603/07 1459

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N03S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617704

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area N - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.12			P
7440-39-3	Barium	0.0147	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	16.4			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.045	J		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1459

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715Q01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617705

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area Q - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.0336	J		P
7440-39-3	Barium	0.0152	J		P
7440-43-9	Cadmium	0.00456	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	6.97			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1459

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715M01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617701

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area M - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.59			N/A

G.K

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

250307 1500

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617702

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area N - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.61			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1500

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N02S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617703

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area N - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.36			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1500

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N03S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617704

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area N - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.4			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1500

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715Q01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617705

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area Q - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.33			N/A

C.K

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1500

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715M01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617701

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area M - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

C-l

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1500

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617702

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area N - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

C. k

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1500

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N02S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617703

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area N - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

C. L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1500

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715N03S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617704

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area N - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1500

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715Q01S030907

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506177

Matrix: SOIL Lab Sample ID: 250617705

Level:(low/med) LOW Date Received: 3/10/07

PercentSolids: 0 Station ID: Area Q - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

260307 1500

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
EPA Sample No.	5715E01S031207		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506194
Matrix:	SOIL	Lab Sample ID:	250619401
Lab File ID:	19401.D	Sample wt/vol:	0.5
Units:	ML	Date Received:	03/13/07
Concentrated Extract Volume:	5	Date Extracted:	
Level:(low/med)	LOW	Date Analyzed:	03/26/07
Time:	1332	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	PURGETRAP	Station ID:	Area E-Boring E
Method:	8260 TCLP	GPC Cleanup : (Y/N)	
pH:		Column(1):	DB-624
ID:	0.18 (mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

ck

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Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506194
Matrix:	SOIL	Lab Sample ID:	250619402
Lab File ID:	19402.D	Sample wt/vol:	0.5
Units:	ML	Date Received:	03/13/07
Concentrated Extract Volume:	5	Date Extracted:	
Level:(low/med)	LOW	Date Analyzed:	03/26/07
Time:	1355	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	PURGETRAP	Station ID:	Area E-Boring E
Method:	8260 TCLP	GPC Cleanup : (Y/N)	
pH:		Column(1):	DB-624
ID:	0.18	(mm)	

EPA Sample No.: 5715E02S031207

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

040407 1621

Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E03S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619403 Lab File ID: 19403.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 1419

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area E-Boring E Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

040407 1621

Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E04S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619404 Lab File ID: 19404.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 1442

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area E-Boring E Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

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Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E05S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619405 Lab File ID: 19405.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 1505

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area E-Boring E Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

040407 1621

Form I

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E06S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619406	Lab File ID: 19406.D
Sample wt/vol:	0.5	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	5			Date Extracted:	
Level:(low/med)	LOW			Date Analyzed: 03/26/07	Time: 1528
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	PURGETRAP			Station ID: Area E-Boring E	Method: 8260 TCLP
GPC Cleanup : (Y/N)		pH:			
Column(1):	DB-624	ID: 0.18	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E07S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619407 Lab File ID: 19407.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 1552

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area E-Boring E Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
			5715E08S031207
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506194
Matrix:	SOIL	Lab Sample ID:	250619408
Lab File ID:	19408.D	Sample wt/vol:	0.5
Units:	ML	Date Received:	03/13/07
Concentrated Extract Volume:	5	Date Extracted:	
Level:(low/med)	LOW	Date Analyzed:	03/26/07
Time:	1615	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	PURGETRAP	Station ID:	Area E-Boring E
Method:	8260 TCLP	GPC Cleanup : (Y/N)	
pH:		Column(1):	DB-624
ID:	0.18	(mm)	

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

040407 1621

Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E09S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619409 Lab File ID: 19409.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 1639

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area E-Boring E Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

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040407 1621

Form I

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E10S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619410 Lab File ID: 19410.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 1702

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area E-Boring E Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

040407 1621

Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E11S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619411 Lab File ID: 19411.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 1725

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area E-Boring E Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

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040407 1621

Form I

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E12S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619412 Lab File ID: 19412.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 1748

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area E-Boring E Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E01S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619401	Lab File ID: 194-01.D
Sample wt/vol:	450	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	1			Date Extracted: 03/26/07	
Level:(low/med)	LOW			Date Analyzed: 03/27/07	Time: 1225
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8270 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	HPMS-5	ID: 0.25	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0222	U

040407 1622

Form I

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E02S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619402 Lab File ID: 194-2RE.D

Sample wt/vol: 490 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 1 Date Extracted: 04/02/07

Level:(low/med) LOW Date Analyzed: 04/04/07 Time: 1420

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area E-Boring E Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00816	U
106-46-7	1,4-Dichlorobenzene	0.00816	U
95-48-7	2-Methylphenol (o-Cresol)	0.00816	U
67-72-1	Hexachloroethane	0.00816	U
106-44-5	4-Methylphenol	0.0124	U
98-95-3	Nitrobenzene	0.00816	U
87-68-3	Hexachlorobutadiene	0.00816	U
88-06-2	2,4,6-Trichlorophenol	0.00816	U
95-95-4	2,4,5-Trichlorophenol	0.00816	U
121-14-2	2,4-Dinitrotoluene	0.00816	U
118-74-1	Hexachlorobenzene	0.00816	U
87-86-5	Pentachlorophenol	0.0204	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E03S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619403 Lab File ID: 194-03.D

Sample wt/vol: 460 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 1 Date Extracted: 03/26/07

Level:(low/med) LOW Date Analyzed: 03/27/07 Time: 1257

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area E-Boring E Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0087	U
106-46-7	1,4-Dichlorobenzene	0.0087	U
95-48-7	2-Methylphenol (o-Cresol)	0.0087	U
67-72-1	Hexachloroethane	0.0087	U
106-44-5	4-Methylphenol	0.0133	U
98-95-3	Nitrobenzene	0.0087	U
87-68-3	Hexachlorobutadiene	0.0087	U
88-06-2	2,4,6-Trichlorophenol	0.0087	U
95-95-4	2,4,5-Trichlorophenol	0.0087	U
121-14-2	2,4-Dinitrotoluene	0.0087	U
118-74-1	Hexachlorobenzene	0.0087	U
87-86-5	Pentachlorophenol	0.0217	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E04S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619404 Lab File ID: 194-04.D

Sample wt/vol: 440 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 1 Date Extracted: 03/26/07

Level:(low/med) LOW Date Analyzed: 03/27/07 Time: 1330

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area E-Boring E Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00909	U
106-46-7	1,4-Dichlorobenzene	0.00909	U
95-48-7	2-Methylphenol (o-Cresol)	0.00909	U
67-72-1	Hexachloroethane	0.00909	U
106-44-5	4-Methylphenol	0.0139	U
98-95-3	Nitrobenzene	0.00909	U
87-68-3	Hexachlorobutadiene	0.00909	U
88-06-2	2,4,6-Trichlorophenol	0.00909	U
95-95-4	2,4,5-Trichlorophenol	0.00909	U
121-14-2	2,4-Dinitrotoluene	0.00909	U
118-74-1	Hexachlorobenzene	0.00909	U
87-86-5	Pentachlorophenol	0.0227	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
EPA Sample No.	5715E05S031207		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506194
Matrix:	SOIL	Lab Sample ID:	250619405
Lab File ID:	194-05.D	Sample wt/vol:	500
Units:	ML	Date Received:	03/13/07
Concentrated Extract Volume:	1	Date Extracted:	03/26/07
Level:(low/med)	LOW	Date Analyzed:	03/27/07
Time:	1402	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	SEPF	Station ID:	Area E-Boring E
Method:	8270 TCLP	GPC Cleanup : (Y/N)	N
pH:		Column(1):	HPMS-5
ID:	0.25 (mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E06S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619406 Lab File ID: 194-6.D

Sample wt/vol: 460 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 1 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1258

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area E-Boring E Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0087	U
106-46-7	1,4-Dichlorobenzene	0.0087	U
95-48-7	2-Methylphenol (o-Cresol)	0.0087	U
67-72-1	Hexachloroethane	0.0087	U
106-44-5	4-Methylphenol	0.0133	U
98-95-3	Nitrobenzene	0.0087	U
87-68-3	Hexachlorobutadiene	0.0087	U
88-06-2	2,4,6-Trichlorophenol	0.0087	U
95-95-4	2,4,5-Trichlorophenol	0.0087	U
121-14-2	2,4-Dinitrotoluene	0.0087	U
118-74-1	Hexachlorobenzene	0.0087	U
87-86-5	Pentachlorophenol	0.0217	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E07S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619407 Lab File ID: 194-07.D

Sample wt/vol: 460 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 1 Date Extracted: 03/26/07

Level:(low/med) LOW Date Analyzed: 03/27/07 Time: 1434

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area E-Boring E Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0087	U
106-46-7	1,4-Dichlorobenzene	0.0087	U
95-48-7	2-Methylphenol (o-Cresol)	0.0087	U
67-72-1	Hexachloroethane	0.0087	U
106-44-5	4-Methylphenol	0.0133	U
98-95-3	Nitrobenzene	0.0087	U
87-68-3	Hexachlorobutadiene	0.0087	U
88-06-2	2,4,6-Trichlorophenol	0.0087	U
95-95-4	2,4,5-Trichlorophenol	0.0087	U
121-14-2	2,4-Dinitrotoluene	0.0087	U
118-74-1	Hexachlorobenzene	0.0087	U
87-86-5	Pentachlorophenol	0.0217	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E08S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619408 Lab File ID: 194-08.D

Sample wt/vol: 450 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 1 Date Extracted: 03/26/07

Level:(low/med) LOW Date Analyzed: 03/27/07 Time: 1507

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area E-Boring E Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0222	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E09S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619409	Lab File ID: 194-09.D
Sample wt/vol:	460	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	1			Date Extracted: 03/26/07	
Level:(low/med)	LOW			Date Analyzed: 03/27/07	Time: 1539
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8270 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	HPMS-5	ID: 0.25	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0087	U
106-46-7	1,4-Dichlorobenzene	0.0087	U
95-48-7	2-Methylphenol (o-Cresol)	0.0087	U
67-72-1	Hexachloroethane	0.0087	U
106-44-5	4-Methylphenol	0.0133	U
98-95-3	Nitrobenzene	0.0087	U
87-68-3	Hexachlorobutadiene	0.0087	U
88-06-2	2,4,6-Trichlorophenol	0.0087	U
95-95-4	2,4,5-Trichlorophenol	0.0087	U
121-14-2	2,4-Dinitrotoluene	0.0087	U
118-74-1	Hexachlorobenzene	0.0087	U
87-86-5	Pentachlorophenol	0.0217	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E10S031207
Lab Code :	PEL	Case No.	SAS No:	SDG No.:	2506194
Matrix:	SOIL		Lab Sample ID: 250619410	Lab File ID:	194-10.D
Sample wt/vol:	480 Units: ML		Date Received:	03/13/07	
Concentrated Extract Volume:	1		Date Extracted:	03/26/07	
Level:(low/med)	LOW		Date Analyzed:	03/27/07	Time: 1611
PercentSolids:	0 decanted :		Dilution Factor:	1	
Extraction:	SEPF		Station ID:	Area E-Boring E	Method: 8270 TCLP
GPC Cleanup : (Y/N)	N pH:				
Column(1):	HPMS-5 ID: 0.25 (mm)				

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00833	U
106-46-7	1,4-Dichlorobenzene	0.00833	U
95-48-7	2-Methylphenol (o-Cresol)	0.00833	U
67-72-1	Hexachloroethane	0.00833	U
106-44-5	4-Methylphenol	0.0127	U
98-95-3	Nitrobenzene	0.00833	U
87-68-3	Hexachlorobutadiene	0.00833	U
88-06-2	2,4,6-Trichlorophenol	0.00833	U
95-95-4	2,4,5-Trichlorophenol	0.00833	U
121-14-2	2,4-Dinitrotoluene	0.00833	U
118-74-1	Hexachlorobenzene	0.00833	U
87-86-5	Pentachlorophenol	0.0208	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
EPA Sample No.	5715E11S031207		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506194
Matrix:	SOIL	Lab Sample ID:	250619411
Lab File ID:	194-11.D	Sample wt/vol:	470
Units:	ML	Date Received:	03/13/07
Concentrated Extract Volume:	1	Date Extracted:	03/26/07
Level:(low/med)	LOW	Date Analyzed:	03/27/07
Time:	1644	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	SEPF	Station ID:	Area E-Boring E
Method:	8270 TCLP	GPC Cleanup : (Y/N)	N
pH:		Column(1):	HPMS-5
ID:	0.25	(mm)	

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00851	U
106-46-7	1,4-Dichlorobenzene	0.00851	U
95-48-7	2-Methylphenol (o-Cresol)	0.00851	U
67-72-1	Hexachloroethane	0.00851	U
106-44-5	4-Methylphenol	0.013	U
98-95-3	Nitrobenzene	0.00851	U
87-68-3	Hexachlorobutadiene	0.00851	U
88-06-2	2,4,6-Trichlorophenol	0.00851	U
95-95-4	2,4,5-Trichlorophenol	0.00851	U
121-14-2	2,4-Dinitrotoluene	0.00851	U
118-74-1	Hexachlorobenzene	0.00851	U
87-86-5	Pentachlorophenol	0.0213	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E12S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619412 Lab File ID: 194-12.D

Sample wt/vol: 450 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 1 Date Extracted: 03/26/07

Level:(low/med) LOW Date Analyzed: 03/27/07 Time: 1716

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area E-Boring E Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0222	U

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
EPA Sample No.	5715E01S031207		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506194
Matrix:	SOIL	Lab Sample ID:	250619401
Lab File ID:	194-01.D	Sample wt/vol:	470
Units:	ML	Date Received:	03/13/07
Concentrated Extract Volume:	10	Date Extracted:	03/26/07
Level:(low/med)	LOW	Date Analyzed:	03/26/07
Time:	1717	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	SEPF	Station ID:	Area E-Boring E
Method:	8081 TCLP	GPC Cleanup : (Y/N)	N
pH:		Column(1):	STX-CLP1
ID:	0.32 (mm)	Column(2):	STX-CLP2
ID:	0.32 (mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000021	U
76-44-8	Heptachlor	0.000021	U
1024-57-3	Heptachlor epoxide	0.000021	U
72-20-8	Endrin	0.000021	U
72-43-5	Methoxychlor	0.000021	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

040407 1622

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E02S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619402	Lab File ID: 194-2.D
Sample wt/vol:	490	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 0046
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

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Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E03S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619403	Lab File ID: 194-03.D
Sample wt/vol:	480	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	10			Date Extracted: 03/26/07	
Level:(low/med)	LOW			Date Analyzed: 03/26/07	Time: 1746
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000021	U
76-44-8	Heptachlor	0.000021	U
1024-57-3	Heptachlor epoxide	0.000021	U
72-20-8	Endrin	0.000021	U
72-43-5	Methoxychlor	0.000021	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

C.L

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E04S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619404	Lab File ID: 194-04.D
Sample wt/vol:	500	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	10			Date Extracted: 03/26/07	
Level:(low/med)	LOW			Date Analyzed: 03/26/07	Time: 1816
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.0000099	J
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc	Contract:	Former NAS Cecil Field Site 15		5715E05S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619405	Lab File ID: 194-05.D
Sample wt/vol:	450	Units:	ML	Date Received:	03/13/07
Concentrated Extract Volume:	10			Date Extracted:	03/26/07
Level:(low/med)	LOW			Date Analyzed:	03/26/07 Time: 1845
PercentSolids:	0	decanted :		Dilution Factor:	1
Extraction:	SEPF			Station ID:	Area E-Boring E Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2):	STX-CLP2 ID: 0.32 (mm)
CONCENTRATION UNITS:	MG/L				**TCLP Analysis**

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000022	U
76-44-8	Heptachlor	0.000022	U
1024-57-3	Heptachlor epoxide	0.000022	U
72-20-8	Endrin	0.000022	U
72-43-5	Methoxychlor	0.000022	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

n.d

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

040407 1622

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E06S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619406	Lab File ID: 194-6.D
Sample wt/vol:	450	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 0117
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000022	U
76-44-8	Heptachlor	0.000022	U
1024-57-3	Heptachlor epoxide	0.000022	U
72-20-8	Endrin	0.000022	U
72-43-5	Methoxychlor	0.000022	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E07S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619407	Lab File ID: 194-07.D
Sample wt/vol:	450	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	10			Date Extracted: 03/26/07	
Level:(low/med)	LOW			Date Analyzed: 03/26/07	Time: 1914
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000022	U
76-44-8	Heptachlor	0.000022	U
1024-57-3	Heptachlor epoxide	0.000022	U
72-20-8	Endrin	0.000022	U
72-43-5	Methoxychlor	0.000022	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

c-1

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

040407 1622

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E08S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619408	Lab File ID: 194-08.D
Sample wt/vol:	490	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	10			Date Extracted: 03/26/07	
Level:(low/med)	LOW			Date Analyzed: 03/26/07	Time: 1943
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

040407 1622

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E09S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619409	Lab File ID: 194-09.D
Sample wt/vol:	470	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	10			Date Extracted: 03/26/07	
Level:(low/med)	LOW			Date Analyzed: 03/26/07	Time: 2033
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000021	U
76-44-8	Heptachlor	0.000021	U
1024-57-3	Heptachlor epoxide	0.000021	U
72-20-8	Endrin	0.000021	U
72-43-5	Methoxychlor	0.000021	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

040407 1622

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E10S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619410	Lab File ID: 194-10.D
Sample wt/vol:	440	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	10			Date Extracted: 03/26/07	
Level:(low/med)	LOW			Date Analyzed: 03/26/07	Time: 2102
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000023	U
76-44-8	Heptachlor	0.000023	U
1024-57-3	Heptachlor epoxide	0.000023	U
72-20-8	Endrin	0.000023	U
72-43-5	Methoxychlor	0.000023	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

040407 1622

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E11S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL		Lab Sample ID:	250619411	Lab File ID: 194-11.D
Sample wt/vol:	450	Units: ML	Date Received:	03/13/07	
Concentrated Extract Volume:	10		Date Extracted:	03/26/07	
Level:(low/med)	LOW		Date Analyzed:	03/26/07	Time: 2351
PercentSolids:	0	decanted :	Dilution Factor:	1	
Extraction:	SEPF		Station ID:	Area E-Boring E	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32 (mm)	Column(2):	STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000022	U
76-44-8	Heptachlor	0.000022	U
1024-57-3	Heptachlor epoxide	0.000022	U
72-20-8	Endrin	0.000022	U
72-43-5	Methoxychlor	0.000022	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

c.d

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E12S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619412	Lab File ID: 194-12.D
Sample wt/vol:	480	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	10			Date Extracted: 03/26/07	
Level:(low/med)	LOW			Date Analyzed: 03/27/07	Time: 0020
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000021	U
76-44-8	Heptachlor	0.000021	U
1024-57-3	Heptachlor epoxide	0.000021	U
72-20-8	Endrin	0.000021	U
72-43-5	Methoxychlor	0.000021	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

c · k

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

040407 1622

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E01S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619401 Lab File ID: 194-01.D

Sample wt/vol: 20.04 Units: G Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 1327

PercentSolids: 91.6 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area E-Boring E Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

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040407 1623

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E02S031207
Lab Code :	PEL	Case No.	SAS No:	SDG No.:	2506194
Matrix:	SOIL		Lab Sample ID: 250619402	Lab File ID:	194-02.D
Sample wt/vol:	20.61 Units: G		Date Received: 03/13/07		
Concentrated Extract Volume:	10		Date Extracted: 03/15/07		
Level:(low/med)	LOW		Date Analyzed: 03/20/07	Time:	1353
PercentSolids:	90.5 decanted :		Dilution Factor: 1		
Extraction:	SONC		Station ID: Area E-Boring E	Method:	8082
GPC Cleanup : (Y/N)	N pH:				
Column(1):	STX-CLP1 ID: 0.32 (mm)				

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

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040407 1623

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E03S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619403 Lab File ID: 194-03.D

Sample wt/vol: 20.23 Units: G Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 1420

PercentSolids: 92.1 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area E-Boring E Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

040407 1623

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E04S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619404 Lab File ID: 194-04.D

Sample wt/vol: 20.41 Units: G Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 1446

PercentSolids: 92.6 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area E-Boring E Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

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Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E05S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619405 Lab File ID: 194-05.D

Sample wt/vol: 20.57 Units: G Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 1512

PercentSolids: 91.3 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area E-Boring E Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

040407 1623

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E06S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619406 Lab File ID: 194-06.D

Sample wt/vol: 20.45 Units: G Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 1713

PercentSolids: 91.6 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area E-Boring E Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

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Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E07S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619407 Lab File ID: 194-07.D

Sample wt/vol: 20.32 Units: G Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 1740

PercentSolids: 91.9 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area E-Boring E Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

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Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E08S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619408 Lab File ID: 194-08.D

Sample wt/vol: 20.31 Units: G Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 1806

PercentSolids: 91.8 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area E-Boring E Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

040407 1623

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E09S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619409 Lab File ID: 194-09.D

Sample wt/vol: 20.83 Units: G Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 1832

PercentSolids: 92.7 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area E-Boring E Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

040407 1623

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
EPA Sample No.	5715E10S031207		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506194
Matrix:	SOIL	Lab Sample ID:	250619410
Lab File ID:	194-10.D		
Sample wt/vol:	20.42	Units:	G
Date Received:	03/13/07		
Concentrated Extract Volume:	10	Date Extracted:	03/15/07
Level:(low/med)	LOW	Date Analyzed:	03/20/07
Time:	1859		
PercentSolids:	91	decanted :	
Dilution Factor:	1		
Extraction:	SONC	Station ID:	Area E-Boring E
Method:	8082		
GPC Cleanup : (Y/N)	N	pH:	
Column(1):	STX-CLP1	ID:	0.32 (mm)
CONCENTRATION UNITS:	UG/KG		

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U J-S
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

040407 1623

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E11S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619411 Lab File ID: 194-11.D

Sample wt/vol: 20.05 Units: G Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 1926

PercentSolids: 92.5 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area E-Boring E Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

040407 1623

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
			5715E12S031207
Lab Code :	PEL . Case No.	SAS No:	SDG No.: 2506194
Matrix:	SOIL	Lab Sample ID:	250619412 Lab File ID: 194-12.D
Sample wt/vol:	20.3 Units: G	Date Received:	03/13/07
Concentrated Extract Volume:	10	Date Extracted:	03/15/07
Level:(low/med)	LOW	Date Analyzed:	03/20/07 Time: 1952
PercentSolids:	91.8 decanted :	Dilution Factor:	1
Extraction:	SONC	Station ID:	Area E-Boring E Method: 8082
GPC Cleanup : (Y/N)	N pH:		
Column(1):	STX-CLP1 ID: 0.32 (mm)		

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

040407 1623

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E01S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619401	Lab File ID: 194-1.D
Sample wt/vol:	480	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 0140
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8151 TCLP
GPC Cleanup : (Y/N)	N	pH:			
				Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00031	U
93-72-1	2,4,5-TP (Silvex)	0.000079	U

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040407 1623

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
EPA Sample No.	5715E02S031207		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506194
Matrix:	SOIL	Lab Sample ID:	250619402
Lab File ID:	194-2.D	Sample wt/vol:	450
Units:	ML	Date Received:	03/13/07
Concentrated Extract Volume:	10	Date Extracted:	03/28/07
Level:(low/med)	LOW	Date Analyzed:	03/29/07
Time:	0954	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	SEPF	Station ID:	Area E-Boring E
Method:	8151 TCLP	GPC Cleanup : (Y/N)	N
pH:		Column(2):	STX-CLP2
ID:	0.32	(mm)	

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000084	U

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040407 1623

Form I

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E03S031207
Lab Code :	PEL	Case No.	SAS No:	SDG No.:	2506194
Matrix:	SOIL		Lab Sample ID: 250619403	Lab File ID:	194-3.D
Sample wt/vol:	460	Units: ML	Date Received: 03/13/07		
Concentrated Extract Volume:	10		Date Extracted: 03/28/07		
Level:(low/med)	LOW		Date Analyzed: 03/29/07	Time:	0223
PercentSolids:	0	decanted :	Dilution Factor: 1		
Extraction:	SEPF		Station ID: Area E-Boring E	Method:	8151 TCLP
GPC Cleanup : (Y/N)	N	pH:			
			Column(2): STX-CLP2	ID: 0.32	(mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000083	U

040407 1623

Form I

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E04S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619404	Lab File ID: 194-4.D
Sample wt/vol:	450	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1037
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8151 TCLP
GPC Cleanup : (Y/N)	N	pH:			
				Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000084	U

c.d

040407 1623

Form I

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E05S031207
Lab Code :	PEL	Case No.	SAS No:	SDG No.:	2506194
Matrix:	SOIL		Lab Sample ID:	250619405	Lab File ID: 194-5.D
Sample wt/vol:	450	Units: ML	Date Received:	03/13/07	
Concentrated Extract Volume:	10		Date Extracted:	03/28/07	
Level:(low/med)	LOW		Date Analyzed:	03/29/07	Time: 1120
PercentSolids:	0	decanted :	Dilution Factor:	1	
Extraction:	SEPF		Station ID:	Area E-Boring E	Method: 8151 TCLP
GPC Cleanup : (Y/N)	N	pH:			
			Column(2):	STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000084	U

OK

040407 1623

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E06S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619406 Lab File ID: 194-6.D

Sample wt/vol: 460 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1202

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area E-Boring E Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000083	U

CL

040407 1623

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E07S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619407 Lab File ID: 194-7.D

Sample wt/vol: 480 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 0306

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area E-Boring E Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00031	U
93-72-1	2,4,5-TP (Silvex)	0.000079	U

nd

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Form I

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E08S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID: 250619408	Lab File ID: 194-8.D
Sample wt/vol:	480	Units:	ML	Date Received: 03/13/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 0348
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area E-Boring E	Method: 8151 TCLP
GPC Cleanup : (Y/N)	N	pH:			
				Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00031	U
93-72-1	2,4,5-TP (Silvex)	0.000079	U

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E09S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619409 Lab File ID: 194-9.D

Sample wt/vol: 480 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 0431

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area E-Boring E Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00031	U
93-72-1	2,4,5-TP (Silvex)	0.000079	U

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Form I

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E10S031207
Lab Code :	PEL	Case No.	SAS No:	SDG No.:	2506194
Matrix:	SOIL		Lab Sample ID: 250619410	Lab File ID:	194-10.D
Sample wt/vol:	480	Units: ML	Date Received:	03/13/07	
Concentrated Extract Volume:	10		Date Extracted:	03/28/07	
Level:(low/med)	LOW		Date Analyzed:	03/29/07	Time: 0514
PercentSolids:	0	decanted :	Dilution Factor:	1	
Extraction:	SEPF		Station ID: Area E-Boring E	Method:	8151 TCLP
GPC Cleanup : (Y/N)	N	pH:			
			Column(2): STX-CLP2	ID: 0.32	(mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00031	U
93-72-1	2,4,5-TP (Silvex)	0.000079	U

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E11S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619411 Lab File ID: 194-11.D

Sample wt/vol: 480 Units: ML Date Received: 03/13/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 0557

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area E-Boring E Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00031	U J-S
93-72-1	2,4,5-TP (Silvex)	0.000079	U

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E12S031207
Lab Code :	PEL	Case No.	SAS No:	SDG No.:	2506194
Matrix:	SOIL		Lab Sample ID: 250619412	Lab File ID:	194-12.D
Sample wt/vol:	470	Units: ML	Date Received:	03/13/07	
Concentrated Extract Volume:	10		Date Extracted:	03/28/07	
Level:(low/med)	LOW		Date Analyzed:	03/29/07	Time: 0639
PercentSolids:	0	decanted :	Dilution Factor:	1	
Extraction:	SEPF		Station ID:	Area E-Boring E	Method: 8151 TCLP
GPC Cleanup : (Y/N)	N	pH:			
			Column(2):	STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00032	U
93-72-1	2,4,5-TP (Silvex)	0.000081	U

nd

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Form I

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E01S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619401

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.0691	J		P
7440-43-9	Cadmium	0.0109	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.5	U		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0603	~~J~~	B	P
7440-22-4	Silver	0.2	U		P

mb

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1624

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E02S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619402

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.169	J		P
7440-43-9	Cadmium	0.0114	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.0698	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0316	~~J~~	B	P
7440-22-4	Silver	0.2	U		P

MB

ct

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E03S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619403

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.0339	J		P
7440-43-9	Cadmium	0.00586	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.5	U		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0325	~~J~~	B	P
7440-22-4	Silver	0.2	U		P

mB

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E04S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619404

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.0858	J		P
7440-43-9	Cadmium	0.0297	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.5	U		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E05S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619405

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.163	J		P
7440-43-9	Cadmium	0.00454	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.084	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0678	~~J~~	B	P
7440-22-4	Silver	0.2	U		P

MD

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E06S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619406

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.0845	J		P
7440-43-9	Cadmium	0.0148	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.18	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E07S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619407

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.0636	J		P
7440-43-9	Cadmium	0.00476	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.0309	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0339	~~J~~	B	P
7440-22-4	Silver	0.2	U		P

MB

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Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E08S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619408

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.0417	J		P
7440-43-9	Cadmium	0.00693	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.193	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.082	~~J~~	B	P
7440-22-4	Silver	0.2	U		P

mB

C.L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E09S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619409

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.199	J		P
7440-43-9	Cadmium	0.017	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	1.86			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

c.l

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E10S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619410

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.0728	J		P
7440-43-9	Cadmium	0.0123	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.5	U		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0591	~~J~~	B	P
7440-22-4	Silver	0.2	U		P

mB

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E11S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619411

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.165	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.114	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0484	~~J~~	B	P
7440-22-4	Silver	0.2	U		P

mB

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E12S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619412

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.05	U		P	
7440-39-3	Barium	0.038	J		P	
7440-43-9	Cadmium	0.05	U		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	0.5	U		P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0286	~~J~~	B	P	mB
7440-22-4	Silver	0.2	U		P	

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E01S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619401

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.31			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E02S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID:	250619402
Level:(low/med)	LOW			Date Received:	3/13/2007
PercentSolids:	0			Station ID:	Area E-Boring E

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.25			N/A

C.R

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E03S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619403

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	7.22			N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E04S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619404

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.07			N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15	5715E05S031207
Lab Code :	PEL	Case No.	SAS No:	SDG No.: 2506194
Matrix:	SOIL		Lab Sample ID:	250619405
Level:(low/med)	LOW		Date Received:	3/13/2007
PercentSolids:	0		Station ID:	Area E-Boring E

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.31			N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E06S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619406

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.44			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E07S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619407

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.51			N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E08S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619408

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.03			N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E09S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID:	250619409
Level:(low/med)	LOW			Date Received:	3/13/2007
PercentSolids:	0			Station ID:	Area E-Boring E

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.74			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E10S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619410

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	7.55			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1525

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E11S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619411

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	7.46			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E12S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID:	250619412
Level:(low/med)	LOW			Date Received:	3/13/2007
PercentSolids:	0			Station ID:	Area E-Boring E

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	7.72			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1525

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E01S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619401

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E02S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619402

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E03S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619403

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

C.L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E04S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619404

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E05S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619405

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E06S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID:	250619406
Level:(low/med)	LOW			Date Received:	3/13/2007
PercentSolids:	0			Station ID:	Area E-Boring E

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E07S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619407

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

c.R

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E08S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619408

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

C.L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E09S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619409

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715E10S031207
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506194
Matrix:	SOIL			Lab Sample ID:	250619410
Level:(low/med)	LOW			Date Received:	3/13/2007
PercentSolids:	0			Station ID:	Area E-Boring E

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

C.R

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E11S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619411

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

C.L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715E12S031207

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506194

Matrix: SOIL Lab Sample ID: 250619412

Level:(low/med) LOW Date Received: 3/13/2007

PercentSolids: 0 Station ID: Area E-Boring E

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

o.k

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

040407 1625

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620701 Lab File ID: 20701.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/28/07 Time: 2035

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area I-Boring I Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620702 Lab File ID: 20702.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/28/07 Time: 2058

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area I-Boring I Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

ok

300307 1507

Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620703 Lab File ID: 20703.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/28/07 Time: 2122

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area I-Boring I Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

r.k

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Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620704 Lab File ID: 20704.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/28/07 Time: 2145

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area I-Boring I Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

ok

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Form I

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620705 Lab File ID: 20705.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/28/07 Time: 2208

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area F-Boring F Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

ok

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Form I

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620706 Lab File ID: 20706.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/28/07 Time: 2232

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area F-Boring F Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

ok

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620707 Lab File ID: 20707.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/28/07 Time: 2255

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area F-Boring F Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620708 Lab File ID: 20708.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/28/07 Time: 2318

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area F-Boring F Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

CL

300307 1507

Form I

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620701 Lab File ID: 207-1.D

Sample wt/vol: 460 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 1 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1330

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area I-Boring I Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0087	U
106-46-7	1,4-Dichlorobenzene	0.0087	U
95-48-7	2-Methylphenol (o-Cresol)	0.0087	U
67-72-1	Hexachloroethane	0.0087	U
106-44-5	4-Methylphenol	0.0133	U
98-95-3	Nitrobenzene	0.0087	U
87-68-3	Hexachlorobutadiene	0.0087	U
88-06-2	2,4,6-Trichlorophenol	0.0087	U
95-95-4	2,4,5-Trichlorophenol	0.0087	U
121-14-2	2,4-Dinitrotoluene	0.0087	U
118-74-1	Hexachlorobenzene	0.0087	U
87-86-5	Pentachlorophenol	0.0217	U

1.4

300307 1508

Form I

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620702 Lab File ID: 207-2.D

Sample wt/vol: 470 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 1 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1402

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area I-Boring I Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00851	U
106-46-7	1,4-Dichlorobenzene	0.00851	U
95-48-7	2-Methylphenol (o-Cresol)	0.00851	U
67-72-1	Hexachloroethane	0.00851	U
106-44-5	4-Methylphenol	0.013	U
98-95-3	Nitrobenzene	0.00851	U
87-68-3	Hexachlorobutadiene	0.00851	U
88-06-2	2,4,6-Trichlorophenol	0.00851	U
95-95-4	2,4,5-Trichlorophenol	0.00851	U
121-14-2	2,4-Dinitrotoluene	0.00851	U
118-74-1	Hexachlorobenzene	0.00851	U
87-86-5	Pentachlorophenol	0.0213	U

ok

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620703 Lab File ID: 207-3.D

Sample wt/vol: 480 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 1 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1435

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area I-Boring I Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00833	U
106-46-7	1,4-Dichlorobenzene	0.00833	U
95-48-7	2-Methylphenol (o-Cresol)	0.00833	U
67-72-1	Hexachloroethane	0.00833	U
106-44-5	4-Methylphenol	0.0127	U
98-95-3	Nitrobenzene	0.00833	U
87-68-3	Hexachlorobutadiene	0.00833	U
88-06-2	2,4,6-Trichlorophenol	0.00833	U
95-95-4	2,4,5-Trichlorophenol	0.00833	U
121-14-2	2,4-Dinitrotoluene	0.00833	U
118-74-1	Hexachlorobenzene	0.00833	U
87-86-5	Pentachlorophenol	0.0208	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620704 Lab File ID: 207-4.D

Sample wt/vol: 460 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 1 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1507

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area I-Boring I Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0087	U
106-46-7	1,4-Dichlorobenzene	0.0087	U
95-48-7	2-Methylphenol (o-Cresol)	0.0087	U
67-72-1	Hexachloroethane	0.0087	U
106-44-5	4-Methylphenol	0.0133	U
98-95-3	Nitrobenzene	0.0087	U
87-68-3	Hexachlorobutadiene	0.0087	U
88-06-2	2,4,6-Trichlorophenol	0.0087	U
95-95-4	2,4,5-Trichlorophenol	0.0087	U
121-14-2	2,4-Dinitrotoluene	0.0087	U
118-74-1	Hexachlorobenzene	0.0087	U
87-86-5	Pentachlorophenol	0.0217	U

n.k

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620705 Lab File ID: 207-5.D

Sample wt/vol: 460 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 1 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1540

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area F-Boring F Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0087	U
106-46-7	1,4-Dichlorobenzene	0.0087	U
95-48-7	2-Methylphenol (o-Cresol)	0.0087	U
67-72-1	Hexachloroethane	0.0087	U
106-44-5	4-Methylphenol	0.0133	U
98-95-3	Nitrobenzene	0.0087	U
87-68-3	Hexachlorobutadiene	0.0087	U
88-06-2	2,4,6-Trichlorophenol	0.0087	U
95-95-4	2,4,5-Trichlorophenol	0.0087	U
121-14-2	2,4-Dinitrotoluene	0.0087	U
118-74-1	Hexachlorobenzene	0.0087	U
87-86-5	Pentachlorophenol	0.0217	U

ok

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620706 Lab File ID: 207-6.D

Sample wt/vol: 430 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 1 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1644

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area F-Boring F Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0093	U
106-46-7	1,4-Dichlorobenzene	0.0093	U
95-48-7	2-Methylphenol (o-Cresol)	0.0093	U
67-72-1	Hexachloroethane	0.0093	U
106-44-5	4-Methylphenol	0.0142	U
98-95-3	Nitrobenzene	0.0093	U
87-68-3	Hexachlorobutadiene	0.0093	U
88-06-2	2,4,6-Trichlorophenol	0.0093	U
95-95-4	2,4,5-Trichlorophenol	0.0093	U
121-14-2	2,4-Dinitrotoluene	0.0093	U
118-74-1	Hexachlorobenzene	0.0093	U
87-86-5	Pentachlorophenol	0.0232	U

ok

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620707 Lab File ID: 207-7.D

Sample wt/vol: 460 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 1 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1717

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area F-Boring F Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0087	U
106-46-7	1,4-Dichlorobenzene	0.0087	U
95-48-7	2-Methylphenol (o-Cresol)	0.0087	U
67-72-1	Hexachloroethane	0.0087	U
106-44-5	4-Methylphenol	0.0133	U
98-95-3	Nitrobenzene	0.0087	U
87-68-3	Hexachlorobutadiene	0.0087	U
88-06-2	2,4,6-Trichlorophenol	0.0087	U
95-95-4	2,4,5-Trichlorophenol	0.0087	U
121-14-2	2,4-Dinitrotoluene	0.0087	U
118-74-1	Hexachlorobenzene	0.0087	U
87-86-5	Pentachlorophenol	0.0217	U

C.K

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620708 Lab File ID: 207-8.D

Sample wt/vol: 470 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 1 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1749

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area F-Boring F Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00851	U
106-46-7	1,4-Dichlorobenzene	0.00851	U
95-48-7	2-Methylphenol (o-Cresol)	0.00851	U
67-72-1	Hexachloroethane	0.00851	U
106-44-5	4-Methylphenol	0.013	U
98-95-3	Nitrobenzene	0.00851	U
87-68-3	Hexachlorobutadiene	0.00851	U
88-06-2	2,4,6-Trichlorophenol	0.00851	U
95-95-4	2,4,5-Trichlorophenol	0.00851	U
121-14-2	2,4-Dinitrotoluene	0.00851	U
118-74-1	Hexachlorobenzene	0.00851	U
87-86-5	Pentachlorophenol	0.0213	U

C.A

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620701 Lab File ID: 207-1.D

Sample wt/vol: 470 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 0148

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area I-Boring I Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000021	U
76-44-8	Heptachlor	0.000021	U
1024-57-3	Heptachlor epoxide	0.000021	U
72-20-8	Endrin	0.000021	U
72-43-5	Methoxychlor	0.000021	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

C-L

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

300307 1508

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620702 Lab File ID: 207-2.D

Sample wt/vol: 460 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 0219

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area I-Boring I Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000022	U
76-44-8	Heptachlor	0.000022	U
1024-57-3	Heptachlor epoxide	0.000022	U
72-20-8	Endrin	0.000022	U
72-43-5	Methoxychlor	0.000022	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

ok

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

300307 1508

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620703 Lab File ID: 207-3.D

Sample wt/vol: 470 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 0250

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area I-Boring I Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000021	U
76-44-8	Heptachlor	0.000021	U
1024-57-3	Heptachlor epoxide	0.000021	U
72-20-8	Endrin	0.000021	U
72-43-5	Methoxychlor	0.000021	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

300307 1508

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	NAS Cecil Field / Site 15		5715I04S031307
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506207
Matrix:	SOIL			Lab Sample ID: 250620704	Lab File ID: 207-4.D
Sample wt/vol:	470	Units:	ML	Date Received: 03/14/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 0321
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area I-Boring I	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000021	U
76-44-8	Heptachlor	0.0000054	J
1024-57-3	Heptachlor epoxide	0.000021	U
72-20-8	Endrin	0.000021	U
72-43-5	Methoxychlor	0.000021	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620705 Lab File ID: 207-5.D

Sample wt/vol: 470 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 0352

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area F-Boring F Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000017	J
76-44-8	Heptachlor	0.000021	U
1024-57-3	Heptachlor epoxide	0.000021	U
72-20-8	Endrin	0.000021	U
72-43-5	Methoxychlor	0.000021	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

ok

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

300307 1508

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	NAS Cecil Field / Site 15		5715F02S031307
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506207
Matrix:	SOIL			Lab Sample ID: 250620706	Lab File ID: 207-6.D
Sample wt/vol:	450	Units:	ML	Date Received: 03/14/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 0958
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area F-Boring F	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000022	U
76-44-8	Heptachlor	0.000022	U
1024-57-3	Heptachlor epoxide	0.000022	U
72-20-8	Endrin	0.000022	U
72-43-5	Methoxychlor	0.000022	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

ok

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

300307 1508

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620707 Lab File ID: 207-7.D

Sample wt/vol: 460 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1029

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area F-Boring F Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000022	U
76-44-8	Heptachlor	0.000022	U
1024-57-3	Heptachlor epoxide	0.000022	U
72-20-8	Endrin	0.000022	U
72-43-5	Methoxychlor	0.000022	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

ok

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

300307 1508

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620708 Lab File ID: 207-8.D

Sample wt/vol: 450 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1059

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area F-Boring F Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000022	U
76-44-8	Heptachlor	0.000022	U
1024-57-3	Heptachlor epoxide	0.000022	U
72-20-8	Endrin	0.000022	U
72-43-5	Methoxychlor	0.000022	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

c.k

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

300307 1508

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620701 Lab File ID: 207-1.D

Sample wt/vol: 20.14 Units: G Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 2018

PercentSolids: 75.4 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area I-Boring I Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	32	U
11096-82-5	Aroclor-1260	32	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	320	U

ok

300307 1508

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620702 Lab File ID: 207-2.D

Sample wt/vol: 20.18 Units: G Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 2045

PercentSolids: 92.1 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area I-Boring I Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

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300307 1508

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620703 Lab File ID: 207-3.D

Sample wt/vol: 20.62 Units: G Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 2111

PercentSolids: 90.8 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area I-Boring I Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

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Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620704 Lab File ID: 207-4.D

Sample wt/vol: 20.17 Units: G Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 2220

PercentSolids: 91.5 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area I-Boring I Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

c.k

300307 1508

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620705 Lab File ID: 207-5.D

Sample wt/vol: 20.71 Units: G Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 2246

PercentSolids: 74.7 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area F-Boring F Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	32	U
11096-82-5	Aroclor-1260	32	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	320	U

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PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620706 Lab File ID: 207-6.D

Sample wt/vol: 20.23 Units: G Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 2312

PercentSolids: 71.7 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area F-Boring F Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	34	U
11096-82-5	Aroclor-1260	34	U
11104-28-2	Aroclor-1221	340	U
11141-16-5	Aroclor-1232	340	U
53469-21-9	Aroclor-1242	340	U
12672-29-6	Aroclor-1248	340	U
11097-69-1	Aroclor-1254	340	U

a.k

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620707 Lab File ID: 207-7.D

Sample wt/vol: 20.22 Units: G Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/20/07 Time: 2338

PercentSolids: 75.7 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area F-Boring F Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	32	U
11096-82-5	Aroclor-1260	32	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	320	U

C.L

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620708 Lab File ID: 207-8.D

Sample wt/vol: 20.13 Units: G Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/15/07

Level:(low/med) LOW Date Analyzed: 03/21/07 Time: 0004

PercentSolids: 71.1 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area F-Boring F Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	34	U
11096-82-5	Aroclor-1260	34	U
11104-28-2	Aroclor-1221	340	U
11141-16-5	Aroclor-1232	340	U
53469-21-9	Aroclor-1242	340	U
12672-29-6	Aroclor-1248	340	U
11097-69-1	Aroclor-1254	340	U

c.L

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620701 Lab File ID: 207-1.D

Sample wt/vol: 450 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1245

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area I-Boring I Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000084	U

a.l

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620702 Lab File ID: 207-2.D

Sample wt/vol: 460 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1328

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area I-Boring I Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000083	U

ch

300307 1509

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620703 Lab File ID: 207-3.D

Sample wt/vol: 460 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1510

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area I-Boring I Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000083	U

ch

300307 1509

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620704 Lab File ID: 207-4.D

Sample wt/vol: 460 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1552

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area I-Boring I Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000083	U

n.t

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620705 Lab File ID: 207-5.D

Sample wt/vol: 460 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1635

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area F-Boring F Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000083	U

c.t

300307 1509

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620706 Lab File ID: 207-6.D

Sample wt/vol: 460 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1718

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area F-Boring F Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000083	U

ok

300307 1509

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620707 Lab File ID: 207-7.D

Sample wt/vol: 450 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1801

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area F-Boring F Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000084	U

c.t

300307 1509

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620708 Lab File ID: 207-8.D

Sample wt/vol: 460 Units: ML Date Received: 03/14/07

Concentrated Extract Volume: 10 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1843

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area F-Boring F Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000083	U

a. L

300307 1509

Form I

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620701

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area I-Boring I

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.05	U		P	
7440-39-3	Barium	0.117	J		P	
7440-43-9	Cadmium	0.05	U		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	0.118	J		P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0466	~~J~~	B	P	MB
7440-22-4	Silver	0.2	U		P	

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1509

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620702

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area I-Boring I

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.128	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.169	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1509

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620703

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area I-Boring I

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.108	J		P
7440-43-9	Cadmium	0.00436	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.362	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0491	J	B	P
7440-22-4	Silver	0.2	U		P

MB

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

ok

Comments:

300307 1509

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620704

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area I-Boring I

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.0261	J		P
7440-39-3	Barium	0.0271	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.0374	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0452	~~J~~	B	P
7440-22-4	Silver	0.2	U		P

MB

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

C.L

Comments:

300307 1509

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620705

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area F-Boring F

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.0216	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	8.88			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0499	~~J~~	B	P
7440-22-4	Silver	0.2	U		P

MB

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

C.L

Comments:

300307 1509

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620706

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area F-Boring F

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.0248	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	7.48			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

C.L

Comments:

300307 1509

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620707

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area F-Boring F

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.0222	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	9.08			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1509

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620708

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area F-Boring F

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0283	J		P	
7440-39-3	Barium	0.019	J		P	
7440-43-9	Cadmium	0.00787	J		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	3.88			P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0591	J	B	P	MB
7440-22-4	Silver	0.2	U		P	

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

ok

Comments:

300307 1509

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620701

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area I-Boring I

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.17			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620702

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area I-Boring I

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.55			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620703

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area I-Boring I

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.16			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1510

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620704

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area I-Boring I

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.34			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620705

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area F-Boring F

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.37			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620706

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area F-Boring F

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.25			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1510

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620707

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area F-Boring F

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	4.38			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1510

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620708

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area F-Boring F

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	3.97			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1510

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620701

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area I-Boring I

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

a.h

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1510

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620703

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area I-Boring I

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

nk

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1510

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715I04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620704

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area I-Boring I

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

C.K

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1510

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F01S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620705

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area F-Boring F

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F02S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620706

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area F-Boring F

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

C.A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F03S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620707

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area F-Boring F

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715F04S031307

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506207

Matrix: SOIL Lab Sample ID: 250620708

Level:(low/med) LOW Date Received: 3/14/2007

PercentSolids: 0 Station ID: Area F-Boring F

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

300307 1510

1

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L10S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622501	Lab File ID: 22501.D
Sample wt/vol:	0.5	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	5			Date Extracted:	
Level:(low/med)	LOW			Date Analyzed: 03/30/07	Time: 0900
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	PURGETRAP			Station ID: Area L - Boring	Method: 8260 TCLP
GPC Cleanup : (Y/N)		pH:			
Column(1):	DB-624	ID: 0.18	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

nk

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Form I

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L11S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622502	Lab File ID: 22502.D
Sample wt/vol:	0.5	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	5			Date Extracted:	
Level:(low/med)	LOW			Date Analyzed: 03/30/07	Time: 0927
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	PURGETRAP			Station ID: Area L - Boring	Method: 8260 TCLP
GPC Cleanup : (Y/N)		pH:			
Column(1):	DB-624	ID: 0.18	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

C.L

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Form I

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
EPA Sample No.	5715L12S031407		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506225
Matrix:	SOIL	Lab Sample ID:	250622503
Lab File ID:	22503.D	Sample wt/vol:	0.5
Units:	ML	Date Received:	03/15/07
Concentrated Extract Volume:	5	Date Extracted:	
Level:(low/med)	LOW	Date Analyzed:	03/30/07
Time:	0954	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	PURGETRAP	Station ID:	Area L - Boring
Method:	8260 TCLP	GPC Cleanup : (Y/N)	
pH:		Column(1):	DB-624
ID:	0.18 (mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

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Form I

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L13S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622504 Lab File ID: 22504.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/15/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/30/07 Time: 1021

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area L - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

ok

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Form I

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L14S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622505	Lab File ID: 22505.D
Sample wt/vol:	0.5	Units:	ML	Date Received:	03/15/07
Concentrated Extract Volume:	5			Date Extracted:	
Level:(low/med)	LOW			Date Analyzed:	03/30/07 Time: 1049
PercentSolids:	0	decanted :		Dilution Factor:	1
Extraction:	PURGETRAP			Station ID:	Area L - Boring Method: 8260 TCLP
GPC Cleanup : (Y/N)		pH:			
Column(1):	DB-624	ID: 0.18	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
EPA Sample No.	5715L15S031407		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506225
Matrix:	SOIL	Lab Sample ID:	250622506
Lab File ID:	22506.D	Sample wt/vol:	0.5
Units:	ML	Date Received:	03/15/07
Concentrated Extract Volume:	5	Date Extracted:	
Level:(low/med)	LOW	Date Analyzed:	03/30/07
Time:	1116	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	PURGETRAP	Station ID:	Area L - Boring
Method:	8260 TCLP	GPC Cleanup : (Y/N)	
pH:		Column(1):	DB-624
ID:	0.18 (mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

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Form I

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L16S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622507 Lab File ID: 22507.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/15/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/30/07 Time: 1144

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area L - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

CL

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L17S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622508 Lab File ID: 22508.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/15/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/30/07 Time: 1211

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area L - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

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020407 1538

Form I

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L18S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622509	Lab File ID: 22509.D
Sample wt/vol:	0.5	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	5			Date Extracted:	
Level:(low/med)	LOW			Date Analyzed: 03/30/07	Time: 1239
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	PURGETRAP			Station ID: Area L - Boring	Method: 8260 TCLP
GPC Cleanup : (Y/N)		pH:			
Column(1):	DB-624	ID: 0.18	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.01	U
75-35-4	1,1-Dichloroethene	0.01	U
78-93-3	2-Butanone	0.04	U
67-66-3	Chloroform	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
71-43-2	Benzene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
79-01-6	Trichloroethene	0.01	U
127-18-4	Tetrachloroethene	0.01	U
108-90-7	Chlorobenzene	0.01	U

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020407 1538

Form I

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L10S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622501	Lab File ID: 225-1.D
Sample wt/vol:	460	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	1			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1458
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8270 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	HPMS-5	ID: 0.25	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0087	U
106-46-7	1,4-Dichlorobenzene	0.0087	U
95-48-7	2-Methylphenol (o-Cresol)	0.0087	U
67-72-1	Hexachloroethane	0.0087	U
106-44-5	4-Methylphenol	0.0133	U
98-95-3	Nitrobenzene	0.0087	U
87-68-3	Hexachlorobutadiene	0.0087	U
88-06-2	2,4,6-Trichlorophenol	0.0087	U
95-95-4	2,4,5-Trichlorophenol	0.0087	U
121-14-2	2,4-Dinitrotoluene	0.0087	U
118-74-1	Hexachlorobenzene	0.0087	U
87-86-5	Pentachlorophenol	0.0435	U

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020407 1538

Form I

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L11S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622502	Lab File ID: 225-2.D
Sample wt/vol:	440	Units:	ML	Date Received:	03/15/07
Concentrated Extract Volume:	1			Date Extracted:	03/28/07
Level:(low/med)	LOW			Date Analyzed:	03/29/07 Time: 1528
PercentSolids:	0	decanted :		Dilution Factor:	1
Extraction:	SEPF			Station ID:	Area L - Boring Method: 8270 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	HPMS-5	ID: 0.25	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00909	U
106-46-7	1,4-Dichlorobenzene	0.00909	U
95-48-7	2-Methylphenol (o-Cresol)	0.00909	U
67-72-1	Hexachloroethane	0.00909	U
106-44-5	4-Methylphenol	0.0139	U
98-95-3	Nitrobenzene	0.00909	U
87-68-3	Hexachlorobutadiene	0.00909	U
88-06-2	2,4,6-Trichlorophenol	0.00909	U
95-95-4	2,4,5-Trichlorophenol	0.00909	U
121-14-2	2,4-Dinitrotoluene	0.00909	U
118-74-1	Hexachlorobenzene	0.00909	U
87-86-5	Pentachlorophenol	0.0454	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
EPA Sample No.	5715L12S031407		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506225
Matrix:	SOIL	Lab Sample ID:	250622503
Lab File ID:	225-3.D	Sample wt/vol:	470
Units:	ML	Date Received:	03/15/07
Concentrated Extract Volume:	1	Date Extracted:	03/28/07
Level:(low/med)	LOW	Date Analyzed:	03/29/07
Time:	1557	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	SEPF	Station ID:	Area L - Boring
Method:	8270 TCLP	GPC Cleanup : (Y/N)	N
pH:		Column(1):	HPMS-5
ID:	0.25 (mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00851	U
106-46-7	1,4-Dichlorobenzene	0.00851	U
95-48-7	2-Methylphenol (o-Cresol)	0.00851	U
67-72-1	Hexachloroethane	0.00851	U
106-44-5	4-Methylphenol	0.013	U
98-95-3	Nitrobenzene	0.00851	U
87-68-3	Hexachlorobutadiene	0.00851	U
88-06-2	2,4,6-Trichlorophenol	0.00851	U
95-95-4	2,4,5-Trichlorophenol	0.00851	U
121-14-2	2,4-Dinitrotoluene	0.00851	U
118-74-1	Hexachlorobenzene	0.00851	U
87-86-5	Pentachlorophenol	0.0426	U

ok

020407 1538

Form I

1

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L13S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622504 Lab File ID: 225-4.D

Sample wt/vol: 440 Units: ML Date Received: 03/15/07

Concentrated Extract Volume: 1 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1626

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00909	U
106-46-7	1,4-Dichlorobenzene	0.00909	U
95-48-7	2-Methylphenol (o-Cresol)	0.00909	U
67-72-1	Hexachloroethane	0.00909	U
106-44-5	4-Methylphenol	0.0139	U
98-95-3	Nitrobenzene	0.00909	U
87-68-3	Hexachlorobutadiene	0.00909	U
88-06-2	2,4,6-Trichlorophenol	0.00909	U
95-95-4	2,4,5-Trichlorophenol	0.00909	U
121-14-2	2,4-Dinitrotoluene	0.00909	U
118-74-1	Hexachlorobenzene	0.00909	U
87-86-5	Pentachlorophenol	0.0454	U

ok

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L14S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622505	Lab File ID: 225-5.D
Sample wt/vol:	460	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	1			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1655
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8270 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	HPMS-5	ID: 0.25	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0087	U
106-46-7	1,4-Dichlorobenzene	0.0087	U
95-48-7	2-Methylphenol (o-Cresol)	0.0087	U
67-72-1	Hexachloroethane	0.0087	U
106-44-5	4-Methylphenol	0.0133	U
98-95-3	Nitrobenzene	0.0087	U
87-68-3	Hexachlorobutadiene	0.0087	U
88-06-2	2,4,6-Trichlorophenol	0.0087	U
95-95-4	2,4,5-Trichlorophenol	0.0087	U
121-14-2	2,4-Dinitrotoluene	0.0087	U
118-74-1	Hexachlorobenzene	0.0087	U
87-86-5	Pentachlorophenol	0.0435	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L15S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622506	Lab File ID: 225-6.D
Sample wt/vol:	450	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	1			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1724
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8270 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	HPMS-5	ID: 0.25	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0444	U

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020407 1538

Form I

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L16S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622507	Lab File ID: 225-7.D
Sample wt/vol:	460	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	1			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1754
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8270 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	HPMS-5	ID: 0.25	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0087	U
106-46-7	1,4-Dichlorobenzene	0.0087	U
95-48-7	2-Methylphenol (o-Cresol)	0.0087	U
67-72-1	Hexachloroethane	0.0087	U
106-44-5	4-Methylphenol	0.0133	U
98-95-3	Nitrobenzene	0.0087	U
87-68-3	Hexachlorobutadiene	0.0087	U
88-06-2	2,4,6-Trichlorophenol	0.0087	U
95-95-4	2,4,5-Trichlorophenol	0.0087	U
121-14-2	2,4-Dinitrotoluene	0.0087	U
118-74-1	Hexachlorobenzene	0.0087	U
87-86-5	Pentachlorophenol	0.0435	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L17S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622508	Lab File ID: 225-8.D
Sample wt/vol:	450	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	1			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1823
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8270 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	HPMS-5	ID: 0.25	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.00889	U
106-46-7	1,4-Dichlorobenzene	0.00889	U
95-48-7	2-Methylphenol (o-Cresol)	0.00889	U
67-72-1	Hexachloroethane	0.00889	U
106-44-5	4-Methylphenol	0.0136	U
98-95-3	Nitrobenzene	0.00889	U
87-68-3	Hexachlorobutadiene	0.00889	U
88-06-2	2,4,6-Trichlorophenol	0.00889	U
95-95-4	2,4,5-Trichlorophenol	0.00889	U
121-14-2	2,4-Dinitrotoluene	0.00889	U
118-74-1	Hexachlorobenzene	0.00889	U
87-86-5	Pentachlorophenol	0.0444	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L18S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622509 Lab File ID: 225-9.D

Sample wt/vol: 460 Units: ML Date Received: 03/15/07

Concentrated Extract Volume: 1 Date Extracted: 03/28/07

Level:(low/med) LOW Date Analyzed: 03/29/07 Time: 1852

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.0087	U
106-46-7	1,4-Dichlorobenzene	0.0087	U
95-48-7	2-Methylphenol (o-Cresol)	0.0087	U
67-72-1	Hexachloroethane	0.0087	U
106-44-5	4-Methylphenol	0.0133	U
98-95-3	Nitrobenzene	0.0087	U
87-68-3	Hexachlorobutadiene	0.0087	U
88-06-2	2,4,6-Trichlorophenol	0.0087	U
95-95-4	2,4,5-Trichlorophenol	0.0087	U
121-14-2	2,4-Dinitrotoluene	0.0087	U
118-74-1	Hexachlorobenzene	0.0087	U
87-86-5	Pentachlorophenol	0.0435	U

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PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L10S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622501	Lab File ID: 225-1.D
Sample wt/vol:	460	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1130
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000022	U
76-44-8	Heptachlor	0.000022	U
1024-57-3	Heptachlor epoxide	0.000022	U
72-20-8	Endrin	0.000022	U
72-43-5	Methoxychlor	0.000022	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

020407 1539

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L11S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622502	Lab File ID: 225-2.D
Sample wt/vol:	500	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1201
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

020407 1539

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L12S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622503	Lab File ID: 225-3.D
Sample wt/vol:	460	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1232
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000022	U
76-44-8	Heptachlor	0.000022	U
1024-57-3	Heptachlor epoxide	0.000022	U
72-20-8	Endrin	0.000022	U
72-43-5	Methoxychlor	0.000022	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

020407 1539

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L13S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622504	Lab File ID: 225-4.D
Sample wt/vol:	480	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1303
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000021	U
76-44-8	Heptachlor	0.000021	U
1024-57-3	Heptachlor epoxide	0.000021	U
72-20-8	Endrin	0.000021	U
72-43-5	Methoxychlor	0.000021	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

ok

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

020407 1539

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L14S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622505	Lab File ID: 225-5.D
Sample wt/vol:	470	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1334
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000021	U
76-44-8	Heptachlor	0.000021	U
1024-57-3	Heptachlor epoxide	0.000021	U
72-20-8	Endrin	0.000021	U
72-43-5	Methoxychlor	0.000021	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

ok

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

020407 1539

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L15S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622506	Lab File ID: 225-6.D
Sample wt/vol:	480	Units:	ML	Date Received:	03/15/07
Concentrated Extract Volume:	10			Date Extracted:	03/28/07
Level:(low/med)	LOW			Date Analyzed:	03/29/07 Time: 1405
PercentSolids:	0	decanted :		Dilution Factor:	1
Extraction:	SEPF			Station ID:	Area L - Boring Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2):	STX-CLP2 ID: 0.32 (mm)
CONCENTRATION UNITS:	MG/L				**TCLP Analysis**

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000021	U
76-44-8	Heptachlor	0.000021	U
1024-57-3	Heptachlor epoxide	0.000021	U
72-20-8	Endrin	0.000021	U
72-43-5	Methoxychlor	0.000021	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

C.A

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

020407 1539

Form I

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L16S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622507	Lab File ID: 225-7.D
Sample wt/vol:	460	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1436
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000022	U
76-44-8	Heptachlor	0.000022	U
1024-57-3	Heptachlor epoxide	0.000022	U
72-20-8	Endrin	0.000022	U
72-43-5	Methoxychlor	0.000022	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

n.k

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

020407 1539

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L17S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622508	Lab File ID: 225-8.D
Sample wt/vol:	480	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	10			Date Extracted: 03/28/07	
Level:(low/med)	LOW			Date Analyzed: 03/29/07	Time: 1830
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2): STX-CLP2	ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000021	U
76-44-8	Heptachlor	0.000021	U
1024-57-3	Heptachlor epoxide	0.000021	U
72-20-8	Endrin	0.000021	U
72-43-5	Methoxychlor	0.000021	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

020407 1539

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L18S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622509	Lab File ID: 225-9.D
Sample wt/vol:	450	Units:	ML	Date Received:	03/15/07
Concentrated Extract Volume:	10			Date Extracted:	03/28/07
Level:(low/med)	LOW			Date Analyzed:	03/29/07 Time: 1901
PercentSolids:	0	decanted :		Dilution Factor:	1
Extraction:	SEPF			Station ID:	Area L - Boring Method: 8081 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)	Column(2):	STX-CLP2 ID: 0.32 (mm)
CONCENTRATION UNITS:	MG/L				**TCLP Analysis**

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000022	U
76-44-8	Heptachlor	0.000022	U
1024-57-3	Heptachlor epoxide	0.000022	U
72-20-8	Endrin	0.000022	U
72-43-5	Methoxychlor	0.000022	U
57-74-9	Chlordane	0.011	U
8001-35-2	Toxaphene	0.011	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

020407 1539

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L10S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622501	Lab File ID: 225-1.D
Sample wt/vol:	20.48	Units:	G	Date Received:	03/15/07
Concentrated Extract Volume:	10			Date Extracted:	03/22/07
Level:(low/med)	LOW			Date Analyzed:	03/25/07 Time: 2025
PercentSolids:	93.4	decanted :		Dilution Factor:	1
Extraction:	SONC			Station ID:	Area L - Boring Method: 8082
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)		
CONCENTRATION UNITS:	UG/KG				

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

G.L

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L11S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622502 Lab File ID: 225-2.D

Sample wt/vol: 20.22 Units: G Date Received: 03/15/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/25/07 Time: 2051

PercentSolids: 92.3 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

020407 1539

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L12S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622503 Lab File ID: 225-3.D

Sample wt/vol: 20.18 Units: G Date Received: 03/15/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/25/07 Time: 2117

PercentSolids: 91.4 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

CL

020407 1539

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L13S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622504 Lab File ID: 225-4.D

Sample wt/vol: 20.4 Units: G Date Received: 03/15/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/25/07 Time: 2144

PercentSolids: 94.1 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

CT

020407 1539

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L14S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622505 Lab File ID: 225-5.D

Sample wt/vol: 20.18 Units: G Date Received: 03/15/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/25/07 Time: 2210

PercentSolids: 92.3 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

ok

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L15S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622506 Lab File ID: 225-6.D

Sample wt/vol: 20.48 Units: G Date Received: 03/15/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/25/07 Time: 2236

PercentSolids: 91.1 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

020407 1539

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L16S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622507 Lab File ID: 225-7.D

Sample wt/vol: 20.1 Units: G Date Received: 03/15/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/25/07 Time: 2303

PercentSolids: 93.6 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

C.L

020407 1539

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L17S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622508 Lab File ID: 225-8.D

Sample wt/vol: 20.33 Units: G Date Received: 03/15/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/25/07 Time: 2329

PercentSolids: 94 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

ok

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Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L18S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622509	Lab File ID: 225-9.D
Sample wt/vol:	20.37	Units:	G	Date Received:	03/15/07
Concentrated Extract Volume:	10			Date Extracted:	03/22/07
Level:(low/med)	LOW			Date Analyzed:	03/26/07 Time: 0037
PercentSolids:	93.3	decanted :		Dilution Factor:	1
Extraction:	SONC			Station ID:	Area L - Boring Method: 8082
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)		
CONCENTRATION UNITS:	UG/KG				

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

n.t

020407 1539

Form I

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L10S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622501 Lab File ID: 225-1.D

Sample wt/vol: 500 Units: ML Date Received: 03/15/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 03/31/07 Time: 0158

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000076	U
94-75-7	2,4'-D	0.0003	U

020407 1539

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L11S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622502	Lab File ID: 225-2.D
Sample wt/vol:	500	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	10			Date Extracted: 03/30/07	
Level:(low/med)	LOW			Date Analyzed: 03/31/07	Time: 0240
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8151 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000076	U
94-75-7	2,4'-D	0.0003	U

nk

020407 1539

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L12S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622503 Lab File ID: 225-3.D

Sample wt/vol: 500 Units: ML Date Received: 03/15/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 03/31/07 Time: 0323

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000076	U
94-75-7	2,4'-D	0.0003	U

ok

020407 1539

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15
EPA Sample No.	5715L13S031407		
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2506225
Matrix:	SOIL	Lab Sample ID:	250622504
Lab File ID:	225-4.D	Sample wt/vol:	500
Units:	ML	Date Received:	03/15/07
Concentrated Extract Volume:	10	Date Extracted:	03/30/07
Level:(low/med)	LOW	Date Analyzed:	03/31/07
Time:	0507	PercentSolids:	0
decanted :		Dilution Factor:	1
Extraction:	SEPF	Station ID:	Area L - Boring
Method:	8151 TCLP	GPC Cleanup : (Y/N)	N
pH:		Column(1):	STX-CLP1
ID:	0.32 (mm)	*CONCENTRATION UNITS:*	MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000076	U
94-75-7	2,4'-D	0.0003	U

C.K

020407 1539

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L14S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622505	Lab File ID: 225-5.D
Sample wt/vol:	500	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	10			Date Extracted: 03/30/07	
Level:(low/med)	LOW			Date Analyzed: 03/31/07	Time: 0549
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8151 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000076	U
94-75-7	2,4'-D	0.0003	U

mk

020407 1539

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L15S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622506	Lab File ID: 225-6.D
Sample wt/vol:	500	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	10			Date Extracted: 03/30/07	
Level:(low/med)	LOW			Date Analyzed: 03/31/07	Time: 0632
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8151 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000076	U
94-75-7	2,4'-D	0.0003	U

C.L

020407 1539

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L16S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622507 Lab File ID: 225-7.D

Sample wt/vol: 500 Units: ML Date Received: 03/15/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 03/31/07 Time: 0714

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000076	U
94-75-7	2,4'-D	0.0003	U

CL

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Former NAS Cecil Field Site 15		5715L17S031407
Lab Code :	PEL	Case No.		SAS No:	SDG No.: 2506225
Matrix:	SOIL			Lab Sample ID: 250622508	Lab File ID: 225-8.D
Sample wt/vol:	500	Units:	ML	Date Received: 03/15/07	
Concentrated Extract Volume:	10			Date Extracted: 03/30/07	
Level:(low/med)	LOW			Date Analyzed: 03/31/07	Time: 0757
PercentSolids:	0	decanted :		Dilution Factor: 1	
Extraction:	SEPF			Station ID: Area L - Boring	Method: 8151 TCLP
GPC Cleanup : (Y/N)	N	pH:			
Column(1):	STX-CLP1	ID: 0.32	(mm)		

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000076	U
94-75-7	2,4'-D	0.0003	U

n.k

020407 1539

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L18S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622509 Lab File ID: 225-9.D

Sample wt/vol: 500 Units: ML Date Received: 03/15/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 03/31/07 Time: 0839

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
93-72-1	2,4,5-TP (Silvex)	0.000076	U
94-75-7	2,4'-D	0.0003	U

ok

020407 1539

Form I

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L10S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622501

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.32			P
7440-39-3	Barium	1.4	J		P
7440-43-9	Cadmium	0.0063	~~J~~	B	P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	9.6			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L11S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622502

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.284			P
7440-39-3	Barium	3.64	J		P
7440-43-9	Cadmium	0.0367	~~J~~	B	P MB
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	33.1			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L12S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622503

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.0205	J		P
7440-39-3	Barium	0.809	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.0528	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

AL

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L13S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622504

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.0272	J		P
7440-39-3	Barium	0.905	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.5	U		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L14S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622505

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	1.92	J		P
7440-43-9	Cadmium	0.0162	~~J~~	B	P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	1.66			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

MB

M.L

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L15S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622506

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	2.65	J		P
7440-43-9	Cadmium	0.0305	~~J~~	B	P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.7			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

mB

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L16S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622507

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	1.39	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.275	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.0415	J		P
7440-22-4	Silver	0.2	U		P

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L17S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622508

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0386	J		P	
7440-39-3	Barium	1.48	J		P	
7440-43-9	Cadmium	0.0176	~~J~~	B	P	MB
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	0.558			P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.1	U		P	
7440-22-4	Silver	0.2	U		P	

CL

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L18S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622509

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.074	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	0.0581	J		P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L10S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622501

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.27			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L11S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622502

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	7.18			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L12S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622503

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	7.28			N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L13S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622504

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.9			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L14S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622505

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.61			N/A

C.k

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L15S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622506

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	7.04			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

020407 1540

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L16S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622507

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.76			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

020407 1540

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L17S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622508

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.82			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

020407 1540

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L18S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622509

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.37			N/A

cl

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

020407 1540

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L10S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622501

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L11S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622502

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

020407 1541

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L12S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622503

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

020407 1541

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L13S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622504

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L15S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622506

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

NE

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

020407 1541

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L16S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622507

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

020407 1541

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L17S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622508

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

c.k

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

020407 1541

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L18S031407

Lab Name: PEL Laboratories, Inc. Contract: Former NAS Cecil Field Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506225

Matrix: SOIL Lab Sample ID: 250622509

Level:(low/med) LOW Date Received: 3/15/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L01S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623501 Lab File ID: 23501.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/30/07 Time: 1737

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area L - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L02S031407

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623502 Lab File ID: 23502.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/30/07 Time: 1805

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area L - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L03S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623503 Lab File ID: 23503.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/30/07 Time: 1834

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area L - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L04S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623504 Lab File ID: 23504.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/30/07 Time: 1903

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area L - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L05S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623505 Lab File ID: 23505.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/30/07 Time: 1931

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area L - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

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Form I

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L06S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623506 Lab File ID: 23506.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/30/07 Time: 1959

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area L - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L07S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623507 Lab File ID: 23507.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/30/07 Time: 2028

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area L - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L08S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623508 Lab File ID: 23508.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/30/07 Time: 2056

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area L - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

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VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L09S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623509 Lab File ID: 23509.D

Sample wt/vol: 0.5 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 03/30/07 Time: 2125

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: PURGETRAP Station ID: Area L - Boring Method: 8260 TCLP

GPC Cleanup : (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-35-4	1,1-Dichloroethene	0.01	U
107-06-2	1,2-Dichloroethane	0.01	U
78-93-3	2-Butanone	0.04	U
71-43-2	Benzene	0.01	U
56-23-5	Carbon tetrachloride	0.01	U
108-90-7	Chlorobenzene	0.01	U
67-66-3	Chloroform	0.01	U
127-18-4	Tetrachloroethene	0.01	U
79-01-6	Trichloroethene	0.01	U
75-01-4	Vinyl chloride	0.01	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L01S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623501 Lab File ID: 235-1.D

Sample wt/vol: 500 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 1 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1639

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 5715L02S031407

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code: PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623502 Lab File ID: 235-2.D

Sample wt/vol: 500 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 1 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1708

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8270 TCLP

GPC Cleanup: (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L03S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623503 Lab File ID: 235-3.D

Sample wt/vol: 500 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 1 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1737

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L04S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623504 Lab File ID: 235-4.D

Sample wt/vol: 500 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 1 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1807

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L05S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623505 Lab File ID: 235-5.D

Sample wt/vol: 500 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 1 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1836

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L06S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623506 Lab File ID: 235-6.D

Sample wt/vol: 500 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 1 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1905

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L07S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623507 Lab File ID: 235-7.D

Sample wt/vol: 500 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 1 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1934

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

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SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L08S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623508 Lab File ID: 235-8.D

Sample wt/vol: 500 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 1 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 2003

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

ok

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 5715L09S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code: PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623509 Lab File ID: 235-9.D

Sample wt/vol: 500 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 1 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 2032

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8270 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.008	U
106-46-7	1,4-Dichlorobenzene	0.008	U
95-48-7	2-Methylphenol (o-Cresol)	0.008	U
67-72-1	Hexachloroethane	0.008	U
106-44-5	4-Methylphenol	0.0122	U
98-95-3	Nitrobenzene	0.008	U
87-68-3	Hexachlorobutadiene	0.008	U
88-06-2	2,4,6-Trichlorophenol	0.008	U
95-95-4	2,4,5-Trichlorophenol	0.008	U
121-14-2	2,4-Dinitrotoluene	0.008	U
118-74-1	Hexachlorobenzene	0.008	U
87-86-5	Pentachlorophenol	0.02	U

C.K

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L01S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623501 Lab File ID: 235-1.D

Sample wt/vol: 520 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1421

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000019	U
76-44-8	Heptachlor	0.0000031	J
1024-57-3	Heptachlor epoxide	0.000019	U
72-20-8	Endrin	0.000019	U
72-43-5	Methoxychlor	0.000019	U
57-74-9	Chlordane	0.0096	U
8001-35-2	Toxaphene	0.0096	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

090407 1406

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L02S031407

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623502 Lab File ID: 235-2.D

Sample wt/vol: 520 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1450

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000019	U
76-44-8	Heptachlor	0.000019	U
1024-57-3	Heptachlor epoxide	0.000019	U
72-20-8	Endrin	0.000019	U
72-43-5	Methoxychlor	0.000019	U
57-74-9	Chlordane	0.0096	U
8001-35-2	Toxaphene	0.0096	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

090407 1406

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L03S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623503 Lab File ID: 235-3.D

Sample wt/vol: 510 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1519

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.0098	U
8001-35-2	Toxaphene	0.0098	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L04S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623504 Lab File ID: 235-4.D

Sample wt/vol: 510 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1548

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000023	J - PC
76-44-8	Heptachlor	0.000027	J - PC
1024-57-3	Heptachlor epoxide	0.000027	J - PC
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.000032	J - PC
57-74-9	Chlordane	0.00038	J - PC
8001-35-2	Toxaphene	0.0098	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

090407 1406

Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L05S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623505 Lab File ID: 235-5.D

Sample wt/vol: 510 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1618

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.0098	U
8001-35-2	Toxaphene	0.0098	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L06S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623506 Lab File ID: 235-6.D

Sample wt/vol: 510 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 1707

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.0000094	J
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.0098	U
8001-35-2	Toxaphene	0.0098	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L07S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623507 Lab File ID: 235-7.D

Sample wt/vol: 520 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 2035

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.000019	U
76-44-8	Heptachlor	0.000019	U
1024-57-3	Heptachlor epoxide	0.000019	U
72-20-8	Endrin	0.000019	U
72-43-5	Methoxychlor	0.000019	U
57-74-9	Chlordane	0.0096	U
8001-35-2	Toxaphene	0.0096	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L08S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623508 Lab File ID: 235-8.D

Sample wt/vol: 500 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 2105

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

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Form I

1

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L09S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623509 Lab File ID: 235-9.D

Sample wt/vol: 500 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 04/04/07

Level:(low/med) LOW Date Analyzed: 04/05/07 Time: 2134

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8081 TCLP

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm) Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	gamma-BHC (Lindane)	0.00002	U
76-44-8	Heptachlor	0.00002	U
1024-57-3	Heptachlor epoxide	0.00002	U
72-20-8	Endrin	0.00002	U
72-43-5	Methoxychlor	0.00002	U
57-74-9	Chlordane	0.01	U
8001-35-2	Toxaphene	0.01	U

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Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

090407 1406

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L01S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623501 Lab File ID: 235-1.D

Sample wt/vol: 20.47 Units: G Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 0104

PercentSolids: 92.1 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

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090407 1406

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L02S031407

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623502 Lab File ID: 235-2.D

Sample wt/vol: 20.11 Units: G Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 0130

PercentSolids: 92.3 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

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PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L03S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623503 Lab File ID: 235-3.D

Sample wt/vol: 20.3 Units: G Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 0156

PercentSolids: 94.2 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

ok

090407 1406

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L04S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623504 Lab File ID: 235-4.D

Sample wt/vol: 20.57 Units: G Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 0223

PercentSolids: 91.1 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

090407 1406

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L05S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623505 Lab File ID: 235-5.D

Sample wt/vol: 20.11 Units: G Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 0249

PercentSolids: 92.5 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

090407 1406

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L06S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623506 Lab File ID: 235-6.D

Sample wt/vol: 20.36 Units: G Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 0316

PercentSolids: 92 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

C.L

090407 1406

Form I

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L07S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623507 Lab File ID: 235-7.D

Sample wt/vol: 20.23 Units: G Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 0342

PercentSolids: 94.3 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

C.8

090407 1406

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L08S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623508 Lab File ID: 235-8.D

Sample wt/vol: 20.25 Units: G Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 0408

PercentSolids: 92 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	26	U
11096-82-5	Aroclor-1260	26	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U

090407 1406

Form I

1

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L09S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623509 Lab File ID: 235-9.D

Sample wt/vol: 20.59 Units: G Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/22/07

Level:(low/med) LOW Date Analyzed: 03/26/07 Time: 0517

PercentSolids: 89.5 decanted : Dilution Factor: 1

Extraction: SONC Station ID: Area L - Boring Method: 8082

GPC Cleanup : (Y/N) N pH:

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor-1016	27	U 5.5
11096-82-5	Aroclor-1260	27	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U

ok

090407 1406

Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L01S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623501 Lab File ID: 235-1.D

Sample wt/vol: 430 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 04/02/07 Time: 1118

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00035	U
93-72-1	2,4,5-TP (Silvex)	0.000088	U

ok

090407 1407

Form I

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L02S031407

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623502 Lab File ID: 235-2.D

Sample wt/vol: 440 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 04/02/07 Time: 1200

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00034	U
93-72-1	2,4,5-TP (Silvex)	0.000086	U

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Form I

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L03S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623503 Lab File ID: 235-3.D

Sample wt/vol: 440 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 04/02/07 Time: 1243

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00034	U
93-72-1	2,4,5-TP (Silvex)	0.000086	U

C.K

090407 1407

Form I

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L04S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623504 Lab File ID: 235-4.D

Sample wt/vol: 430 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 04/02/07 Time: 1326

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00035	U
93-72-1	2,4,5-TP (Silvex)	0.000088	U

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L05S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623505 Lab File ID: 235-5.D

Sample wt/vol: 430 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 04/02/07 Time: 1408

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00035	U
93-72-1	2,4,5-TP (Silvex)	0.000088	U

ok

090407 1407

Form I

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L06S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623506 Lab File ID: 235-6.D

Sample wt/vol: 430 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 04/02/07 Time: 1451

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00035	U
93-72-1	2,4,5-TP (Silvex)	0.000088	U

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Form I

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L07S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623507 Lab File ID: 235-7.D

Sample wt/vol: 420 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 04/02/07 Time: 1534

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00036	U
93-72-1	2,4,5-TP (Silvex)	0.00009	U

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Form I

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L08S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623508 Lab File ID: 235-8.D

Sample wt/vol: 450 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 04/02/07 Time: 1716

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000084	U

1

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L09S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623509 Lab File ID: 235-9.D

Sample wt/vol: 450 Units: ML Date Received: 03/16/07

Concentrated Extract Volume: 10 Date Extracted: 03/30/07

Level:(low/med) LOW Date Analyzed: 04/02/07 Time: 1758

PercentSolids: 0 decanted : Dilution Factor: 1

Extraction: SEPF Station ID: Area L - Boring Method: 8151 TCLP

GPC Cleanup : (Y/N) N pH:

Column(2): STX-CLP2 ID: 0.32 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4'-D	0.00033	U
93-72-1	2,4,5-TP (Silvex)	0.000084	U

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L01S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623501

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.0282	~~J~~	B	P
7440-39-3	Barium	0.487	J		P
7440-43-9	Cadmium	0.0111	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	3.35			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

mB

C:A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L02S031407

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623502

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.05	U		P
7440-39-3	Barium	0.408	J		P
7440-43-9	Cadmium	0.0144	J		P
7440-47-3	Chromium	0.0141	J		P
7439-92-1	Lead	2.29			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L03S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623503

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.23		B	P	MB
7440-39-3	Barium	0.293	J		P	
7440-43-9	Cadmium	0.0122	J		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	15.8			P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0389	J	B	P	MB
7440-22-4	Silver	0.2	U		P	

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L04S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623504

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.043	J	B	P
7440-39-3	Barium	0.14	J		P
7440-43-9	Cadmium	0.05	U		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	3.33			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

MB

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L05S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623505

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.0417	J	B	P
7440-39-3	Barium	0.266	J		P
7440-43-9	Cadmium	0.00426	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	5.29			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L06S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623506

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0464	J	B	P	MB
7440-39-3	Barium	0.337	J		P	
7440-43-9	Cadmium	0.00728	J		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	5.48			P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0665	J	B	P	MB
7440-22-4	Silver	0.2	U		P	

Color Before: _____ Clarity Before: _____ Texture :_____ C.K

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L07S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623507

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0342	J	B	P	MB
7440-39-3	Barium	0.711	J		P	
7440-43-9	Cadmium	0.05	U		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	3.17			P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0333	J	B	P	MB
7440-22-4	Silver	0.2	U		P	

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____ AK

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L08S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623508

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	0.0816		B	P
7440-39-3	Barium	3.42	J		P
7440-43-9	Cadmium	0.00705	J		P
7440-47-3	Chromium	0.5	U		P
7439-92-1	Lead	5.91			P
7439-97-6	Mercury	0.002	U		CV
7782-49-2	Selenium	0.1	U		P
7440-22-4	Silver	0.2	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L09S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623509

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

TCLP Analysis

CONCENTRATION UNITS: MG/L

CAS NO.	ANALYTE	Concentration	C	Q	M	
7440-38-2	Arsenic	0.0522		B	P	MB
7440-39-3	Barium	2.98	J		P	
7440-43-9	Cadmium	0.0112	J		P	
7440-47-3	Chromium	0.5	U		P	
7439-92-1	Lead	5.62			P	
7439-97-6	Mercury	0.002	U		CV	
7782-49-2	Selenium	0.0264	~~J~~	B	P	MB
7440-22-4	Silver	0.2	U		P	

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L01S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623501

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.82			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L02S031407

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623502

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.12			N/A

c.k

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L03S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623503

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.91			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L04S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623504

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.8			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L05S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623505

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.7			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L06S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623506

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.99			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1408

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L07S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623507

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.83			N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1408

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L08S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623508

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	5.92			N/A

n.k

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1408

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L09S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623509

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: pH

CAS NO.	ANALYTE	Concentration	C	Q	M
1-00-6	pH	6.33			N/A

o.k

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1408

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L01S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623501

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1408

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L02S031407

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623502

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1408

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L03S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623503

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1408

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L04S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623504

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1408

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L05S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623505

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1408

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L06S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623506

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1406

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L07S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623507

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1408

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L08S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623508

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1406

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

5715L09S031507

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field / Site 15

Lab Code : PEL Case No. SAS No: SDG No.: 2506235

Matrix: SOIL Lab Sample ID: 250623509

Level:(low/med) LOW Date Received: 3/16/2007

PercentSolids: 0 Station ID: Area L - Boring

CONCENTRATION UNITS: Fahrenheit

CAS NO.	ANALYTE	Concentration	C	Q	M
1-01-3	Flash Point	160	U		N/A

ok

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

090407 1408

2506142 mG

CH2MHILL Constructors, 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

COC NUMBER: 263231-003 Page 1 of 1

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.):
Former N.A.S. Cecil Field Site 15	263231	PEL Laboratories Inc. Darcy Weisman	Bethany Garvey / CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 770.604.9182, Fax:770.604.9282
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.):
Site 15 - Soil Characterization Sampling	0057	20410	Mike Halil / CH2M Hill Constuctors, Inc.	6121 Aviation Ave. Jacksonville, FL 32221 904.777.4812, Fax: 904.777.4262
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Mike Halil CH2M Hill Constuctors, Inc.	Ph: 904.777-4812 Fax: 904.777.4262	Ph:813.247.2805 Fax: 813.248.1537		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	PCBs by 8082	Ignitability by 1010, Corrosivity by 9040a	TCLP Volatiles by 8260B, TCLP Semi-Volatiles by 8270C, TCLP Metals by 6010A, TCLP Pesticides by 8081A, TCLP Herbicides by 8151A			SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
1	5715A01S030607	Area A - Boring A-01	S	03/06/07	1020	III/B	7	1	1	1			N		01
2	5715B01S030607	Area B - Boring B-01	S	03/06/07	1125	III/B	7	1	1	1			N		02
3	5715B02S030607	Area B - Boring B-02	S	03/06/07	1115	III/B	7	1	1	1			N		03
4	5715B03S030607	Area B - Boring B-03	S	03/06/07	1050	III/B	7	1	1	1			N		04
5	5715H01S030607	Area H - Boring H-01	S	03/06/07	1440	III/B	7	1	1	1			N		05
6	5715H02S030607	Area H - Boring H-02	S	03/06/07	1520	III/B	7	1	1	1			N		06
7	5715H03S030607	Area H - Boring H-03	S	03/06/07	1545	III/B	7	1	1	1			N		07
8	5715J01S030607	Area J - Boring J-01	S	03/06/07	1410	III/B	7	1	1	1			N		08
9															
10															

2506142

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:
Randy Dumaop / Jeff Marks / Craig Haas AGVIQ / CH2M HILL	Federal Express Tracking Numbers: 7923 0215 4302.

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	3/6/2007	18:00	Federal Express Tracking Numbers: 7923 0215 4302.	3/6/2007	18:00
Printed Name and Signature:			Printed Name and Signature:		
C. Pearce / PEL	3/7/07	10:15			
Printed Name and Signature:			Printed Name and Signature:		

Distribution: | | Original - Laboratory (To be returned with Analytical Report); | | Copy 1 - Project File; | | Copy 2 - PMO

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REC'D @ 4.0 C

CH2MHILL Constructors, 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

2506152 CP

COC NUMBER: 263231-004 Page 1 of 1

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.):
Former N.A.S. Cecil Field Site 15	263231	PEL Laboratories Inc. Darcy Weisman	Bethany Garvey / CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 770.604.9182, Fax:770.604.9282
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.):
Site 15 - Soil Characterization Sampling	0057	20410	Mike Halil / CH2M Hill Constuctors, Inc.	6121 Aviation Ave. Jacksonville, FL 32221 904.777.4812, Fax: 904.777.4262
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Mike Halil CH2M Hill Constuctors, Inc.	Ph: 904.777-4812 Fax: 904.777.4262	Ph:813.247.2805 Fax: 813.248.1537		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	PCBs by 8082	Ignitability by 1010, Corrosivity by 9040a	TCLP Volatiles by 8260B, TCLP Semi-Volatiles by 8270C, TCLP Metals by 6010A, TCLP Pesticides by 8081A, TCLP Herbicides by 8151A			SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
1	5715C01S030707	Area C - Boring C-01	S	03/07/07	1640	III/B	14	1	1	1			N		01
2	5715D01S030707	Area D - Boring D-01	S	03/07/07	1045	III/B	14	1	1	1			N		02
3	5715D02S030707	Area D - Boring D-02	S	03/07/07	1025	III/B	14	1	1	1			N		03
4	5715D03S030707	Area D - Boring D-03	S	03/07/07	1005	III/B	14	1	1	1			N		04
5	5715D04S030707	Area D - Boring D-04	S	03/07/07	940	III/B	14	1	1	1			N		05
6	5715G01S030707	Area G - Boring G-01	S	03/07/07	1505	III/B	14	1	1	1			N		06
7	5715G02S030707	Area G - Boring G-02	S	03/07/07	1450	III/B	14	1	1	1			N		07
8	5715G03S030707	Area G - Boring G-03	S	03/07/07	1415	III/B	14	1	1	1			N		08
9															
10															

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:	
Randy Dumaop / Jeff Marks / Craig Haas AGVIQ / CH2M HILL	Federal Express Tracking Numbers: 7995 9981 2396.	Rec'd @ 35°C

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	3/7/2007	18:00	Federal Express Tracking Numbers: 7995 9981 2396.	3/7/2007	18:00
Printed Name and Signature:			Printed Name and Signature:		
				03/08/07	1045
Printed Name and Signature:			Printed Name and Signature:		

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273

CP

2506164

CH2MHILL Constructors, 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

COC NUMBER: **263231-005** Page 1 of 1

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.):
Former N.A.S. Cecil Field Site 15	263231	PEL Laboratories Inc. Darcy Weisman	Bethany Garvey / CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 770.604.9182, Fax:770.604.9282
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.):
Site 15 - Soil Characterization Sampling	0057	804705	Mike Halil / CH2M Hill Constuctors, Inc.	6121 Aviation Ave. Jacksonville, FL 32221 904.777.4812, Fax: 904.777.4262
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Mike Halil CH2M Hill Constuctors, Inc.	Ph: 904.777-4812 Fax: 904.777.4262	Ph:813.247.2805 Fax: 813.248.1537		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	PCBs by 8082	Ignitability by 1010, Corrosivity by 9040a	TCLP Volatiles by 8260B, TCLP Semi-Volatiles by 8270C, TCLP Metals by 6010A, TCLP Pesticides by 8081A, TCLP Herbicides by 8151A			SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
1	5715K01S030807	Area K - Boring K-01	S	03/08/07	925	III/B	14	1	1	1			N		01
2	5715O01S030807	Area O - Boring O-01	S	03/08/07	1040	III/B	14	1	1	1			N		02
3	5715O02S030807	Area O - Boring O-02	S	03/08/07	1120	III/B	14	1	1	1			N		03
4	5715P01S030807	Area P - Boring P-01	S	03/08/07	1500	III/B	14	1	1	1			N		04
5	5715P02S030807	Area P - Boring P-02	S	03/08/07	1440	III/B	14	1	1	1			N		05
6	5715P03S030807	Area P - Boring P-03	S	03/08/07	1410	III/B	14	1	1	1			N		06
7															
8															
9															
10															

2506164

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:
Randy Dumaop / Jeff Marks / Craig Haas AGVIQ / CH2M HILL	Federal Express Tracking Numbers: 7912 4846 0261.

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	3/8/2007	18:00	Federal Express Tracking Numbers: 7912 4846 0261.	3/8/2007	18:00
Printed Name and Signature:			Printed Name and Signature:		
				03/09/07	1015
Printed Name and Signature:			Printed Name and Signature:		

Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PMO

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250 37010, 67010, 1 REC'D @ 3.00

CH2MHILL Constructors, 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

2506177

COC NUMBER: 263231-006 Page 1 of 1

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.):
Former N.A.S. Cecil Field Site 15	263231	PEL Laboratories Inc. Darcy Weisman	Bethany Garvey / CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 770.604.9182, Fax:770.604.9282
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.):
Site 15 - Soil Characterization Sampling	0057	804705	Mike Halil / CH2M Hill Constuctors, Inc.	6121 Aviation Ave. Jacksonville, FL 32221 904.777.4812, Fax: 904.777.4262
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Mike Halil CH2M Hill Constuctors, Inc.	Ph: 904.777-4812 Fax: 904.777.4262	Ph:813.247.2805 Fax: 813.248.1537		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	PCBs by 8082	Ignitability by 1010, Corrosivity by 9040a	TCLP Volatiles by 8260B, TCLP Semi-Volatiles by 8270C, TCLP Metals by 6010A, TCLP Pesticides by 8081A, TCLP Herbicides by 8151A			SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
1	5715M01S030907	Area M - Boring M-01	S	03/09/07	1150	III/B	14	1	1	1			N		01
2	5715N01S030907	Area N - Boring N-01	S	03/09/07	1030	III/B	14	1	1	1			N		02
3	5715N02S030907	Area N - Boring N-02	S	03/09/07	1100	III/B	14	1	1	1			N		03
4	5715N03S030907	Area N - Boring N-03	S	03/09/07	1125	III/B	14	1	1	1			N		04
5	5715Q01S030907	Area Q - Boring Q-01	S	03/09/07	1430	III/B	14	1	1	1			N		05
6															
7															
8															
9															
10															

SAMPLER(S) AND COMPANY: (please print)
Randy Dumaop / Jeff Marks / Craig Haas
AGVIQ / CH2M HILL

COURIER AND SHIPPING NUMBER:
Federal Express Tracking Numbers: 7929 4707 5126.

Rec'd @ 4.0°C

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	3/9/2007	18:00	Federal Express Tracking Numbers: 7929 4707 5126.	3/9/2007	18:00
Printed Name and Signature:			Printed Name and Signature:		
	03/10/07	1000			
Printed Name and Signature:			Printed Name and Signature:		

Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PMO

Form CC1001, Rev 02/00

2506177

254

6/10/11

CP

2506194

CH2MHILL Constructors, 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

COC NUMBER: 263231-007 Page 1 of 1

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.):
Former N.A.S. Cecil Field Site 15	263231	PEL Laboratories Inc. Darcy Weisman	Bethany Garvey / CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 770.604.9182, Fax:770.604.9282
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.):
Site 15 - Soil Characterization Sampling	0057	804705	Mike Halil / CH2M Hill Constuctors, Inc.	6121 Aviation Ave. Jacksonville, FL 32221 904.777.4812, Fax: 904.777.4262
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Mike Halil CH2M Hill Constuctors, Inc.	Ph: 904.777-4812 Fax: 904.777.4262	Ph:813.247.2805 Fax: 813.248.1537		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	PCBs by 8082	Ignitability by 1010, Corrosivity by 9040a	TCLP Volatiles by 8260B, TCLP Semi-Volatiles by 8270C, TCLP Metals by 6010A, TCLP Pesticides by 8081A, TCLP Herbicides by 8151A			SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
1	5715E01S031207	Area E - Boring E-01	S	03/12/07	935	III/B	14	1	1	1			N		01
2	5715E02S031207	Area E - Boring E-02	S	03/12/07	1005	III/B	14	1	1	1			N		02
3	5715E03S031207	Area E - Boring E-03	S	03/12/07	1045	III/B	14	1	1	1			N		03
4	5715E04S031207	Area E - Boring E-04	S	03/12/07	1110	III/B	14	1	1	1			N		04
5	5715E05S031207	Area E - Boring E-05	S	03/12/07	1145	III/B	14	1	1	1			N		05
6	5715E06S031207	Area E - Boring E-06	S	03/12/07	1325	III/B	14	1	1	1			N		06
7	5715E07S031207	Area E - Boring E-07	S	03/12/07	1350	III/B	14	1	1	1			N		07
8	5715E08S031207	Area E - Boring E-08	S	03/12/07	1420	III/B	14	1	1	1			N		08
9	5715E09S031207	Area E - Boring E-09	S	03/12/07	1450	III/B	14	1	1	1			N		09
10	5715E10S031207	Area E - Boring E-10	S	03/12/07	1520	III/B	14	1	1	1			N		10
11	5715E11S031207	Area E - Boring E-11	S	03/12/07	1555	III/B	14	1	1	1			N		11
12	5715E12S031207	Area E - Boring E-12	S	03/12/07	1615	III/B	14	1	1	1			N		12

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:
Randy Dumaop / Jeff Marks / Craig Haas AGVIQ / CH2M HILL	Federal Express Tracking Numbers: 7991 0236 3390.

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	3/12/2007	18:00	Federal Express Tracking Numbers: 7991 0236 3390.	3/12/2007	18:00
Printed Name and Signature:			Printed Name and Signature:		
				03/13/07	1015
Printed Name and Signature:			Printed Name and Signature:		

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Form CC1001, Rev 02/00

2506194

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67010, 1 KW

CH2MHILL Constructors, 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

2506207 CP

COC NUMBER: 263231-008 Page 1 of 1

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.):
Former N.A.S. Cecil Field Site 15	263231	PEL Laboratories Inc. Darcy Weisman	Bethany Garvey / CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 770.604.9182, Fax:770.604.9282
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.):
Site 15 - Soil Characterization Sampling	0057	804705	Mike Halil / CH2M Hill Constuctors, Inc.	6121 Aviation Ave. Jacksonville, FL 32221 904.777.4812, Fax: 904.777.4262
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Mike Halil CH2M Hill Constuctors, Inc.	Ph: 904.777-4812 Fax: 904.777.4262	Ph:813.247.2805 Fax: 813.248.1537		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	PCBs by 8082	Ignitability by 1010, Corrosivity by 9040a	TCLP Volatiles by 8260B, TCLP Semi-Volatiles by 8270C, TCLP Metals by 6010A, TCLP Pesticides by 8081A, TCLP Herbicides by 8151A			SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
1	5715I01S031307	Area I - Boring I-01	S	03/13/07	1625	III/B	14	1	1	1			N		01
2	5715I02S031307	Area I - Boring I-02	S	03/13/07	1640	III/B	14	1	1	1			N		02
3	5715I03S031307	Area I - Boring I-03	S	03/13/07	1655	III/B	14	1	1	1			N		03
4	5715I04S031307	Area I - Boring I-04	S	03/13/07	1710	III/B	14	1	1	1			N		04
5	5715F01S031307	Area F - Boring F-01	S	03/13/07	1105	III/B	14	1	1	1			N		05
6	5715F02S031307	Area F - Boring F-02	S	03/13/07	1130	III/B	14	1	1	1			N		06
7	5715F03S031307	Area F - Boring F-03	S	03/13/07	1150	III/B	14	1	1	1			N		07
8	5715F04S031307	Area F - Boring F-04	S	03/13/07	1210	III/B	14	1	1	1			N		08
9															
10															

SAMPLER(S) AND COMPANY: (please print)
Randy Dumaop / Jeff Marks / Craig Haas
AGVIQ / CH2M HILL

COURIER AND SHIPPING NUMBER:
Federal Express Tracking Numbers: 7991 0255 8319.

Rec'd @ 3.8°C

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	3/13/2007	18:00	Federal Express Tracking Numbers: 7991 0255 8319.	3/13/2007	18:00
Printed Name and Signature:			Printed Name and Signature:		
			PEL	03/14/07	1015
Printed Name and Signature:			Printed Name and Signature:		

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Form CCI001, Rev 02/00

2506207

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CH2MHILL Constructors, 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

2506225

COC NUMBER: 263231-009

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.):
Former N.A.S. Cecil Field Site 15	263231	PEL Laboratories Inc. Darcy Weisman	Bethany Garvey / CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 770.604.9182, Fax:770.604.9282
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.):
Site 15 - Soil Characterization Sampling	0057	804705	Mike Halil / CH2M Hill Constuctors, Inc.	6121 Aviation Ave. Jacksonville, FL 32221 904.777.4812, Fax: 904.777.4262
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Mike Halil CH2M Hill Constuctors, Inc.	Ph: 904.777-4812 Fax: 904.777.4262	Ph:813.247.2805 Fax: 813.248.1537		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	PCBs by 8082	Ignitability by 1010, Corrosivity by 9040a	TCLP Volatiles by 8260B, TCLP Semi-Volatiles by 8270C, TCLP Metals by 6010A, TCLP Pesticides by 8081A, TCLP Herbicides by 8151A			SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
1	5715L10S031407	Area L - Boring L-10	S	03/14/07	1615	III/B	14	1	1	1			N		01
2	5715L11S031407	Area L - Boring L-11	S	03/14/07	1600	III/B	14	1	1	1			N		02
3	5715L12S031407	Area L - Boring L-12	S	03/14/07	1540	III/B	14	1	1	1			N		03
4	5715L13S031407	Area L - Boring L-13	S	03/14/07	1520	III/B	14	1	1	1			N		04
5	5715L14S031407	Area L - Boring L-14	S	03/14/07	1500	III/B	14	1	1	1			N		05
6	5715L15S031407	Area L - Boring L-15	S	03/14/07	1440	III/B	14	1	1	1			N		06
7	5715L16S031407	Area L - Boring L-16	S	03/14/07	1420	III/B	14	1	1	1			N		07
8	5715L17S031407	Area L - Boring L-17	S	03/14/07	1405	III/B	14	1	1	1			N		08
9	5715L18S031407	Area L - Boring L-18	S	03/14/07	1350	III/B	14	1	1	1			N		09
10															

SAMPLER(S) AND COMPANY: (please print)
Randy Dumaop / Jeff Marks / Craig Haas
AGVIQ / CH2M HILL

COURIER AND SHIPPING NUMBER:
Federal Express Tracking Numbers: 7986 2809 1918.

Rec'd @ 3.8°C

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	3/14/2007	18:00	Federal Express Tracking Numbers: 7986 2809 1918.	3/14/2007	18:00
Printed Name and Signature:			Printed Name and Signature:		
				03/15/07	10:00
Printed Name and Signature:			Printed Name and Signature:		

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CH2MHILL Constructors, 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

2506235 CP

COC NUMBER: 263231-010 Page 1 of 1

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.):
Former N.A.S. Cecil Field Site 15	263231	PEL Laboratories Inc. Darcy Weisman	Bethany Garvey / CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 770.604.9182, Fax:770.604.9282
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.):
Site 15 - Soil Characterization Sampling	0057	804705	Mike Halil / CH2M Hill Constuctors, Inc.	6121 Aviation Ave. Jacksonville, FL 32221 904.777.4812, Fax: 904.777.4262
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Mike Halil CH2M Hill Constuctors, Inc.	Ph: 904.777-4812 Fax: 904.777.4262	Ph:813.247.2805 Fax: 813.248.1537		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on SOP)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on SOP)	TAT (calendar days)	PCBs by 8082	Ignitability by 1010, Corrosivity by 9040a	TCLP Volatiles by 8260B, TCLP Semi-Volatiles by 8270C, TCLP Metals by 6010A, TCLP Pesticides by 8081A, TCLP Herbicides by 8151A			SAMPLE TYPE (see codes on SOP)	COMMENTS/ SCREENING READINGS	LAB ID (for lab's use)
1	5715L01S031507	Area L - Boring L-01	S	03/15/07	1230	III/B	14	1	1	1			N		01
2	5715L02S031407	Area L - Boring L-02	S	03/15/07	1215	III/B	14	1	1	1			N		02
3	5715L03S031507	Area L - Boring L-03	S	03/15/07	1155	III/B	14	1	1	1			N		03
4	5715L04S031507	Area L - Boring L-04	S	03/15/07	1135	III/B	14	1	1	1			N		04
5	5715L05S031507	Area L - Boring L-05	S	03/15/07	1120	III/B	14	1	1	1			N		05
6	5715L06S031507	Area L - Boring L-06	S	03/15/07	1045	III/B	14	1	1	1			N		06
7	5715L07S031507	Area L - Boring L-07	S	03/15/07	1030	III/B	14	1	1	1			N		07
8	5715L08S031507	Area L - Boring L-08	S	03/15/07	1010	III/B	14	1	1	1			N		08
9	5715L09S031507	Area L - Boring L-09	S	03/15/07	1000	III/B	14	1	1	1			N		09
10															

SAMPLER(S) AND COMPANY: (please print)
Randy Dumaop / Jeff Marks / Craig Haas
AGVIQ / CH2M HILL

COURIER AND SHIPPING NUMBER:
Federal Express Tracking Numbers: 7912 5380 8771.

Rec'd @ 4.0C

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	3/15/2007	18:00	Federal Express Tracking Numbers: 7912 5380 8771.	3/15/2007	18:00
Printed Name and Signature:			Printed Name and Signature:		
			C Pearce / PEL	3/16/07	10:15
Printed Name and Signature:			Printed Name and Signature:		

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Appendix I
Quality Control Attachments

Submittal Register

Contract Number: N62467-01-D-0331			CTO No.: 0063		CTO Title:						Location:				Contractor: CH2M HILL Constructors, Inc.		
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Item Number	Spec Section	Item Description	Para. Number	Approving Authority	Other Reviewers	Submittal Number	Scheduled Submission Date	CH2MHILL Review Date	CH2MHILL Disposition	CH2MHILL Transmit Date	QC Admin Received Date	QC Disposition	QC Admin Transmit Date	Contracting Officer Received	Contracting Officer Disposition	Contracting Officer Return	Remarks
	DIV 1	**General Paragraphs**															
		SD-09, Reports	--	--													
1		A Work Plan		CO													
2		B Health & Safety Plan		CO													
		SD-18, Records		--													
3		A As Built Records		CO													
4		B Environmental Conditions Report		NTR													
5		C Test Results Summary Report		NTR													
6		D Daily Production Reports		NTR													
7		E QC Report		NTR													
8		F Rework Items List		NTR													
9		G Permits		JAA													
10		H Construction Documentation Report		CO													
	DIV 2	**General Excavation, Filling, and Backfilling**															
		SD-02, Manufacturer's Catalog Data	--	--													
11		A Portland Cement / Lead SS Reagent		CH2M HILL													
	DIV 2	**T&D of Contaminated Material**															
		SD-08, Statements	--	--													
12		A Treatment Facility Permit		CH2M HILL													
		SD-18, Records	--	--													
13		A Shipment Manifests		CH2M HILL													
14		B Delivery Certificates		CH2M HILL													
15		C Disposal Site Decontamination Certificate		CH2M HILL													
16		D Work Site Decontamination Certificate		CH2M HILL													
17		E Treatment and Disposal Certificate		CH2M HILL													

Testing Plan and Log

CH2M HILL Constructors, Inc.

Contract Number: N62467-01-D-0331	CTO No.	CTO Title:	Location: Jacksonville, FL

A	B	C	D	E	F	G	H	I	J	K
Spec Section and Paragraph	Test Required	Testing Lab	Sampled By	Date Collected	Test Location	Frequency	Date Tested	Date Reported	Results	Remarks
Construction Testing - Soil Density										
Analytical - Soil sampling										

Transportation and Disposal Log

CTO No	Project No	Project Name	Site Description	Container Type	Container Design	Waste Profile Sample No	Contractor	Transporter	Date Transported	Transporter EPA ID	Load ID	Disposal Facility	Disp Fac EPA ID	Media	Waste Type (Haz, Nonhaz, TSCA)	Waste Code/ Haz Waste No	Disposal Date	Manifest Number	Disposal Treatment Method (Enter disposal quantity under appropriate method)					Certif of Disp/ Destruc Date	Comments/ Notes	File Status (see note)
																			Incineration	Recycle	Landfill	Other	Unit			

Monthly Summary Report of Field Tests

Start Date:	End Date:	Submitted Date:	
Contract Number: Navy Contract # **N62467-01-D-0331**	CTO No.:	CTO Title:	Location:

A	B	C	D
Type of Test Required	Date of Test	Reporting Laboratory	Test Results

CH2M HILL **SOUTHDIV RAC** **N62467-01-D-0331**	**CONTRACTOR PRODUCTION REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: REVISION NO: REVISION DATE:

CTO NO:	PROJECT NAME/LOCATION:		REPORT NO:
PROJECT NO:	SUPERINTENDENT:	SITE H&S SPECIALIST:	
AM WEATHER:	PM WEATHER:	MAX TEMP: F	MIN TEMP: F

SUMMARY OF WORK PERFORMED TODAY

JOB SAFETY

Was A Job Safety Meeting Held This Date?	☐ Yes ☐ No	**TOTAL WORK HOURS ON JOB SITE THIS DATE** (Including Continuation Sheets)	
Were there any lost-time accidents this date? (If Yes, attach copy of completed OSHA report)	☐ Yes ☐ No	CH2MHILL On-Site Hours	
Was a Confined Space Entry Permit Administered This Date? (If Yes, attach copy of each permit)	☐ Yes ☐ No	JA JONES On-Site Hours	
Was Crane/Manlift/Trenching/Scaffold/HV Elec/High Work/Hazmat Work Done?? (If Yes, attach statement or checklist showing inspection performed)	☐ Yes ☐ No	Subcontractor On-Site Hours	
		Total On-Site Hours This Date	
Was Hazardous Material/Waste Released into the Environment? (If Yes, attach description of incident and proposed action)	☐ Yes ☐ No	Cumulative Total of Work Hours From Previous Report	
		Total Work Hours From Start of Construction	

SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED (Include Safety Violations, Corrective Instructions Given, Corrective Actions Taken, and Results of Safety Inspections Conducted):

EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB

DESCRIPTION OF EQUIPMENT/MATERIAL RECEIVED	MAKE/ MODEL/ MANUFACTURER	EQUIPMENT/ LOT NUMBER	INSPECTION PERFORMED BY	NUMBER/ VOLUME/ WEIGHT

EQUIPMENT USED ON JOB SITE TODAY.

EQUIPMENT DESCRIPTION	EQUIPMENT MAKE/MODEL	SAFETY CHECK PERFORMED BY	NUMBER OF HOURS		
			USED	IDLE	REPAIR

CHANGED CONDITIONS/DELAY/CONFLICTS ENCOUNTERED (List any conflicts with the delivery order [i.e., scope of work and/or drawings], delays to the project attributable to site and weather conditions, etc.)**:**

VISITORS TO THE SITE:

LIST OF ATTACHMENTS (OSHA report, confined space entry permit, incident reports, etc.):

SAFETY REQUIREMENTS HAVE BEEN MET ☐

SUPERINTENDENT'S SIGNATURE DATE

CH2M HILL **SOUTHDIV RAC** **N62467-98-D-0995**	**CONTRACTOR PRODUCTION REPORT** (CONTINUATION SHEET)	DATE OF REPORT: REVISION NO: REVISION DATE:
CTO NO:	PROJECT NAME/LOCATION:	REPORT NO:

WORK PERFORMED TODAY

EMPLOYEE	WORK PERFORMED	EMPLOYER	EMPLOYEE NUMBER	TITLE/TRADE	HRS

INCLUDE ALL PERSONNEL WORK HOURS IN THE TOTAL WORK HOURS ON JOB SITE

SAFETY REQUIREMENTS HAVE BEEN MET ☐

SUPERINTENDENT'S SIGNATURE

DATE

CH2M HILL **SOUTHDIV RAC** **N62467-01-D-0331**	**CONTRACTOR QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	REPORT DATE: REVISION NO: REVISION DATE:

CTO NO:	PROJECT NAME/LOCATION:	REPORT NO:
PROJECT NO:	PROJECT QC MANAGER:	SITE H&S SPECIALIST:

SAFETY MEETINGS AND INSPECTIONS

WAS A SAFETY MEETING HELD THIS DAY?	☐ YES	☐ NO	IF YES, ATTACH SAFETY MEETING MINUTES
WAS CRANE USED ON THE SITE THIS DAY?	☐ YES	☐ NO	IF YES, ATTACH DAILY CRANE REPORT OF INSPECTION AND CONTRACTOR CRANE OPERATION CHECKLIST

DEFINABLE FEATURES OF WORK STATUS

DFOW No.	Definable Feature Of Work	Preparatory	Initial	Follow-Up
1		☐	☐	☐
2		☐	☐	☐
3		☐	☐	☐
4		☐	☐	☐
5		☐	☐	☐
6		☐	☐	☐
7		☐	☐	☐
8		☐	☐	☐
9		☐	☐	☐
10		☐	☐	☐
11		☐	☐	☐
12		☐	☐	☐
13		☐	☐	☐
14		☐	☐	☐
15		☐	☐	☐

PREPARATORY

WAS PREPARATORY PHASE WORK PERFORMED TODAY? ☐ YES ☐ NO

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKLIST.

DFOW No.(from list above).	TASK/ACTIVITY	PREPARATORY PHASE REPORT NO.

INITIAL AND FOLLOW-UP FEATURE OF WORK COMMENTS

DFOW No.(from list above)	Phase	Comment/Finding/Action
	Initial ☐ Follow up ☐	
	Initial ☐ Follow up ☐	
	Initial ☐ Follow up ☐	
	Initial ☐ Follow up ☐	
	Initial ☐ Follow up ☐	
	Initial ☐ Follow up ☐	
	Initial ☐ Follow up ☐	
	Initial ☐ Follow up ☐	
	Initial ☐ Follow up ☐	
	Initial ☐ Follow up ☐	
	Initial ☐ Follow up ☐	

REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			**REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)**	
TASK/ACTIVITY	DATE ISSUED	DESCRIPTION	TASK/ACTIVITY	CORRECTIVE ACTION(S) TAKEN

CH2M HILL **SOUTHDIV RAC** **N62467-98-D-0995**	**CONTRACTOR QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	REPORT DATE: REVISION NO: REVISION DATE:

CTO NO:	PROJECT NAME/LOCATION:	REPORT NO:
PROJECT NO:	PROJECT QC MANAGER:	SITE H&S SPECIALIST:

SAMPLING/TESTING PERFORMED

SAMPLING/TESTING PERFORMED	SAMPLING/TESTING COMPANY	SAMPLING/TESTING PERSONNEL

MATERIALS/EQUIPMENT INSPECTION (Materials received and inspected against specifications)

MATERIAL/EQUIPMENT DESCRIPTION	SPECIFICATION	MATERIAL ACCEPTED?	COMMENT/REASON/ACTION
		YES ☐ NO ☐	
		YES ☐ NO ☐	
		YES ☐ NO ☐	
		YES ☐ NO ☐	
		YES ☐ NO ☐	
		YES ☐ NO ☐	
		YES ☐ NO ☐	

SUBMITTALS INSPECTION / REVIEW

SUBMITTAL NO	SUBMITTAL DESCRIPTION	SPEC/PLAN REFERENCE	SUBMITTAL APPROVED?	COMMENT/REASON/ACTION
			YES ☐ NO ☐	
			YES ☐ NO ☐	
			YES ☐ NO ☐	
			YES ☐ NO ☐	

OFF-SITE SURVEILLANCE ACTIVITIES, INCLUDING ACTIONS TAKEN:

ACCUMULATION/STOCKPILE AREA INSPECTION

INSPECTION PERFORMED BY:		SIGNATURE OF INSPECTOR:	
ACCUMULATION/ STOCKPILE AREA LOCATION			

NO OF CONTAINERS:		NO OF TANKS:		NO OF ROLL-OFF BOXES:		NO OF DRUMS:	

INSPECTION RESULTS:

TRANSPORTATION AND DISPOSAL ACTIVITIES/SUMMARY/QUANTITIES:

GENERAL COMMENTS (rework, directives, etc.):

LIST OF ATTACHMENTS (examples, as applicable: preparatory phase checklist, QC meeting minutes, safety meeting minutes, crane inspections, crane operation checklist, COCs, weight tickets, manifests, profiles, rework item list, testing plan and log, etc.):

On behalf of the contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.

PROJECT QC MANAGER'S SIGNATURE DATE

On behalf of the contractor, I attest that the work for which payment is requested, including stored material, is in compliance with contract requirements.

PROJECT QC MANAGER'S SIGNATURE DATE

CH2M HILL **SOUTHDIV RAC** **N62467-01-D-0331**	**PREPARATORY PHASE REPORT**	REPORT NO:	REPORT DATE: REVISION NO: REVISION DATE:	CTO NO:
PROJECT NO:	DEFINABLE FEATURE OF WORK:	SITE/ACTIVITY:		

PERSONNEL PRESENT

GOVERNMENT REP NOTIFIED _____ HOURS IN ADVANCE: YES ☐ NO ☐

NAME	POSITION	COMPANY/GOVERNMENT

SUBMITTALS

REVIEW SUBMITTALS AND/OR SUBMITTAL REGISTER.

HAVE ALL SUBMITTALS BEEN APPROVED? YES ☐ NO ☐

IF NO, WHAT ITEMS HAVE NOT BEEN SUBMITTED?

ARE ALL MATERIALS ON HAND? YES ☐ NO ☐

IF NO, WHAT ITEMS ARE MISSING?

CHECK APPROVED SUBMITTALS AGAINST DELIVERED MATERIAL. (THIS SHOULD BE DONE AS MATERIAL ARRIVES).

COMMENTS:

MATERIAL STORAGE

ARE MATERIALS STORED PROPERLY? YES ☐ NO ☐

IF NO, WHAT ACTION IS TAKEN?

SPECIFICATIONS

REVIEW EACH PARAGRAPH OF SPECIFICATIONS.

DISCUSS PROCEDURE FOR ACCOMPLISHING THE WORK.

CLARIFY ANY DIFFERENCES.

PRELIMINARY WORK & PERMITS

ENSURE PRELIMINARY WORK IS CORRECT AND PERMITS ARE ON FILE.

IF NO, WHAT ACTION IS TAKEN?

CH2M HILL **SOUTHDIV RAC** **N62467-98-D-0995**	**PREPARATORY PHASE REPORT**	REPORT NO:	REPORT DATE: REVISION NO: REVISION DATE:	CTO NO:
PROJECT NO:	DEFINABLE FEATURE OF WORK:	SITE/ACTIVITY:		

TESTING

IDENTIFY TEST TO BE PERFORMED, FREQUENCY, AND BY WHOM.

TEST	FREQUENCY	PERFORMER

WHEN REQUIRED?

WHERE REQUIRED?

REVIEW TESTING PLAN.

HAVE TEST FACILITIES BEEN APPROVED?

TEST FACILITY	APPROVED?
	YES ☐ NO ☐
	YES ☐ NO ☐

SAFETY

ACTIVITY HAZARD ANALYSIS APPROVED? YES ☐ NO ☐

REVIEW APPLICABLE PORTION OF EM 385-1-1.

MEETING COMMENTS

NAVY/ROICC COMMENTS DURING MEETING.

OTHER ITEMS OR REMARKS

OTHER ITEMS OR REMARKS:

PROJECT QC MANAGER NAME	PROJECT QC MANAGER'S SIGNATURE		DATE	