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LOCKHEED MARTIN

Transmitted by Overnight Mail

Mr. James W. Metz

April 21, 2008

Chief, Voluntary Cleanup Division
Environmental Restoration and Redevelopment Program
Maryland Department of the Environment
1800 Washington Blvd. Ste. 625
Baltimore, MD 21230

Re: Middle River Complex VCP – Soil Response Action Plan, Block F, MRC, Middle River, Maryland

Dear Mr. Metz:

Please find enclosed document for your review and approval.

Please let me know if you have any questions about this transmittal; I can be reached at (301) 214-9958.

Sincerely,

Thomas D. Blackman
Project Lead, Environmental Remediation

Attachment: Soil Response Action Plan, Block F, MRC, Middle River, Maryland
BET 129

cc: Via Email

Brad Owens, Lockheed Martin	Mr. Horacio Tablada, MDE
Christine Kline, Lockheed Martin	Mr. James R. Carroll, MDE
Mary Morningstar, Lockheed Martin	Ms. Richelle Hanson, MDE
Mike Martin, Tetra Tech	Mr. Gary Schold, MDE

SOIL RESPONSE ACTION PLAN
BLOCK F
LOCKHEED MARTIN MIDDLE RIVER COMPLEX

2323 Eastern Boulevard
Middle River, Maryland

LOCKHEED MARTIN

Tetra Tech
Environmental Engineers & Scientists

April 2008

Final Soil Response Action Plan
Block F
Lockheed Martin Middle River Complex
2323 Eastern Boulevard
Middle River, Maryland

Prepared for:

Lockheed Martin Corporation

Prepared by:

Tetra Tech, Inc.

Michael Martin, P.G.
Project Manager

TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

Section **Page**

TABLE OF CONTENTS (Continued)

APPENDICES

LIST OF FIGURES

All figures appear at the end of each section

TABLE OF CONTENTS (Continued)

LIST OF TABLES
All tables appear at the end of each section

ACRONYMS

µg/kg	micrograms per kilogram
API	American Petroleum Institute
ARAR	Applicable or Relevant and Appropriate Requirement
ASTM	American Society for Testing and Materials International
ATC	Average Typical Concentration
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	chemical of concern
COMAR	Code of Maryland Regulations
COPC	chemical of potential concern
CSF	Cancer Slope Factor
CSM	Conceptual Site Model
cy	cubic yards
DEPRM	Department of Environmental Protection and Resource Management
DRO	diesel range organics
EDD	electronic data deliverable
EM	electromagnetic
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
GLM	Glenn L. Martin Company
GPR	ground penetrating radar
GRA	general response action
GRO	gasoline range organics

HASP	Health and Safety Plan
HHRA	human health risk assessment
LDR	Land Disposal Restriction
LUC	land use control
MDE	Maryland Department of the Environment
mg/kg	milligrams per kilogram
MRAS	Middle River Aircraft Systems
MRC	Middle River Complex
MS2-LS&S	Maritime Systems & Sensors – Littoral Ships & Systems
MSDS	Material Safety Data Sheet
msl	mean sea level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NIOSH	National Institute of Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
NPW	net present worth
O&M	operation and maintenance
OCP	Oil Control Program
OSHA	Occupational Safety and Health Administration
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PLS	pure live seed
PPE	personal protective equipment
RAO	response action objective
RAP	Response Action Plan
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RfD	Reference Dose
sf	square feet
SSO	Site Safety Officer
STP	Sewage Treatment Plant
SVOC	semivolatile organic compound

TBC	To Be Considered
TCLP	Toxicity Characteristic Leaching Procedure
TPH	total petroleum hydrocarbon
TSDF	treatment, storage, and disposal facility
Tetra Tech	Tetra Tech, Inc.
UCL	upper confidence limit
UECA	Uniform Environmental Covenants Act
USC	United States Code
USCS	Unified Soil Classification System
UST	underground storage tank
UTS	Universal Treatment Standard
VCP	Voluntary Cleanup Program
VOC	volatile organic compound

Executive Summary

This Response Action Plan (RAP) is being submitted by Tetra Tech, Inc. (Tetra Tech) on behalf of Lockheed Martin Corporation (Lockheed Martin) for soil media at Block F of the Lockheed Martin Middle River Complex (MRC) located in Middle River, Maryland. The RAP was prepared in accordance with the requirements of the Maryland Department of the Environment's (MDE's) Voluntary Cleanup Program (VCP) (Section 7-508 of the Environment Article, Annotated Code of Maryland). The purpose of the RAP is to provide the information necessary to support the decision to remove contaminated soil in order to receive a Certificate of Completion from the MDE under a Tier 1A (Residential Unrestricted) future land use and restriction category based on potential future residential development. In addition, previously abandoned-in-place underground storage tanks (USTs), associated piping, and associated contaminated soil will be removed. A separate RAP is being prepared to address contaminated groundwater beneath the MRC, including the groundwater beneath Block F.

The MRC is located in Middle River, Maryland, approximately 11.5 miles northeast of downtown Baltimore and covers approximately 161 acres. Block F (11.94 acres) is located in the southern portion of the MRC. Four Recognized Environmental Conditions (RECs), REC #4 (Boat Launch Area), REC #5 (Former Aviation Fuel USTs), a portion of REC #6 (Waterfront Lot), and REC #13 (Former Boat Dock Area), are located in Block F.

REC #4 (Boat Launch Area) and REC #5 (Former Aviation Fuel USTs) are covered by a concrete tarmac which defines the boundary of REC #4. The seven USTs comprising REC #5 lie underneath the north-central portion of the concrete tarmac. No other structures are present onsite. The concrete tarmac is composed of smaller concrete slabs that are in relatively good condition with some minor cracking and pothole development in a few locations. A grass-covered strip of land is present along the southeastern edge of REC #4.

REC #6 (Waterfront Lot) is a well manicured, grass-covered strip of land lying between Chesapeake Park Plaza and Parking Lot No. 6 and Dark Head Cove. Several trees are present and the grass appears to be in good condition.

REC #13 (Former Boat Dock Area) is an open, relatively flat grass-covered parcel of land. REC #13 is covered with a well maintained grass lawn with shrubs and trees growing thickly along the Cow Pen Creek Shoreline. Several trees are present within the REC. Although no structures are currently present onsite, the severely degraded remnants of several walkways, parking areas, and a few foundations are still evident.

Investigations within Block F have been conducted since 2003 and have included record reviews, discussions with MRC personnel, geophysical surveys, and soil and groundwater sampling. The analytical results for the soil and groundwater samples were evaluated in a site-specific human health risk assessment (HHRA), which identified benzo(a)pyrene as a chemical of concern (COC) in soil. The greatest concentrations of benzo(a)pyrene were generally detected in shallow soils in REC #13 (Former Boat Dock Area) and in subsurface soils in REC #4 (Boat Launch Area). Mercury and PCBs were also identified as COCs in soils. Cleanup goals were developed to satisfy the requirements of the VCP and to be consistent with the requirements of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 Code of Federal Regulations (CFR) Part 400.430, as implemented through the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Attainment of the cleanup goals at Block F will result in a cancer risk less than 1×10^{-5} and a hazard index less than 1.0.

An additional field investigation was conducted at Block F during the fall of 2007 to refine the horizontal and vertical limits of soil with COC concentrations greater than the cleanup goals. Based on the investigation, benzo(a)pyrene concentrations in soils ranged from non-detect to 19,000 µg/kg at soil boring SB-383 (1 to 2 feet bgs). The benzo(a)pyrene concentration was below 1,000 µg/kg in the majority of the samples. The 47 detections of benzo(a)pyrene were scattered sporadically at various boring locations. The cleanup goal for benzo(a)pyrene is 400 µg/kg. Five samples that exceeded the cleanup goals are located in and around REC #13 and REC #4. PCB (Aroclor-1260) concentrations ranged from non-detect to a maximum of 34 µg/kg at soil boring SB-383 (1 to 2 feet bgs) with no PCB concentration greater than the cleanup goal (320 µg/kg). The Block F wide average mercury concentration, as represented by the UCL, must be less than 0.5 mg/kg.

As required by the VCP, selected technologies and land use controls (LUCs) were evaluated. The NCP served as a guide for the process used to arrive at the selected technology (i.e., selected alternative). This process included the identification, screening, and evaluation of potential technologies and process options; preliminary and detailed screening of technologies and process options; selection of representative process options; development and detailed analysis of alternatives; comparative analysis of alternatives; and description of the proposed alternative. The proposed response action selected was Excavation to Allow Unrestricted Residential Site Use and Off-Site Treatment and Disposal.

The proposed response action would remove soil with COC concentrations greater than the cleanup goals from four areas shown on Figure 8-1 (Areas A, B, C, and D) to the extent necessary to allow unrestricted residential use of Block F. In addition, seven previously abandoned-in-place USTs, associated piping, and associated contaminated soil with petroleum hydrocarbon diesel range organics (DRO) and gasoline range organics (GRO) with concentrations greater than the MDE soil cleanup standard of 230 mg/kg would be removed (Area 5 on Figure 8-1). A total of 5,200 cubic yards of soil would be removed. Site preparation would include the construction of temporary materials handling pad, decontamination zones, haul routes and clearing of the areas to be excavated. Shallow excavation of soil would be conducted using a bulldozer, front-end loader, hydraulic excavators, backhoe, or similar equipment. Post-removal/confirmation samples would be collected from the sidewalls and base of the excavation(s). Following excavation and confirmation sampling, the excavated areas would be backfilled with certified clean material, graded to original contours, and restored using vegetation. It is assumed that all excavated soil would be disposed at an off-site permitted Resource Conservation and Recovery Act (RCRA) Subtitle D landfill. Because the soil remaining on site would no longer contain concentrations of COCs that could be harmful to potential future residential receptors, soil-related LUCs would not be required.

Lockheed Martin will meet local, State, and federal permitting requirements for the response action. Based on a review of requirements of MDE and Baltimore County, permitting requirements for the response action are related to earth-moving activities and USTs.

As stipulated by MDE's VCP, administrative requirements, including a written agreement, zoning certification, performance bond or other form of security, and health and safety plan requirements

will be met. A written agreement stipulating that if the RAP is approved, the applicant agrees to comply with the provisions of the RAP is provided herein. A zoning certification, a certified written statement that the property meets all applicable county and municipal zoning requirements, is also provided with this RAP. A project-specific Health and Safety Plan (HASP) will be prepared and submitted to MDE prior to implementation of the MDE-approved RAP.

Section 1
Introduction

1.1 PURPOSE

On behalf of Lockheed Martin Corporation (Lockheed Martin), Tetra Tech, Inc. (Tetra Tech) has prepared this Response Action Plan (RAP) for soil media at Block F of the Lockheed Martin Middle River Complex (MRC) located in Middle River, Maryland. The location of the MRC is shown on Figure 1-1. This RAP has been prepared in accordance with the requirements of the Maryland Department of the Environment's (MDE's) Voluntary Cleanup Program (VCP) (Section 7-508 of the Environment Article, Annotated Code of Maryland).

The purpose of the RAP is to provide the background, support, and framework for remediation of soil with chemical of concern (COC) concentrations greater than the cleanup goals in order to receive a Certificate of Completion from the MDE under a Tier IA (Residential Unrestricted) future land use and restriction category based on potential future residential development. In addition, previously abandoned-in-place underground storage tanks (USTs), associated piping, and associated soil with petroleum hydrocarbon diesel range organic (DRO) and gasoline range organic (GRO) concentrations greater than MDE soil cleanup standards will be removed. Block F and physical features are shown on Figure 1-2.

A Certificate of Completion will be sought from the MDE following the satisfactory implementation and completion of the MDE-approved RAP.

1.2 SCOPE

The response action for Block F, which will address soil and groundwater with COC concentrations greater than the cleanup goals, is summarized as follows:

- The soil response action proposed in this RAP will include removal of soil with COC concentrations greater than the cleanup goals and removal of previously abandoned-in-place USTs, associated piping, and associated soil with DRO and GRO concentrations greater than MDE soil cleanup standards.

- The Groundwater Response Action Plan will address groundwater with COC concentrations greater than the cleanup goals in order to receive a Certificate of Completion from the MDE under a Tier IB (Residential Restricted) future land use and restriction category. The restriction category would consist of institutional controls designed to prevent potable use of groundwater. The restriction category consisting of institutional controls would remain in place until the groundwater cleanup goals are achieved through remediation. The proposed response action for groundwater associated with Block F is described in the Groundwater Response Action Plan provided under separate cover.

1.3 ORGANIZATION

This RAP is organized as follows:

- Section 1 – Introduction: Presents the purpose, scope, and organization of the RAP.

- Section 2 – Block F Overview: Presents a brief description of MRC and Block F history, environmental investigations and results, nature and extent of contamination, and a summary of the proposed soil response action.

- Section 3 – Additional Investigatory Information: Presents a summary of the additional investigation completed in support of the response action.

- Section 4 – Exposure Assessment: Presents the current and proposed land use, media of concern, and Conceptual Site Model (CSM).

- Section 5 – Cleanup Criteria: Presents cleanup criteria, a risk assessment summary, cleanup goals, and information associated with attainment of cleanup goals.

- Section 6 – Selected Technologies and Land Use Controls: Presents the screening of technologies and process options, development and analysis of alternatives, comparative analysis of alternatives, and the selected alternative to achieve cleanup of Block F.

- Section 7 – Evaluation Criteria for the Selected Technology: Presents the criteria required for a Certificate of Completion.

- Section 8 – Proposed Response Actions: Presents the plan for all work necessary to perform the proposed response action.

- Section 9 – Permits, Notifications, and Contingencies: Presents the local, State, and federal laws and regulations that prescribe the permits and approvals required to implement the MDE-approved RAP.

- Section 10 – Implementation Schedule: Presents the detailed schedule for all work necessary to implement the MDE-approved RAP.

- Section 11 – Administrative Requirements: Presents the administrative documents required to implement the MDE-approved RAP.

- Section 12 – References: Lists references and citations used in compiling this RAP.

Appendix A includes a summary of soil analytical results. Appendix B includes a statistical summary of pre- and post-removal action data. Appendix C includes field documentation notes and boring logs. Appendix D includes data validation reports. Appendix E includes documentation required to comply with administrative requirements.

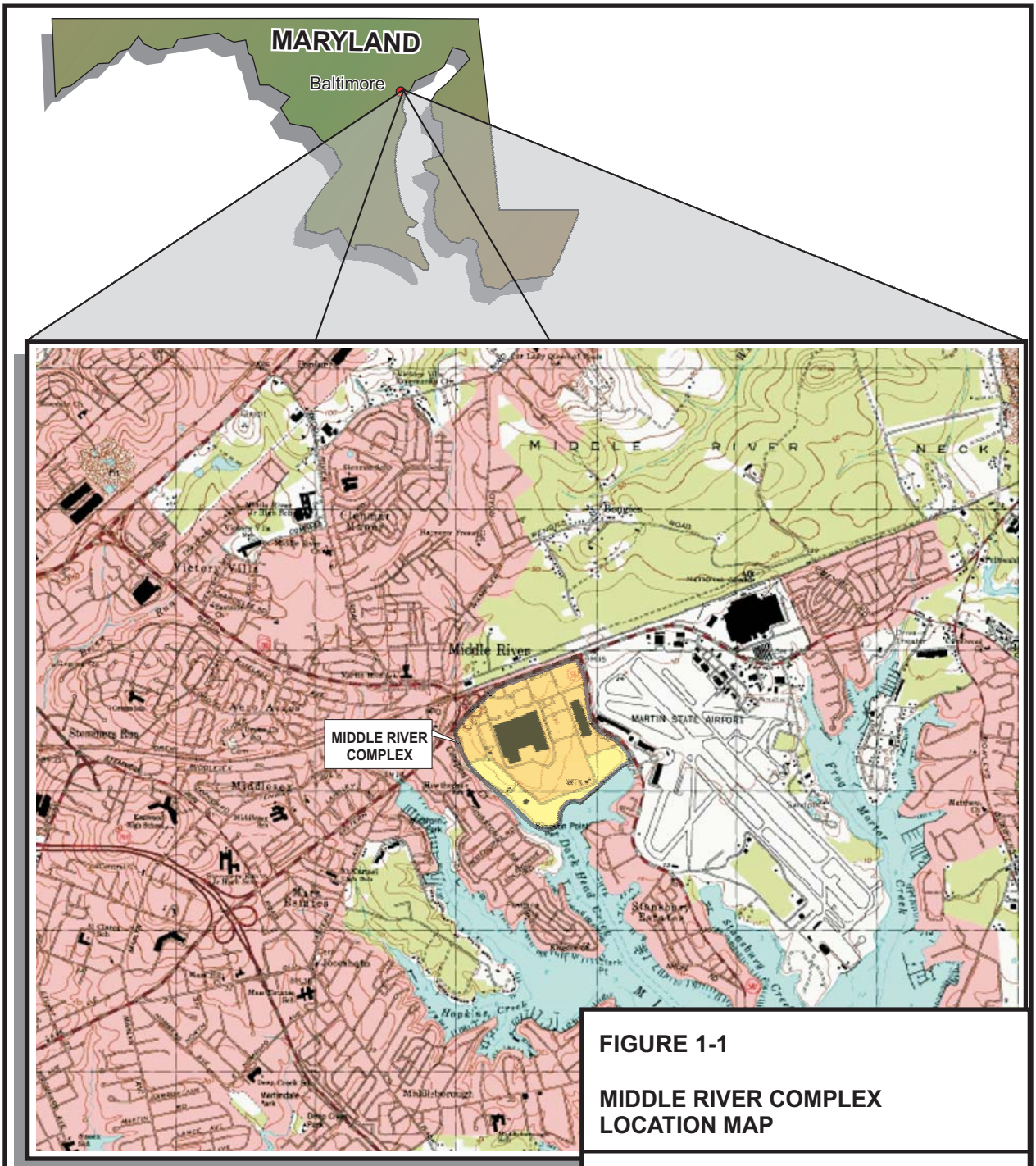


FIGURE 1-1

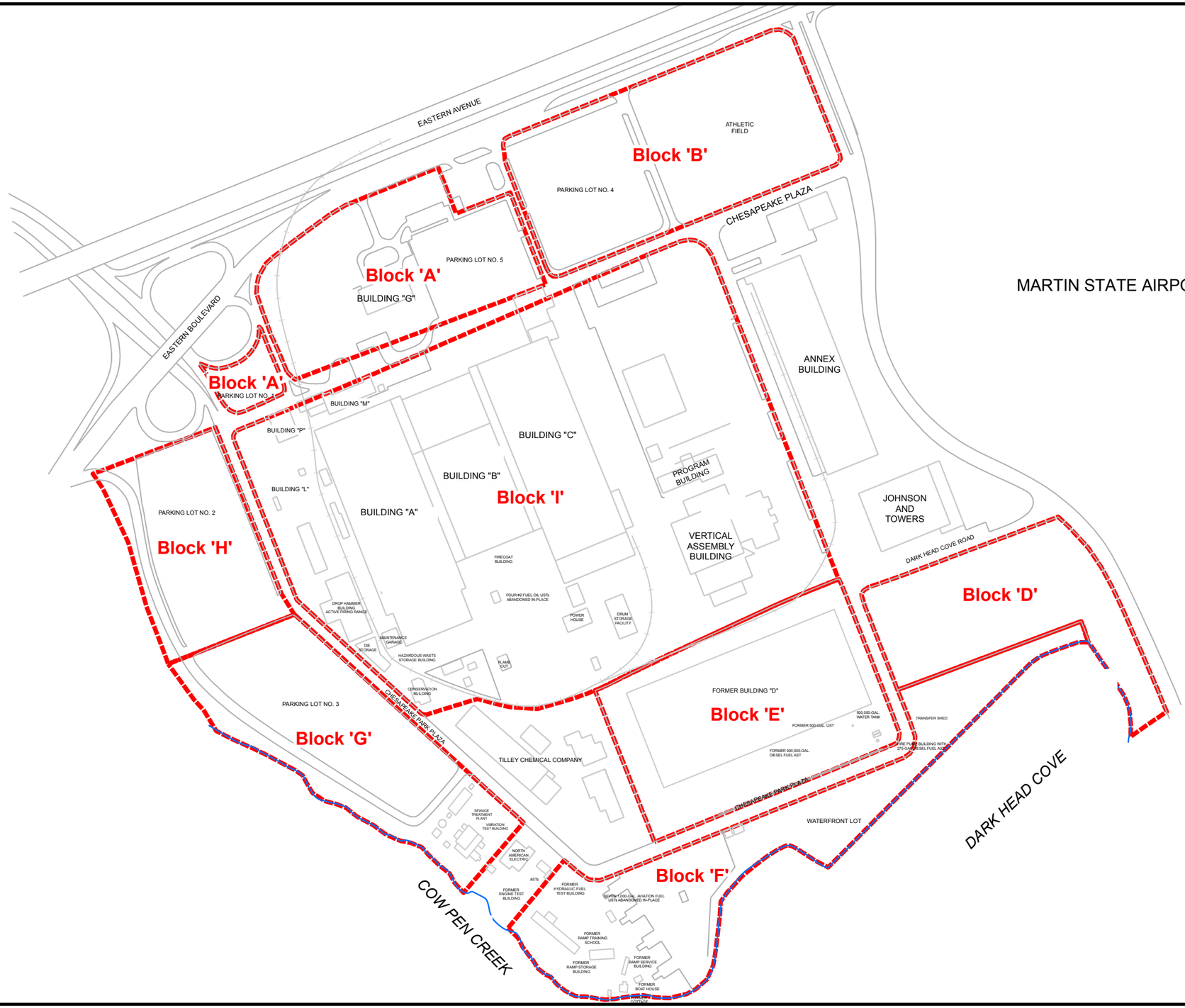
MIDDLE RIVER COMPLEX LOCATION MAP

Lockheed Martin Middle River Complex
Middle River, Maryland

NOT TO SCALE	N
DATE MODIFIED: 8/21/07	CREATED BY: J. F.

Tetra Tech, Inc.

K:\GProject\middle_river\graphics\Middle River Complex Loc Map_Revised.cdr



MARTIN STATE AIRPORT

FIGURE 1-2

MIDDLE RIVER COMPLEX
TAX BLOCKS

LEGEND

- TAX BLOCK
- STRUCTURE
- RAILROAD TRACKS

Lockheed Martin Middle River Complex
Middle River, Maryland

0 100 200 400 Feet

N

DATE MODIFIED: 3/13/07

CREATED BY: J. F.

Tetra Tech, Inc.

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Section 2
Block F Overview

2.1 BLOCK F BACKGROUND

The MRC, which is part of the Chesapeake Industrial Park, is located at 2323 Eastern Boulevard in Middle River, Maryland, approximately 11.5 miles northeast of downtown Baltimore. The MRC covers approximately 161 acres and consists of 12 main buildings, an active industrial area and yard, perimeter parking lots, an athletic field, a concrete-covered vacant lot, a trailer and parts storage lot, and numerous grass-covered green spaces along its perimeter. The MRC is bounded by Eastern Boulevard (Route 150) to the north, Dark Head Cove to the south, Cow Pen Creek to the west, and Martin State Airport to the east. The location of the MRC is shown in Figure 1-1. A MRC layout map is presented as Figure 2-1.

The MRC is comprised of several tax blocks. Block F, consisting of 11.94 acres, is located in the southern portion of the MRC. Block F is bounded on the north by Parking Lot No. 6 (Block D), Former Building D (Block E), the Tilley Chemical Company, and North American Electric, to the east by Parking Lot No. 6 (Block D) and Dark Head Cove, to the south by Dark Head Cove, and to the west by Cow Pen Creek. The following Recognized Environmental Conditions (RECs) are located in Block F:

- Boat Launch Area (REC #4)
- Former Aviation Fuel Underground Storage Tanks (USTs) (REC #5)
- Waterfront Lot (portion of REC #6)
- Former Boat Dock Area (REC #13)

2.1.1 Block F Description

Currently, Lockheed Martin's MRC primary activities include facility and building management and maintenance. The MRC has two main tenants: Middle River Aircraft Systems (MRAS), a

subsidiary of General Electric that conducts design, manufacturing, fabrication, testing, overhaul, repair, and maintenance of aeronautical structures, parts, and components for military and commercial applications, and Maritime Systems & Sensors – Littoral Ships & Systems (MS2-LS&S), a subsidiary of Lockheed Martin that conducts fabrication, assembly, testing, and support of vertical launch systems. Lockheed Martin and tenant operations are primarily contained within Block I.

Block F consists of RECs #4, #5, #6 and #13. The Boat Launch Area (REC #4) and the Former Aviation Fuel USTs (REC #5) are primarily covered by a concrete tarmac which defines the boundary of REC #4. The seven USTs comprising REC #5 lie underneath the north-central portion of the concrete tarmac. No other structures are present onsite. A chain-link fence is present along the northern edge of REC #4, along Chesapeake Park Plaza, prohibiting unauthorized access to these two RECs. Vehicle and personal access is obtained through a locked gate in the fence.

The concrete tarmac is composed of smaller concrete slabs that are in relatively good condition with some minor cracking and pothole development in a few locations. Grass and soil were observed in many of the slab joints. A grass-covered strip of land is present along the southeastern edge of REC #4, separating the southeastern portion of the tarmac from a steel bulkhead that is present along Dark Head Cove.

The Waterfront Lot (REC #6) comprises only a portion of REC #6. Parking Lot No. 6 (Block D) is also a part of REC #6. The Waterfront Lot is a well manicured, grass-covered strip of land lying between Chesapeake Park Plaza and Dark Head Cove and Parking Lot No. 6 and Dark Head Cove. Several trees are present and the grass appears to be in good condition. A steel bulkhead bounds the unit along Dark Head Cove. Ground subsidence has occurred around the bulkhead in the eastern portion of the Waterfront Lot.

The Former Boat Dock Area (REC #13) is an open, relatively flat grass-covered parcel of land. A chain link fence is located along Chesapeake Park Plaza limiting unauthorized access to REC #13. A fence is not present along the boundary shared with North American Electric or with the Boat

Launch Area (REC #4). Vehicle and personnel access is obtained through a locked gate along Chesapeake Park Plaza at REC #4.

The Former Boat Dock Area is covered with a well maintained grass lawn with shrubs and trees growing thickly along the Cow Pen Creek Shoreline. Several trees are present within the REC. Although no structures are currently present onsite, the severely degraded remnants of several walkways, parking areas, and a few foundations are still evident.

2.1.2 Block F History

In 1929, Glenn L. Martin Company (GLM), a predecessor of Lockheed Martin, acquired a large parcel of land in Middle River, Maryland to conduct aircraft manufacturing for the United States government and for commercial clients. Prior to the property's first occupancy, the MRC was undeveloped land. In the early 1960s, GLM merged with American-Marietta Company, forming Martin Marietta Corporation. Around 1975, the adjacent eastern airport (Martin State Airport), totaling approximately 750 acres, was transferred to the State of Maryland. In the mid-1990s, Martin Marietta Corporation merged with Lockheed, forming Lockheed Martin Corporation, with its principal subsidiary specializing in construction and testing of new ordnance for the United States government and for commercial clients. Shortly following the merger, General Electric acquired the majority of Lockheed Martin's aeronautical business in Middle River, which began to function as MRAS.

The Boat Launch Area (REC #4) has been present since the initial construction of the MRC in the mid-1930s. Prior to World War II, the area was an unpaved ramp entering Dark Head Cove. During World War II, REC #4 was used for the staging, fueling, and launching of military seaplanes. After World War II, the area was used for the fueling, maintenance, testing, and prototype evaluation of Chase boats along with staging of vehicles and equipment. By 1957, the site had been improved with the addition of the concrete tarmac. By 1969, the area was abandoned and all onsite structures had been demolished. Currently, no structures other than the concrete tarmac exist on the site.

REC #5 is located underneath the north-central portion of REC #4. The Phase I Environmental Site Assessment (ESA) identified the Former Aviation Fuel USTs, including seven closed-in-place 1,000-gallon USTs beneath the Boat Launch Area's concrete tarmac, as REC #5. The tanks were reportedly last used in 1954 and closed in place in 1986-1987. During the Phase I ESA investigation, no closure records were available for these USTs, and MRC personnel interviewed did not know whether confirmatory sampling had been conducted as part of the tank closure.

REC #6 consists of the Waterfront Lot within Block F and Parking Lot No. 6 within Block D. Between 1938 and 1949, the Waterfront Lot was backfilled, raising the topography to the current elevation and extending the shoreline to the current position. During filling, a steel bulkhead was constructed, and a 100-foot-wide swath of the cove along the bulkhead was proposed for dredging. Dredging activities were planned to lower the creek bottom near the shoreline to 8 feet below sea level. The dredging and filling activities were conducted to facilitate possible use of the creek as an anchor basin. After the shoreline was reconstructed, from the 1950s through the 1970s, the Waterfront Lot south of Building D showed numerous service roads of unknown usage criss-crossing the waterfront area. An unknown structure was present in this area from the early 1950s to at least 1971. An aerial photograph taken of the MRC in the early 1970s shows a mound of unknown material in the waterfront area south of Building D. Since the early to mid 1970s, the Waterfront Lot appears to have been used solely for recreational activities.

Based on a review of available aerial photographs and MRC maps, the area informally identified as the Boat Dock Area (REC #13) was developed prior to 1949. In 1949, the area showed 11 small structures in the vicinity of the Boat Launch Area. Further development of the area included construction of a cottage, service building, storage building, training school, boat house, and two docks. The buildings were demolished before 1969. No additional information regarding chemical and material storage and waste handling practices was available.

2.1.3 Block F Characteristics

2.1.3.1 Current and Surrounding Land Use

The MRC is an industrial facility, and the area surrounding the MRC primarily consists of commercial, industrial, and residential establishments. Six facilities comprise the remaining portion of the Chesapeake Industrial Park including Tilley Chemical Company, Inc., a food and pharmaceutical chemical distributor for personal care and industries; North American Electric, Inc., an industrial and commercial electrical contractor; Johnson and Towers, a heavy duty automotive and boat repair and maintenance company; Poly-Seal Corp., a company that produces flexible packaging; Exxon, a gasoline fill station and convenience store; and the Middle River Post Office. Residential developments are present on the opposite shores of Cow Pen Creek, Dark Head Cove, and Dark Head Creek and north of Eastern Boulevard (Route 150).

2.1.3.2 Physiography

The MRC is located within the Western Shore of the Coastal Plain Physiographic Province, which is generally characterized by low relief. The topography of the MRC is gently sloping, ranging from sea level to 32 feet above mean sea level (msl) (Cassell, 1977). The topography slopes from Eastern Boulevard to the southwest and south towards Cow Pen Creek and Dark Head Cove.

The topography of Block F is relatively flat with a slight dip to the southeast and ranges from 16 feet above msl along Chesapeake Park Plaza to 2 feet above msl along Dark Head Cove (Cassell, 1977).

2.1.3.3 Hydrology

The MRC lies at the junction of Cow Pen Creek and Dark Head Cove. Both surface water bodies discharge into Dark Head Creek, a tributary to Middle River, which is a tributary to Chesapeake Bay. The MRC lies approximately 3.24 miles (17,100 feet) upstream of Chesapeake Bay.

No surface water bodies lie within or cross the MRC. Excluding areas immediately adjacent to Cow Pen Creek and Dark Head Creek, surface water runoff discharges from the MRC via storm drains. Lockheed Martin maintains a State of Maryland National Pollution Discharge Elimination System (NPDES) permit (State Discharge Permit No.: 00-DP-0298, NPDES No.: MD0002852), issued by MDE Industrial Discharge Permits Division, Water Management Administration. The permit covers stormwater discharge from the entire property rather than individual tenants. The NPDES permitted outfall locations are shown on Figure 2-1.

No surface water bodies cross or emanate from Block F. Due to the topography and the presence of the concrete tarmac at REC #4, surface water runoff in this area would most likely discharge directly to Dark Head Cove as overland sheet flow. Surface water runoff generated in the grass covered areas will generally infiltrate into the underlying soil or discharge to Dark Head Cove or Cow Pen Creek as overland sheet flow. Stormwater management features are located within Block D and are indicated on the MRC utility map included as Appendix J of the Site Characterization Report (Tetra Tech, May 2006). No wetlands have been identified in or around Block F, and Block F is not located within the 100-year floodplain.

2.1.3.4 Soils

Soils underlying MRC have been mapped as Mattapex-Urban Land Complex and Sassafras-Urban Land Complex by the United States Department of Agriculture Soil Conservation Service. Mattapex-Urban Land soils consist of deep, well-drained silty soils whose original texture has been disturbed, graded over, or otherwise altered. Sassafras-Urban Land soils consist of deep, well-drained sandy soils whose original texture has been disturbed, graded over, or otherwise altered. Site characterization studies indicate that a high degree of fine-grained (e.g., silt and clay) soils with low permeabilities are present at the MRC.

2.1.3.5 Geology

The surficial geology of Block F is summarized below. The geology of the MRC is described in the Site Characterization Report (Tetra Tech, May 2006).

Based on the lithologic logging of the soil borings installed within Block F, the subsurface soils at REC #4 are highly heterogeneous, consisting of sands, silts, and clays. The subsurface soils at the Waterfront Lot (REC #6) consisted primarily of silty clay underlain by sand. However, several borings contained sand at shallower depths. The Boat Dock Area (REC #13) is primarily underlain with a 2 to 4 foot thick silty sand unit which is then underlain with a silty clay to sandy clay unit.

2.1.3.6 Hydrogeology

A summary of groundwater measurements taken at Block F is presented in Table 2-1. The groundwater elevation contours using the shallow/intermediate surficial aquifer monitoring wells are presented on Figure 2-2. Groundwater flows in a radial fashion from the hydraulically upgradient northern portion of the MRC at Eastern Boulevard to the southeast, south, and southwest toward Dark Head Cove and Cow Pen Creek.

Groundwater was encountered at Block F at depths ranging from less than 1 foot to 13 feet below ground surface (bgs). Groundwater was generally encountered at shallower depths in areas known to have been filled in during the 1940s. Based on the locations of Cow Pen Creek and Dark Head Cove, groundwater flow is to the south.

2.2 SUMMARY OF BLOCK F INVESTIGATIONS

Investigations within Block F have been conducted since 2003 and have included record reviews, discussions with MRC personnel, geophysical surveys, and soil and groundwater sampling. Investigations[1] included the Phase I Environmental Site Assessment (2003) (Earth Tech, Inc., 2003), Phase II Investigation (Fall/Winter 2003) (Tetra Tech, February 2004), Historical Survey (2004) (Tetra Tech, August 2004), Site-Wide Phase II Investigation (2004) (Tetra Tech, April 2005), Phase II Soil Investigation (Summer 2005) (Tetra Tech, May 2006), Groundwater Characterization (Summer 2005) (Tetra Tech, May 2006), Geophysical Survey/Soil Investigation (Fall 2005) (Tetra Tech, May 2006), and Groundwater Investigation (Fall 2005) (Tetra Tech, May

1 Investigations cited by investigation title, performance period, and reference.

2006). The summary of Block F investigations provided below is limited to soil, whereas a summary of groundwater investigations is provided in the Groundwater Response Action Plan.

2.2.1 Phase I Environmental Site Assessment (2003)

A Phase I ESA was conducted on the MRC in February 2003. The Phase I ESA (Earth Tech, Inc., 2003) consisted of a historical review of the MRC (i.e., a review of available MRC documents, aerial photographs, and city directories); a review of federal, state, and local agency databases; interviews with site personnel; and a site visit. The Phase I ESA identified 13 specific RECs associated with the MRC. The RECs are areas that indicate the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate potential for an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

Three of the four RECs located in Block F were identified during the Phase I ESA (REC #4, REC #5, and REC #6). No information on former chemical handling processes, chemical storage, or waste stream disposal at the Boat Launch Area (REC #4) was documented in the Phase I ESA report. Based on a review of available MRC documents, the Phase I ESA documented the possible presence of fill material beneath the waterfront area (REC #6). No additional information regarding filling activities was obtained. In addition, information reviewed during the Phase I ESA did not indicate any chemical handling activities, chemical storage, or waste stream disposal occurring at the unit. Due to the unknown quality of the fill material, the Phase I ESA identified the Waterfront Lot as a REC.

During the review of available historic aerial photographs, multiple structures were observed at the Boat Dock Area (Earth Tech, February 2003). No additional information was collected during the Phase I investigation and the area was not recommended for classification as a REC.

In addition to the identification of the 13 RECs, the Phase I ESA also recommended further investigation into the MRC's historic site activities to identify other potential environmental concerns.

2.2.2 Phase II Investigation (Fall/Winter 2003)

During the fall of 2003, a Phase II investigation consisting of soil and groundwater sampling and analysis and a geophysical survey was conducted on 7 of the 13 Phase I RECs (Tetra Tech, February 2004). The objective of the Phase II investigation was to determine baseline conditions by identifying and evaluating contaminants of potential concern (COPC) present in the underlying media.

An electromagnetic (EM) geophysical survey was completed at the Waterfront Lot and Parking Lot No. 6 to detect any areas of waste disposal and buried drums or other metallic debris that may be present in the fill area of REC #6. A total of nine anomalies were identified during this survey. A follow-up ground penetrating radar (GPR) survey of the anomalies found that eight of the anomalies were associated with utilities (primarily storm drains), while the GPR survey did not indicate any definitive source for the final anomaly (located within Parking Lot No. 6). This anomaly was not considered consistent with any known potential subsurface metallic objects or utilities. The results of the geophysical survey are presented in Appendix A of the Final Report, Phase II Site Investigation of Exterior Areas (Tetra Tech, February 2004).

Four soil borings (SB-22 through SB-25) were installed within the concrete tarmac at the Boat Launch Area for general geographic coverage across REC #4. Two subsurface soil samples (5 and 10 feet bgs) were collected from each boring and were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), metals, gasoline range organics (GRO), and diesel range organics (DRO).

Four soil borings (SB-26 through SB-29) were installed on all four sides of the former tank farm (REC #5). One subsurface soil sample (6 or 10 feet bgs) was collected from each boring and analyzed for VOCs and GRO.

Two soil borings (SB-30 and SB-31) were installed within the grass covered areas of the Waterfront Lot. One subsurface soil sample (5 feet bgs) was collected from each boring and analyzed for VOCs, SVOCs, PCBs, metals, GRO, and DRO.

Sample locations are shown on Figure 2-3. Of the VOCS and metals that were detected in the soil samples collected at REC #4, REC #5, and REC #6, mercury was the only chemical that was detected at concentrations that exceeded MDE soil cleanup levels.

The results of this investigation are provided in the Final Data Report Site-Wide Phase II Investigation (Tetra Tech, April 2005). Tables AF-1 and AF-2 (Appendix A) provide a summary of detected concentrations in surface soil samples and subsurface soil samples, respectively.

2.2.3 Historical Survey (2004)

The historical survey consisted of review of available MRC maps (e.g., as-builts, proposed construction plans, and plot maps), interviews with Lockheed Martin and tenant personnel, and site visits. Based on the investigation findings, a total of 18 additional RECs located along the MRC's perimeter, within the active industrial yard, and within Buildings A, B, and C were identified. The additional RECs included a former sewage treatment plant (STP), an incinerator, several plating shops, a potential historical debris storage lot, abandoned USTs, and areas associated with several environmental investigations (i.e., lead removal at the Die Storage Unit and elevated chromium concentrations in groundwater adjacent to Building A).

A review of the available MRC documents identified a cottage, service building, storage building, training school, and boat house within the Boat Dock Area. Based on a review of other MRC maps and available data, multiple buildings were present from the 1940s to 1969 (Earth Tech, February 2003). No information regarding chemical and material storage and waste handling practices were obtained during the historical research survey. Due to the potential historic use of the buildings, the Boat Dock Area was identified as REC #13 and was included in the Site-Wide Phase II Investigation.

2.2.4 Site-Wide Phase II Investigation (2004)

During the Site-Wide Phase II Investigation, all 31 RECs were investigated and the investigation included geophysical surveys of five areas, and soil and groundwater sampling. The investigation

within Block F only included soil and groundwater sampling. Sample locations are shown on Figure 2-3.

Surface soil samples (SB-22A-SS through SB-25A-SS and SB-50-SS) were collected from the first foot of soil from soil borings installed adjacent to the 2003 soil borings installed within REC #4 (SB-22 and SB-25). The samples were analyzed for VOCs, SVOCs, PCBs, metals, GRO, and DRO. To verify the mercury concentrations detected in the earlier samples, an additional soil boring (SB-50) was installed and one surface soil and two subsurface soil (5 and 10 feet bgs) samples were collected from the boring. These samples were analyzed for metals.

At the Waterfront Lot, surface soil samples were collected from the 2003 soil boring locations (SB-30 and SB-31). In addition, four new soil borings (SB-55 through SB-58) were installed in areas associated with a former mound of unknown material, former service roads, and a dissecting storm sewer utility trench. Surface soil and subsurface soil (various depths) samples were collected from each of the borings. The samples were analyzed for VOCs, SVOCs, PCBs, metals, GRO, and DRO. The surface and 5 foot bgs subsurface samples from the four new soil borings (SB-55 through SB-58) were also analyzed for pesticides.

Four soil borings (SB-93 through SB-96) were installed in the Boat Dock Area. One surface soil sample and two subsurface soil samples (5 and 10 feet bgs) were collected from each boring. An additional subsurface soil sample (15 feet bgs) was collected from soil borings SB-93, SB-94, and SB-96. All of the samples were analyzed for VOCs, SVOCs, pesticides, PCBs, metals, GRO, and DRO.

Mercury again was the only compound that exceeded the MDE soil cleanup levels within REC #4. Metals such as arsenic and lead were detected in the soil samples from the Waterfront Lot at concentrations that exceeded the MDE soil cleanup levels. Four polycyclic aromatic hydrocarbons (PAHs), Aroclor-1260, cadmium, chromium, and mercury were detected at concentrations above the MDE soil cleanup levels in the soil samples collected in the Boat Dock Area (REC #13).

The results of this investigation are provided in the Final Data Report Site-Wide Phase II Investigation (Tetra Tech, April 2005). Tables AF-1 and AF-2 (Appendix A) provide a summary of detected concentrations in surface soil samples and subsurface soil samples, respectively.

Although no monitoring wells were installed at Block F during the Site-Wide Phase II Investigation, a total of 12 groundwater samples were collected from soil borings installed at the RECs within Block F during the Site-Wide Phase II Investigation. Soil boring locations are shown on Figure 2-3. A summary of groundwater investigations is provided in the Groundwater Response Action Plan.

2.2.5 Phase II Soil Investigation (Summer 2005)

To provide further delineation of the elevated detections of mercury in the Former Boat Launch Area, three additional soil borings (SB-236 through SB-238) were installed in 2005 and soil samples were collected from various depths (0 to 1, 1 to 2, and 4 to 5 feet bgs). The samples were analyzed for metals.

An elevated lead concentration detected in a surface soil sample collected in 2004 (SB-55) located along the waterfront, was further evaluated in 2005 by installing four additional soil borings (SB-250 through SB-253). Soil samples were collected from 0 to 1 and 1 to 2 feet bgs from each boring and analyzed for metals.

To evaluate PAHs, chromium, and PCBs that were detected in the surface soil samples collected in 2004 from soil borings SB-93 and SB-94, six additional soil borings (SB-265 through SB-270) were installed in the Former Boat Dock Area. Soil samples were collected from 0 to 1 and 1 to 2 feet bgs and were analyzed for SVOCs. The surface soil samples were also analyzed for PCBs and metals.

Several metals and DRO were found in the soil samples collected from the Former Boat Launch Area during this investigation at concentrations above the MDE soil cleanup levels. Several metals and PAHs were found in the soil samples from the Former Boat Dock Area at concentrations above the MDE soil cleanup levels. Sample locations are shown on Figure 2-3.

The results of this investigation are provided in the Site Characterization Report (Tetra Tech, May 2006). Tables AF-1 and AF-2 (Appendix A) provide a summary of the detected concentrations in the surface soil and subsurface soil samples, respectively.

2.2.6 Geophysical Survey/Soil Investigation (Fall 2005)

An EM survey was conducted in the fall of 2005 to screen the area of REC #13 within Block F. Identified anomalies were evaluated further with GPR. The results of the geophysical surveys are presented in the Site Characterization Report (Tetra Tech, May 2006). Based on the geophysical surveys, four anomalies that could not be resolved as being associated with known features (utilities) were investigated by installing five additional soil borings (SB-295 through SB-299). Subsurface soil samples were collected from two depths in each boring (4.5 and 9.5 feet bgs) and the samples were analyzed for VOCs, SVOCs, PCBs, metals, GRO, and DRO.

Several metals were detected in these soil samples at concentrations above the MDE soil cleanup levels. Sample locations are shown on Figure 2-3. The results of this investigation are provided in the Site Characterization Report (Tetra Tech, May 2006). Tables AF-1 and AF-2 (Appendix A) provide a summary of the detected concentrations in the surface soil and subsurface soil samples, respectively.

2.3 NATURE AND EXTENT OF CONTAMINATION

This section presents a summary of the nature and extent of contamination in soil and groundwater at Block F based on the results of all investigations conducted prior to the fall of 2007. Tables AF-1 and AF-2 (Appendix A) provide a summary of the detected concentrations in surface soil and subsurface soil samples, respectively.

2.3.1 Soil

The human health risk assessment (HHRA) prepared for the Site Characterization Report (Tetra Tech, May 2006) identified a number of COPCs by comparing maximum concentrations to MDE

soil cleanup standards. COPCs detected in soil samples collected within Block F included 11 metals (antimony, arsenic, cadmium, chromium, cobalt, lead, mercury, molybdenum, nickel, vanadium, and zinc), six PAHs [benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene], Aroclor-1254 and Aroclor-1260, DRO and GRO. Results of the site-specific HHRA were used to assist in determining which COPCs were the principal contributors to risk, also referred to as COCs. The COCs identified for Block F were carcinogenic PAHs, mercury, and PCBs in surface and subsurface soils.

The highest concentrations of benzo(a)pyrene and other PAHs were detected in surface and subsurface soil samples collected in the central portion of the Former Boat Dock Area (REC #13) (SB-93 through SB-95, SB-265, SB-266, SB-268, and SB-269). Elevated concentrations of PAHs were also detected in a subsurface soil sample (SB-238-05) collected in the Former Boat Launch Area (REC #4). Detected benzo(a)pyrene concentrations ranged from 63 micrograms per kilogram (µg/kg) (SB-24A-SS) to 25,600 µg/kg (SB-268-SS) in surface soil and from 62 µg/kg (SB-270-02) to 3,130 µg/kg (SB-268-02) in subsurface soil. The highest concentrations of these compounds were generally found in the surface soil samples. Figure 2-4 shows the concentrations of benzo(a)pyrene and PCBs in the soil samples that exceed the cleanup goal established in Section 5.3.

In addition to soil contaminated with PAHs, the previously abandoned-in-place USTs, associated piping, and soil associated with the USTs and piping contaminated with DRO or GRO greater than MDE soil cleanup standards [MDE Oil Control Program (OCP)] will be removed

2.3.2 Groundwater

The primary impacts to groundwater in Block F are chlorinated VOCs (primarily trichloroethene) downgradient of the eastern VOC plume which originates in Block I. These compounds may be of concern should future land use include construction of buildings over impacted groundwater. The area is currently served by public water and there are currently no wells (other than monitoring wells) anywhere on the MRC. Further discussions of impacts to groundwater are discussed in the Groundwater Response Action Plan.

2.4 RESPONSE ACTION SUMMARY

This RAP was developed in accordance with VCP guidance to support Lockheed Martin's application to the VCP for Block F at the MRC. This RAP was prepared to address elevated concentrations of PAHs, mercury, and PCBs in soils within Block F. A separate RAP is being prepared to address contaminated groundwater beneath the MRC.

In addition to soil contaminated with PAHs, mercury, and PCBs, previously abandoned-in-place USTs, associated piping, and associated contaminated soil with DRO and GRO concentrations greater than MDE soil cleanup standards will be removed to comply with MDE OCP requirements.

2.4.1 Proposed Response Actions

Soil at Block F with PAH, mercury, and PCBs concentrations greater than the cleanup goals and previously abandoned-in-place USTs, associated piping, and associated contaminated soil with DRO and GRO concentrations greater than MDE soil cleanup standards will be removed and disposed at a permitted off-site disposal facility. Development of the cleanup goals is presented in Section 5. The response action is described in Section 8.

2.4.2 Future Land Use Category

The MRC is currently an industrial facility and the area surrounding the property primarily consists of commercial and industrial establishments. Residential developments are present on the opposite shores of Cow Pen Creek, Dark Head Cove, Dark Head Creek and north of Eastern Boulevard (Route 150). The implementation of the proposed RAP will allow for unrestricted residential use of Block F.

2.4.3 Proposed Land Use Control

The proposed RAP for Block F includes the removal of soil with concentrations of PAHs, mercury, and PCBs greater than the cleanup goals and removal of previously abandoned-in-place USTs, associated piping, and associated contaminated soil with DRO and GRO concentrations greater than MDE soil cleanup standards. Consequently, Block F will be considered for unrestricted residential uses, and land use controls (LUCs) will not be required. LUCs for the groundwater beneath Block F may be required and are discussed in the Groundwater Response Action Plan provided under separate cover.

Table 2-1

Summary of Groundwater Level Measurements
Block F
Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland

Monitoring Well Number	Top of Riser Elevation (ft)	Ground Surface Elevation (ft)	Screened Interval Length (ft)	Elevation of Bottom of Screened Interval (ft)	Measurement Date					
					6/5/2005		10/13/2005		12/6/2005	
					Groundwater Elevation (ft)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft)	Depth to Groundwater (ft bgs)	Groundwater Elevation (ft)	Depth to Groundwater (ft bgs)
MW38A	9.70	9.99	10	-4.01	4.49	5.50	4.15	5.84	4.14	5.85
MW39A	6.60	6.93	10	-7.07	6.6	0.33	6.60	0.33	3.55	3.38
MW40A	6.24	6.53	10	-8.47	6.24	0.29	6.24	0.29	6.24	0.29
MW36A	11.46	11.86	10	-6.64	5.16	6.70	4.96	6.90	4.78	7.08
MW37A	12.23	12.67	10	-4.33	5.12	7.55	4.93	7.74	4.63	8.04
MW45A	6.44	6.77	10	-6.23	NA	NA	-3.31	10.08	-6.46	13.23
MW46A	7.98	8.32	10	-4.68	3.38	4.94	3.03	5.29	2.27	6.05
MW47A	12.30	12.64	10	-2.36	8.9	3.74	12.30	0.34	12.30	0.34
MW65A	16.42	16.79	10	-1.21	NA	NA	NA	NA	11.42	5.37
MW66A	16.65	16.90	10	-2.10	NA	NA	NA	NA	9.90	7.00

1 Monitoring well data for monitoring wells located within or near the Block F limits.
2 See Figure 2-2 for monitoring well locations.
3 Elevations reference National Geodetic Vertical Datum (NGVD), 1929.
4 Monitoring well information obtained from Site Characterization Report (Tetra Tech, May 2006).

bgs - Below ground surface.
ft - Feet.
NA - Not available.
" - " - Denotes negative number.

FIGURE 2-1

MIDDLE RIVER COMPLEX LAYOUT MAP

LEGEND

OUTFALL 004 NPDES PERMITTED OUTFALL

STORMWATER AND FLOW DIRECTION

PRE-1950 SHORELINE

EXISTING STRUCTURE

FORMER STRUCTURE

REC LOCATION (APPROXIMATE)

Lockheed Martin Middle River Complex
Middle River, Maryland

0 200 400

N

DATE MODITFIED 8/21/07

CREATED BY JF

Tetra Tech Inc.

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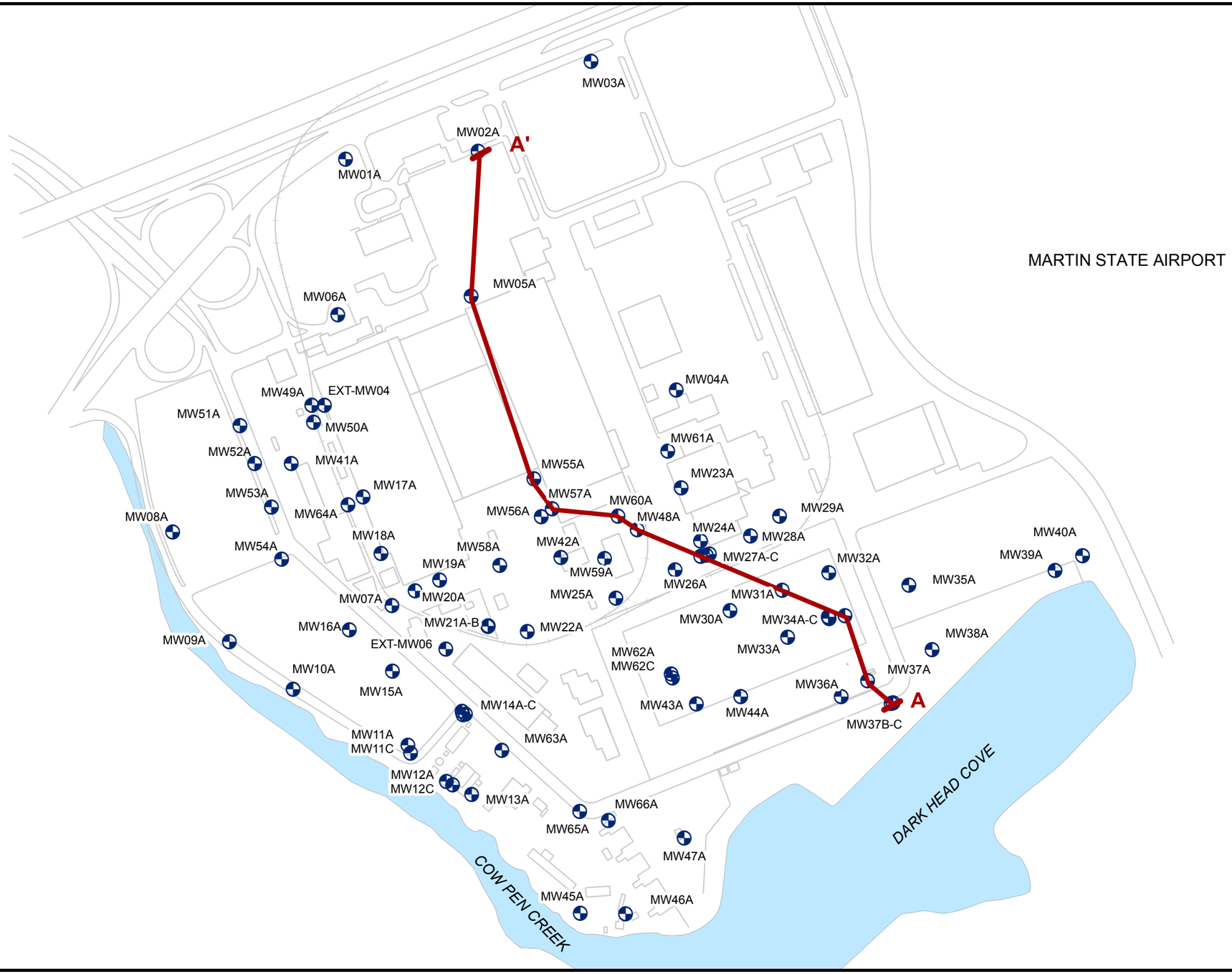

FIGURE 2-2

GROUNDWATER MONITORING WELL AND GEOLOGIC CROSS SECTION LOCATIONS

LEGEND

- GROUNDWATER MONITORING WELL
- A — A' CROSS SECTION

Lockheed Martin Middle River Complex
Middle River, Maryland

0 100200 400 Feet

N

DATE MODIFIED: 3/13/07

CREATED BY: J. F.

Tetra Tech, Inc.

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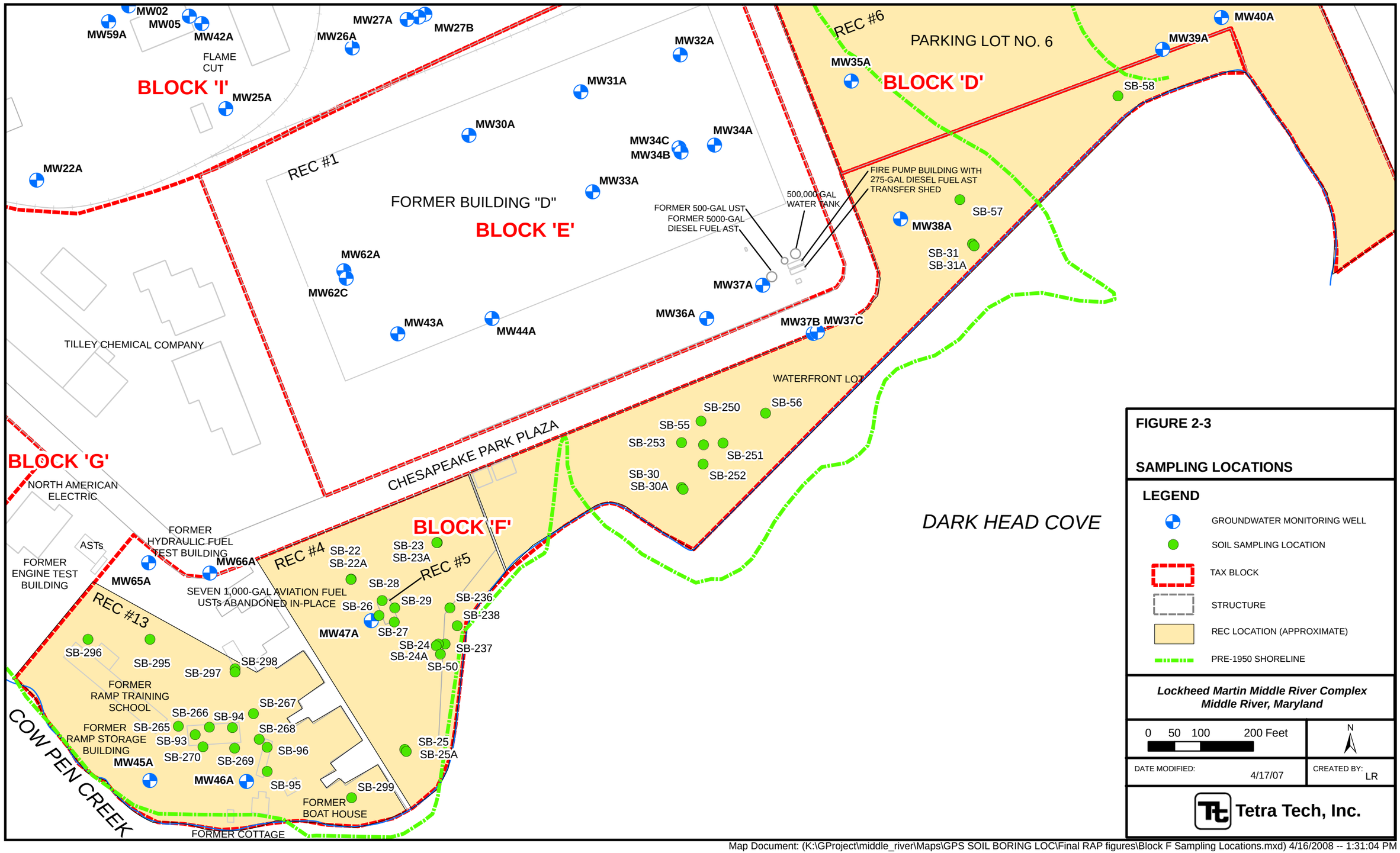

FIGURE 2-3

SAMPLING LOCATIONS

LEGEND

- GROUNDWATER MONITORING WELL
- SOIL SAMPLING LOCATION
- TAX BLOCK
- STRUCTURE
- REC LOCATION (APPROXIMATE)
- PRE-1950 SHORELINE

Lockheed Martin Middle River Complex
Middle River, Maryland

0 50 100 200 Feet

N

DATE MODIFIED: 4/17/07

CREATED BY: LR

Tetra Tech, Inc.

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MW02
MW59A
MW05
MW42A
MW27A
MW27B
MW26A
MW32A
MW40A
MW39A
FLAME CUT
BLOCK 'I'
MW25A
MW31A
MW35A
REC #6
PARKING LOT NO. 6
BLOCK 'D'
MW30A
MW34C
MW34B
MW34A
MW22A
REC #1
MW33A
FIRE PUMP BUILDING WITH 275-GAL DIESEL FUEL AST TRANSFER SHED
500,000-GAL WATER TANK
FORMER BUILDING "D"
BLOCK 'E'
FORMER 500-GAL UST
FORMER 5000-GAL DIESEL FUEL AST
MW38A
MW62A
MW62C
MW37A
MW36A
MW37B
MW37C
MW43A
MW44A
TILLEY CHEMICAL COMPANY
WATERFRONT LOT
CHESAPEAKE PARK PLAZA
SB-265
BENZO(A)PYRENE 1.800 (SS)
BENZO(A)PYRENE 0.401 (02')
SB-93
BENZO(A)PYRENE 1.500 (SS)
AROCLOR-1260 0.800 (SS)
SB-266
BENZO(A)PYRENE 0.977 (SS)
AROCLOR-1260 0.756 (SS)
BLOCK 'G'
NORTH AMERICAN ELECTRIC
FORMER HYDRAULIC FUEL TEST BUILDING
ASTs
FORMER ENGINE TEST BUILDING
MW66A
MW65A
REC #4
REC #5
BLOCK 'F'
SEVEN 1,000-GAL AVIATION FUEL USTs ABANDONED IN-PLACE
MW47A
REC #13
DARK HEAD COVE
SB-238
BENZO(A)PYRENE 1.960 (05')
SB-94
BENZO(A)PYRENE 0.850 (SS)
AROCLOR-1260 1.400 (SS)
BENZO(A)PYRENE 0.490 (05')
BENZO(A)PYRENE 0.950 (10')
SB-268
BENZO(A)PYRENE 25.600 (SS)
BENZO(A)PYRENE 3.130 (02')
FORMER RAMP TRAINING SCHOOL
FORMER RAMP STORAGE BUILDING
MW45A
MW46A
COW PEN CREEK
SB-265
BENZO(A)PYRENE 1.310 (SS)
SB-269
BENZO(A)PYRENE 1.600 (SS)
FORMER BOAT HOUSE
FORMER COTTAGE

FIGURE 2-4

COC EXCEEDANCES OF CLEANUP GOALS

LEGEND

- GROUNDWATER MONITORING WELL
- SOIL SAMPLING LOCATION
- TAX BLOCK
- STRUCTURE
- REC LOCATION (APPROXIMATE)
- PRE-1950 SHORELINE

CLEANUP GOAL FOR PCBs IS 0.320 mg/kg (320 ug/kg)
CLEANUP GOAL FOR DRO and GRO IS 230 mg/kg

Lockheed Martin Middle River Complex
Middle River, Maryland

0 50 100 200 Feet

N

DATE MODIFIED: 4/17/07

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Section 3
Additional Investigatory Information

3.1 ADDITIONAL SOIL INVESTIGATIONS

Tetra Tech performed an additional field investigation at Block F during the fall of 2007 to confirm previous results and refine the limits of COCs greater than the cleanup goals. The risk assessment included in the Site Characterization Report (Tetra Tech, May 2006) identified benzo(a)pyrene, and PCBs (Aroclor-1260) concentrations that require mitigation. Concentrations of benzo(a)pyrene and PCBs (Aroclor-1260) in excess of the cleanup goals were identified at previous soil boring locations (SB-93, SB-94, SB-95, SB-265, SB-265, SB-269) located in REC #13 (Former Boat Dock Area), soil boring SB-238 in REC #4 (Boat Launch Area), and previously abandoned-in-place USTs, associated piping, and associated total petroleum hydrocarbon (TPH) contaminated soil in REC #5 (Former Aviation Fuel USTs). The greatest concentration of benzo(a)pyrene (25,600 µg/kg) was detected at soil boring SB-268 in the surface soil. The greatest concentration of PCBs (Aroclor-1260) (1,400 µg/kg) was detected at soil boring SB-94 in surface soil. The benzo(a)pyrene and PCB (Aroclor-1260) concentrations exceeded their cleanup goals (400 µg/kg and 320 µg/kg, respectively). The extent of COCs in excess of cleanup goals in the vicinity of these soil borings was refined by installing additional soil borings. A work plan was prepared in November 2007 (Tetra Tech, 2007) documenting field investigation protocols, sampling procedures, and analytical requirements. The field investigation was performed in accordance with the work plan.

Thirty soil borings were installed in the vicinity of soil borings SB-93, SB-94, SB-95, SB-265, SB-265, SB-269 and SB-268 using a direct push technology (DPT). The borings were spaced on a grid pattern across the previously identified geophysical anomaly areas to cover significant horizontal and vertical areas for further delineation of COCs greater than the cleanup goals. Soil boring locations are shown on Figure 3-1. The soil borings were drilled to a maximum depth of 8 feet bgs. The soil samples were obtained continuously from the surface to the termination depth

of the borehole with samples submitted for chemical analysis at 2 foot intervals (1 to 2, 2 to 3, 4 to 5 and 7 to 8 ft bgs). The samples were logged in the field to document geologic description of the lithology for USCS classification, moisture content, and the depth of the water table. The field documentation notes and geologic logs are provided in Appendix C. The lithology is consistent with presence of brown silty clay mixed with clayey sands and clay. The soils were generally moist with the water table present between 6 to 8 feet bgs. Most of the borings were terminated at 8 feet bgs. Soil samples were collected in precleaned sample containers, packed in coolers, sealed and sent to the contracted laboratory for benzo(a)pyrene (EPA Method 8270) and Aroclor-1260 (PCBs) (EPA Method 8082) analysis.

3.2 RESULTS

The laboratory data confirmed the presence of benzo(a)pyrene in forty seven soil samples. A total of 121 soil samples including duplicates were collected from the 30 soil borings and analyzed in the laboratory. A total of 121 soil samples were analyzed for benzo(a)pyrene and Aroclor-1260 (PCBs). These samples underwent Level IV data validation procedures in accordance with EPA Region III protocols to ensure that the generated laboratory data is valid and accurate. The summary of detected concentrations in subsurface soils is presented in Table AF-3 (Appendix A) and the validation reports are provided in Appendix D.

Benzo(a)pyrene concentrations in soils ranged from non-detect to 19,000 µg/kg at soil boring SB-383 (1 to 2 feet bgs). The benzo(a)pyrene concentration was below 1,000 µg/kg in the majority of the samples. The forty seven detections of benzo(a)pyrene were scattered sporadically at various boring locations. The cleanup goal for benzo(a)pyrene was established at 400 µg/kg. Five samples that exceeded the cleanup goals are located in and around REC #13 and REC #4.

PCB (Aroclor-1260) concentrations ranged from non-detect to a maximum of 34 µg/kg at soil boring SB-383 (1 to 2 feet bgs) with no PCB concentration greater than the cleanup goal (320 µg/kg). The soil boring locations with COC exceedances of cleanup goals is presented in Figure 3-2.

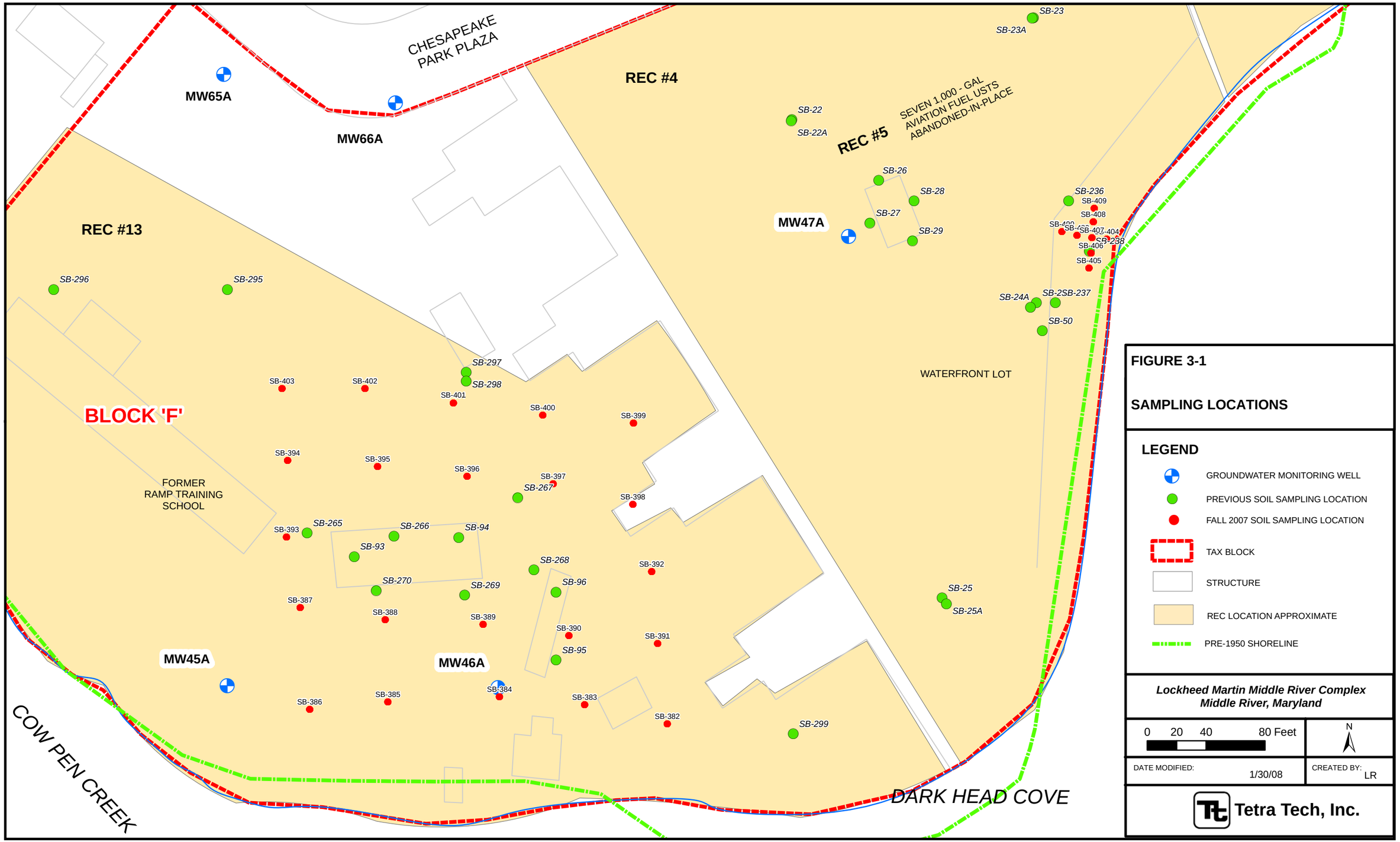


FIGURE 3-1

SAMPLING LOCATIONS

LEGEND

- GROUNDWATER MONITORING WELL
- PREVIOUS SOIL SAMPLING LOCATION
- FALL 2007 SOIL SAMPLING LOCATION
- TAX BLOCK
- STRUCTURE
- REC LOCATION APPROXIMATE
- PRE-1950 SHORELINE

Lockheed Martin Middle River Complex
Middle River, Maryland

0 20 40 80 Feet

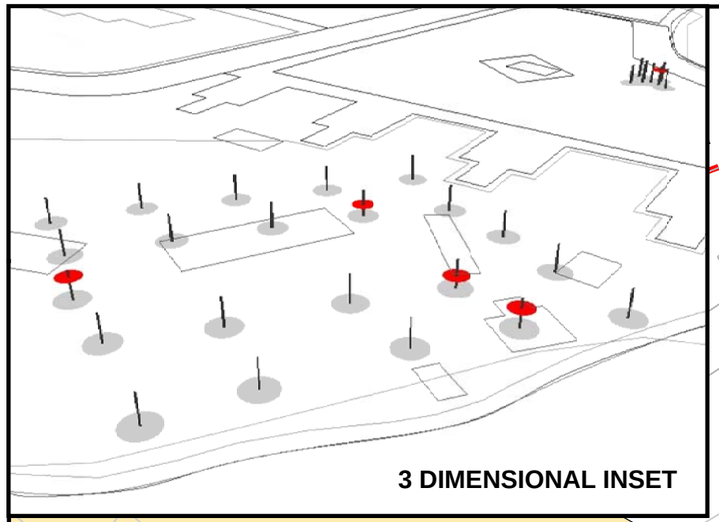
N

DATE MODIFIED: 1/30/08

CREATED BY: LR

Tetra Tech, Inc.

Map Document: (K:\GProject\middle_river\Maps\GPS SOIL BORING LOC\Final RAP figures\Block F ProBorings.mxd) 3/7/2008



CHESAPEAKE PARK PLAZA

REC #4

REC #5

SEVEN 1,000 - GAL AVIATION FUEL USTS ABANDONED-IN-PLACE

BLOCK 'F'

REC #13

SB-23
SB-23A
SB-22A
SB-22
SB-26
SB-28
SB-27
SB-29
MW47A
SB-236
SB-409
SB-408
SB-490
SB-489
SB-407
SB-238
SB-406
SB-405
SB-24A
SB-24
SB-237
SB-50
WATERFRONT LOT

SB-406-0102
BENZO(A)PYRENE
510 ug/kg

SB-238
BENZO(A)PYRENE 1960 ug/kg (05')

SB-266
BENZO(A)PYRENE 977 ug/kg (SS)
AROCLOR-1260 756 mg/kg (SS)

SB-265
BENZO(A)PYRENE 1800 ug/kg (SS)
BENZO(A)PYRENE 401 ug/kg (02')

SB-402
SB-403
SB-297
SB-298
SB-401
SB-400
SB-399
SB-394
SB-395
SB-396
SB-267
SB-398
SB-397-0405
BENZO(A)PYRENE
850 ug/kg

SB-94
BENZO(A)PYRENE 850 ug/kg (SS)
AROCLOR-1260 400 mg/kg (SS)
BENZO(A)PYRENE 490 ug/kg (05')
BENZO(A)PYRENE 950 ug/kg (10')

FORMER RAMP TRAINING SCHOOL

SB-393-0102
BENZO(A)PYRENE
450 ug/kg

SB-265
SB-266
SB-94
SB-393
SB-93
SB-268
BENZO(A)PYRENE 25600 ug/kg (SS)
BENZO(A)PYRENE 3130 ug/kg (02')

SB-270
SB-269
SB-96
SB-392
SB-25
SB-25A
SB-388
SB-389
SB-387

SB-93
BENZO(A)PYRENE 1500 ug/kg (SS)
AROCLOR-1260 800 mg/kg (SS)

SB-269
BENZO(A)PYRENE 1310 ug/kg (SS)

SB-391

SB-390-0405
BENZO(A)PYRENE
990 ug/kg

SB-95

MW45A
MW46A
SB-384
SB-386
SB-385
SB-382
SB-299

SB-95
BENZO(A)PYRENE 1600 ug/kg (SS)

SB-383-0102
BENZO(A)PYRENE
19000 ug/kg

COW PEN CREEK

DARK HEAD COVE

FIGURE 3-2

COC EXCEEDANCES OF CLEANUP GOALS (INCLUDING FALL 2007 DATA)

LEGEND

- GROUNDWATER MONITORING WELL
- PREVIOUS SOIL SAMPLING LOCATION
- FALL 2007 SOIL SAMPLING LOCATION
- TAX BLOCK
- STRUCTURE
- REC LOCATION APPROXIMATE
- PRE-1950 SHORELINE

CLEANUP GOAL FOR BENZO(A)PYRENE IS 400 ug/kg
CLEANUP GOAL FOR PCBs IS 320 ug/kg

Lockheed Martin Middle River Complex
Middle River, Maryland

0 20 40 80 Feet

N

DATE MODIFIED: 1/30/08

CREATED BY: LR

Tetra Tech, Inc.

Map Document: (K:\GProject\middle_river\Maps\GPS SOIL BORING LOC\Block F ProBorings.mxd) 1/31/2008

Section 4
Exposure Assessment

4.1 INTRODUCTION

The exposure assessment presents the current and future land use as defined by the VCP land use definitions, media of concern, and CSM, which includes potentially exposed populations based on future land use and potential exposure pathways.

4.2 CURRENT AND FUTURE LAND USE

The VCP requires applicants to choose a land use and restriction category based on the planned future use of the property. A No Further Requirements Determination or Certificate of Completion issued for a property is contingent on future use of the property as defined by the VCP.

Currently Block F is used only for occasional recreational activities. It is considered to be "Tier 3 Industrial." The VCP defines this land use category as follows:

> *Industrial property to be used by workers over the age of 18, adult workers and construction workers, and other potential expected users. Industrial purposes allow access to the property at a frequency and duration consistent with a typical business day.*

This RAP is evaluating Block F in terms of what would be required to achieve a "Tier 1 Residential Unrestricted" land use and restriction category. The VCP defines this land use and restriction category as follows:

Property usage that allows exposure and access by all populations including infant, children, elderly, and infirmed populations. The "A (Unrestricted)" classification indicates that no LUCs are imposed on the property. Tier 1A properties typically include single-family and multi-family dwellings.

The Tier 1A (Residential Unrestricted) future land use and restriction category is based on the results of the HHRA for Block F, which evaluated potential future residential development.

4.3 MEDIA OF CONCERN

The medium of concern at Block F is surface and subsurface soil. Groundwater was also investigated at Block F; however, groundwater is being addressed separately on a MRC-wide basis rather than on a tax block-specific basis.

4.4 CONCEPTUAL SITE MODEL

The CSM identifies the potential exposure populations at a site, based on current and future use. The CSM also identifies the potential exposure pathways and presents the rationale used to determine whether an exposure pathway is complete. The CSM is the framework for conducting the HHRA.

An HHRA for Block F was conducted as part of the Site Characterization Report (Tetra Tech, May 2006). The CSM in the HHRA postulates human activities that result in exposure to contaminants in soils. The CSM includes individuals who either live at Block F (residents), work at Block F (commercial or industrial workers), develop Block F (construction workers), or visit Block F (recreational users and commercial/industrial establishment visitors) and engage in activities that result in exposure via incidental ingestion of soil, skin contact resulting in dermal absorption of COPCs in soil, and inhalation of dusts and vapors from soil.

Section 5
Cleanup Criteria

5.1 CLEANUP CRITERIA

Development of cleanup goals must be conducted to satisfy the requirements of the VCP and be consistent with the requirements of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 Code of Federal Regulations (CFR) Part 400.430 as implemented through the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The VCP defines a need for remedial action at sites with a cancer risk of 1×10^{-5} or a hazard index of 1.0.

The results of the risk assessment presented in the Site Characterization Report (Tetra Tech, May 2006) provide the information necessary to focus cleanup goal development. If the cancer risk for the current or future land use is greater than 1×10^{-5} or greater than a hazard index of 1.0, then cleanup goals must be developed for the intended future use of the site. Cleanup goals are only being developed for COCs, those chemicals that are the principal contributors to risk. A COC is defined as a chemical detected at a concentration that may result in a cancer risk greater than 1×10^{-5} or a hazard quotient greater than 1.0. Results of a site-specific risk assessment determine which COPCs are the COCs. This determination of COCs was based on a Block F-wide approach rather than evaluation of results from individual soil borings.

Soil sampling locations with COC concentrations greater than the remedial action levels to attain the residential cleanup standards for soil and greater than background would be identified for removal. Site-specific background concentrations are only applicable to metals. If the site-specific background concentration for a metal is greater than the MDE residential cleanup standard for soil, the site-specific metal background concentration is the applicable cleanup goal. Generally, soil remediation will be designed to attain cleanup criteria for the COCs as well as attain target risk levels for a site. Verification of post-removal conditions will be conducted to

demonstrate that post-response action risks are less than a cancer risk of 1 x 10^{-5} and a hazard index of 1.0.

5.2 RISK ASSESSMENT SUMMARY

The HHRA was conducted for a range of soil exposure scenarios including residential, commercial, and industrial usage. The assessment indicated that future residential exposures to surface and subsurface soil exceeded MDE's threshold level for cancer risk (1 x 10^{-5}) and the target hazard index of 1.0. The assessment also indicated that exposure to surface soil by all other evaluated receptors exceeded MDE's threshold level for cancer risk. The COCs identified in this assessment are arsenic, vanadium, mercury, and carcinogenic PAHs in soil.

5.3 CLEANUP GOALS

A cleanup goal was identified for benzo(a)pyrene to satisfy a VCP Tier 1A (Residential Unrestricted) future land use and restriction category based on potential future single-family residential development. The MDE residential soil cleanup standard for benzo(a)pyrene is 330 micrograms per kilogram (µg/kg). However, benzo(a)pyrene is being used to represent all carcinogenic PAHs. Benzo(a)pyrene is co-located with all the carcinogenic PAHs; therefore, its removal is considered representative of the removal of other carcinogenic PAHs that may be contributing significantly to risk. The site data will be used in concert with the site-specific incremental lifetime cancer risks and hazard indices at individual sampling locations to define a site-specific remedial action level for benzo(a)pyrene to achieve a target risk level of 1 x 10^{-5} and a target hazard index of 1.0.

The MDE residential soil cleanup standard for PCBs is 320 ug/kg. However, reduction of PCB concentrations will be coincident with benzo(a)pyrene removal to result in attainment of target risks at individual sampling locations.

The MDE identifies a residential soil cleanup standard for arsenic and vanadium of 2 mg/kg and 55 mg/kg, respectively. However, because arsenic and vanadium are naturally occurring, it is appropriate to consider background reference concentrations. A site-wide approach was used to

identify a background reference concentration for arsenic at the MRC in Comment Response Document No. 2 of the Site Characterization Report (Tetra Tech, December 2006). The Block F-wide average concentration for arsenic, as represented by the 95 percent upper confidence limit of the mean (UCL), must be less than 6 mg/kg with no individual soil concentration exceeding 12 mg/kg. Similarly, the Block F-wide average concentration for vanadium must be less than 55 mg/kg with no individual soil concentration exceeding 91 mg/kg. This approach provides conditions where no arsenic or vanadium "hot spots" remain within Block F while attaining protection of human health through exposure to these metals in soil at Block F.

The MDE identifies a residential soil cleanup standard for mercury of 0.1 mg/kg. However, the MDE's Average Typical Concentration (ATC), based on background data collected in the state of Maryland, provides the basis for determining the need for remediation. A block-wide approach for determining if there is a need for remediation was defined in Comment Response Document No. 2 of the Site Characterization Report (Tetra Tech, December 2006). The Block F wide average concentration, as represented by the UCL, must be less than 0.5 mg/kg.

COPCs, including those constituents comprising TPH, were evaluated in the Block F-specific risk assessment and cleanup goals were subsequently developed. COPCs associated with the previously abandoned-in-place USTs were therefore included in the Block F risk assessment. To comply with MDE's OCP, soil associated with the previously abandoned-in-place USTs and piping with DRO and GRO concentrations greater than MDE cleanup standards will be removed. The MDE generic numerical residential cleanup standard for DRO and GRO in soil is 230 mg/kg.

Cleanup goals are summarized in Table 5-1. Attainment of the cleanup goals at Block F will result in a cancer risk less than 1×10^{-5} and a hazard index less than 1.0.

5.4 ATTAINMENT OF CLEANUP GOALS

To attain cleanup goals, soil with PCB concentrations greater than 320 µg/kg and benzo(a)pyrene concentrations greater than 400 mg/kg will be removed. Removal of benzo(a)pyrene results in a concomitant reduction of mercury and PCB concentrations. Therefore, the post-response action UCL mercury concentration is less than 0.5 mg/kg. Moreover, the post-response action risk at

each soil boring should be less than a cancer risk of 1 x 10^{-5} and the hazard index of 1.0. In addition, the previously abandoned-in-place USTs, associated piping, and associated contaminated soil with DRO and GRO concentrations greater than the MDE cleanup standard of 230 mg/kg will be removed.

Arsenic and vanadium were identified as COCs based on the results of the HHRA. However, arsenic and vanadium were considered to be present within background levels based on the analysis presented in Comment Response Document No. 2 of the Site Characterization Report (Tetra Tech, December 2006). Because arsenic and vanadium concentrations are currently within background levels, risks associated with these metals would not be included in the post-response action risk calculations. The statistical summary of pre-response action data illustrating that arsenic and vanadium are within background levels and that mercury is present at concentrations greater than the ATC is presented in Table 5-2 and summarized in the Appendix.

Table 5-3 illustrates which samples will be removed and shows the pre- and post-response action risks associated with those soil borings. Soil in some surface soil locations that have no exceedances of MDE's cleanup standards are being removed because the corresponding subsurface soil sample has concentrations greater than MDE's cleanup standards. The pre-response action risks are based on values presented in the HHRA in the Site Characterization Report (Tetra Tech, May 2006). The post-response action risks for those samples that have been removed are defined as "zero risk." The post-response action risks in those borings that remain exclude risks associated with arsenic and vanadium because their concentrations would then be considered to be within background. Arsenic and vanadium concentrations were less than their background concentrations prior to any proposed response action at the site. A statistical summary of post-response action data illustrating that mercury satisfies the ATC requirements is presented in Table 5-4 and Appendix B. Removal of soils associated with benzo(a)pyrene contamination coincidentally resulted in the attainment of cleanup standards for mercury and PCBs.

Table 5-1

Cleanup Criteria
Block F, Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland

Parameter	Criterion	Test Method
PCBs [1]	≤ 320 µg/kg	EPA SW-846 8081
Benzo(a)pyrene	≤ 400 µg/kg	EPA SW-846 8270C
Mercury [2]	--	EPA SW-846 6020
- Post-response action 95% UCL for Block F soil	≤ 0.5 mg/kg	
Petroleum Hydrocarbon – Diesel Range Organics [3]	≤ 230 mg/kg	EPA SW-846 8015M DRO
Petroleum Hydrocarbon – Gasoline Range Organics [3]	≤ 230 mg/kg	EPA SW-846 8015M DRO

1 The cleanup goal for PCBs is equal to the remedial action level required to attain the MDE residential cleanup standard for soil [Table 1 – Generic Numeric Cleanup Standards for Groundwater and Soil (MDE, August 2001)].

2 The cleanup goal for mercury is based on the Maryland Department of the Environment Average Typical Concentration (ATC) standard and a statistical analysis of mercury data across Block F.

3 The cleanup criteria for petroleum hydrocarbons is equal to the MDE residential cleanup standard for soil [Table 2 – Generic Numeric Cleanup Standards for Groundwater and Soil for Total Petroleum Hydrocarbon (MDE, August 2001)]. Cleanup criteria are applicable only for the previously abandoned-in-place USTs, associated piping, and associated contaminated soil.

DRO Diesel range organics.
EPA United States Environmental Protection Agency.
GRO Gasoline range organics.
mg/kg Milligrams per kilogram.
PCB Polychlorinated biphenyls.
UCL Upper confidence limit.
µg/kg Micrograms per kilogram.

Table 5-2

Statistical Comparisons of Background Criteria to Pre-Response Action Concentrations
Block F, Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland

COPC	Background Criteria		Pre-Response Action Concentrations	
	Maximum	UCL	Maximum	UCL
Surface Soil				
Mercury	--	0.5	1.4	0.8
Arsenic	12	6	6	2.9
Vanadium	91	55	49	36
Subsurface Soil				
Mercury	--	0.5	0.97	0.24
Arsenic	12	6	7	3.4
Vanadium	91	55	62	38

Concentrations reported in milligrams per kilogram (mg/kg).

COPC Chemical of potential concern.
UCL Upper confidence limit.

Table 5-3

Pre- and Post-Response Action Risks
Block F, Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland

Surface Soil Boring	Residential Risks (Pre-Response Action)[1]		Residential Risks (Post-Response Action)[2]	
	Cancer	Noncancer	Cancer	Noncancer
SB-22A[3]	1.4E-05	0.34	1.1E-07	0.14
SB-236	1.2E-05	1.4	3.4E-07	0.35
SB-237	1.6E-05	2.1	2.1E-06	0.8
SB-238	1.8E-05	1.7	0	0
SB-23A	1.6E-05	0.36	9.4E-06	0.26
SB-24A	1.7E-05	0.73	7.0E-06	0.58
SB-250	2.3E-07	0.63	2.3E-07	0.082
SB-251	2.8E-07	0.74	2.8E-07	0.086
SB-252	1.9E-07	0.61	1.9E-07	0.066
SB-253	2.5E-07	0.89	2.5E-07	0.10
SB-25A	1.2E-05	0.33	9.9E-06	0.30
SB-265	6.1E-05	1.7	0	0
SB-266	2.8E-05	1.2	0	0
SB-267	6.7E-06	0.8	6.7E-06	0.22
SB-268	6.9E-04	1.6	0	0
SB-269	5.2E-05	1.6	0	0
SB-270	7.1E-06	0.82	7.1E-06	0.12
SB-30A	1.5E-05	0.3	8.6E-06	0.19
SB-31A	1.4E-05	0.27	9.1E-06	0.19
SB-50	9.3E-06	0.35	1.2E-07	0.20
SB-55	1.1E-05	0.28	7.0E-06	0.21
SB-56[3]	2.2E-05	0.42	1.7E-07	0.11
SB-57[3]	1.7E-05	0.34	1.4E-07	0.09
SB-58[3]	8.0E-05	0.29	2.8E-07	0.10
SB-93	8.6E-05	0.71	0	0
SB-94	6.8E-05	1.1	0	0
SB-95	4.5E-05	0.34	0	0
SB-96	1.5E-05	0.30	9.3E-06	0.20

Table 5-3

Pre- and Post-Response Action Risks
Block F, Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland
Page 2 of 3

Subsurface Soil Boring	Residential Risks (Pre-Response Action)[1]		Residential Risks (Post-Response Action)[2]	
	Cancer	Noncancer	Cancer	Noncancer
SB-22	1.7E-05	0.32	8.7E-06	0.18
SB-23	1.3E-05	0.22	8.4E-06	0.15
SB-236	2.0E-05	1.4	3.4E-07	0.37
SB-237	4.1E-07	1.0	4.1E-07	0.11
SB-238	6.2E-05	1.2	0	0
SB-24	1.9E-05	0.53	8.6E-06	0.37
SB-25	1.2E-05	0.27	8.6E-06	0.20
SB-250	2.2E-07	0.79	2.2E-07	0.066
SB-251	1.5E-05	1.3	3.5E-07	0.10
SB-252	1.2E-05	1.0	2.3E-07	0.077
SB-253	2.2E-07	0.75	2.2E-07	0.076
SB-26	0	0	0	0
SB-265	1.1E-05	0	0	0
SB-266	3.4E-06	0	3.4E-06	0
SB-267	2.6E-06	0	2.6E-06	0
SB-268	7.6E-05	0	0	0
SB-269	1.7E-06	0	1.7E-06	0
SB-27	0	0	0	0
SB-270	2.2E-06	0	2.2E-06	0
SB-28	0	0	0	0
SB-29	0	0	0	0
SB-295	2.2E-05	1.4	8.7E-06	0.12
SB-296	2.6E-05	2.1	9.5E-06	0.21
SB-297	1.8E-05	1.2	8.4E-06	0.12
SB-298	1.9E-05	1.3	8.6E-06	0.12
SB-299	1.3E-05	0.9	8.4E-06	0.1
SB-30	1.1E-05	0.26	8.3E-06	0.21
SB-31	8.8E-06	0.25	8.8E-06	0.25

Table 5-3

Pre- and Post-Response Action Risks
Block F, Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland
Page 3 of 3

Subsurface Soil Boring	Residential Risks (Pre-Response Action)[1]		Residential Risks (Post-Response Action)[2]	
	Cancer	Noncancer	Cancer	Noncancer
SB-50	3.3E-06	0.21	1.6E-07	0.16
SB-55	1.6E-05	0.53	1.0E-05	0.44
SB-56	1.0E-05	0.23	9.6E-06	0.22
SB-57	1.3E-05	0.25	9.7E-06	0.20
SB-58	2.1E-05	0.43	9.5E-06	0.25
SB-93	1.1E-05	0.25	9.9E-06	0.24
SB-94	1.9E-05	0.26	0	0
SB-95	1.1E-05	0.26	1.0E-05	0.25
SB-96	1.1E-05	0.22	9.8E-06	0.21

1 Soil boring location risks as identified in the Site Characterization Report (Tetra Tech, May 2006).

2 Soil boring location risks excluding those attributable to arsenic and vanadium (less than Block F-specific background reference concentration of 12 and 91 mg/kg, respectively).

Table 5-4

Statistical Comparisons of Background Criteria to Post-Response Action Concentrations
Block F, Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland

COPC	Background Criteria		Post-Response Action Concentrations	
	Maximum	UCL	Maximum	UCL
Surface Soil				
Mercury	--	0.5	1.4	0.38
Subsurface Soil				
Mercury	--	0.5	0.97	0.23

1 Concentrations reported in milligrams per kilogram (mg/kg).

COPC Chemical of potential concern.
UCL Upper confidence limit.

Section 6
Selected Technologies and Land Use Controls

6.1 INTRODUCTION

The selected technologies and LUCs for the proposed response action are provided in this section as required by the VCP guidance document. The NCP, 40 CFR Part 400.430 as implemented through CERCLA, served as a guide for the process used to arrive at the selected technology (i.e., selected alternative). This section includes the identification, screening, and evaluation of potential technologies and process options; preliminary and detailed screening of technologies and process options; selection of representative process options; development and detailed analysis of alternatives; comparative analysis of alternatives; and description of the proposed alternative.

The basis for technology identification and screening began with a series of discussions that included the following:

- Development of response action objectives (RAOs)
- Identification of Applicable or Relevant and Appropriate Requirements (ARARs)
- Identification of COCs
- Development of cleanup goals
- Identification of general response actions (GRAs)
- Identification of volumes or areas of the media of concern

6.1.1 Response Action Objectives

The purpose of this section is to develop RAOs for Block F. Development of RAOs is an important step in the CERCLA process. The RAOs are medium-specific goals that define the objective of conducting response actions to protect human health and the environment. The RAOs

specify the COCs, potential exposure routes and receptors, and acceptable contaminant levels for the site. The development of RAOs takes into consideration ARARs and To Be Considered (TBC) criteria.

This RAP addresses soil contamination at Block F. The RAOs were developed to permit consideration of a range of treatment and containment alternatives to obtain a Certificate of Completion from the MDE under a Tier IA (Residential Unrestricted) future land use and restriction category.

The following RAOs were developed for Block F:

- Prevent unacceptable human health risk associated with exposure to surface soil containing PCBs and PAH concentrations greater than the cleanup goals.
- Remove the previously abandoned-in-place aviation fuel USTs (REC #5), associated piping, and contaminated soil under the MDE OCP in accordance with the Code of Maryland Regulations (COMAR) 26.10.10.02.

6.1.2 Applicable or Relevant and Appropriate Requirements and To Be Considered Criteria

ARARs consist of the following:

- Any standard, requirement, criterion, or limitation under federal environmental law.
- Any promulgated standard, requirement, criterion, or limitation under a State environmental or facility-siting law that is more stringent than the associated federal standard, requirement, criterion, or limitation.

TBC criteria are nonpromulgated, nonenforceable guidelines or criteria that may be useful for developing a response action or are necessary for determining what is protective of human health and/or the environment. Examples of TBC criteria include United States Environmental Protection Agency's (EPA's) Reference Doses (RfDs) and Cancer Slope Factors (CSFs).

One of the primary concerns during the development of response action alternatives for hazardous waste sites is the degree of human health and environmental protection offered by a given remedy. Section 121 of CERCLA requires that primary consideration be given to response alternatives that

attain or exceed ARARs. The purpose of this requirement is to make CERCLA response actions consistent with other pertinent federal and state environmental requirements.

The NCP identifies the following three categories of ARARs [40 CFR Section 300.400 (g)]:

- Chemical-Specific: Health-risk-based numerical values or methodologies that establish concentration or discharge limits for particular contaminants. Table 6-1 presents a list of federal and State of Maryland chemical-specific ARARs and TBC criteria. These ARARs and TBC criteria provide some medium-specific guidance on "acceptable" or "permissible" concentrations of contaminants.

- Location-Specific: Restrict actions or contaminant concentrations in certain environmentally sensitive areas. Examples of these areas regulated under various federal laws include floodplains, wetlands, and locations where endangered species or historically significant cultural resources are present. Table 6-2 presents a list of federal and State of Maryland location-specific ARARs and TBC criteria. These ARARs and TBC criteria place restrictions on concentrations of contaminants or the conduct of activities solely based on the site's particular characteristics or location.

- Action-Specific: Technology- or activity-based requirements, limitations on actions, or conditions involving special substances that control or restrict response action. Examples of action-specific ARARs include wastewater discharge standards and performance or design standards, controls, or restrictions on particular types of activities. Table 6-3 presents a list of federal and State of Maryland action-specific ARARs and TBCs.

6.1.3 Chemicals Of Concern

The HHRA determined which compounds were the principal contributors to risk, also referred to as COCs. A COC is defined as a chemical that produces a cancer risk greater than 1×10^{-5} or a hazard quotient greater than 1.0. The determination of COCs was based on a Block F-wide approach rather than evaluation of results from individual soil borings. The COC determination is discussed in Section 5.

6.1.4 Cleanup Goals

Cleanup goals are chemical concentrations in environmental media that, when attained, should achieve RAOs. In general, cleanup goals are established with consideration given to the following:

- Protecting human receptors from adverse health effects
- Compliance with federal and State ARARs

Soil cleanup goals were determined for the COCs (PAHs, mercury and PCBs) and MDE soil cleanup standards for DRO and GRO were determined in Section 5.3, and attainment of the cleanup critieria was discussed in Section 5.4. Cleanup criteria are presented on Table 5-1.

6.1.5 General Response Actions and Action-Specific ARARs

GRAs are broadly defined response approaches that may be used (by themselves or in combination with one or more of the others) to attain RAOs. GRAs describe categories of actions that could be implemented to satisfy or address a component of an RAO for the site. Response action alternatives will then be composed using GRAs individually or in combination to meet the RAOs. The response action alternatives, composed of GRAs, will be capable of achieving the RAOs for contaminated soil at Block F.

The following GRAs were considered for soil at Block F:

- No Action
- Limited Action: LUCs
- Containment
- Removal
- In-Situ Treatment
- Ex-Situ Treatment
- Disposal

6.1.6 Estimated Volume of Contaminated Soil

Preliminary surface areas and volumes of soil that would need to be managed to allow for future land use as VCP Tier 1A (Residential Unrestricted) were estimated as described in Section 8. It is estimated that approximately 5,200 in-place cubic yards (cy) of contaminated soil with a surface area of approximately 29,000 square feet (sf) contain concentrations of COCs greater than the cleanup goals and DRO and GRO concentrations greater than the MDE soil cleanup standards.

6.2 SCREENING OF TECHNOLOGIES AND PROCESS OPTIONS

This section identifies, screens, and evaluates the potential technologies and process options that may be applicable to develop the response action alternatives for soil at Block F. The primary objective of this phase of the RAP is to develop an appropriate range of technologies and process options that will be used for developing the response action alternatives.

Technology screening evaluation is performed in this section with the completion of the following analytical steps:

- Identification and preliminary screening of technologies and process options;
- Detailed screening of technologies and process options that pass the preliminary screening step;
- Evaluation and selection of representative process options;

In this section, a variety of technologies and process options are identified under each GRA (discussed in Section 6.1.5) and screened. The selection of technologies and process options for initial screening is based on the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (EPA, October 1988). The screening is first conducted at a preliminary level to focus on relevant technologies and process options. Then the screening is conducted at a more detailed level based on certain evaluation criteria. Finally, process options are selected to represent the technologies that have passed the screening and detailed evaluation.

The evaluation criteria for detailed screening of technologies and process options that have been retained after the preliminary screening are effectiveness, implementability, and cost. The following are descriptions of these evaluation criteria:

- Effectiveness
    - Protection of human health and environment; reduction in toxicity, mobility, or volume; and permanence of solution.
    - Ability of the technology to address the estimated areas or volumes of contaminated media.
    - Ability of the technology to meet the cleanup goals identified in the RAOs.
    - Technical reliability (innovative versus proven) with respect to contaminants and site conditions.

- Implementability

    - Overall technical feasibility at the site.
    - Availability of vendors, mobile units, storage and disposal services, etc.
    - Administrative feasibility.
    - Special long-term maintenance and operation requirements.

- Cost
    - Capital cost.
    - Operation and maintenance (O&M) costs.

Technologies and process options will be identified for the soil response action in the following sections.

Section 6.3 discusses the development of the response action alternatives developed from the process options retained in this section and provides a description of the conceptual design for these alternatives. This section also presents an evaluation of each response action alternative with respect to the criteria of the NCP of 40 CFR Part 300. These criteria and their relative importance are also discussed in this section.

Section 6.4 compares the analyses that were presented for each of the response action alternatives. The criteria for comparison are identical to those used for the detailed analysis of individual alternatives.

6.2.1 Preliminary Screening of Technologies and Process Options

This section identifies and screens technologies and process options for soil at a preliminary stage based on implementation with respect to site conditions and COCs. Table 6-4 summarizes the preliminary screening of technologies and process options applicable to soil. This table presents the GRAs, identifies the technologies and process options, and provides a brief description of each process option followed by screening comments. The technologies and process options that pass the initial screening step are retained for detailed screening in Section 6.2.2.

The technologies and process options for the soil response action that will be retained for detailed screening are shown below.

General Response Action	Response Action Technology	Process Option
No Action	None	Not Applicable
Removal	Excavation	Mechanical
Disposal	Off-Site	RCRA Landfill or TSCA TSDF

6.2.2 Detailed Screening of Soil Treatment Technologies and Process Options

This section identifies and develops the representative process options, through a detailed screening procedure, which will be used in the formulation of response action alternatives to accomplish the RAOs and meet the cleanup goals identified for soil in Section 5.

6.2.2.1 No Action

No Action consists of maintaining status quo at Block F. As required under CERCLA regulations, the No Action alternative is carried through to provide a baseline for comparison of alternatives and their effectiveness in mitigating risks posed by site contaminants.

6.2.2.2 Removal

The technology considered under this GRA is excavation.

Excavation

A variety of equipment such as front-end loaders, hydraulic excavators, backhoes, and other mechanical equipment could be used to perform the excavation. The type of equipment selected must take into consideration several factors, such as the type of material to be removed, the load-bearing capacity of the ground surrounding the removal area, the depth and areal extent of removal, the required rate of removal, and the elevation of the groundwater table. Excavation is a preferred technology for the removal of well-consolidated material such as soil with significant load-bearing capacity (i.e., greater than 1,500 pounds per square foot).

Excavation logistics must take into account the available space for stormwater management, equipment decontamination, operating the equipment, loading, unloading, and stockpiling the

excavated material, location of the site, etc. After excavation is completed, the location is filled and graded with certified clean fill material or treated soils.

Effectiveness

Shallow excavation is a well-proven and effective method of removing soil with contaminant concentrations greater than the cleanup criteria from a site. Properly designed excavation would remove the soil with contaminant concentrations greater than the cleanup criteria, and the remaining soil would not pose an unacceptable risk to human health or the environment.

Implementability

Excavation of soil with contaminant concentrations greater than the cleanup criteria at Block F would be implementable. Excavation equipment is readily available. This technology is well proven and a common solution in the construction/remediation industry. During excavation, site-specific health and safety procedures and Occupational Safety and Health Administration (OSHA) regulations would be complied with to ensure that the exposure of the workers to COCs is minimized.

The excavation at Block F would extend to a depth of 10 feet bgs (or to the zone of saturation). The excavation would be cut-back or stepped, supported by trench boxes and personnel would not be permitted to enter the excavation. Existing concrete tarmac and concrete paved asphalt parking surfaces, etc. would have to be removed prior to excavation.

Cost

Cost of excavation at Block F on a unit volume basis would be low to moderate.

Conclusion

Excavation is retained in combination with other process options for the development of response action alternatives.

6.2.2.3 Disposal

The technology considered under this GRA is off-site landfilling.

Off-Site Landfilling

Off-site landfilling would consist of transporting the excavated soil for burial at a permitted off-site treatment, storage, and disposal facility (TSDF). Excavated soil characterized as Resource Conservation and Recovery Act (RCRA) non-hazardous waste could be disposed in a RCRA Subtitle D solid waste landfill. Excavated soil characterized as RCRA hazardous waste would have to be disposed in a RCRA Subtitle C TSDF. Excavated soil and debris with PCB concentrations greater than 50 mg/kg would have to be managed at a Toxic Substances Control Act (TSCA) TSDF.

Effectiveness

Off-site landfilling does not permanently or irreversibly reduce contaminant toxicity or mobility. However, although CERCLA preference for treatment relegates landfilling to a less preferable option, this technology can be an effective disposal option for contaminated soil and can be used in conjunction with treatment alternatives. Off-site landfills are only permitted to operate if they meet certain requirements of design and operation governing foundations, liners, leak detection, leachate collection and treatment, daily cover, post-closure inspections and monitoring, etc., which ensure the effectiveness of these facilities. The requirements of a TSCA and RCRA hazardous (Subtitle C) TSDF are typically more stringent than those of a RCRA non-hazardous (Subtitle D) solid waste landfill.

Implementability

Off-site landfilling would be easily implementable. Facilities and services are available. Disposal at a RCRA Subtitle D landfill may require certain pre-treatment, mainly the removal of free liquids but, because soil would be excavated no deeper than to a depth of the zone of saturation, associated water should be minimal and this requirement should be easy to meet. In addition, a waste profile would have to be prepared, indicating the contaminant concentrations and their leachability potential. Disposal of any soil containing compounds with Toxicity Characteristic Leaching Procedure (TCLP) levels exceeding hazardous criteria would require pre-treatment to meet Land Disposal Restrictions (LDRs) prior to landfilling. If treatment achieves Universal

Treatment Standards (UTSs), then disposal of the treated soil in a RCRA Subtitle D landfill (i.e., non-hazardous) would be permissible. If not, the treated soil would need to disposed in a RCRA Subtitle C (i.e., hazardous) TSDF. Disposal of any soil and debris with PCB concentrations greater than 50 mg/kg would be managed at a TSCA TSDF.

Cost

Cost of off-site landfilling would be low to moderate depending on volume and distance to the disposal facility.

Conclusion

Off-site landfilling is retained in combination with other process options for the development of response action alternatives.

6.2.3 Selection of Representative Process Options

The following GRAs, technologies, and process options, under the GRAs as noted, are retained for the development of response action alternatives:

- No Action
- Removal: Excavation
- Disposal: Off-Site RCRA Non-Hazardous (Subtitle D) Landfill, and Off-Site RCRA Hazardous (Subtitle C) TSDF, and Off-Site TSCA TSDF

The next step is to select representative process options from each technology to assemble an adequate variety of alternatives and evaluate the alternatives in sufficient detail to aid in the final selection process. All process options listed above are retained for the formulation of alternatives because the processes are sufficiently varied in their functions.

6.3 DEVELOPMENT AND DETAILED ANALYSIS OF ALTERNATIVES

This section discusses the development of the soil response action alternatives from the process options retained above and provides a description of the conceptual designs for the alternatives. This section also presents an evaluation of each response action alternative with respect to the

criteria of the NCP of 40 CFR Part 300. The criteria and the relative importance of these criteria are also discussed in this section.

6.3.1 Development of Alternatives

The technologies and process options retained after detailed screening in Section 6.2.3 were assembled into the following alternatives:

S-1. No Action:

This alternative is required by the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (EPA, 1988) as a baseline for comparison to other alternatives.

S-2. Excavation to Allow Unrestricted Residential Site Use and Off-Site Disposal:

This alternative would remove soil with COC concentrations greater than the cleanup goals to the extent necessary to allow unrestricted residential use of Block F. This would require excavation of the soil with contaminant concentrations greater than the cleanup criteria identified in Section 5.3.

It is assumed that all excavated soil would be disposed at an off-site permitted RCRA Subtitle D landfill. If any excavated material fails TCLP testing, the material would be disposed at an off-site permitted RCRA Subtitle C TSDF. If any excavated material has PCB concentrations greater than 50 mg/kg, the material would be disposed at a TSCA TSDF. The excavated areas would then be backfilled with certified clean imported fill material and Block F would be restored to pre-response action conditions. Because the soil remaining on site would no longer contain concentrations of COCs that could be harmful to potential future residential receptors, soil-related LUCs would not be required.

In addition to soil contaminated with PAHs, the previously abandoned-in-place aviation fuel USTs (REC #5), associated piping, and contaminated soil will be removed to comply with MDE OCP requirements.

6.3.2 Description and Detailed Analysis of Alternatives

This section presents a description of the conceptual design of each alternative, followed by the detailed analysis using the nine criteria of the NCP under 40 CFR Part 300. The evaluation criteria are discussed below.

6.3.2.1 Evaluation Criteria

In accordance with the NCP (40 CFR Part 300.430), the following nine criteria are used for the evaluation of response action alternatives:

- Overall Protection of Human Health and the Environment
- Compliance with ARARs
- Long-Term Effectiveness and Permanence
- Reduction of Toxicity, Mobility, or Volume through Treatment
- Short-Term Effectiveness
- Implementability
- Cost
- State Acceptance
- Community Acceptance

Overall Protection of Human Health and the Environment

Alternatives must be assessed for adequate protection of human health and environment, in the short and long term, from unacceptable risks posed by hazardous substances or contaminants present at Block F by eliminating, reducing, or controlling exposure to levels exceeding response action goals. Overall protection draws on the assessments of other evaluation criteria, especially long-term effectiveness and permanence, short-term effectiveness, and compliance with ARARs.

Compliance with ARARs

Alternatives must be assessed to determine whether they attain ARARs under federal environmental laws and State environmental or facility siting laws. If one or more regulations that are applicable cannot be complied with, a waiver must be invoked. Grounds for invoking a waiver would depend on the following circumstances:

- The alternative will attain a standard of performance that is equivalent to that required under the otherwise applicable standard, requirement, or limitation through use of another method or approach.

- A State requirement has not been consistently applied or the State has not demonstrated the intention to consistently apply the promulgated requirement in similar circumstances at other response actions within the State.

Long-Term Effectiveness and Permanence

Alternatives must be assessed for the long-term effectiveness and permanence they offer, along with a degree of certainty that the alternative will be successful. Factors that should be considered, as appropriate, include the magnitude of residual risk (i.e., risks posed by untreated waste or treatment residuals) and adequacy and reliability of controls (i.e., controls needed to manage untreated waste or treatment residuals).

Reduction of Toxicity, Mobility, or Volume through Treatment

The degree to which the alternative employs recycling or treatment that reduces the toxicity, mobility, or volume of the waste must be assessed, including how treatment is used to address the principal threats posed by the site.

Short-Term Effectiveness

The short-term impacts of the alternative must be assessed considering the following:

- Short-term risks that might be posed to the community during implementation.

- Potential impacts on workers during the response action and the effectiveness and reliability of protective measures.

- Potential environmental impacts of the response action and the effectiveness and reliability of mitigation measures during implementation.

- Time until protection is achieved.

Implementability

The ease or difficulty of implementing the alternatives must be assessed by considering technical feasibility, administrative feasibility, and availability of services and materials.

Cost

Capital costs must include both direct and indirect costs. Annual O&M costs must be provided. A net present worth (NPW) value of the capital and O&M costs must also be provided. Typically, the cost estimate accuracy range is plus 50 percent to minus 30 percent. Because there are no costs associated with the first alternative (No Action), a cost comparison of the two alternatives will not be performed.

State Acceptance

The MDE will review the proposed RAP and will inform Lockheed Martin in writing, on or before the end of a 75-day review period, whether the RAP has been approved or rejected. If the proposed RAP is rejected, MDE will state the modifications necessary to receive approval. The 75-day MDE review period will begin after a notice of the proposed RAP is published in a local newspaper and a sign is posted at the property indicating notice of intent to conduct the RAP.

Community Acceptance

The public will be afforded the opportunity to review and provide commentary on the proposed RAP. The MDE will receive written comments from the public for 30 days after publication of the newspaper notice and posting of the sign at the property or 5 days after the public informational meeting, whichever is later. In addition, a public informational meeting will be held within 40 days after publication of the newspaper notice.

Relative Importance of Criteria

Among the nine criteria, the threshold criteria are considered to be:

- Overall Protection of Human Health and the Environment
- Compliance with ARARs

The threshold criteria must be satisfied for an alternative to be eligible for selection.

Among the remaining criteria, the following five are considered to be the primary balancing criteria:

- Long-Term Effectiveness and Permanence
- Reduction of Toxicity, Mobility, or Volume

- Short-Term Effectiveness
- Implementability
- Cost (not applicable to Block F)

The balancing criteria are used to weigh the relative merits of alternatives.

The remaining two of the nine criteria, State acceptance and community acceptance, are considered to be modifying criteria that must be considered during response action selection. These last two criteria can only be evaluated after the MDE and community have reviewed the proposed RAP. Therefore, this RAP addresses only seven of the nine criteria. The remaining two criteria will be addressed through the RAP review, comment, and approval process.

6.3.2.2 Selection of Response Action

The selection of a remedy is a two-step process. The first step consists of identification of a preferred alternative and presentation of the alternative in a proposed RAP submitted to MDE and the community for review and comment. The preferred alternative must meet the following criteria:

- Protection of human health and the environment.
- Compliance with ARARs.
- Cost effectiveness in protecting human health and environment and in complying with ARARs.
- Utilization of permanent solutions and alternate treatment technologies or resource recovery technologies to the maximum extent practicable.

The second step consists of the review of the comments and consultation with the MDE to determine whether or not the preferred alternative continues to be the most appropriate response action for the site.

6.3.3 Detailed Analysis of Alternatives

6.3.3.1 Alternative S-1: No Action

Description of Alternative S-1

This alternative would leave Block F in its current condition. The No Action alternative is required under CERCLA to establish a basis for comparison with other alternatives.

Detailed Analysis of Alternative S-1

Overall Protection of Human Health and Environment

Alternative S-1 would not be protective of human health and the environment. Concentrations of PAHs, mercury, and PCBs that exceed the established site-specific cleanup goal for human health and concentrations of DRO and GRO greater than MDE soil cleanup standards would remain in the soil. Therefore, the RAOs for Block F would not be achieved.

Compliance with ARARs

Alternative S-1 would not achieve human health site-specific cleanup goals or MDE soil cleanup standards.

Long-Term Effectiveness and Permanence

Alternative S-1 would not be effective in the long term because soil COCs would remain on site and pose potential human health risks. Although concentrations of soil COCs might gradually decrease to acceptable levels over a long duration of time because of natural processes, monitoring would not be conducted to verify this.

Reduction of Toxicity, Mobility, and Volume through Treatment

Alternative S-1 does not employ any treatment.

Short-Term Effectiveness

There are no relevant issues under Alternative S-1 because no action would occur.

Implementability

There are no implementability concerns for Alternative S-1 because no action would be implemented.

Cost

There are no costs associated with Alternative S-1.

6.3.3.2 Alternative S-2: Excavation to Allow Unrestricted Residential Site Use and Off-Site Treatment and Disposal

Description of Alternative S-2

Alternative S-2 is illustrated on Figure 8-1 and would consist of two major components: (1) excavation to allow unrestricted residential site use and (2) off-site treatment and disposal.

Component 1: Excavation to Allow Unrestricted Residential Site Use

Figure 8-1 shows the areas of Block F that would be excavated to meet the cleanup goals. As part of site preparation, a material handling pad, decontamination zones, and haul routes would be constructed to allow equipment to access the areas to be excavated and these areas would be cleared, if required. Excavation of soil to a depth of 5 feet (or to the zone of saturation) would be conducted using a bulldozer, front-end loader, or similar equipment.

Post-removal/confirmation samples would be collected from the sidewalls and base of the excavation and analyzed for PAHs, mercury, and PCBs. Post-removal/confirmation samples in the previously abandoned-in-place aviation fuel USTs excavation would be collected from the sidewalls and base of the excavation and analyzed for DRO and GRO.

Following excavation and after post-removal/confirmation sample results confirm that soil with concentrations greater than the cleanup goals has been removed, the excavated areas would be backfilled with certified clean material, graded to original contours, and restored to pre-response action conditions.

Component 2: Off-Site Disposal

The following are the expected actions for the excavated soil:

- Excavated material characterized as RCRA non-hazardous waste would be transported to a permitted RCRA Subtitle D facility for direct landfilling.

- Excavated soil that fails TCLP testing would be characterized as RCRA hazardous waste and would be transported to a permitted RCRA Subtitle C TSDF for treatment to meet TCLP limits followed by direct landfilling.

- Excavated soil with PCB concentrations greater than 50 mg/kg would be transported to a permitted TSCA TSDF for treatment, if required, followed by direct landfilling.

The volumes estimated for disposal at the various facilities would need to be verified based on sampling and analysis of stockpiled soil, followed by profiling as necessary for each facility.

Detailed Analysis of Alternative S-2

Overall Protection of Human Health and Environment

Alternative S-2 would be protective of human health and the environment. The removal of soil with COC concentrations greater than the cleanup goals will reduce potential risk for any future developments. Block F would be suitable for revegetation and potential use as a natural and recreational corridor. All of the RAOs for Block F would be achieved.

Compliance with ARARs

Alternative S-2 would achieve the human health site-specific cleanup goal established in Section 5. Location-specific and action-specific ARARs would be complied with in substance, in particular, the following:

- RCRA regulations including Identification and Listing of Hazardous Wastes and LDRs
- TSCA regulations
- OSHA regulations
- Maryland Hazardous Waste Management System Regulations
- Maryland Regulation of Water Supply, Sewage Disposal, and Solid Waste
- Maryland General Permit for Construction Activity
- Maryland OCP

Long-Term Effectiveness and Permanence

Alternative S-2 would be effective in the long term because the COCs that present an unacceptable risk to residential human receptors would be removed from Block F and deposited in a suitable

landfill outside the site, resulting in residual levels that would no longer pose an unacceptable risk to these receptors.

Reduction of Toxicity, Mobility, and Volume through Treatment

Alternative S-2 would permanently and irreversibly reduce the mobility of the contaminants to the environment by depositing them in a RCRA-permitted landfill or TSCA TSDF where their exposure to the environment would be adequately controlled. However, unless the excavated material is treated prior to landfilling, Alternative S-2 would not reduce the toxicity of the contaminated soil.

Short-Term Effectiveness

Alternative S-2 would be effective in the short term. Dust suppression and control measures would be implemented to minimize the emission of contaminated soil particulates during onsite response action activities. Erosion control measures would minimize the migration of COCs into nearby streams. Transportation of the contaminated soil to an off-site landfill would be conducted in suitable containers and by reputable transporters. In the unlikely event of a traffic accident releasing contaminated soil to the environment, an immediate hazard to the community would not be posed because of the non-volatile nature and relatively low solubility of the COCs present in the soil. However, should such an event occur, measures to prevent washing away of the soil by storm events would be warranted. Workers on site would be adequately protected if suitable health and safety procedures are followed. The approximate timeframe for implementation of this alternative is 7 weeks.

Implementability

Alternative S-2 is implementable. Excavation equipment considered under this alternative are typical in the construction industry and are readily available from several local sources. Time to coordinate with stakeholders and obtain necessary permits can easily be built into the schedule. Suitable landfills are available for treatment and/or direct disposal of the excavated non-hazardous soil and have been identified at nearby locations. Suitable landfills for treatment and disposal of excavated soil with PCB concentrations greater than 50 mg/kg (i.e., TSCA TSDF) have been identified at more distant locations.

Cost

The capital cost for Alternative S-2 is $910,000. There are no annual O&M costs associated with Alternative S-2. The NPW value of the capital and O&M costs is $910,000.

6.4 COMPARATIVE ANALYSIS OF ALTERNATIVES

This section compares the analyses presented for each of the response action alternatives in Section 6.3. The criteria for comparison are identical to those used for the detailed analysis of individual alternatives.

6.4.1 Soil

The following response action alternatives for soil are being compared in this section:

- Alternative S-1: No Action
- Alternative S-2: Excavation to Allow Unrestricted Residential Site Use and Off-Site Treatment and Disposal

6.4.1.1 Overall Protection of Health and the Environment

Alternative S-1 would not be protective. Alternative S-2 would be protective.

6.4.1.2 Compliance with ARARs and TBCs

There are no chemical-specific ARARs for Block F soil, only chemical-specific TBCs that are the cleanup goals developed in Section 5. Alternative S-1 would not comply with the chemical-specific TBCs. Action-specific ARARs do not apply to Alternative S-1. Alternative S-2 would comply with the chemical-specific TBCs and location- and action-specific ARARs.

6.4.1.3 Long-Term Effectiveness and Permanence

Alternative S-1 would not be effective in the long term and offers no permanent solution. Alternative S-2 would be effective in the long term because it offers a remedy that removes the

PAHs, mercury, and PCBs from Block F without the need for LUCs to prevent residential and commercial/industrial development and recreational use.

6.4.1.4 Reduction of Toxicity, Mobility, or Volume through Treatment

Alternatives S-1 and S-2 do not employ any treatment.

6.4.1.5 Short-Term Effectiveness

Alternative S-1 would not present short-term risks to workers, the community, and the environment because no actions would be taken. Short-term risks to the community, workers, and the environment associated with Alternative S-2 could be adequately controlled.

Alternative S-1 would not achieve the soil RAOs. The approximate timeframe for implementation and attainment of RAOs would be 7 weeks for Alternative S-2.

6.4.1.6 Implementability

There is no action to be implemented for Alternative S-1. Alternative S-2 would be easy to implement because no on-site treatment or long-term maintenance would be required.

6.4.1.7 Cost

There are no costs associated with Alternative S-1. The capital and NPW cost for Alternative S-2 is $910,000.

6.4.2 Summary of Comparative Analysis of Alternatives

Table 6-5 summarizes the comparative analysis of the two soil response action alternatives.

6.5 PROPOSED ALTERNATIVE

The proposed alternative is Alternative S-2. This alternative would remove soil with COC concentrations greater than the cleanup goals to the extent necessary to allow unrestricted residential use of Block F and remove the previously abandoned-in-place aviation fuel USTs (REC #5), associated piping, and contaminated soil with DRO and GRO concentrations greater than the MDE cleanup standards. This would require excavation of the soil with COC concentrations greater than the cleanup goals identified in Section 5. Figure 8-1 shows the areas of Block F that would be excavated to meet the cleanup goals. As part of site preparation, temporary haul routes would be constructed to allow equipment to access the areas to be excavated and these areas would be cleared using a bulldozer or similar equipment and mulched. Excavation of soil would be conducted using a bulldozer, front-end loader, hydraulic excavators, backhoe, or similar equipment.

Post-removal/confirmation samples would be collected from the sidewalls and base of the excavation and analyzed for PAHs, mercury, PCBs and DRO and GRO.

Following excavation and after post-removal/confirmation sample results confirm that soil with COC concentrations greater than the cleanup goals and soil with DRO and GRO concentrations greater than the MDE cleanup standards have been removed, the excavated areas would be backfilled with certified clean material, graded to original contours, and restored to pre-response action conditions.

It is assumed that all excavated soil would be disposed at an off-site permitted RCRA Subtitle D landfill. If any excavated material fails TCLP testing, the material would be disposed at an off-site permitted RCRA Subtitle C TSDF. If any excavated material has PCB concentrations greater than 50 mg/kg, the material would be disposed at a TSCA TSDF. Because the soil remaining on site would no longer contain concentrations of COCs that could be harmful to hypothetical future residential receptors, soil-related LUCs would not be required.

In addition to soil contaminated with PAHs, the former aviation fuel USTs (REC #5), associated piping, and contaminated soil will be removed to comply with MDE OCP requirements.

Table 6-1

Chemical-Specific ARARs
Block F
Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland

Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Federal				
Cancer Slope Factors (CSFs)	NA	To Be Considered	CSFs are guidance values used to evaluate the potential carcinogenic hazard caused by exposure to contaminants.	CSFs would be considered for development of human health protection PRGs for soil at this site.
Reference Doses (RfDs)	NA	To Be Considered	RfDs are guidance values used to evaluate the potential non-carcinogenic hazard caused by exposure to contaminants.	RfDs would be considered for development of human health protection PRGs for soil at this site.
State				
Cleanup Standards for Soil and Groundwater	Maryland Environmental Article 7-508/7-208	Applicable	This document presents the approach and supporting documentation used to develop numeric cleanup standards for hazardous substances in the soil and groundwater for the State of Maryland.	These standards maybe considered for use in determining cleanup standards in the absence of a site-specific risk assessment.

ARARs Applicable or Relevant and Appropriate Requirements.
CSFs Cancer slope factors.
NA Not applicable.
PRGs Preliminary remediation goals.
RfDs Reference doses.

Table 6-2

Location-Specific ARARs
Block F
Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland

Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Federal				
Endangered Species Act Regulations	50 CFR Parts 81, 225, and 402	Potentially Applicable	This act requires federal agencies to take action to avoid jeopardizing the continued existence of federally listed endangered or threatened species.	If a site investigation or remediation could potentially affect an endangered species or their habitat, these regulations would apply (There have been no endangered species or their habitat identified at the MRC).
Historic Sites Act Regulations	36 CFR Part 62	Potentially Applicable	Requires federal agencies to consider to existence and location of landmarks on the National Registry of Natural Landmarks to avoid undesirable impacts on such landmarks.	The existence of National Landmarks would be identified prior to remedial activities on site including remedial investigations (There have been no National Landmarks identified at the MRC).
State				
Nongame and Endangered Species Conservation Act	Annotated Code of Maryland 10-2A-01; COMAR 08.03.08 and 08.02.12.	Potentially Applicable	Requires State agencies to use their authority to maintain and enhance nongame wildlife and endangered species populations.	If a site investigation or remediation could potentially affect an endangered species or their habitat, these regulations would apply (There have been no endangered species or their habitat identified at the MRC).
Division of Historical and Cultural Programs	Annotated Code of Maryland 5A	Potentially Applicable	The Maryland Historic Trust formed in 1961 to preserve, protect, and enhance districts, sites, buildings, structures, and objects significant in the prehistory, history, upland and underwater archeology, architecture, engineering, and culture of the State.	The existence of Maryland historic sites would be identified prior to remedial activities on site including remedial investigations (There have been no historic sites identified at the MRC).

ARARs Applicable or Relevant and Appropriate Requirements.
CFR Code of Federal Regulations.
COMAR Code of Maryland Regulations.
MRC Middle River Complex.

Table 6-3

Action-Specific ARARs
Block F
Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland
Page 1 of 4

Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Federal				
RCRA Regulations, Identification and Listing of Hazardous Wastes	40 CFR Part 261	Potentially Applicable	Defines the listed and characteristic hazardous wastes subject to RCRA. Appendix II contains the TCLP.	These regulations would apply when determining whether or not a solid waste is hazardous, either by being listed or by exhibiting a hazardous characteristic, as described in the regulations.
Polychlorinated Biphenyl (PCB) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions	40 CFR 761	Potentially Applicable	Amends rules under the Toxic Substances Control Act (TSCA) that addresses the use, handling, and disposal of PCBs and PCB-contaminated material.	Potential removal action may include remediation of PCB-contaminated soil and/or debris.
Guidance on Remedial Actions for Superfund Sites with PCB Contamination	OSWER Directive 9355.4-01	To Be Considered	This guidance describes how to address PCB contamination issues	PCBs are present within soils at the site.
CAA Regulations, NAAQSs	40 CFR Part 50	Relevant and Appropriate	Establishes primary (health-based) and secondary (welfare-based) air quality standards for carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur oxides emitted from a major source of air emissions. The NAAQSs form the basis for all regulations promulgated under the CAA.	Site remediation activities must comply with NAAQSs. The principal application of these standards is during response action activities resulting in exposures through dust and vapors. In general, emissions from CERCLA activities are not expected to qualify as a major source and are therefore not expected to be applicable requirements. However, the requirements may be determined to be relevant and appropriate for non-major sources with significantly similar emissions.
RCRA Regulations, LDRs	40 CFR Part 268	Potentially Applicable	This regulation prohibits the land disposal of untreated hazardous wastes and provides criteria for the treatment of hazardous waste prior to land disposal.	Response actions that involve excavating, treating, and redepositing hazardous soil would comply with LDRs.

Table 6-3

Action-Specific ARARs
Block F
Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland
Page 2 of 4

Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
OSHA Regulations, General Industry Standards	29 CFR Part 1910	Applicable	Requires establishment of programs to assure worker health and safety at hazardous waste sites, including employee training requirements.	These regulations would apply to all response activities.
OSHA Regulations, Occupational Health and Safety Regulations	29 CFR Part 1910, Subpart Z	Potentially Applicable	Establishes permissible exposure limits for workplace exposure to a specific listing of chemicals.	Standards are applicable for worker exposure to OSHA hazardous chemicals during response action activities.
OSHA Regulations, Recordkeeping, Reporting, and Related Regulations	29 CFR Part 1904	Potentially Applicable	Provides recordkeeping and reporting requirements applicable to response action activities.	These requirements apply to all site contractors and subcontractors and must be followed during all site work.
OSHA Regulations, Health and Safety Standards	29 CFR Part 1926	Potentially Applicable	Specifies the type of safety training, equipment, and procedures to be used during the site investigation and response action.	All phases of the response action would be executed in compliance with this regulation.
RCRA Regulations, Contingency Plan and Emergency Procedures	40 CFR 264, Subpart D	Potentially Relevant and Appropriate	Outlines requirements for emergency procedures to be followed in case of an emergency.	The administrative requirements established in this rule would be met for response actions involving the management of hazardous waste.
RCRA Regulations, Preparedness and Prevention	40 CFR Part 264, Subpart C	Potentially Relevant and Appropriate	Outlines requirements for safety equipment and spill control for hazardous waste facilities. Facilities must be designed, maintained, constructed, and operated to minimize the possibility of an unplanned release that could threaten human health or the environment.	Safety and communication equipment would be incorporated into all aspects of the response action process, and local authorities would be familiarized with site operations.
RCRA Regulations, Standards for Owners and Operators of Hazardous Waste TSDFs.	40 CFR Part 264	Potentially Relevant and Appropriate	Establishes minimum national standards defining the acceptable management of hazardous wastes for owners and operators of facilities that treat, store, or dispose of hazardous wastes.	If response actions involving management of RCRA wastes at an off-site TSDF or if RCRA wastes are managed on site, the requirements of this rule would be followed.

Table 6-3

Action-Specific ARARs
Block F
Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland
Page 3 of 4

Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
RCRA Regulations, Use and Management of Containers	40 CFR Part 264, Subpart I	Potentially Relevant and Appropriate	Sets standards for the storage of containers of hazardous waste.	This requirement would apply if a response action alternative involves the storage of a hazardous waste (i.e., contaminated soil) in containers prior to treatment or disposal.
Migratory Bird Treaty Act	16 USC 703-711	Potentially Applicable	Protects migratory birds and their nests.	Proposed response action shall not kill migratory birds or destroy their nests and eggs.
State				
Maryland Hazardous Waste Management System	Title 26, Subtitle 13 of the COMAR	Potentially Applicable	Requires hazardous waste generators to ship their hazardous waste to a facility permitted to accept it or, with the appropriate permits, treat it themselves. Requires use of a certified hauler to ship hazardous waste off site, and shipment must be accompanied by a manifest. Requires compliance with regulations on the storage of the waste and specifies procedures to prevent the occurrence of circumstances that would threaten human health or the environment.	These regulations would apply if waste on site was deemed hazardous and needed to be stored, transported, or disposed of properly.
Maryland Regulation of Water Supply, Sewage Disposal, and Solid Waste	Title 26, Subtitle 4 of the COMAR	Potentially Applicable	Sets the requirements for construction and operation for solid waste disposal facilities.	These requirements would apply if on-site waste was deemed a non-hazardous solid waste and needed to be stored, transported, or disposed of properly.
Maryland General Permit for Construction Activity	Title 26, Subtitle 17 of the COMAR	Potentially Relevant and Appropriate	Establishes requirements for stormwater management and erosion and sediment control at construction sites.	Response actions involving excavation would require submittal of an erosion and sediment control plan and a stormwater management plan.

Table 6-3

Action-Specific ARARs
Block F
Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland
Page 4 of 4

ARARs	Applicable or Relevant and Appropriate Requirements.
CAA	Clean Air Act.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act.
CFR	Code of Federal Regulations.
COMAR	Code of Maryland Regulations.
LDRs	Land Disposal Restrictions.
MDE	Maryland Department of the Environment.
NAAQSs	National Ambient Air Quality Standards.
OSHA	Occupational Safety and Health Act.
RCRA	Resource Conservation and Recovery Act.
TCLP	Toxicity Characteristic Leaching Procedure.
TSDF	Treatment, Storage, and Disposal Facility.
USC	United States Code.

Table 6-4

Preliminary Screening of Technologies and Process Options, Block F
Soil Response Action Plan
LMC Middle River Complex, Middle River, Maryland
Page 1 of 4

General Response Action	Response Action Technology	Process Option	Description	Screening Comment
No Action	None	Not applicable	No activities conducted at Block F to address contamination. Biodegradation of mercury would not occur through natural attenuation processes.	Required by the CERCLA. Retain for baseline comparison to other technologies.
Limited Action	LUCs	Engineered Controls:	Fencing, markers, warning signs.	Eliminate. This technology would leave soil contaminants in place. Fencing may not be compatible with future residential use. Markers and warnings signs would not be effective unless combined with formal administrative controls.
		Administrative Controls: Deed or Site Use Restrictions	Administrative action using property deeds or other land use prohibitions to restrict future site activities. Five-year reviews would be conducted to evaluate if additional response actions would be required.	Eliminate. This technology would leave soil contaminants in place leaving portions of Block F unsuitable for residential use. Does not meet the RAO of unrestricted site use.
	Monitoring	Sampling and Analysis	Sampling and analysis of groundwater to evaluate if additional response actions would be warranted.	Addressed in Groundwater Response Action Plan.
Containment	Cover/Barrier	Soil Cover/Multi-Media Cap	Use of semipermeable or low permeability barriers to minimize direct exposure to contaminants and potential migration to groundwater.	Eliminate. This technology would leave soil contaminants in place leaving portions of Block F unsuitable for residential use.
	Erosion Control	Rip-Rap Cover/Vegetation	Use of gravel/cobbles or dense plant growth to minimize migration of wastes/contaminated soils.	Eliminate. Block F is relatively flat and erosion is not a concern. However, revegetation is retained to allow future site use as a green space.
Removal	Excavation	Mechanical	Means for removal of contaminated soils by backhoe, bulldozer, loader, etc.	Retain for removal of contaminated soil.
In-Situ Treatment	Thermal	Vitrification	Use of high-temperature melting to fuse inorganic contaminants into a glass matrix within vadose zone or the use of moderate temperature heating to volatilize contaminants and remove them from the vadose zone.	Eliminate. This technology presents implementability concerns due to the shallow groundwater table and high moisture content of the soil.

Table 6-4

Preliminary Screening of Technologies and Process Options, Block F
Soil Response Action Plan
LMC Middle River Complex, Middle River, Maryland
Page 2 of 4

General Response Action	Response Action Technology	Process Option	Description	Screening Comment
In-Situ Treatment	Thermal	Radio-Frequency Heating	Use of radio-frequency energy to heat soil and cause volatilization of contaminants	Eliminate. Limited thickness and shallow depth of contaminated soil renders this technology difficult to implement with limited, commercially available equipment. Not applicable for treatment of mercury.
		Electrical Heating	Use of an electrical blanket or electrical heating elements within slotted pipes to volatilize contaminants	Eliminate. The shallow depth to groundwater renders this technology difficult to implement. Not applicable for treatment of mercury.
	Physical/ Chemical	Soil Flushing/ Chemical Extraction	Use of water/solvents to remove contaminants from the vadose zone by flushing and collecting the contaminated wastewater in the saturated zone followed by above-ground pump and treat.	Eliminate. The result of this technology would be the migration of COCs from soil to groundwater. Therefore, the implementation of this technology could contaminate "clean" groundwater.
		Dynamic Underground Stripping	Steam injection at the periphery of the contaminated area resulting in the vaporization of volatile compounds bound to soil and the movement of contaminants to a centrally located extraction well.	Eliminate. Difficult to implement due to the shallow groundwater table. Not applicable for treatment of mercury.
		Soil Vapor Extraction	Use of vacuum and possibly air sparging to volatilize contaminants.	Eliminate. Not applicable for treatment of mercury.
		Chemical Fixation/ Solidification	Mixing of chemical agents in the vadose zone to chemically bind, solidify, and reduce contaminant mobility.	Eliminate. Traditional chemical fixation/stabilization processes have only limited effectiveness for the immobilization of SVOCs in contaminated soil..
		Electrokinetic Separation	Use of electrodes with the application of direct current-based electrical fields to induce the migration of metallic contaminants from soil towards electrodes or to induce electrochemical reactions to destroy selected organic contaminants.	Eliminate. Shallow depth to groundwater would minimize the available resistivity required for application of this technology.
	Biological	Biodegradation	Nutrients and amendments are added to surface soil to promote biodegradation of organic compounds.	Eliminate. Not effective for mercury contamination.
In-Situ Treatment	Biological	Phytoremediation	Use of selected plants cultivated in contaminated soil to lead to uptake of metallic contaminants or	Eliminate. This innovative technology has limited demonstrated effectiveness for areas with high levels

Table 6-4

Preliminary Screening of Technologies and Process Options, Block F
Soil Response Action Plan
LMC Middle River Complex, Middle River, Maryland
Page 3 of 4

General Response Action	Response Action Technology	Process Option	Description	Screening Comment
(Continued)	(Continued)		enhancement of biodegradation of organic contaminants by indigenous microorganisms in the root zone.	of organic contaminants. Has potential in reducing lower level organic contamination left in place, however not applicable to achieve identified cleanup goals.
Ex-Situ Treatment	Physical/ Chemical	Soil Washing/ Chemical Extraction	Use of solubilization and chemical (oxidation/reduction/neutralization) processes to remove contaminants from the solid phase and convert them into more concentrated forms or less toxic forms in liquid phase.	Eliminate. When different classes of contaminants are present, such as metals and organic compounds, a series of extraction operations using different solvents, pH adjustment, etc. may be required. By-products from the process would consist of spent solvent streams containing the wastes, requiring further treatment/disposal and recovery/recycle of the extractants.
		Chemical Fixation/ Solidification	Mixing of chemical agents to bind, solidify, and reduce contaminant mobility.	Eliminate. Not suitable for use on site to return treated soil to the excavated area because the treated matrix would be unsuitable for unrestricted residential use of the site (COCs would remain on site).
Ex-situ Treatment (Continued)	Biological	On-Site Landfarming	Tilling of contaminated soils and wastes in layers of surface soil within a treatment bed to aerate and biodegrade organic contaminants.	Eliminate. Not effective for mercury.
	Thermal	Off-Site Incineration	Use of high temperatures to pyrolize or oxidize organic contaminants into less toxic gases.	Eliminate. Not effective for destruction of mercury.
		Off-Site Thermal Desorption	Use of moderate temperatures to volatilize contaminants and remove them from the solid phase into the gaseous phase.	Eliminate. This technology would not be effective for the removed mercury contamination.

Table 6-4

Preliminary Screening of Technologies and Process Options, Block F
Soil Response Action Plan
LMC Middle River Complex, Middle River, Maryland
Page 4 of 4

General Response Action	Response Action Technology	Process Option	Description	Screening Comment
Ex-situ Treatment (Continued)	Solids Processing	Size Reduction	Crushing/grinding/shredding of wastes as a preliminary process to aid in downstream treatment.	Eliminate crushing because it applies to rock that would typically not be further treated. Eliminate grinding and shredding as pretreatment step for vegetative material (tree stumps) because trees, etc. are not present at Block F in contaminated areas.
		Screening	Removal/segregation of material based on size as a preliminary process to aid in downstream treatment.	Eliminate. Removal of oversized material that is typically not contaminated is not required.
Disposal TSCA	Off-Site	Non-Hazardous/Hazardous/TSCA Waste Landfilling	Disposal of excavated wastes and treatment residuals in a permitted RCRA Subtitle C or D facility or TSCA TSDF.	Retain landfilling to be used in conjunction with other response action technologies.
	On-Site	Consolidation	Excavation and relocation of contaminated soil to minimize space and closure requirements.	Eliminate. Would trigger on-site issues that are unacceptable to regulatory agencies (COCs still present on site – not suitable for unrestricted residential use of the site).
		Beneficial Reuse	Reuse of treated soil as fill material.	Eliminate. Soil treatment technologies not retained, eliminating need for disposition of treatment residuals.

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act.
COCs Chemicals of concern.
LUCs Land use controls.
RCRA Resource Conservation and Recovery Act.
RAO Response action objective.
SVOCs Semivolatile organic compounds.
VOCs Volatile organic compounds.

Table 6-5

Summary of Comparative Analysis of Alternatives
Block D, Soil Response Action Plan
LMC Middle River Complex, Middle River, Maryland

Evaluation Criteria	Alternative S-1: No Action	Alternative S-2: Excavation to Allow Unrestricted Residential Site Use and Off-Site Disposal
Overall Protection of Human Health and Environment	Not protective	Protective
Chemical-Specific ARARs	Would not comply	Would comply
Location-Specific ARARs	Not applicable	Would comply
Action-Specific ARARs	Not applicable	Would comply
Long-Term Effectiveness and Permanence	Not effective	Effective
Reduction of Contaminant Toxicity, Mobility, or Volume through Treatment	None	None
Short-Term Effectiveness	No relevant issues to address	Would be effective. Minimum potential for short-term risks. Seven weeks to attain soil RAOs.
Implementability	Nothing to implement	Easy to implement
Costs: Capital NPW of O&M NPW	 $0 $0 $0	 $910,000 $-0- $910,000

ARARs Applicable or Relevant and Appropriate Requirements.
O&M Operation and maintenance.
RAO Response action objective.
NPW Net present worth.

Section 7
Evaluation Criteria for the Selected Technology

7.1 EVALUATION CRITERIA

The proposed response action will remove and dispose off site soil with COC (i.e. PAHs, mercury and PCBs) concentrations greater than the cleanup goals; removal of previously abandoned-in-place USTs and associated piping; and removal of soil associated with the USTs and piping with DRO and GRO concentrations greater than MDE soil cleanup standards. Following removal of this material, the exposed soil on the excavation base and sidewalls will be visually examined for free product, sheen, staining, or other evidence suggesting that residual contamination is present. Additional removal may be performed based on the visual examination. Following completion of removal and visual examination activities, the base and sidewalls of the removal area will be sampled to confirm that all soil with COC concentrations greater than the cleanup goals and soil with DRO and GRO concentrations greater than the MDE cleanup standards have been removed. Additional removal and sampling will be performed until it is confirmed that soil with COC concentrations greater than the cleanup goals and soil with DRO and GRO concentrations greater than the MDE cleanup standards have been removed. A complete description of the post-removal/confirmation sampling and analysis plan is presented in Section 8.3. Cleanup goals are presented in Section 5.

7.2 CONTINGENCY MEASURES

Considering the limited extent of soil with COC concentrations greater than the cleanup goals and soil with DRO and GRO concentrations greater than the MDE cleanup standards and the nature of the proposed response action (i.e., removal), the development of contingency measures to address COC impacts at Block F is not warranted.

Section 8
Proposed Response Actions

8.1 INTRODUCTION

The proposed response action will remove and dispose off site soil with COC (i.e. PAHs, mercury and PCBs) concentrations greater than the cleanup goals; removal of previously abandoned-in-place USTs and associated piping; and removal of soil associated with the USTs and piping with DRO and GRO concentrations greater than MDE soil cleanup standards. The response action for Block F will address soil and groundwater with COC concentrations greater than the cleanup goals. The soil response action proposed in this RAP will address removal of soil with COC concentrations greater than the cleanup goals; removal of previously abandoned-in-place USTs and associated piping; and removal of soil associated with the USTs and piping with DRO and GRO concentrations greater than MDE soil cleanup standards. The proposed response action for soil and USTs in Block F is described in this section. The proposed response action for groundwater in Block F is described in the Groundwater Response Action Plan provided under separate cover.

8.2 RESPONSE ACTION PLAN DESCRIPTION

The proposed soil response action is to remove soil with COC concentrations greater than the cleanup goals to obtain a Certificate of Completion under a Tier IA (Residential Unrestricted) future property use based on potential future residential development. In addition, previously abandoned-in-place USTs, associated piping, and associated soil with DRO and GRO concentrations greater than MDE soil cleanup standards will also be removed. The major components of the proposed response action, performance criteria, and sequence are described below.

8.2.1 Summary of Major Components

The major components of the response action necessary to achieve a Certificate of Completion are as follows:

- Removal of soil with COC concentrations greater than cleanup goals. Remove soil in the Former Ramp Storage Building portion of REC #13 (Former Boat Dock Area) associated with soil borings SB-93, SB-265, SB-266, SB-268, SB-269, and SB-393 (Area A) as shown in Figure 8-1 to a depth of 2 feet bgs. Remove soil in the Former Ramp Service Building portion of REC #13 (Former Boat Dock Area) associated with soil borings SB-94 and SB-397 (Area B) as shown in Figure 8-1 to a depth of 10 feet bgs. Remove soil in the Former Ramp Storage Building portion of REC #13 (Former Boat Dock Area) associated with soil borings SB-95, SB-383, and SB-390 (Area C) as shown in Figure 8-1 to a depth of 5 feet bgs. Remove soil in REC #4 (Boat Launch Area) associated with soil boring SB-238 and SB-406 (Area D) as shown in Figure 8-1 to a depth of 5 feet bgs or to the depth of the zone of saturation, whichever is less. The areal extent of removal is approximately 29,000 sf and the removed soil quantity, including the USTs, is approximately 5,200 cy. The soil boring sample locations and removal limits are indicated on Figure 8-1.

- Removal of the seven previously abandoned-in-place USTs comprising REC #5 (Former Aviation Fuel USTs) (Area E) as shown in Figure 8-1. Remove previously abandoned-in-place USTs, associated piping, and associated soil with DRO and GRO concentrations greater than MDE soil cleanup standards. Removal of the concrete tarmac and an excavation depth of 9.3 ft bgs are assumed. The USTs were reportedly closed in place, however, no closure records were available for these USTs. The UST removal procedure will therefore be as follows, as applicable:

  - Coordinate removal activities with the MDE OCP personnel.
  - Determine the location and contents of USTs.
  - Remove flammable, combustible, or other liquids from the UST storage systems.
  - Empty and clean the USTs by removing all liquids and accumulated sludges.
  - Empty, disconnect, and remove associated piping including fill lines, vents, dispensing lines, and return lines.
  - Purge UST storage systems of all explosive vapors and monitor with an appropriate direct-reading instrument before and during removal.
  - Remove USTs and any solid inert material.
  - Puncture USTs to render them unfit for further use.
  - Remove cathodic protection systems and anchorage.
  - Remove regulated substances, soils saturated with regulated substances, and visibly contaminated soil from the excavation.
  - Perform post-removal/confirmation sampling and analysis and compare results to the MDE soil cleanup standards provided in Table 5-1.
  - Backfill the excavation and restore the ground surface.
  - Amend the UST registration forms and submit to the MDE OCP within 30 days after the USTs are removed.

- Post-removal/confirmation sampling and analysis – Sampling and analysis of the exposed soil on the base and sidewalls of the removal areas including the UST areas, will be performed to confirm that soils with contaminant concentrations greater than the cleanup criteria provided in Table 5-1 are removed. For removal areas where the proposed removal depth cannot be achieved due to the depth of the zone of saturation, post-excavation sampling and analysis of the exposed soil on the base of the removal areas will be performed to obtain data for informational purposes only. Post-removal/confirmation sampling and analysis procedures are presented in Section 8.3.

- Characterization, transport, and off-site disposal of removed materials – Stockpiled soil will be characterized for the purposes of waste disposal, transported to an off-site non-hazardous waste disposal facility, and disposed. Removed concrete, steel and other construction/demolition materials will be characterized as appropriate. Disposal of soil at an off-site permitted non-hazardous waste disposal facility is assumed based on review of the constituent concentrations provided in Tables AF-1, AF-2 and AF-3 (Appendix A). The disposal quantity is approximately 7,600 tons based on the removal limits indicated on Figure 8-1.

- Concrete, steel and other construction/demolition materials resulting from removal of the foundations of former structures, concrete tarmac, previously abandoned-in-place USTs and piping will either be cleaned/decontaminated as appropriate and sudsequently recycled or disposed in an off-site facility permitted to accept such materials.

- Backfilling and regrading – The removal areas will be backfilled and the final surface graded to match existing grades. The fill material will be certified clean material similar in grain size to removed soils and obtained from an off-site borrow source.

- Restoration - The disturbed areas will either be stabilized by vegetation or repaved. All areas disturbed as a result of response action activities will be permanently stabilized.

8.2.2 Performance Criteria

The performance criteria for the response action are presented below.

Soil Removal

Soil within Block F that is identified as having COC concentrations greater than the cleanup goals will be removed to the proposed depths. The removal limits presented in the RAP were determined based on review of existing soil boring sample results provided in Tables AF-1, AF-2, and AF-3 (Appendix A). The final limits of removal will be determined after completion of post-removal/confirmation sampling. The removal limits will extend to the indicated depths or to the depth of saturation, whichever is less.

Sediments accumulated in erosion and sediment control devices (see Section 8.4) prior to confirmation that soil with COC concentrations greater than the cleanup goals has been removed will be disposed off site along with the removed soils.

UST, Associated Piping, and Soil Removal

The previously abandoned-in-place USTs, associated piping, associated soil with DRO and GRO concentrations greater than MDE soil cleanup standards, and overlying concrete tarmac will be removed. Excavation will be required to confirm UST locations. The UST removal will be performed under the MDE OCP in accordance with the COMAR 26.10.10.02 and the API's Recommended Practice 1604 (1996) modified as necessary based on conditions encountered. The final limits of removal will be determined after completion of post-removal/confirmation sampling. The removal limits will extend to the indicated depths or to the depth of the zone of saturation, whichever is less.

Post-Removal/Confirmation Sampling

Post-removal/confirmation samples will be collected from the excavation base and sidewalls of the removal areas prior to backfilling to confirm that soils with contaminant concentrations greater than the cleanup criteria provided in Table 5-1 have been removed. Additional removal may be required based on the results of the post-removal/confirmation sampling. For removal areas where the proposed removal depth cannot be achieved due to the depth of the zone of saturation, post-removal samples will be collected from the exposed soil on the base of the removal areas to obtain data for informational purposes only. Post-removal/confirmation sampling and analysis procedures are provided in Section 8.3.

Temporary Storage

Soil and materials from the removal areas will be stockpiled and secured within the Block F boundary on a materials handling pad that will consist of a minimum 8-mil-thick polyethylene geomembrane overlain by a drainage layer. Water from the materials handling pad will drain into the excavation of origin. The stockpiled soil and materials will be completely covered with a minimum 8-mil-thick polyethylene geomembrane during inactive periods to prevent movement of

soil to the surrounding area. The geomembrane cover will be secured daily using sandbags and rope or other suitable means. The stockpiled soil and materials will be temporarily stored on site until waste characterization has been completed.

Waste Characterization

Removed soil and materials will be sampled from stockpiles for waste disposal characterization at a minimum frequency of one sample per 500 cy. Composite samples consisting of three grab samples will be collected from the stockpile. The sampling frequency may be increased depending on the volume of the removed soil and waste disposal facility requirements. Samples will be analyzed for TCLP and parameters required by the waste disposal facility.

Disposal

Removed soil and materials not suitable for recycling will be transported for off-site disposal after waste characterization has been completed and the waste disposal facility has approved acceptance of the waste. Removed soil and materials not suitable for recycling will be disposed at an off-site non-hazardous waste disposal facility.

Dewatering

Dewatering of the removal areas may be required to facilitate backfilling. Water that has accumulated in the removal areas will be collected and conveyed through a sediment removal device (i.e. filter). Solids trapped in the filter will be transported to an off-site non-hazardous waste disposal facility, off-site hazardous waste TSDF, or TSCA TSDF. Permits required for the proposed response action are described in Section 9.2.2. Water will be contained, characterized as required following removal of sediment, and disposed at an off-site permitted TSDF if required or discharged to a NPDES permitted outfall or to a stabilized area.

Backfilling

The removal areas will be backfilled after completion of post-removal/confirmation sampling and excavation dewatering. Backfill soil will be certified clean soil similar in grain size to removed

soils and obtained from an off-site borrow source. Backfill material acceptance criteria are provided in Table 8-1. The off-site borrow source material will be evaluated in accordance with the procedures described in the MDE document titled Facts About…VCP – Clean Imported Fill Material[2]. The off-site borrow source will be identified and environmental site assessment documentation obtained if available. The documentation will be reviewed by an environmental professional to determine the borrow source's suitability for use. If the borrow source is judged acceptable, soil samples will be obtained and analyzed for the target compounds using the method and at the sampling frequency recommended in the MDE document based on the location, history, and size (i.e., area and volume) of the borrow source area. Constituents detected in the samples will be evaluated for risk using the residential cleanup standards provided in MDE's Cleanup Standards for Soil and Groundwater (August 2001).

Backfill material will be compacted to a minimum of 90 percent of the maximum dry density as determined by the Standard Proctor. Additional compactive effort may be required dependent on future use of the area.

Restoration

The top 4 inches of backfill in areas to be restored using vegetation will be medium-textured loam suitable for establishment of vegetation (i.e., topsoil). The backfilled and regraded areas along with other areas disturbed during response action implementation will be restored/stabilized using permanent stabilization practices. Vegetative restoration will consist of surface preparation, fertilizing, seeding, and mulching. Vegetative restoration procedures are presented in detail in Section 8.4.2. Pavement disturbed by response action activities may be restored to pre-response action conditions based on future use of the area.

Stormwater Management and Erosion and Sediment Control

Erosion and sediment control will be performed in accordance with the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control (MDE, 1994). Erosion and sediment control measures are described in Section 8.4. A stormwater management plan will be prepared in

2 Document available at http://www.mde.state.md.us/assets/document/Clean Imported Fill Material.pdf

accordance with the Maryland Stormwater Design Manual (MDE, October 2000). Before removal activities begin, erosion and sediment controls will be established to prevent impacts to downgradient areas. During removal, backfilling, and regrading activities and until disturbed areas are stabilized, the erosion and sediment controls will be regularly inspected and maintained.

Stabilized Construction Entrance

Ingress to and egress from the removal area(s) will be controlled using a stabilized layer of aggregate that is underlain with a geotextile (i.e., a stabilized construction entrance).

Decontamination Pad

A temporary decontamination pad will be established to clean equipment used to remove and transport contaminated soils. The pad will be sized to accommodate all the equipment to be used during response action implementation and will be constructed in a manner that contains all the contaminated materials removed from equipment and the liquids used to clean the equipment. Contaminated materials removed from the equipment and solids removed from the wash water will be disposed off site along with the removed soils. Wash water will be contained, characterized as required following removal of sediment, and disposed at an off-site permitted TSDF if required or discharged to a NPDES permitted outfall or to a stabilized area.

8.2.3 Sequence

The field duration, excluding items 1 through 3 below, required to perform the proposed response action is estimated to be approximately 7 weeks. The generalized sequence of response action activities is presented below. The sequence of response action activities is subject to change based on the Contractor's work plan.

1. Obtain permits, notifications, and approvals as identified in Section 9 prior to mobilization.
2. Hold a pre-response action implementation meeting on site with the Contractor.
3. Locate and mark existing site utilities. Notify Miss Utility of Maryland (1-800-257-7777; www.missutility.net) at least 48 hours, but no more than 10 working days, prior to the day

excavation will commence. Inspect the site prior to response action implementation to verify existing site conditions.

4. Install perimeter controls for the stabilized construction entrance and construct the stabilized construction entrance. Install the remaining perimeter erosion and sediment controls.

5. Install support features including but not limited to decontamination pad and storage area(s), etc.

6. Protect or remove existing utilities within or in close proximity to the removal limits.

7. Remove soil, concrete tarmac, previously abandoned-in-place USTs, and associated piping from the indicated limits. Collect post-removal/confirmation samples from the removal area to determine the need for additional removal.

8. Following post-removal/confirmation that soils with contaminant concentrations greater than the cleanup criteria provided in Table 5-1 have been removed or the depth of the zone of saturation has been reached, restore the area by dewatering removal areas if necessary, backfilling, regrading, and establishing permanent stabilization for all disturbed areas.

9. Remove decontamination pad, material storage area, etc. Following support feature removal, stabilize areas with permanent vegetation or paving.

10. Following permanent stabilization of all disturbed areas, remove all remaining perimeter controls and immediately stabilize all areas disturbed by the placement and removal of perimeter controls.

8.3 POST-REMOVAL/CONFIRMATION SAMPLING AND ANALYSIS

The purpose of post-removal/confirmation sampling and analysis is to obtain sufficient data to confirm that soil with COC concentrations greater than the cleanup goals and associated soil with DRO and GRO concentrations greater than MDE cleanup standards have been removed. The post-removal/confirmation sampling and analysis plan is summarized below.

8.3.1 Sampling and Sample Evaluation

The response action implementation includes the removal and off-site disposal of soil with COC concentrations greater than the cleanup goals and soil associated with the previously abandoned-in-place USTs and piping with DRO and GRO concentrations greater than MDE soil cleanup standards. The removal areas are shown on Figure 8-1. Following removal of this material, the

exposed surfaces of the excavation (i.e., base and sidewalls) will be visually examined for evidence of remaining contamination (e.g., free-product, sheen, staining). Additional excavation may be performed based on the visual examination. The exposed surfaces of the removal area will then be sampled to determine if all the soils with contaminant concentrations greater than the cleanup criteria provided in Table 5-1 have been removed. The purpose of the excavation base and sidewall samples will be to determine whether the depth and lateral extent of removal is sufficient or if the removal depth and lateral extent need to be increased to remove soils with contaminant concentrations greater than the cleanup criteria. For removal areas where the proposed removal depth cannot be achieved due to the depth of the zone of saturation, post-excavation sampling and analysis of the exposed soil on the base of the removal areas will be performed to obtain data for informational purposes only.

Post-removal/confirmation samples will be collected, packaged, and shipped to a fixed-base laboratory. The fixed-base laboratory will analyze the samples for the constituents and per the methods indicated on Table 5-1. Post-removal/confirmation samples for soil that is not subsequently removed and disposed off-site will also be analyzed for VOCs, SVOCs, PCBs, and metals at a minimum frequency of 1 for every 5 samples (i.e., 20 percent). Post-removal/confirmation sampling results will be reviewed and the need for additional removal evaluated. If additional removal is required, additional post-removal/confirmation samples will be collected from the new exposed surfaces using the following criteria:

- If additional removal is required from the excavation base only, additional post-removal/ confirmation samples will be collected from the new exposed excavation base only (i.e., no sidewall samples).
- If additional removal is required from the excavation sidewalls only, additional post-removal/confirmation samples will be collected from the new excavation sidewalls and the new exposed excavation base.
- If additional removal is required from the excavation base and sidewalls, additional post-removal/confirmation samples will be collected from the new excavation sidewalls and the new exposed excavation base.

Analytical results from the fixed-base laboratory for post-removal/confirmation samples that represent exposed surfaces of the excavation that will remain (i.e., no further removal will be performed) will be validated using EPA's Contract Laboratory Program protocol, EPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics

Analyses (EPA, 1993), and EPA Region III Modifications to National Functional Guidelines for Organic Data Review, Multi-Media, Multi-Concentration (EPA, 1994) in conjunction with method-specific criteria. Analytical results from the fixed-base laboratory for samples representing soil that is subsequently removed and disposed off-site will not be validated.

8.3.2 Sampling Locations

Samples will be collected from the excavation base and sidewalls of each removal area. The excavation base of each removal area will be divided into areas of no more than 625 sf (i.e., 25-foot by 25-foot area). One post-removal/confirmation base sample will be collected from each 625-sf area. The post-removal/confirmation base sample will be a composite sample created from soil collected at four randomly determined grab locations. A minimum of four post-removal/confirmation sidewall samples will be collected from each removal area having excavation sidewall lengths less than 50 feet. Additional sidewall samples will be collected at a frequency of one sidewall sample for every 50 feet of exposed sidewall. Post-removal/confirmation samples collected from excavation sidewalls will also be composite samples created from soil collected at two randomly determined grab locations.

8.4 EROSION AND SEDIMENT CONTROL

Erosion and sediment control measures will be implemented to minimize and/or eliminate erosion and sedimentation during the response action. The construction, implementation, and maintenance of the erosion and sediment control devices will be in accordance with the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control (MDE, 1994). The number provided below with each control measure, if any, references the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control (MDE, 1994). The erosion and sediment control devices can be modified based on construction equipment and techniques presented in the Contractor's work plan.

The erosion and sediment control measures include the following:

- Silt Fence (E15.0) – Placed along the downslope sides of each removal area to provide a temporary sediment barrier consisting of geotextile filter fabric.

- Stabilized Construction Entrance (17.0) – Placed as a controlled site entrance to reduce the amount of sediment transported by construction vehicles onto public roads. Loose dirt will be removed from the tires of construction vehicles as they traverse the stabilized construction entrance.

- Dust Control – Utilized to prevent surface and air movement of dust from exposed soil surfaces and to reduce the amount of airborne substances that may present health hazards, traffic safety problems, or harm plant/animal life.

- Permanent Seeding (20.0) – Utilized to establish perennial vegetation on disturbed areas by planting seeds of native grasses.

- Mulching (20.0) – Utilized to prevent erosion by protecting the soil surface from raindrop impact and to reduce the velocity of overland flow.

8.4.1 Inspection and Maintenance

In general, all erosion and sediment control measures will be checked daily and after each runoff-producing rainfall event. Any required repairs will be made immediately. The following items will be checked:

- The stabilized construction entrance will be maintained in a condition that will minimize tracking sediment onto public roads.

- Silt fence will be checked for undermining or deterioration of the fabric. Sediment will be removed when the level of sediment causes bulging or reaches one-half of the fabric height.

- Seeded areas will be checked regularly to ensure that a good stand of vegetation is maintained, and will be fertilized and reseeded as needed.

- The fuel and lubricant materials storage area will be checked to ensure that stored containers are not leaking and that the lining system is functioning properly.

Erosion and sediment control devices will be inspected and maintained during the response action and until the disturbed areas are permanently stabilized. Damaged erosion and sediment control devices will be repaired immediately. The Contractor will maintain a logbook of all erosion and sediment control device inspections and maintenance. The logbook will be available at the site at all times for inspection by duly authorized officials. Post-response action maintenance will consist of performing periodic inspections of the disturbed areas and repair of disturbed areas until the areas are permanently stabilized.

8.4.2 Restoration

All areas disturbed by response action implementation activities (i.e., removal and support facility areas) will be restored/stabilized using permanent stabilization practices. Activities to establish permanent stabilization (i.e., preparing the area for seeding and seed application or repaving) will be implemented as soon as possible following the establishing of final grades. The establishment of permanent stabilization includes seed bed preparation, seeding, and mulching. The seed mixture was selected from the list of Maryland standard seed mixtures in Section 20.0 of the Maryland Standards and Specifications for Soil Erosion and Sediment Control (MDE, 1994). The seed was selected based on the applicable hardiness zone, level of maintenance, and erosion resistance. The permanent seed mixture is based on Mixture 5 in Table 25 (page G-20-18) of the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control. Mixture 5 is suited for Plant Hardiness Zone 7a, in which the site is located. The permanent seed mixture consists of perennial ryegrass (*Lolium perenne*) seeded at a rate of 20 pounds of pure live seed (PLS) per acre, flatpea (*Lathyrus sylvestris*) seeded at a rate of 20 pounds PLS per acre. In the event that disturbed areas are brought to final grade outside of the optimal growing season for the permanent seed mixture, the disturbed areas will be temporarily stabilized using a temporary seed mixture. Erosion and sediment control devices will remain in place until permanent stabilization is established over the disturbed areas.

8.5 MISCELLANEOUS RESPONSE ACTION REQUIREMENTS

8.5.1 Utilities

Above- and below-ground utilities are known to exist on and near Block F. Stormwater, fire water, and potable water lines are present in Block F. Known utilities are indicated on the MRC utility map included as Appendix J of the Site Characterization Report (Tetra Tech, May 2006). The Contractor will verify, locate, and stake all utility locations within the limits of the site and adequately implement protection measures or remove the utilities before any earth-disturbing activities. The Contractor will coordinate protection, removal, or temporary utility bypasses with Lockheed Martin.

8.5.2 Groundwater Monitoring Wells

Groundwater monitoring wells MW37A through C, MW38A, MW39A, MW45A, MW46A, MW47A, MW65A and MW66A with flush-mounted protective casings exist throughout Block F. The monitoring wells will be protected during response action implementation. Groundwater monitoring well locations are shown on Figure 2-2.

8.5.3 Dust Control

During construction, the Contractor will be required, as necessary, to control the generation of dust to comply with OSHA and National Institute of Occupational Safety and Health (NIOSH) requirements. Systems used for dust control could include a sprinkler systems, water trucks, etc. The Contractor will identify the methods of dust control within the Contractor's work plan.

8.5.4 Spill Mitigation Response Procedures

Potential non-stormwater discharges during response action activities include wash water resulting from decontamination efforts associated with field equipment and vehicles, fuel, lubricant, and hydraulic fluid spills from vehicle fueling, lubrication, and maintenance, and spills of fertilizers and small quantities of laboratory chemicals used in sample collection, and other flammable substances.

All decontamination wash water will be collected in a lined decontamination and equipment wash pad area. All waters generated from decontamination and/or other washing activities will be collected, solids removed, characterized, and transported to an approved off-site permitted TSDF. All vehicle fueling, lubrication, and maintenance will be performed utilizing drip pans to contain any spills that may occur or within the decontamination pad to contain spills. Containers of detergents and vehicle maintenance fluids (e.g., oil, grease, antifreeze, hydraulic fluid, etc.) will be stored within an enclosed, lined, diked area along with the equipment fuel, which will be stored in tanks. This area, referred to as the materials storage area, will be bermed and lined with a minimum 60-mil-thick polyethylene geomembrane and will be sized to contain 110 percent of the volume stored within the area. A small sump or low point in the geomembrane will be designed to serve as a collection and monitoring point for any leaks or spills from the containers stored within

the materials storage area. When not in use, chemicals, paints, and other flammable substances will be stored in a flammable storage cabinet located within the Contractor's equipment trailer.

Good housekeeping procedures will be followed to reduce risks associated with these materials. These procedures include, but are not limited to, keeping materials in their original containers whenever possible, maintaining original labels and Material Safety Data Sheets (MSDSs), and using proper disposal methods for surplus materials. Accidental spills that may occur will be contained as appropriate for the spilled medium (liquid or solid) and collected and containerized immediately after discovery of the spill. Containerized material will be characterized for off-site transportation and disposal. The following spill mitigation equipment should be available on site during response action activities:

- Drip pans
- Oil-dry or similar compound
- Absorbent socks
- Shovels
- 55-Gallon drums or storage tank (for containerization)
- Labels for contents identification

Following spill cleanup, the cause of the spill will be investigated and material storage and handling procedures will be reviewed and revised where appropriate.

8.6 REPORTING REQUIREMENTS

Analytical reports and documentation generated as a result of the approved RAP and as necessary to obtain a Certificate of Completion will be included in the Notification of Completion Report. The Notification of Completion Report will be submitted to MDE within 90 days after completion of response action activities. The reports and documentation are described below.

Analytical reports of post-removal confirmation sample and backfill material data deliverables submitted to MDE will be in hardcopy format and electronic data deliverable (EDD) format. The EDD will be provided in Microsoft Excel® format to facilitate efficient and time-sensitive evaluation by MDE.

Removal activities for each discrete removal area will be documented on removal logs. The removal logs will include documentation such as identification and location of the removal area (e.g., associated soil boring sample number), contractor's name, removal date(s), backfill date(s), removal equipment used, removal area dimensions at both the ground surface and base of excavation, removal depth(s), lithology, groundwater elevation, direct-reading instrument and field screening results if applicable, visual observations, olfactory observations if any, and photographs. The final removal area limits at ground surface will be surveyed by a professional land surveyor registered in the State of Maryland. Post-removal/confirmation sampling field documentation including grab sample locations will be documented on a separate Soil Sample Log Sheet.

UST documentation will include the following information:

- UST size (gallons and dimensions) and material of construction
- UST location on the property
- Date of removal
- UST system description including condition and contents
- Method or methods used for removal of the UST system
- Method or methods used for cleaning/decontamination of recyclable materials
- Post-removal confirmation sample analytical reports and documentation
- Name of contractor who performed the work
- Receipt documenting proper disposal of the UST system
- Receipt documenting proper disposal of removed oil-contaminated soil

Waste profiles, waste characterization results, TSDF pre-approval or approval documentation, shipment manifests, delivery tickets or certificates, and treatment and disposal certificates will be provided for all contaminated media removed from Block F.

8.6.1 Recordkeeping

Lockheed Martin will maintain complete records of the response action for a minimum of 5 years.

Lockheed Martin and the MDE-certified underground storage system technician or remover will maintain complete records of UST removal for a minimum of 5 years as required by COMAR 26.10.06.11G. Lockheed Martin will maintain complete records that demonstrate compliance with the UST closure requirements for at least 5 years after completion of the removal.

Table 8-1

Backfill Material Acceptance Criteria
Block F, Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland

Parameter	Criteria	Test Method
USCS Classification	GW, GP, GM, SW, SP, and SM	ASTM D 2487
Atterberg Limits	--	ASTM D 4318
- Liquid Limit	35 maximum	
- Plasticity Index	12 maximum	
Amount finer than the No. 200 U.S. Standard Sieve	25 percent maximum	ASTM D 1140
Maximum Particle Size	1 inch maximum	ASTM D 422

1 Backfill material will be evaluated for constituents as described in Section 8.2.2 paragraph titled "Backfilling."

ASTM American Society for Testing and Materials International.
USCS Unified Soil Classification System.

Map Document: (K:\GProject\middle_river\Maps\GPS SOIL BORING LOC\Final RAP figures\Block F Removal Limits.mxd) 4/16/2008 -- 1:54:33 PM

CHESAPEAKE PARK PLAZA

MW65A

MW66A

REC #4

REC #13

REC #5

SEVEN 1,000 - GAL AVIATION FUEL USTS ABANDONED-IN-PLACE

REMOVAL DEPTH = 9.3 FT BGS

MW47A

NOTE:
Depth of removal indicated is based on bottom of sampling interval where contaminant concentrations exceed the cleanup criteria. Actual depth of removal will extend to this depth or to the depth of the zone of saturation, whichever is less. Post-removal/confirmation sampling and analysis of the exposed soil on the base and sidewalls of the removal area(s) will be performed.

SB-23
SB-23A
SB-22A
SB-22
SB-26
SB-28
SB-27
SB-29

Area E
(329 cubic yards)

SB-236
SB-409
SB-407
SB-408
SB-490
SB-404
SB-489

Area D
(136 cubic yards)

SB-406
SB-405
SB-24A
SB-24
SB-237
SB-50

SB-266
BENZO(A)PYRENE 977 ug/kg (SS)
AROCLOR-1260 756 ug/kg (SS)

SB-238
BENZO(A)PYRENE 1960 ug/kg (05')

SB-406-0102
BENZO(A)PYRENE
510 ug/kg

SB-296
SB-295

SB-397-0405
BENZO(A)PYRENE
850 ug/kg

SB-297
SB-298
SB-401
SB-400
SB-399
SB-403
SB-402

WATERFRONT LOT

SB-94
BENZO(A)PYRENE 850 ug/kg (SS)
AROCLOR-1260 1400 ug/kg (SS)
BENZO(A)PYRENE 490 ug/kg (05')
BENZO(A)PYRENE 950 ug/kg (10')

BLOCK 'F'

SB-265
BENZO(A)PYRENE 1800 ug/kg (SS)
BENZO(A)PYRENE 401 ug/kg (02')

SB-394
SB-395
SB-396
SB-267
SB-398

FORMER RAMP TRAINING SCHOOL

SB-393-0102
BENZO(A)PYRENE
450 ug/kg

SB-265
SB-266
SB-94
SB-393
SB-93

Area B
(2,666 cubic yards)

Area A
(1,067 cubic yards)

SB-268
BENZO(A)PYRENE 25600 ug/kg (SS)
BENZO(A)PYRENE 3130 ug/kg (02')

SB-268
SB-270
SB-269
SB-96
SB-392

SB-93
BENZO(A)PYRENE 1500 ug/kg (SS)
AROCLOR-1260 800 ug/kg (SS)

SB-388
SB-389
SB-25
SB-25A

SB-269
BENZO(A)PYRENE 1310 ug/kg (SS)

SB-387
SB-391

SB-390-0405
BENZO(A)PYRENE
990 ug/kg

SB-95

MW45A

SB-384

SB-95
BENZO(A)PYRENE 1600 ug/kg (SS)

SB-382

SB-386
SB-385

MW46A

Area C
(906 cubic yards)

SB-299

SB-383-0102
BENZO(A)PYRENE
19000 ug/kg

COW PEN CREEK

DARK HEAD COVE

FIGURE 8-1

REMOVAL LIMITS

LEGEND

- GROUNDWATER MONITORING WELL
- PREVIOUS SOIL SAMPLING LOCATION
- FALL 2007 SOIL SAMPLING LOCATION
- TAX BLOCK
- REC LOCATION APPROXIMATE
- 2 FT
- 5 FT
- 10 FT
- PRE-1950 SHORELINE

CLEANUP GOAL FOR BENZO(A)PYRENE IS 400 ug/kg
CLEANUP GOAL FOR PCBs IS 320 ug/kg

Lockheed Martin Middle River Complex
Middle River, Maryland

0 25 50 100 Feet

N

DATE MODIFIED: 3/4/08

CREATED BY: LR

Tetra Tech, Inc.

Section 9
Permits, Notifications, and Contingencies

9.1 INTRODUCTION

This section describes the permits required for the proposed response action and the required notifications and contingencies if unexpected conditions are encountered during implementation of the RAP.

9.2 PERMITS

Lockheed Martin will meet all local, State, and federal permitting requirements for the response action described in Section 8. Based on a review of requirements of MDE and Baltimore County, permitting requirements for the response action are related to earth-moving activities, excavation dewatering if necessary, and USTs.

9.2.1 Earth-Moving Activities

This section describes permits related to earth-moving activities including grading, erosion and sediment control, and stormwater management.

Although the proposed response action will not result in a planned disturbance of 1 acre or more, a Notice of Intent form will be submitted to MDE to obtain coverage under the General Permit for Construction Activity for stormwater discharges. Conditions of the General Permit include compliance with approved erosion and sediment control and stormwater management plans. The erosion and sediment control plan will be submitted to the Baltimore County Soil Conservation

District for review and approval, and the stormwater management plan will be submitted to the Baltimore County Department of Environmental Protection and Resource Management (DEPRM) for review and approval, as discussed below. As a condition of erosion and sediment control plan approval, Lockheed Martin will certify that a "responsible person" trained in techniques and standards of erosion and sediment controls will be on site during construction. After Block F has been finally stabilized and all stormwater discharges from construction sites that are authorized by this permit are eliminated, a Notice of Termination form will be submitted to MDE.

Miss Utility for Maryland will be notified (1-800-257-7777, www.missutility.net) at least 48 hours, but not more than 10 working days, before excavation begins.

A Baltimore County grading permit is required for any land disturbance and any grading activities that disturb greater than 5,000 sf or more than 100 cy of fill material. As a condition of grading permit issuance, a stormwater management plan will be submitted to the Baltimore County DEPRM for review and approval by DEPRM and the Baltimore County Soil Conservation District. The stormwater management plan will be prepared in accordance with the 2000 Maryland Stormwater Design Manual, Volumes I and II (MDE, October 2000). As an additional condition of grading permit issuance, a grading plan will be submitted to the Baltimore County DEPRM for review and approval, and an erosion and sediment control plan will be submitted to the Soil Conservation District for review and approval. The erosion and sediment control plan will be prepared in accordance with the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control (MDE, 1994). The approved plans will be included with the grading permit application.

A Baltimore County stormwater management permit is required because stormwater management devices and practices are required. The approved stormwater management plan will be included with the stormwater management permit application.

9.2.2 Excavation Dewatering

Water resulting from excavation dewatering will be managed in one of the following ways:

- Contained, characterized as required, and disposed at an off-site permitted TSDF
- Filtered and subsequently discharged to surface water (regulated by MDE and EPA)
- Filtered and subsequently discharged to the local sanitary sewer system (regulated by Baltimore County)

The industrial surface water discharge permit is a combined state and federal permit under NPDES. A completed application will be submitted to MDE if required. MDE develops discharge limits based on the information provided in the permit application and issues the permit considering public comments, if any.

A wastewater discharge permit is required to discharge industrial wastewater to the local sanitary sewer system. A completed application for discharge to the Baltimore County sanitary sewer system will be submitted to the Engineering and Regulation Division of the Bureau of Utilities if required. There are specific limits set by the treatment plant for certain pollutants. Discharge limits for these and other pollutants may be set on a case-by-case basis. The discharge permit is issued by the Baltimore County Department of Public Works and Development Management.

9.2.3 Underground Storage Tanks

This section describes permits associated with removal of USTs.

MDE OCP will be notified at least 30 days before an UST is removed using the 30-Day Written Notification, Underground Storage System Removal/Abandonment form. MDE may require completion of a Notification for Underground Storage Tanks form if it is determined necessary to properly update MDE records. If so, an amended Notification for Underground Storage Tanks form will also be submitted to the MDE OCP within 30 days after the USTs are removed.

A storage system removal permit issued by the Baltimore County Department of Permits and Development Management will be obtained before any USTs are removed.

UST removal will be performed only with the continuous on-site presence, direction, supervision, and control of an MDE-Certified Underground Storage System Technician or Remover as defined by MDE and Baltimore County. The technician or remover will have proof of certification from the MDE at all times while on site.

9.3 NOTIFICATIONS

MDE will be notified immediately of any previously undiscovered contamination, changes in the RAP schedule, previously undiscovered storage tanks and other oil-related issues, and citations from regulatory entities related to health and safety practices.

9.4 CONTINGENCIES

If soil with COC concentrations greater than the cleanup goals is discovered outside the planned limits of soil removal, based on the results of post-removal/confirmation sampling and analysis, it will be addressed as discussed in Section 8.3. If free product or other unexpected petroleum contamination is discovered during UST removal, it will be addressed as discussed in Section 8.2.1.

Section 10
Implementation Schedule

The response action proposed in this RAP for Block F is anticipated to take approximately four months to complete. The response actions for the six properties that have RAPs submitted to MDE for review (Blocks B, D, E, F, G, and H) will be executed in sequence. Lockheed Martin is committed to commence work within 30 days of approval of the RAPs and the entire project is expected to take approximately twelve months to complete. Upon approval of the RAPs, Lockheed Martin will provide a more detailed schedule for the entire project and then provide the MDE with an updated schedule each month for tracking purposes. Lockheed Martin reserves the right to stage or execute each block in sequential order to minimize site disruption and costs. A draft schedule for the Block is presented below:

Deliverable/Milestone	Completion Date
Soil RAP Submittal to MDE	On or about April 22, 2008
Soil RAP Approval	On or about July 7, 2008
Submit Permits/Notifications	Within 30 days of approval
Mobilization/Site Preparation	In conjunction with other blocks over a 6 to 12 month timeframe
Soil Removal and Sampling	3 months after commencing work
Demobilization	Within 30 days of completion of soil removal
Reporting	Within 60 days of demobilization

Section 11
Administrative Requirements

11.1 INTRODUCTION

MDE's VCP stipulates several administrative requirements with which the applicant must comply. The administrative requirements include a written agreement, zoning certification, performance bond or other form of security, and health and safety plan requirements. These administrative requirements are described below.

11.2 WRITTEN AGREEMENT

A written agreement is provided with this RAP in compliance with Section 7-508 of the Environment Article, Annotated Code of Maryland. The written agreement stipulates that if the RAP is approved, the applicant agrees, subject to the withdrawal provisions set forth in Section 7-512 of the Environment Article, to comply with the provisions of the RAP. The written agreement is provided in Appendix E.

11.3 ZONING CERTIFICATION

A zoning certification is provided with this RAP in compliance with Section 7-508 of the Environment Article, Annotated Code of Maryland. Section 7-508 requires that RAPs include a certified written statement that the property meets all applicable county and municipal zoning requirements. The zoning certification is provided in Appendix E.

11.4 PERFORMANCE BOND OR OTHER SECURITY

Lockheed Martin will post a performance bond with MDE within ten days of RAP approval. The bond amount ($140,000) will be adequate to secure and stabilize the property if the RAP is not completed.

11.5 HEALTH AND SAFETY PLAN

A project-specific Health and Safety Plan (HASP) will be prepared and submitted to MDE prior to implementation of the MDE-approved RAP. The HASP will address each planned response action activity that is performed by workers engaged in hazardous waste site activities. The project-specific HASP will reference applicable regulations that may apply to response action activities. At a minimum, the HASP will contain the required elements specified in 29 CFR Parts 1910.120 and 1926.65, as well as other regulatory and Lockheed Martin requirements that apply to the nature of the activities that will be performed. At a minimum, the project-specific HASP will address the following (29 CFR Part 1910 citation in parentheses):

- Health and safety personnel requirements and responsibilities [29 CFR Part 1910.120(b)(4)(iv)]
- Pertinent site information [29 CFR Part 1910.120(b)(4)(iv)]
- Scope of work [29 CFR Part 1910.120(b)(4)(iv)]
- A safety and health risk or hazard analysis for each planned site activity [29 CFR Part 1910.120(b)(4)(iv)]
- Training requirements [29 CFR Part 1910.120(e)]
- Personal protective equipment (PPE) requirements for each planned site activity [29 CFR Part 1910.120(c)(5)]
- Medical surveillance requirements [29 CFR Part 1910.120(h)(1)(i)]
- Air monitoring and sampling requirements
- Site control measures [29 CFR Part 1910.120(d)]
- Decontamination procedures [29 CFR Part 1910.120(k)(1)]

- An Emergency Response Plan [29 CFR Part 1910.120(l)(1)]
- Confined-space entry procedures (29 CFR Part 1910.146)
- Spill containment [29 CFR Part 1910.120(j)(1)(viii)]
- Recordkeeping [29 CFR Part 1910.120(f)(8)]

The HASP will present information to adequately address appropriate hazard recognition and evaluation and control for the potential hazards that may be anticipated for the specific planned activities.

The project-specific HASP is recognized as a dynamic document that is subject to review and possible revision, as appropriate. Potential factors that could warrant the revision of a HASP include a change in the scope of work or as a result of evaluating data collected throughout implementation of the response action.

Implementation of the appropriate portions of the project-specific HASP will be accomplished by the Site Safety Officer (SSO) (with assistance from project management, as appropriate) assigned to the response action. The SSO will be on site during all intrusive activities. Specific health and safety program implementation elements are summarized below.

11.5.1 Training and Medical Surveillance

All personnel who participate in on-site work where there is a potential for exposure to hazardous waste-related safety or health hazards will be current participants in health and safety training and medical surveillance programs. These programs are in accordance with regulatory requirements. In general, the employee training and medical requirements specified in the OSHA hazardous waste regulations are regarded as minimum requirements.

At a minimum, employees who will or may participate in any on-site activities that may involve potential exposures to hazardous waste-related safety or health hazards will first have to satisfy the following health and safety training requirements:

- 40-Hour introductory hazardous waste general worker training [29 CFR Part 1910.120(e)(3)(i)].
- On their first assignment, an additional 24 hours of activity under the direction of a trained, experienced supervisor [29 CFR Part 1910.120(e)(3)(i)].
- Individuals who will be in a supervisory position must also complete an additional 8 hours of management/supervisory health and safety training [29 CFR Part 1910.120(e)(4)].
- 8 Hours of annual health and safety refresher training for all general workers and supervisors [29 CFR Part 1910.120(e)(8)].
- Project-specific training prior to the onset of any on-site intrusive activities.

Additional health and safety training requirements may also be specified in the project-specific HASP depending on the nature of the planned activities (e.g., confined space entry training, fall protection training, excavation safety training, etc.).

11.5.2 On-Site Health and Safety Functions

The SSO will be responsible for ensuring that all health and safety requirements specified in the HASP are adequately performed and documented. This commonly includes activities such as the following:

- Conducting and documenting on-site health and safety training.
- Implementing a project-specific hazard communication program (e.g., chemical inventory, MSDSs, chemical container labeling, etc.).
- Implementing other project-specific health and safety programs that may be relevant based on the response action scope of work and the nature of planned activities (e.g., hearing conservation program, confined space entry program, respiratory protection program, etc.).
- Performing and documenting equipment inspections for equipment that is intended to be used on site.
- Calibration and use of air monitoring devices (e.g., organic vapor meters, particulate meters, etc.) and air sampling devices.
- Ensuring that specified PPE is appropriately used.
- Overseeing personnel and equipment decontamination activities.

- Coordinating with appropriate on- and off-site contacts and agencies and managing the emergency response plan, when/as appropriate.

- Other duties as specified in the HASP.

Section 12
References

1. Aerial Photographs dated: 1938, 1949, 1957, 1969 and 1971.

2. American Petroleum Institute (API), March 1996. Closure of Underground Petroleum Storage Tanks (API Recommended Practice 1604, Third Edition).

3. Cassell, J.R., July 1977. Drainage Area Map – Existing Storm Water Drains, Chesapeake Park Plaza/Dark Head Cove Road; Sheet A1 of 7.

4. Earth Tech, Inc., February 2003. Draft Phase I Environmental Assessment, Chesapeake Industrial Park.

5. United States Environmental Protection Agency (EPA), October 1988. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final EPA/540/G-89/004: Office of Emergency and Remedial Response, Washington, D.C.

6. EPA, 1993. EPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analysis.

7. EPA, 1994. EPA Region III Modifications to National Functional Guidelines for Organic Data Review, Multi-Media, Multi-Concentration.

8. Maryland Department of the Environment (MDE), 1994. 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control, Maryland Department of the Environment, Water Management Administration in association with Soil Conservation Service and State Soil Conservation Committee.

9. MDE, October 2000. 2000 Maryland Stormwater Design Manual Volumes I & II, Maryland Department of the Environment, Water Management Administration.

10. MDE, August 2001. Cleanup Standards for Soil and Groundwater, Interim Final Guidance (Update No. 1).

11. MDE, March 2006. Guidance Document, Voluntary Cleanup Program.

12. Tetra Tech, Inc. (Tetra Tech), February 2004. Final Report Phase II Site Investigation of Exterior Areas, Volumes I and II, Lockheed Martin Middle River Complex.

13. Tetra Tech, August 2004. Historical Research Report, Lockheed Martin Middle River Complex.

14. Tetra Tech, April 2005. Final Data Report, Site-Wide Phase II Investigation, Middle River Complex.

15. Tetra Tech, May 2006. Site Characterization Report, Revision 1.0, Lockheed Martin Middle River Complex.

16. Tetra Tech, December 2006. Comment Response Document No. 2, Site Characterization Report, Lockheed Martin Middle River Complex.

17. Tetra Tech, November 2007. Soil Characterization Work Plan, Lockheed Martin Middle River Complex.

APPENDIX A - SUMMARY OF DETECTED CONCENTRATIONS IN SOIL

TABLE AF-1

SUMMARY OF DETECTED CONCENTRATIONS IN SURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 1 OF 9

SAMPLE ID:	SB-22A-SS	SB-23A-SS	SB-24A-SS	SB-25A-SS	SB-30A-SS	SB-31A-SS	SB-55-SS	SB-56-SS
LABORATORY ID:	04091701-24	04091701-18	04091701-19	04091701-23	04091701-15	04091701-10	04091701-16	04091701-11
SAMPLE DATE:	9/15/2004	9/15/2004	9/15/2004	9/15/2004	9/15/2004	9/13/2004	9/15/2004	9/13/2004
LOCATION:	SB-22A	SB-23A	SB-24A	SB-25A	SB-30A	SB-31A	SB-55	SB-56
INORGANICS (mg/kg)								
ANTIMONY	--	--	--	--	--	--	--	--
ARSENIC	1.3	2.2	3.4	0.6	2.3 L	1.8 L	1.5 L	2.9 L
BARIUM	NA	NA	NA	NA	NA	NA	NA	NA
BERYLLIUM	--	--	--	5	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--
CHROMIUM	8.1	13	18	18	8.7 L	7.9 L	13 L	14 L
COBALT	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	4.9 K	5.3	36	15	4.4 K	7.4	74	11
LEAD	--	5.4	67	5.9	4.5 J	2.8 J	420 J	6.3 J
MERCURY	--	--	1.4	--	--	--	--	--
MOLYBDENUM	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	4.6 K	7.1	14	27	4.5 K	3.6 K	13	5.1 K
SELENIUM	--	--	--	--	--	--	--	--
SILVER	--	3.4	--	--	--	--	--	--
VANADIUM	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	--	--	120	48 K	--	--	58 J	--
MISCELLANEOUS (mg/kg)								
HEXAVALENT CHROMIUM	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (S.U.)								
PH	NA	NA	NA	NA	NA	NA	NA	NA
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1254	--	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--	--
PETROLEUM HYDROCARBONS (ug/kg)								
DIESEL RANGE ORGANICS	--	--	--	--	--	--	13000	--
GASOLINE RANGE ORGANICS	--	--	--	1200	--	--	--	--

TABLE AF-1

SUMMARY OF DETECTED CONCENTRATIONS IN SURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 9

SAMPLE ID:	SB-22A-SS	SB-23A-SS	SB-24A-SS	SB-25A-SS	SB-30A-SS	SB-31A-SS	SB-55-SS	SB-56-SS
LABORATORY ID:	04091701-24	04091701-18	04091701-19	04091701-23	04091701-15	04091701-10	04091701-16	04091701-11
SAMPLE DATE:	9/15/2004	9/15/2004	9/15/2004	9/15/2004	9/15/2004	9/13/2004	9/15/2004	9/13/2004
LOCATION:	SB-22A	SB-23A	SB-24A	SB-25A	SB-30A	SB-31A	SB-55	SB-56
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)								
ACENAPHTHENE	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	74 J	--	44 J	--	110 J	--
BENZO(A)PYRENE	--	--	63 J	--	--	--	99 J	--
BENZO(B)FLUORANTHENE	--	--	66 J	--	--	--	94 J	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	70 J	--
BENZO(K)FLUORANTHENE	--	--	57 J	--	37 J	--	110 J	--
BENZOIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--
CHRYSENE	--	--	77 J	--	55 J	--	130 J	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	60 J	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--	--	--	--	--	--
FLUORANTHENE	57 J	--	170 J	--	84 J	--	270 J	--
FLUORENE	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--
PHENANTHRENE	44 J	--	92 J	--	74 J	--	160 J	--
PHENOL	--	420	--	--	--	--	--	--
PYRENE	--	--	110 J	--	110 J	37 J	160 J	--
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
2-BUTANONE	--	--	--	--	--	--	--	--
ACETONE	89 J	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	11 B	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--

TABLE AF-1

SUMMARY OF DETECTED CONCENTRATIONS IN SURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-57-SS	SB-58-SS	SB-93-SS	SB-94-SS	SB-95-SS	SB-96-SS	SB-236-SS	SB-237-SS
LABORATORY ID:	04091701-06	04091701-01	04092018-12	04092018-08	04092018-01	04092018-04	9612617009	9612621002
SAMPLE DATE:	9/13/2004	9/13/2004	9/16/2004	9/16/2004	9/16/2004	9/16/2004	5/9/2005	5/9/2005
LOCATION:	SB-57	SB-58	SB-93	SB-94	SB-95	SB-96	SB-236	SB-237
INORGANICS (mg/kg)								
ANTIMONY	--	--	--	--	--	--	0.5 L	0.4 L
ARSENIC	2.2 L	1.5 L	1.8 L	2.1 L	2 L	2 L	3	3 B
BARIUM	NA	NA	NA	NA	NA	NA	36	42
BERYLLIUM	--	--	--	--	--	--	1.4	1.6
CADMIUM	--	--	3.5 L	4.5 L	--	--	0.3	0.4
CHROMIUM	11 L	24 L	110	25	14	9.3 K	17.7	19.8
COBALT	NA	NA	NA	NA	NA	NA	6.8	5.6
COPPER	7.5	9.4	21 L	21 L	34 L	5.1 L	14	12
LEAD	8.6 J	41 J	73 L	65 L	100 L	3.2 L	11	8 B
MERCURY	--	--	0.68	0.97	0.15	--	0.29 L	0.06
MOLYBDENUM	NA	NA	NA	NA	NA	NA	0.4 B	0.6 B
NICKEL	7.4	8.4	11	11	8.1	5.4 K	12	12
SELENIUM	--	--	--	--	--	--	2	2
SILVER	--	--	--	--	--	--	--	--
VANADIUM	NA	NA	NA	NA	NA	NA	29.9	31
ZINC	--	43 J	100 K	92 K	81 K	--	35	28
MISCELLANEOUS (mg/kg)								
HEXAVALENT CHROMIUM	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (S.U.)								
PH	NA	NA	NA	NA	NA	NA	8.1	NA
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1254	--	--	--	--	--	--	NA	NA
AROCLOR-1260	--	--	800	1400	--	--	NA	NA
PETROLEUM HYDROCARBONS (ug/kg)								
DIESEL RANGE ORGANICS	--	100000 L	150000	67000	--	--	NA	NA
GASOLINE RANGE ORGANICS	--	--	--	--	--	--	NA	NA

TABLE AF-1

SUMMARY OF DETECTED CONCENTRATIONS IN SURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-57-SS	SB-58-SS	SB-93-SS	SB-94-SS	SB-95-SS	SB-96-SS	SB-236-SS	SB-237-SS
LABORATORY ID:	04091701-06	04091701-01	04092018-12	04092018-08	04092018-01	04092018-04	9612617009	9612621002
SAMPLE DATE:	9/13/2004	9/13/2004	9/16/2004	9/16/2004	9/16/2004	9/16/2004	5/9/2005	5/9/2005
LOCATION:	SB-57	SB-58	SB-93	SB-94	SB-95	SB-96	SB-236	SB-237
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)								
ACENAPHTHENE	--	--	--	--	160 J	--	NA	NA
ACENAPHTHYLENE	--	--	--	--	--	--	NA	NA
ANTHRACENE	--	--	--	--	380 J	--	NA	NA
BENZO(A)ANTHRACENE	--	--	1800 J	880 J	1600	--	NA	NA
BENZO(A)PYRENE	--	--	1500 J	850 J	1600	--	NA	NA
BENZO(B)FLUORANTHENE	--	--	1600 J	890 J	1800	--	NA	NA
BENZO(G,H,I)PERYLENE	--	--	1000 J	--	1000 J	--	NA	NA
BENZO(K)FLUORANTHENE	--	--	1500 J	1000 J	1600	--	NA	NA
BENZOIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	NA	NA
BUTYL BENZYL PHTHALATE	--	--	--	--	--	--	NA	NA
CARBAZOLE	--	--	--	--	190 J	--	NA	NA
CHRYSENE	60 J	--	2300 J	1100 J	1700	--	NA	NA
DIBENZO(A,H)ANTHRACENE	--	--	--	--	75 J	--	NA	NA
DIBENZOFURAN	--	--	--	--	54 J	--	NA	NA
DIMETHYL PHTHALATE	--	2000 J	--	--	--	--	NA	NA
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	NA	NA
DI-N-OCTYL PHTHALATE	--	--	--	--	53 J	--	NA	NA
FLUORANTHENE	98 J	630 J	3400 J	2000 J	3300	--	NA	NA
FLUORENE	--	--	--	--	130 J	--	NA	NA
INDENO(1,2,3-CD)PYRENE	--	--	820 J	360 J	990	--	NA	NA
NAPHTHALENE	--	--	--	--	--	--	NA	NA
PHENANTHRENE	54 J	--	1600 J	1100 J	1600	--	NA	NA
PHENOL	--	--	--	--	--	--	NA	NA
PYRENE	94 J	540 J	4000 J	1400 J	2500	--	NA	NA
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
2-BUTANONE	--	--	--	--	--	--	NA	NA
ACETONE	--	--	--	--	--	--	NA	NA
CARBON DISULFIDE	--	--	--	--	--	--	NA	NA
METHYLENE CHLORIDE	--	--	--	--	--	8 J	NA	NA
TOLUENE	--	--	--	--	--	--	NA	NA

TABLE AF-1

SUMMARY OF DETECTED CONCENTRATIONS IN SURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 5 OF 9

SAMPLE ID:	SB-238-SS	SB-250-SS	SB-251-SS	SB-252-SS	SB-253-SS	SB-265-SS	SB-266-SS	SB-267-SS
LABORATORY ID:	9613107007	9612617001	9612617003	9612617005	9612617007	9612625001	9612625003	9612625005
SAMPLE DATE:	5/17/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005
LOCATION:	SB-238	SB-250	SB-251	SB-252	SB-253	SB-265	SB-266	SB-267
INORGANICS (mg/kg)								
ANTIMONY	1 L	0.8 L	1 L	0.7 L	1 L	0.5	1	1
ARSENIC	3	1 B	3 B	2 B	3 B	5	3 B	3 B
BARIUM	86	37	40	31	49	29	44	79
BERYLLIUM	1.3	0.7	0.7	0.6	0.6	1.3	0.8	0.8
CADMIUM	2	0.2 B	0.2 B	0.1 B	0.4	0.8	1.8	0.7
CHROMIUM	36.4	11.8	15.8	11.8	14.4	55.8	31.3	16.4
COBALT	6.4	5.8	5.9	3.6	4.9	8.9	8.5	6
COPPER	23	6	6	4	9	17	16	16
LEAD	148	17	7 B	10	31	20	43	91
MERCURY	0.24	0.04	0.02	0.04	0.07	0.09	0.51	0.07
MOLYBDENUM	1 B	0.5 B	--	--	--	2 B	0.6 B	--
NICKEL	21	8	9 B	6 B	8 B	20	14	9
SELENIUM	--	2	--	--	--	--	3	3
SILVER	--	0.05 B	--	--	0.2 B	1.1	1.1	0.06 B
VANADIUM	49	20.5	24.8	20.3	29.5	46.2	33.4	21.6
ZINC	167	32	29	25	39	50	85	287
MISCELLANEOUS (mg/kg)								
HEXAVALENT CHROMIUM	0.49	NA	NA	NA	NA	3.6	2	NA
MISCELLANEOUS (S.U.)								
PH	NA	NA	NA	NA	NA	8.3	NA	NA
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1254	--	NA	NA	NA	NA	--	--	96
AROCLOR-1260	154	NA	NA	NA	NA	119	756	73 J
PETROLEUM HYDROCARBONS (ug/kg)								
DIESEL RANGE ORGANICS	271000	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	--	NA	NA	NA	NA	NA	NA	NA

TABLE AF-1

SUMMARY OF DETECTED CONCENTRATIONS IN SURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-238-SS	SB-250-SS	SB-251-SS	SB-252-SS	SB-253-SS	SB-265-SS	SB-266-SS	SB-267-SS
LABORATORY ID:	9613107007	9612617001	9612617003	9612617005	9612617007	9612625001	9612625003	9612625005
SAMPLE DATE:	5/17/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005
LOCATION:	SB-238	SB-250	SB-251	SB-252	SB-253	SB-265	SB-266	SB-267
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)								
ACENAPHTHENE	--	NA	NA	NA	NA	174	98	--
ACENAPHTHYLENE	--	NA	NA	NA	NA	135	44 J	--
ANTHRACENE	54 J	NA	NA	NA	NA	870	291	41 J
BENZO(A)ANTHRACENE	241 J	NA	NA	NA	NA	1980	947	209
BENZO(A)PYRENE	245 J	NA	NA	NA	NA	1800	977	212
BENZO(B)FLUORANTHENE	254 J	NA	NA	NA	NA	2300	1090	229
BENZO(G,H,I)PERYLENE	344 J	NA	NA	NA	NA	450 J	253 J	113 J
BENZO(K)FLUORANTHENE	225 J	NA	NA	NA	NA	1910	1100	241
BENZOIC ACID	--	NA	NA	NA	NA	152 J	157 J	925
BIS(2-ETHYLHEXYL)PHTHALATE	--	NA	NA	NA	NA	40 J	--	--
BUTYL BENZYL PHTHALATE	--	NA	NA	NA	NA	25 J	--	--
CARBAZOLE	40 J	NA	NA	NA	NA	242	158 J	--
CHRYSENE	287 J	NA	NA	NA	NA	2090	1030	229
DIBENZO(A,H)ANTHRACENE	100 J	NA	NA	NA	NA	232	117	41 J
DIBENZOFURAN	--	NA	NA	NA	NA	86 J	43 J	--
DIMETHYL PHTHALATE	--	NA	NA	NA	NA	--	--	--
DI-N-BUTYL PHTHALATE	--	NA	NA	NA	NA	37 J	38 J	--
DI-N-OCTYL PHTHALATE	--	NA	NA	NA	NA	--	--	--
FLUORANTHENE	546	NA	NA	NA	NA	4020	1940	395
FLUORENE	--	NA	NA	NA	NA	213	94	--
INDENO(1,2,3-CD)PYRENE	274 J	NA	NA	NA	NA	635	340	138 J
NAPHTHALENE	--	NA	NA	NA	NA	36 J	--	--
PHENANTHRENE	249	NA	NA	NA	NA	2740	1090	163
PHENOL	--	NA	NA	NA	NA	--	--	--
PYRENE	685 J	NA	NA	NA	NA	2570	1380	286
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
2-BUTANONE	3.14 J	NA	NA	NA	NA	NA	NA	NA
ACETONE	31 J	NA	NA	NA	NA	NA	NA	NA
CARBON DISULFIDE	7.1	NA	NA	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	--	NA	NA	NA	NA	NA	NA	NA
TOLUENE	1.2 J	NA	NA	NA	NA	NA	NA	NA

TABLE AF-1

SUMMARY OF DETECTED CONCENTRATIONS IN SURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	**SB-268-SS**	**SB-269-SS**	**SB-270-SS**
LABORATORY ID:	**9612621005**	**9612621007**	**9612621009**
SAMPLE DATE:	**5/9/2005**	**5/9/2005**	**5/9/2005**
LOCATION:	**SB-268**	**SB-269**	**SB-270**
INORGANICS (mg/kg)			
ANTIMONY	2 L	1 L	1 L
ARSENIC	5	6	3 B
BARIUM	207	103	64
BERYLLIUM	1.4	1.7	1.1
CADMIUM	3	0.7	0.3 B
CHROMIUM	31.8	26.1	15.3
COBALT	11.7	6.6	5.4
COPPER	50	15	12
LEAD	447	56	64
MERCURY	0.49	0.18	0.11
MOLYBDENUM	1 B	1 B	0.6 B
NICKEL	14	13	8 B
SELENIUM	--	3	--
SILVER	0.3 B	--	--
VANADIUM	35.8	42.8	26.2
ZINC	289	74	51
MISCELLANEOUS (mg/kg)			
HEXAVALENT CHROMIUM	3.6	0.51	0.64
MISCELLANEOUS (S.U.)			
PH	NA	NA	NA
PESTICIDES/PCBs (ug/kg)			
AROCLOR-1254	--	--	--
AROCLOR-1260	63	95	29 J
PETROLEUM HYDROCARBONS (ug/kg)			
DIESEL RANGE ORGANICS	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA

TABLE AF-1

SUMMARY OF DETECTED CONCENTRATIONS IN SURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-268-SS	SB-269-SS	SB-270-SS
LABORATORY ID:	9612621005	9612621007	9612621009
SAMPLE DATE:	5/9/2005	5/9/2005	5/9/2005
LOCATION:	SB-268	SB-269	SB-270
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)			
ACENAPHTHENE	3620	79 J	--
ACENAPHTHYLENE	--	--	--
ANTHRACENE	9420	256 J	66 J
BENZO(A)ANTHRACENE	28700	1260 J	239
BENZO(A)PYRENE	25600	1310 J	258
BENZO(B)FLUORANTHENE	26700	1520 J	250
BENZO(G,H,I)PERYLENE	13200 J	662 J	175 J
BENZO(K)FLUORANTHENE	23000	1360 J	244
BENZOIC ACID	--	--	189 J
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--
BUTYL BENZYL PHTHALATE	--	--	--
CARBAZOLE	4640	123 J	32 J
CHRYSENE	28400	1250 J	269
DIBENZO(A,H)ANTHRACENE	5250	206 J	46 J
DIBENZOFURAN	1650 J	27 J	--
DIMETHYL PHTHALATE	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--
DI-N-OCTYL PHTHALATE	--	--	--
FLUORANTHENE	63200	2720 J	600
FLUORENE	3580	68 J	--
INDENO(1,2,3-CD)PYRENE	14500	745 J	135 J
NAPHTHALENE	--	--	--
PHENANTHRENE	36100	987 J	265
PHENOL	--	--	--
PYRENE	45200	1740 J	371
VOLATILE ORGANIC COMPOUNDS (ug/kg)			
2-BUTANONE	NA	NA	NA
ACETONE	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA
TOLUENE	NA	NA	NA

TABLE AF-1

SUMMARY OF DETECTED CONCENTRATIONS IN SURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

1 Highlighted values indicate positive detection in exceedance of cleanup goals.

µg/kg - Micrograms per kilogram.
MDE - Maryland Department of the Environment.
mg/kg - Milligrams per kilogram.
NA - Not applicable.
NC - No criterion.
SB - Soil boring.
S.U. - Standard Units.
-- - Not detected.

B - Analyte was detected but is considered to be a laboratory contaminant.
J - Positive value is considered estimated as a result of technical noncompliance.
K - Positive value is considered biased high as a result of techical noncompliance.
L - Positive value is considered biased low as a result of technical noncompliance.

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Proposed Removal Depth

SAMPLE ID:	SB-22-05	SB-22-10	SB-23-05	SB-23-10	SB-24-05	SB-24-10	SB-25-05	SB-25-10
LABORATORY ID:	03111913-06	03111913-07	03111913-18	03111913-19	03111913-10	03111913-11	03111913-14	03111913-15
SAMPLE DATE:	11/17/2003	11/17/2003	11/18/2003	11/18/2003	11/17/2003	11/17/2003	11/17/2003	11/17/2003
LOCATION:	SB-22	SB-22	SB-23	SB-23	SB-24	SB-24	SB-25	SB-25
INORGANICS (mg/kg)								
ANTIMONY	--	--	--	--	--	--	--	--
ARSENIC	2.9 L	2.7 L	1.5 L	1 L	3.5 L	2.3 L	0.92 L	1.7 L
BARIUM	NA	NA	NA	NA	NA	NA	NA	NA
BERYLLIUM	--	--	--	--	--	--	--	4.6
CADMIUM	--	--	--	--	--	--	--	--
CHROMIUM	13 L	16 L	5.3 L	--	13 L	12 L	11 L	16 L
COBALT	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	10	13	--	--	28	7.8	8	19
LEAD	10 L	6 L	--	--	46 L	12 L	6.6 L	14 L
MERCURY	--	--	--	--	0.94	0.17	--	--
MOLYBDENUM	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	8.9 L	14 L	3.6 L	--	12 L	6.7 L	24 L	46 L
SELENIUM	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--
VANADIUM	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	--	--	--	--	100 J	--	--	110 J
MISCELLANEOUS (%)								
PERCENT SOLIDS	70	85	84	86	80	84	85	84
TOTAL SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (S.U.)								
PH	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (ug/kg)								
DIESEL RANGE ORGANICS	--	--	--	--	--	--	--	--
GASOLINE RANGE ORGANICS	--	--	--	--	--	--	--	--
TPH (C09-C36)	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)								
1-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-22-05	SB-22-10	SB-23-05	SB-23-10	SB-24-05	SB-24-10	SB-25-05	SB-25-10
LABORATORY ID:	03111913-06	03111913-07	03111913-18	03111913-19	03111913-10	03111913-11	03111913-14	03111913-15
SAMPLE DATE:	11/17/2003	11/17/2003	11/18/2003	11/18/2003	11/17/2003	11/17/2003	11/17/2003	11/17/2003
LOCATION:	SB-22	SB-22	SB-23	SB-23	SB-24	SB-24	SB-25	SB-25
SVOCs (ug/kg) (Continued)								
BENZO(A)PYRENE	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--
BENZOIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BENZYL ALCOHOL	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
1,2,4-TRIMETHYLBENZENE	--	--	--	--	--	--	--	--
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--
4-ISOPROPYLTOLUENE	--	--	--	--	--	--	--	--
ACETONE	40 J	11 J	16 J	9 J	28 J	27 J	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	5 J	6 J	5 J	--	--	5 J	6 J
NAPHTHALENE	--	--	--	--	--	--	--	--
N-BUTYLBENZENE	--	--	--	--	--	--	--	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-22-05	SB-22-10	SB-23-05	SB-23-10	SB-24-05	SB-24-10	SB-25-05	SB-25-10
LABORATORY ID:	03111913-06	03111913-07	03111913-18	03111913-19	03111913-10	03111913-11	03111913-14	03111913-15
SAMPLE DATE:	11/17/2003	11/17/2003	11/18/2003	11/18/2003	11/17/2003	11/17/2003	11/17/2003	11/17/2003
LOCATION:	SB-22	SB-22	SB-23	SB-23	SB-24	SB-24	SB-25	SB-25
VOCs (ug/kg) (Continued)								
O-XYLENE	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Proposed Removal Depth

SAMPLE ID:	SB-26-10	SB-27-10	SB-28-10	SB-29-10	SB-30-05	SB-31-05	SB-50-05	SB-50-10
LABORATORY ID:	03111913-03	03111913-01	03111913-02	03111913-05	03111913-22	03111913-25	04091701-21	04091701-22
SAMPLE DATE:	11/17/2003	11/17/2003	11/17/2003	11/17/2003	11/18/2003	11/18/2003	9/15/2004	9/15/2004
LOCATION:	SB-26	SB-27	SB-28	SB-29	SB-30	SB-31	SB-50	SB-50
INORGANICS (mg/kg)								
ANTIMONY	NA	NA	NA	NA	--	--	--	--
ARSENIC	NA	NA	NA	NA	0.99 L	--	0.96	1.2
BARIUM	NA	NA	NA	NA	NA	NA	NA	NA
BERYLLIUM	NA	NA	NA	NA	3.2	4.9	--	--
CADMIUM	NA	NA	NA	NA	--	--	--	--
CHROMIUM	NA	NA	NA	NA	19 L	27 L	13	5.8
COBALT	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	NA	NA	NA	NA	21	22	8.7	10
LEAD	NA	NA	NA	NA	7.4 L	24 L	6.7	4.8
MERCURY	NA	NA	NA	NA	--	--	--	--
MOLYBDENUM	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	NA	NA	NA	NA	33 L	46 L	18	28
SELENIUM	NA	NA	NA	NA	4.4 L	11 L	--	--
SILVER	NA	NA	NA	NA	--	--	--	--
THALLIUM	NA	NA	NA	NA	--	--	--	--
VANADIUM	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	NA	NA	NA	NA	--	130 J	43 K	140
MISCELLANEOUS (%)								
PERCENT SOLIDS	77	75	77	76	87	84	NA	NA
TOTAL SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (S.U.)								
PH	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (ug/kg)								
DIESEL RANGE ORGANICS	NA	NA	NA	NA	--	--	NA	NA
GASOLINE RANGE ORGANICS	--	--	--	--	--	--	NA	NA
TPH (C09-C36)	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)								
1-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	NA	--	--	NA	NA
2-METHYLNAPHTHALENE	NA	NA	NA	NA	--	--	NA	NA
ACENAPHTHENE	NA	NA	NA	NA	--	--	NA	NA
ACENAPHTHYLENE	NA	NA	NA	NA	--	--	NA	NA
ANTHRACENE	NA	NA	NA	NA	--	--	NA	NA
BENZO(A)ANTHRACENE	NA	NA	NA	NA	--	--	NA	NA

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-26-10	SB-27-10	SB-28-10	SB-29-10	SB-30-05	SB-31-05	SB-50-05	SB-50-10
LABORATORY ID:	03111913-03	03111913-01	03111913-02	03111913-05	03111913-22	03111913-25	04091701-21	04091701-22
SAMPLE DATE:	11/17/2003	11/17/2003	11/17/2003	11/17/2003	11/18/2003	11/18/2003	9/15/2004	9/15/2004
LOCATION:	SB-26	SB-27	SB-28	SB-29	SB-30	SB-31	SB-50	SB-50
SVOCs (ug/kg) (Continued)								
BENZO(A)PYRENE	NA	NA	NA	NA	--	--	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	NA	--	--	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	NA	--	--	NA	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	NA	--	--	NA	NA
BENZOIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BENZYL ALCOHOL	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	NA	--	--	NA	NA
CARBAZOLE	NA	NA	NA	NA	--	--	NA	NA
CHRYSENE	NA	NA	NA	NA	--	--	NA	NA
DIBENZO(A,H)ANTHRACENE	NA	NA	NA	NA	--	--	NA	NA
DIBENZOFURAN	NA	NA	NA	NA	--	--	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	NA	--	--	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	NA	--	--	NA	NA
FLUORANTHENE	NA	NA	NA	NA	--	--	NA	NA
FLUORENE	NA	NA	NA	NA	--	--	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	NA	--	--	NA	NA
NAPHTHALENE	NA	NA	NA	NA	--	--	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	NA	--	--	NA	NA
PHENANTHRENE	NA	NA	NA	NA	--	--	NA	NA
PHENOL	NA	NA	NA	NA	--	--	NA	NA
PYRENE	NA	NA	NA	NA	--	--	NA	NA
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
1,2,4-TRIMETHYLBENZENE	--	--	--	--	--	--	NA	NA
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	NA	NA
2-BUTANONE	6 J	--	--	9 J	--	--	NA	NA
4-ISOPROPYLTOLUENE	--	--	--	--	--	--	NA	NA
ACETONE	48 J	29 J	14 J	45 J	--	--	NA	NA
CARBON DISULFIDE	--	--	--	--	--	--	NA	NA
ETHYLBENZENE	--	--	--	--	--	--	NA	NA
ISOPROPYLBENZENE	--	--	--	--	--	--	NA	NA
M+P-XYLENES	--	--	--	--	--	--	NA	NA
METHYLENE CHLORIDE	--	7 J	6 J	--	6 J	5 J	NA	NA
NAPHTHALENE	--	--	--	--	--	--	NA	NA
N-BUTYLBENZENE	--	--	--	--	--	--	NA	NA

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-26-10	SB-27-10	SB-28-10	SB-29-10	SB-30-05	SB-31-05	SB-50-05	SB-50-10
LABORATORY ID:	03111913-03	03111913-01	03111913-02	03111913-05	03111913-22	03111913-25	04091701-21	04091701-22
SAMPLE DATE:	11/17/2003	11/17/2003	11/17/2003	11/17/2003	11/18/2003	11/18/2003	9/15/2004	9/15/2004
LOCATION:	SB-26	SB-27	SB-28	SB-29	SB-30	SB-31	SB-50	SB-50
VOCs (ug/kg) (Continued)								
O-XYLENE	--	--	--	--	--	--	NA	NA
TOLUENE	--	--	--	--	--	--	NA	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	NA	NA

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Proposed Removal Depth

SAMPLE ID:	SB-55-05	SB-55-10	SB-56-05	SB-56-10	SB-56-15	SB-57-05	SB-57-10	SB-57-15
LABORATORY ID:	04091701-25	04091701-17	04091701-12	04091701-13	04091701-14	04091701-07	04091701-08	04091701-09
SAMPLE DATE:	9/15/2004	9/15/2004	9/13/2004	9/13/2004	9/13/2004	9/13/2004	9/13/2004	9/13/2004
LOCATION:	SB-55	SB-55	SB-56	SB-56	SB-56	SB-57	SB-57	SB-57
INORGANICS (mg/kg)								
ANTIMONY	--	--	--	--	--	--	--	--
ARSENIC	1.9	0.58 L	--	--	--	0.65 L	1.8 L	0.66 L
BARIUM	NA	NA	NA	NA	NA	NA	NA	NA
BERYLLIUM	6.2	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--
CHROMIUM	15	8.4 L	15 L	10 L	9.5 L	8.6 L	9.5 L	5.7 L
COBALT	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	56	12	10	4.7 K	3.9 K	16	6.4	--
LEAD	8.4	5.2 J	3.2 J	--	--	3.2 J	3.7 J	--
MERCURY	--	--	--	--	--	--	--	--
MOLYBDENUM	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	150	11	11	5.3 K	6	--	3.8 K	--
SELENIUM	2.8	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--
VANADIUM	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	270	62 J	--	--	--	--	--	--
MISCELLANEOUS (%)								
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (S.U.)								
PH	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (ug/kg)								
DIESEL RANGE ORGANICS	--	--	--	--	--	--	--	--
GASOLINE RANGE ORGANICS	--	--	--	--	--	--	--	--
TPH (C09-C36)	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)								
1-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	220 J	--	--	--	--	--	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-55-05	SB-55-10	SB-56-05	SB-56-10	SB-56-15	SB-57-05	SB-57-10	SB-57-15
LABORATORY ID:	04091701-25	04091701-17	04091701-12	04091701-13	04091701-14	04091701-07	04091701-08	04091701-09
SAMPLE DATE:	9/15/2004	9/15/2004	9/13/2004	9/13/2004	9/13/2004	9/13/2004	9/13/2004	9/13/2004
LOCATION:	SB-55	SB-55	SB-56	SB-56	SB-56	SB-57	SB-57	SB-57
SVOCs (ug/kg) (Continued)								
BENZO(A)PYRENE	--	200 J	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	190 J	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	140 J	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	160 J	--	--	--	--	--	--
BENZOIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BENZYL ALCOHOL	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--
CHRYSENE	--	250 J	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	310 J	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--
FLUORANTHENE	--	490	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	110 J	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--
PHENANTHRENE	--	190 J	--	--	--	--	--	--
PHENOL	480	--	910	730	770	--	670	550
PYRENE	--	370 J	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
1,2,4-TRIMETHYLBENZENE	--	--	--	--	--	--	--	--
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--
4-ISOPROPYLTOLUENE	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	7 B	--	--	--	--	--	--	7 B
NAPHTHALENE	--	--	--	--	--	--	--	--
N-BUTYLBENZENE	--	--	--	--	--	--	--	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-55-05	SB-55-10	SB-56-05	SB-56-10	SB-56-15	SB-57-05	SB-57-10	SB-57-15
LABORATORY ID:	04091701-25	04091701-17	04091701-12	04091701-13	04091701-14	04091701-07	04091701-08	04091701-09
SAMPLE DATE:	9/15/2004	9/15/2004	9/13/2004	9/13/2004	9/13/2004	9/13/2004	9/13/2004	9/13/2004
LOCATION:	SB-55	SB-55	SB-56	SB-56	SB-56	SB-57	SB-57	SB-57
VOCs (ug/kg) (Continued)								
O-XYLENE	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 10 OF 27

Proposed Removal Depth								5
SAMPLE ID:	**SB-58-05**	**SB-58-10**	**SB-58-15**	**SB-58-20**	**SB-93-05**	**SB-93-10**	**SB-93-15**	**SB-94-05**
LABORATORY ID:	**04091701-02**	**04091701-03**	**04091701-04**	**04091701-05**	**04092018-13**	**04092018-14**	**04092018-15**	**04092018-09**
SAMPLE DATE:	**9/13/2004**	**9/13/2004**	**9/13/2004**	**9/13/2004**	**9/16/2004**	**9/16/2004**	**9/16/2004**	**9/16/2004**
LOCATION:	**SB-58**	**SB-58**	**SB-58**	**SB-58**	**SB-93**	**SB-93**	**SB-93**	**SB-94**
INORGANICS (mg/kg)								
ANTIMONY	--	--	--	--	--	--	--	--
ARSENIC	2.3 L	4.1 L	5.3 L	2.5 L	--	--	--	--
BARIUM	NA	NA	NA	NA	NA	NA	NA	NA
BERYLLIUM	--	--	--	--	--	--	--	3.2 L
CADMIUM	--	--	--	--	--	--	--	--
CHROMIUM	19 L	15 L	26 L	3.8 L	20	9.9 K	18	14
COBALT	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	13	21	22	4.8 K	13 L	10 L	12 L	21 L
LEAD	9.3 J	7.9 J	20 J	--	8.7 L	2.9 L	4 L	6.7 L
MERCURY	--	--	--	--	--	--	--	--
MOLYBDENUM	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	8.6	18	18	23	17	4 K	18	12
SELENIUM	--	--	--	--	4.3 L	--	--	4.2 L
SILVER	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--
VANADIUM	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	68 J	41 J	49 J	--	--	--	--	--
MISCELLANEOUS (%)								
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (S.U.)								
PH	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (ug/kg)								
DIESEL RANGE ORGANICS	--	--	--	--	--	--	--	17000
GASOLINE RANGE ORGANICS	--	--	--	--	--	--	--	--
TPH (C09-C36)	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)								
1-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	110 J
ACENAPHTHYLENE	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	270 J
BENZO(A)ANTHRACENE	99 J	--	--	--	--	--	--	620

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-58-05	SB-58-10	SB-58-15	SB-58-20	SB-93-05	SB-93-10	SB-93-15	SB-94-05
LABORATORY ID:	04091701-02	04091701-03	04091701-04	04091701-05	04092018-13	04092018-14	04092018-15	04092018-09
SAMPLE DATE:	9/13/2004	9/13/2004	9/13/2004	9/13/2004	9/16/2004	9/16/2004	9/16/2004	9/16/2004
LOCATION:	SB-58	SB-58	SB-58	SB-58	SB-93	SB-93	SB-93	SB-94
SVOCs (ug/kg) (Continued)								
BENZO(A)PYRENE	83 J	--	--	--	--	--	--	490
BENZO(B)FLUORANTHENE	66 J	--	--	--	--	--	--	630
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	280 J
BENZO(K)FLUORANTHENE	86 J	--	--	--	--	--	--	450
BENZOIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BENZYL ALCOHOL	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	200 J
CHRYSENE	100 J	--	--	--	--	--	--	660
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	73 J
DIMETHYL PHTHALATE	62 J	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--
FLUORANTHENE	150 J	--	--	--	--	--	--	1500
FLUORENE	--	--	--	--	--	--	--	110 J
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	270 J
NAPHTHALENE	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--
PHENANTHRENE	80 J	--	--	--	--	--	--	1200
PHENOL	--	690	--	590	--	--	--	--
PYRENE	140 J	--	--	--	--	--	--	1100
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
1,2,4-TRIMETHYLBENZENE	--	--	--	--	--	--	--	--
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--	--
2-BUTANONE	--	--	--	--	--	--	--	--
4-ISOPROPYLTOLUENE	--	--	--	--	--	--	--	--
ACETONE	--	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	--	--	--	--	--	--	8 J	--
NAPHTHALENE	--	--	--	--	--	--	--	--
N-BUTYLBENZENE	--	--	--	--	--	--	--	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-58-05	SB-58-10	SB-58-15	SB-58-20	SB-93-05	SB-93-10	SB-93-15	SB-94-05
LABORATORY ID:	04091701-02	04091701-03	04091701-04	04091701-05	04092018-13	04092018-14	04092018-15	04092018-09
SAMPLE DATE:	9/13/2004	9/13/2004	9/13/2004	9/13/2004	9/16/2004	9/16/2004	9/16/2004	9/16/2004
LOCATION:	SB-58	SB-58	SB-58	SB-58	SB-93	SB-93	SB-93	SB-94
VOCs (ug/kg) (Continued)								
O-XYLENE	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Proposed Removal Depth	10							
SAMPLE ID:	**SB-94-10**	**SB-94-15**	**SB-95-05**	**SB-95-10**	**SB-96-05**	**SB-96-10**	**SB-96-15**	**SB-236-01**
LABORATORY ID:	**04092018-10**	**04092018-11**	**04092018-02**	**04092018-03**	**04092018-05**	**04092018-06**	**04092018-07**	**9612621001**
SAMPLE DATE:	**9/16/2004**	**9/16/2004**	**9/16/2004**	**9/16/2004**	**9/16/2004**	**9/16/2004**	**9/16/2004**	**5/9/2005**
LOCATION:	**SB-94**	**SB-94**	**SB-95**	**SB-95**	**SB-96**	**SB-96**	**SB-96**	**SB-236**
INORGANICS (mg/kg)								
ANTIMONY	--	--	--	--	--	--	--	2 L
ARSENIC	--	--	--	--	--	--	--	4
BARIUM	NA	NA	NA	NA	NA	NA	NA	83
BERYLLIUM	--	--	5.2 L	--	--	4.1 L	--	0.7
CADMIUM	--	--	--	--	--	--	--	0.4
CHROMIUM	20	27	19	9.6 K	--	17	--	19.8
COBALT	NA	NA	NA	NA	NA	NA	NA	5.8
COPPER	11 L	7.4 L	24 L	5.5 L	4.3 L	13 L	3.3 L	22
LEAD	17 L	3.3 L	5.2 L	3.2 L	--	4.3 L	--	51
MERCURY	--	--	--	--	--	--	--	0.92 L
MOLYBDENUM	NA	NA	NA	NA	NA	NA	NA	0.6 B
NICKEL	21	20	21	8.4	--	22	--	12
SELENIUM	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	0.9
THALLIUM	--	--	--	--	--	--	--	--
VANADIUM	NA	NA	NA	NA	NA	NA	NA	31
ZINC	33 K	--	--	--	--	--	--	82
MISCELLANEOUS (%)								
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (S.U.)								
PH	NA	NA	NA	NA	NA	NA	NA	8.2
PETROLEUM HYDROCARBONS (ug/kg)								
DIESEL RANGE ORGANICS	--	--	--	--	--	12000	--	NA
GASOLINE RANGE ORGANICS	--	--	--	--	--	--	--	NA
TPH (C09-C36)	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)								
1-METHYLNAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	NA
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	NA
ACENAPHTHENE	190 J	--	--	--	--	--	--	NA
ACENAPHTHYLENE	--	--	--	--	--	--	--	NA
ANTHRACENE	430	--	--	--	--	--	--	NA
BENZO(A)ANTHRACENE	1200	--	--	--	--	--	--	NA

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 14 OF 27

SAMPLE ID:	SB-94-10	SB-94-15	SB-95-05	SB-95-10	SB-96-05	SB-96-10	SB-96-15	SB-236-01
LABORATORY ID:	04092018-10	04092018-11	04092018-02	04092018-03	04092018-05	04092018-06	04092018-07	9612621001
SAMPLE DATE:	9/16/2004	9/16/2004	9/16/2004	9/16/2004	9/16/2004	9/16/2004	9/16/2004	5/9/2005
LOCATION:	SB-94	SB-94	SB-95	SB-95	SB-96	SB-96	SB-96	SB-236
SVOCs (ug/kg) (Continued)								
BENZO(A)PYRENE	950	--	--	--	--	--	--	NA
BENZO(B)FLUORANTHENE	1000	--	--	--	--	--	--	NA
BENZO(G,H,I)PERYLENE	600 J	--	--	--	--	--	--	NA
BENZO(K)FLUORANTHENE	940	--	--	--	--	--	--	NA
BENZOIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BENZYL ALCOHOL	NA	NA	NA	NA	NA	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	--	--	--	--	--	NA
CARBAZOLE	380 J	--	--	--	--	--	--	NA
CHRYSENE	1200	--	--	--	--	--	--	NA
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	NA
DIBENZOFURAN	130 J	--	--	--	--	--	--	NA
DIMETHYL PHTHALATE	--	--	--	77 J	--	--	--	NA
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	NA
FLUORANTHENE	2700	--	--	--	--	--	--	NA
FLUORENE	200 J	--	--	--	--	--	--	NA
INDENO(1,2,3-CD)PYRENE	590	--	--	--	--	--	--	NA
NAPHTHALENE	58 J	--	--	--	--	--	--	NA
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	NA
PHENANTHRENE	2200	--	--	--	--	--	--	NA
PHENOL	--	--	140 J	--	--	--	--	NA
PYRENE	1900	--	--	--	--	--	--	NA
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
1,2,4-TRIMETHYLBENZENE	--	--	--	--	--	--	--	NA
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--	NA
2-BUTANONE	--	--	--	--	--	--	--	NA
4-ISOPROPYLTOLUENE	--	--	--	--	--	--	--	NA
ACETONE	--	--	--	--	--	--	--	NA
CARBON DISULFIDE	--	--	--	--	--	--	--	NA
ETHYLBENZENE	--	--	--	--	--	--	--	NA
ISOPROPYLBENZENE	--	--	--	--	--	--	--	NA
M+P-XYLENES	--	--	--	--	--	--	--	NA
METHYLENE CHLORIDE	--	--	--	--	--	--	--	NA
NAPHTHALENE	--	--	--	--	--	--	--	NA
N-BUTYLBENZENE	--	--	--	--	--	--	--	NA

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-94-10	SB-94-15	SB-95-05	SB-95-10	SB-96-05	SB-96-10	SB-96-15	SB-236-01
LABORATORY ID:	04092018-10	04092018-11	04092018-02	04092018-03	04092018-05	04092018-06	04092018-07	9612621001
SAMPLE DATE:	9/16/2004	9/16/2004	9/16/2004	9/16/2004	9/16/2004	9/16/2004	9/16/2004	5/9/2005
LOCATION:	SB-94	SB-94	SB-95	SB-95	SB-96	SB-96	SB-96	SB-236
VOCs (ug/kg) (Continued)								
O-XYLENE	--	--	--	--	--	--	--	NA
TOLUENE	--	--	--	--	--	--	--	NA
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	NA

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Proposed Removal Depth					5			
SAMPLE ID:	**SB-236-05**	**SB-237-01**	**SB-237-05**	**SB-238-01**	**SB-238-05**	**SB-250-02**	**SB-251-02**	**SB-252-02**
LABORATORY ID:	**9612617010**	**9612621003**	**9612621004**	**9613107008**	**9613107009**	**9612617002**	**9612617004**	**9612617006**
SAMPLE DATE:	**5/9/2005**	**5/9/2005**	**5/9/2005**	**5/17/2005**	**5/17/2005**	**5/9/2005**	**5/9/2005**	**5/9/2005**
LOCATION:	**SB-236**	**SB-237**	**SB-237**	**SB-238**	**SB-238**	**SB-250**	**SB-251**	**SB-252**
INORGANICS (mg/kg)								
ANTIMONY	2 L	4 L	--	--	0.3 L	0.6 L	0.9 L	0.8 L
ARSENIC	7	5	2 B	3	3	3 B	5	4
BARIUM	103	68	35	41	24	30	40	27
BERYLLIUM	0.6	0.6	3.2	1.8	2	1	1	0.5
CADMIUM	0.5	0.3	0.3	0.6	0.5	0.2 B	0.1 B	0.2 B
CHROMIUM	20.6	185	24.6	27.4	23.9	15.5	20.8	15.6
COBALT	6.2	5.1	8	8.4	14.8	2.8	7.1	3.5
COPPER	38	33	11	16	14	10	10	7
LEAD	81	63	11	30	14	5 B	7 B	6 B
MERCURY	0.97 L	0.35	0.01	0.08	0.07	0.03	0.01	0.04
MOLYBDENUM	0.6 B	63	--	0.8 B	0.7 B	0.6 B	0.5 B	0.7 B
NICKEL	17	18	23	22	27	6 B	9	6 B
SELENIUM	3	4	--	--	--	--	3	--
SILVER	2.3	1.4	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--
VANADIUM	26.9	41.9	35.1	35.9	34.1	27.2	35.6	27.9
ZINC	131	99	41	54	57	25	34	24
MISCELLANEOUS (%)								
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (S.U.)								
PH	7.7	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (ug/kg)								
DIESEL RANGE ORGANICS	NA	NA	NA	55700	881000	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	21200	NA	NA	NA
TPH (C09-C36)	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)								
1-METHYLNAPHTHALENE	NA	NA	NA	--	3420	NA	NA	NA
2,4-DIMETHYLPHENOL	NA	NA	NA	--	68 J	NA	NA	NA
2-METHYLNAPHTHALENE	NA	NA	NA	--	6900	NA	NA	NA
ACENAPHTHENE	NA	NA	NA	--	6960	NA	NA	NA
ACENAPHTHYLENE	NA	NA	NA	--	69 J	NA	NA	NA
ANTHRACENE	NA	NA	NA	--	2510	NA	NA	NA
BENZO(A)ANTHRACENE	NA	NA	NA	75 J	2700	NA	NA	NA

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-236-05	SB-237-01	SB-237-05	SB-238-01	SB-238-05	SB-250-02	SB-251-02	SB-252-02
LABORATORY ID:	9612617010	9612621003	9612621004	9613107008	9613107009	9612617002	9612617004	9612617006
SAMPLE DATE:	5/9/2005	5/9/2005	5/9/2005	5/17/2005	5/17/2005	5/9/2005	5/9/2005	5/9/2005
LOCATION:	SB-236	SB-237	SB-237	SB-238	SB-238	SB-250	SB-251	SB-252
SVOCs (ug/kg) (Continued)								
BENZO(A)PYRENE	NA	NA	NA	74 J	1960	NA	NA	NA
BENZO(B)FLUORANTHENE	NA	NA	NA	90	2080	NA	NA	NA
BENZO(G,H,I)PERYLENE	NA	NA	NA	75 J	1240 J	NA	NA	NA
BENZO(K)FLUORANTHENE	NA	NA	NA	87	2010	NA	NA	NA
BENZOIC ACID	NA	NA	NA	--	--	NA	NA	NA
BENZYL ALCOHOL	NA	NA	NA	--	--	NA	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	NA	NA	NA	--	--	NA	NA	NA
CARBAZOLE	NA	NA	NA	--	5690	NA	NA	NA
CHRYSENE	NA	NA	NA	92	1800	NA	NA	NA
DIBENZO(A,H)ANTHRACENE	NA	NA	NA	--	392 J	NA	NA	NA
DIBENZOFURAN	NA	NA	NA	--	3980	NA	NA	NA
DIMETHYL PHTHALATE	NA	NA	NA	--	--	NA	NA	NA
DI-N-BUTYL PHTHALATE	NA	NA	NA	--	--	NA	NA	NA
FLUORANTHENE	NA	NA	NA	142	10000	NA	NA	NA
FLUORENE	NA	NA	NA	--	6330	NA	NA	NA
INDENO(1,2,3-CD)PYRENE	NA	NA	NA	67 J	1110 J	NA	NA	NA
NAPHTHALENE	NA	NA	NA	--	31000	NA	NA	NA
N-NITROSODIPHENYLAMINE	NA	NA	NA	--	81 J	NA	NA	NA
PHENANTHRENE	NA	NA	NA	58 J	18600	NA	NA	NA
PHENOL	NA	NA	NA	--	--	NA	NA	NA
PYRENE	NA	NA	NA	120	7570	NA	NA	NA
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
1,2,4-TRIMETHYLBENZENE	NA	NA	NA	--	658	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	--	139 J	NA	NA	NA
2-BUTANONE	NA	NA	NA	2.87 J	--	NA	NA	NA
4-ISOPROPYLTOLUENE	NA	NA	NA	--	165 J	NA	NA	NA
ACETONE	NA	NA	NA	27.2 J	--	NA	NA	NA
CARBON DISULFIDE	NA	NA	NA	0.72 J	--	NA	NA	NA
ETHYLBENZENE	NA	NA	NA	--	394	NA	NA	NA
ISOPROPYLBENZENE	NA	NA	NA	--	83.1 J	NA	NA	NA
M+P-XYLENES	NA	NA	NA	--	270 J	NA	NA	NA
METHYLENE CHLORIDE	NA	NA	NA	3.3 J	147 J	NA	NA	NA
NAPHTHALENE	NA	NA	NA	--	159000	NA	NA	NA
N-BUTYLBENZENE	NA	NA	NA	--	125 J	NA	NA	NA

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-236-05	SB-237-01	SB-237-05	SB-238-01	SB-238-05	SB-250-02	SB-251-02	SB-252-02
LABORATORY ID:	9612617010	9612621003	9612621004	9613107008	9613107009	9612617002	9612617004	9612617006
SAMPLE DATE:	5/9/2005	5/9/2005	5/9/2005	5/17/2005	5/17/2005	5/9/2005	5/9/2005	5/9/2005
LOCATION:	SB-236	SB-237	SB-237	SB-238	SB-238	SB-250	SB-251	SB-252
VOCs (ug/kg) (Continued)								
O-XYLENE	NA	NA	NA	--	186 J	NA	NA	NA
TOLUENE	NA	NA	NA	1.9 J	--	NA	NA	NA
TOTAL XYLENES	NA	NA	NA	--	456 J	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	NA	--	--	NA	NA	NA

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Proposed Removal Depth		2			2			
SAMPLE ID:	**SB-253-02**	**SB-265-02**	**SB-266-02**	**SB-267-02**	**SB-268-02**	**SB-269-02**	**SB-270-02**	**SB-295-0405**
LABORATORY ID:	**9612617008**	**9612625002**	**9612625004**	**9612625006**	**9612621006**	**9612621008**	**9612621010**	**WV5857-15**
SAMPLE DATE:	**5/9/2005**	**5/9/2005**	**5/9/2005**	**5/9/2005**	**5/9/2005**	**5/9/2005**	**5/9/2005**	**11/1/2005**
LOCATION:	**SB-253**	**SB-265**	**SB-266**	**SB-267**	**SB-268**	**SB-269**	**SB-270**	**SB-295**
INORGANICS (mg/kg)								
ANTIMONY	0.9 L	NA	NA	NA	NA	NA	NA	--
ARSENIC	3 B	NA	NA	NA	NA	NA	NA	4.6
BARIUM	36	NA	NA	NA	NA	NA	NA	22.8
BERYLLIUM	0.7	NA	NA	NA	NA	NA	NA	0.96
CADMIUM	0.09 B	NA	NA	NA	NA	NA	NA	--
CHROMIUM	14	NA	NA	NA	NA	NA	NA	25.1
COBALT	4	NA	NA	NA	NA	NA	NA	3.2 B
COPPER	5	NA	NA	NA	NA	NA	NA	14.6
LEAD	5 B	NA	NA	NA	NA	NA	NA	8
MERCURY	0.03	NA	NA	NA	NA	NA	NA	0.01
MOLYBDENUM	0.5 B	NA	NA	NA	NA	NA	NA	0.41 K
NICKEL	5 B	NA	NA	NA	NA	NA	NA	9.7
SELENIUM	3	NA	NA	NA	NA	NA	NA	--
SILVER	0.2 B	NA	NA	NA	NA	NA	NA	0.72
THALLIUM	--	NA	NA	NA	NA	NA	NA	--
VANADIUM	25.5	NA	NA	NA	NA	NA	NA	40.4
ZINC	20	NA	NA	NA	NA	NA	NA	27.1
MISCELLANEOUS (%)								
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS	NA	NA	NA	NA	NA	NA	NA	81
MISCELLANEOUS (S.U.)								
PH	NA	8.4	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (ug/kg)								
DIESEL RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA
TPH (C09-C36)	NA	NA	NA	NA	NA	NA	NA	--
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)								
1-METHYLNAPHTHALENE	NA	--	--	--	36.5 J	--	--	--
2,4-DIMETHYLPHENOL	NA	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	NA	--	--	--	32 J	--	--	--
ACENAPHTHENE	NA	--	--	--	350	--	--	--
ACENAPHTHYLENE	NA	--	--	--	49 J	--	--	--
ANTHRACENE	NA	109	30 J	--	1000	--	--	--
BENZO(A)ANTHRACENE	NA	432	121	81 J	2980	--	73 J	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-253-02	SB-265-02	SB-266-02	SB-267-02	SB-268-02	SB-269-02	SB-270-02	SB-295-0405
LABORATORY ID:	9612617008	9612625002	9612625004	9612625006	9612621006	9612621008	9612621010	WV5857-15
SAMPLE DATE:	5/9/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005	11/1/2005
LOCATION:	SB-253	SB-265	SB-266	SB-267	SB-268	SB-269	SB-270	SB-295
SVOCs (ug/kg) (Continued)								
BENZO(A)PYRENE	NA	401	116	80 J	3130	--	62 J	--
BENZO(B)FLUORANTHENE	NA	374	129	83	4000	--	65 J	--
BENZO(G,H,I)PERYLENE	NA	260 J	85 J	59 J	650 J	--	48 J	--
BENZO(K)FLUORANTHENE	NA	405	111	90	2930	--	--	--
BENZOIC ACID	NA	--	--	333 J	180 J	--	217 J	--
BENZYL ALCOHOL	NA	--	--	--	--	47.5 J	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	NA	--	--	--	--	--	--	--
CARBAZOLE	NA	43 J	--	--	448	--	--	--
CHRYSENE	NA	461	135	82 J	2930	--	69 J	--
DIBENZO(A,H)ANTHRACENE	NA	86	--	--	307	--	--	--
DIBENZOFURAN	NA	--	--	--	140	--	--	--
DIMETHYL PHTHALATE	NA	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	NA	32 J	--	--	37 J	--	--	--
FLUORANTHENE	NA	802	245	173	8780	--	163	--
FLUORENE	NA	32 J	--	--	331	--	--	--
INDENO(1,2,3-CD)PYRENE	NA	295	92 J	62 J	948	--	51 J	--
NAPHTHALENE	NA	--	--	--	57 J	--	--	--
N-NITROSODIPHENYLAMINE	NA	--	--	--	--	--	--	--
PHENANTHRENE	NA	417	127	47 J	3450	--	81 J	--
PHENOL	NA	--	--	--	--	--	--	--
PYRENE	NA	637	178	110	4530	28 J	113	--
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
1,2,4-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	--
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	NA	NA	NA	NA	NA	NA	NA	--
4-ISOPROPYLTOLUENE	NA	NA	NA	NA	NA	NA	NA	--
ACETONE	NA	NA	NA	NA	NA	NA	NA	21 J
CARBON DISULFIDE	NA	NA	NA	NA	NA	NA	NA	--
ETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	--
ISOPROPYLBENZENE	NA	NA	NA	NA	NA	NA	NA	--
M+P-XYLENES	NA	NA	NA	NA	NA	NA	NA	--
METHYLENE CHLORIDE	NA	NA	NA	NA	NA	NA	NA	11 B
NAPHTHALENE	NA	NA	NA	NA	NA	NA	NA	--
N-BUTYLBENZENE	NA	NA	NA	NA	NA	NA	NA	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 21 OF 27

SAMPLE ID:	SB-253-02	SB-265-02	SB-266-02	SB-267-02	SB-268-02	SB-269-02	SB-270-02	SB-295-0405
LABORATORY ID:	9612617008	9612625002	9612625004	9612625006	9612621006	9612621008	9612621010	WV5857-15
SAMPLE DATE:	5/9/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005	5/9/2005	11/1/2005
LOCATION:	SB-253	SB-265	SB-266	SB-267	SB-268	SB-269	SB-270	SB-295
VOCs (ug/kg) (Continued)								
O-XYLENE	NA	NA	NA	NA	NA	NA	NA	--
TOLUENE	NA	NA	NA	NA	NA	NA	NA	--
TOTAL XYLENES	NA	NA	NA	NA	NA	NA	NA	--
TRICHLOROFLUOROMETHANE	NA	NA	NA	NA	NA	NA	NA	2 J

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 22 OF 27

Proposed Removal Depth

SAMPLE ID:	SB-295-0910	SB-296-0405	SB-296-0910	SB-297-0405	SB-297-0910	SB-298-0405	SB-298-0910	SB-299-0405
LABORATORY ID:	WV5857-16	WV5857-17	WV5857-18	WV5857-19	WV5857-20	WV5858-1	WV5858-2	WV5858-3
SAMPLE DATE:	11/1/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005	11/1/2005	11/1/2005	11/1/2005
LOCATION:	SB-295	SB-296	SB-296	SB-297	SB-297	SB-298	SB-298	SB-299
INORGANICS (mg/kg)								
ANTIMONY	--	--	--	--	--	--	--	--
ARSENIC	2.9 K	5.7	2.4 K	3.3	3 K	3.5	2 K	1.3 K
BARIUM	15.1	14.5	13.7	16.3	22.3	17.7	19.6	12.5
BERYLLIUM	3.2	3.6	3.6	3.1	3.7	4.3	3.8	1.8
CADMIUM	--	--	--	--	--	--	--	--
CHROMIUM	29	38.7	21.1	26.1	19.2	16.3 K	39.4 K	18.6 K
COBALT	8.5 K	32.3	6 K	6 K	8.7 K	8	5.3	11
COPPER	17.5	40.4	21.9	21.9	15.9	18	11.6	10.9
LEAD	8.7	9.9	7.6	8.3	8.5	8.4	10.4	4
MERCURY	--	0.02	0.01	--	--	--	--	--
MOLYBDENUM	0.44 K	0.55 K	--	0.43 K	0.45 K	0.32	0.35	--
NICKEL	24.3	31.4	21.3	24	25.4	23.3	17.8	13.7
SELENIUM	--	--	--	--	--	--	--	--
SILVER	0.99	1.6	1.2	--	--	--	--	--
THALLIUM	--	--	--	--	1.3 B	--	--	1.5 B
VANADIUM	32.5	61.6	32.8	35.3	31.8	28.4	46.4	27.2
ZINC	32.2	58	26.8	24.1	33.2	34.7	30.8	40.9
MISCELLANEOUS (%)								
PERCENT SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL SOLIDS	84	80	84	88	84	84	83	86
MISCELLANEOUS (S.U.)								
PH	NA	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS (ug/kg)								
DIESEL RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA
GASOLINE RANGE ORGANICS	NA	NA	NA	NA	NA	NA	NA	NA
TPH (C09-C36)	--	4900 J	--	3500 J	3800 J	3600 B	2800 B	2900 B
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)								
1-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--
2,4-DIMETHYLPHENOL	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--	--
ACENAPHTHENE	--	--	--	--	--	--	--	--
ACENAPHTHYLENE	--	--	--	--	--	--	--	--
ANTHRACENE	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE	--	--	--	--	--	--	--	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-295-0910	SB-296-0405	SB-296-0910	SB-297-0405	SB-297-0910	SB-298-0405	SB-298-0910	SB-299-0405
LABORATORY ID:	WV5857-16	WV5857-17	WV5857-18	WV5857-19	WV5857-20	WV5858-1	WV5858-2	WV5858-3
SAMPLE DATE:	11/1/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005	11/1/2005	11/1/2005	11/1/2005
LOCATION:	SB-295	SB-296	SB-296	SB-297	SB-297	SB-298	SB-298	SB-299
SVOCs (ug/kg) (Continued)								
BENZO(A)PYRENE	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE	--	--	--	--	--	--	--	--
BENZOIC ACID	--	--	--	--	--	--	--	--
BENZYL ALCOHOL	--	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	--	--	190 J	--	--	--	--	--
CARBAZOLE	--	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE	--	--	--	--	--	--	--	--
DIBENZOFURAN	--	--	--	--	--	--	--	--
DIMETHYL PHTHALATE	--	--	--	--	--	--	--	--
DI-N-BUTYL PHTHALATE	--	--	--	--	--	--	--	--
FLUORANTHENE	--	--	--	--	--	--	--	--
FLUORENE	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE	--	--	--	--	--	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--
N-NITROSODIPHENYLAMINE	--	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--	--
PHENOL	--	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
1,2,4-TRIMETHYLBENZENE	--	--	--	--	--	--	--	--
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
2-BUTANONE	--	--	--	--	--	--	--	--
4-ISOPROPYLTOLUENE	--	--	--	--	--	--	--	--
ACETONE	14 J	29 J	14 J	37 L	36 L	29 B	16 B	--
CARBON DISULFIDE	--	--	--	--	--	--	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	--	--	--	--	--	--
M+P-XYLENES	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	8 B	8 B	6 B	7 B	8 B	--	--	--
NAPHTHALENE	--	--	--	--	--	--	--	--
N-BUTYLBENZENE	--	--	--	--	--	--	--	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-295-0910	SB-296-0405	SB-296-0910	SB-297-0405	SB-297-0910	SB-298-0405	SB-298-0910	SB-299-0405
LABORATORY ID:	WV5857-16	WV5857-17	WV5857-18	WV5857-19	WV5857-20	WV5858-1	WV5858-2	WV5858-3
SAMPLE DATE:	11/1/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005	11/1/2005	11/1/2005	11/1/2005
LOCATION:	SB-295	SB-296	SB-296	SB-297	SB-297	SB-298	SB-298	SB-299
VOCs (ug/kg) (Continued)								
O-XYLENE	--	--	--	--	--	--	--	--
TOLUENE	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	--	--	--	--	--	--	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Proposed Removal Depth

SAMPLE ID:	**SB-299-0910**
LABORATORY ID:	**WV5858-4**
SAMPLE DATE:	**11/1/2005**
LOCATION:	**SB-299**
INORGANICS (mg/kg)	
ANTIMONY	--
ARSENIC	2.2 K
BARIUM	42.2
BERYLLIUM	2.6
CADMIUM	--
CHROMIUM	16 K
COBALT	9.3
COPPER	11.2
LEAD	11.2
MERCURY	0.01 B
MOLYBDENUM	--
NICKEL	18.1
SELENIUM	--
SILVER	--
THALLIUM	2 B
VANADIUM	20.7
ZINC	42.7
MISCELLANEOUS (%)	
PERCENT SOLIDS	NA
TOTAL SOLIDS	85
MISCELLANEOUS (S.U.)	
PH	NA
PETROLEUM HYDROCARBONS (ug/kg)	
DIESEL RANGE ORGANICS	NA
GASOLINE RANGE ORGANICS	NA
TPH (C09-C36)	2900 B
SEMIVOLATILE ORGANIC COMPOUNDS (ug/kg)	
1-METHYLNAPHTHALENE	--
2,4-DIMETHYLPHENOL	--
2-METHYLNAPHTHALENE	--
ACENAPHTHENE	--
ACENAPHTHYLENE	--
ANTHRACENE	--
BENZO(A)ANTHRACENE	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	**SB-299-0910**
LABORATORY ID:	**WV5858-4**
SAMPLE DATE:	**11/1/2005**
LOCATION:	**SB-299**
SVOCs (ug/kg) (Continued)	
BENZO(A)PYRENE	--
BENZO(B)FLUORANTHENE	--
BENZO(G,H,I)PERYLENE	--
BENZO(K)FLUORANTHENE	--
BENZOIC ACID	--
BENZYL ALCOHOL	--
BIS(2-ETHYLHEXYL)PHTHALATE	--
CARBAZOLE	--
CHRYSENE	--
DIBENZO(A,H)ANTHRACENE	--
DIBENZOFURAN	--
DIMETHYL PHTHALATE	--
DI-N-BUTYL PHTHALATE	--
FLUORANTHENE	--
FLUORENE	--
INDENO(1,2,3-CD)PYRENE	--
NAPHTHALENE	--
N-NITROSODIPHENYLAMINE	--
PHENANTHRENE	--
PHENOL	--
PYRENE	--
VOLATILE ORGANIC COMPOUNDS (ug/kg)	
1,2,4-TRIMETHYLBENZENE	--
1,3,5-TRIMETHYLBENZENE	NA
2-BUTANONE	--
4-ISOPROPYLTOLUENE	--
ACETONE	16 B
CARBON DISULFIDE	--
ETHYLBENZENE	--
ISOPROPYLBENZENE	--
M+P-XYLENES	--
METHYLENE CHLORIDE	7 B
NAPHTHALENE	--
N-BUTYLBENZENE	--

TABLE AF-2

SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL
BLOCK F, SOIL RESPONSE ACTION PLAN
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	**SB-299-0910**
LABORATORY ID:	**WV5858-4**
SAMPLE DATE:	**11/1/2005**
LOCATION:	**SB-299**
VOCs (ug/kg) (Continued)	
O-XYLENE	--
TOLUENE	--
TOTAL XYLENES	--
TRICHLOROFLUOROMETHANE	--

1 Highlighted values indicate positive detection in exceedance of cleanup goals.

µg/kg - Micrograms per kilogram.
MDE - Maryland Department of the Environment.
mg/kg - Milligrams per kilogram.
NA - Not applicable.
NC - No criterion.
SB - Soil boring.
S.U. - Standard Units.
SVOC - Semivolatile organic compound.
VOC - Volatile organic compound.
-- - Not detected.

B - Analyte was detected but is considered to be a laboratory contaminant.
J - Positive value is considered estimated as a result of technical noncompliance.
K - Positive value is considered biased high as a result of techical noncompliance.
L - Positive value is considered biased low as a result of technical noncompliance.

TABLE AF-3
SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL - FALL 2007 RESULTS
BLOCK F
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-382-0102	SB-382-0203	SB-382-0405	SB-382-0708	SB-383-0102	SB-383-0102DL	SB-383-0203	SB-385-0102
LABORATORY ID:	A7J170235001	A7J170235002	A7J170235003	A7J170235004	A7J170235005	A7J170235005	A7J170235006	A7J170235013
SAMPLE DATE:	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007
LOCATION:	SB-382	SB-382	SB-382	SB-382	SB-383	SB-383	SB-383	SB-385
DEPTH RANGE:	1 - 2	2 - 3	4 - 5	7 - 8	1 - 2	1 - 2	2 - 3	1 - 2
MISCELLANEOUS (%)								
PERCENT SOLIDS	85.6	76.2	80.4	79.2	88	NA	87.2	92
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	--	--	--	--	NA	19000	51 J	--
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	--	34 J	NA	--	NA

SAMPLE ID:	SB-383-0405	SB-383-0708	SB-384-0102	SB-384-0203	SB-384-0405	SB-384-0708	SB-384-0708RE	SB-386-0405
LABORATORY ID:	A7J170235007	A7J170235008	A7J170235009	A7J170235010	A7J170235011	A7J170235012	A7J170235012	A7J170235019
SAMPLE DATE:	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007
LOCATION:	SB-383	SB-383	SB-384	SB-384	SB-384	SB-384	SB-384	SB-386
DEPTH RANGE:	4 - 5	7 - 8	1 - 2	2 - 3	4 - 5	7 - 8	7 - 8	4 - 5
MISCELLANEOUS (%)								
PERCENT SOLIDS	79.2	83.1	87	86	84.6	76.6	NA	89.5
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	38 J	10 J	--	--	--	--	NA	--
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	--	--	NA	--	--

TABLE AF-3
SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL - FALL 2007 RESULTS
BLOCK F
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-385-0102RE	SB-385-0203	SB-385-0405	SB-385-0708	SB-386-0102	SB-386-0203	SB-388-0203	SB-388-0405
LABORATORY ID:	A7J170235013	A7J170235014	A7J170235015	A7J170235016	A7J170235017	A7J170235018	A7J170248006	A7J170248007
SAMPLE DATE:	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007
LOCATION:	SB-385	SB-385	SB-385	SB-385	SB-386	SB-386	SB-388	SB-388
DEPTH RANGE:	1 - 2	2 - 3	4 - 5	7 - 8	1 - 2	2 - 3	2 - 3	4 - 5
MISCELLANEOUS (%)								
PERCENT SOLIDS	NA	91	93	84.7	90	89.2	87.6	90.8
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	NA	--	--	--	--	--	--	--
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	--	--	--	--	--

SAMPLE ID:	SB-386-0708	SB-387-0102	SB-387-0203	SB-387-0405	SB-387-0708	SB-388-0102	SB-390-0102	SB-390-0203
LABORATORY ID:	A7J170235020	A7J170248001	A7J170248002	A7J170248003	A7J170248004	A7J170248005	A7J170248013	A7J170248014
SAMPLE DATE:	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007
LOCATION:	SB-386	SB-387	SB-387	SB-387	SB-387	SB-388	SB-390	SB-390
DEPTH RANGE:	7 - 8	1 - 2	2 - 3	4 - 5	7 - 8	1 - 2	1 - 2	2 - 3
MISCELLANEOUS (%)								
PERCENT SOLIDS	84.1	93.7	91.4	84.4	88.8	93.6	87	78.4
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	--	12 J	--	--	--	380	9.9 J	--
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	--	--	--	--	--

TABLE AF-3
SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL - FALL 2007 RESULTS
BLOCK F
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-388-0708	SB-389-0102	SB-389-0203	SB-389-0405	SB-389-0708	SB-391-0708	SB-392-0102	SB-392-0203
LABORATORY ID:	A7J170248008	A7J170248009	A7J170248010	A7J170248011	A7J170248012	A7J170248020	A7J170253001	A7J170253002
SAMPLE DATE:	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/15/2007	10/16/2007	10/16/2007	10/16/2007
LOCATION:	SB-388	SB-389	SB-389	SB-389	SB-389	SB-391	SB-392	SB-392
DEPTH RANGE:	7 - 8	1 - 2	2 - 3	4 - 5	7 - 8	7 - 8	1 - 2	2 - 3
MISCELLANEOUS (%)								
PERCENT SOLIDS	90.3	91.2	85	87.5	86.4	85.3	90.3	89.3
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	--	220 J	--	33 J	9.7 J	--	--	--
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	--	--	--	--	--

SAMPLE ID:	SB-390-0405	SB-390-0708	SB-391-0102	SB-391-0203	SB-391-0405	SB-393-0405	SB-393-0708	SB-394-0102
LABORATORY ID:	A7J170248015	A7J170248016	A7J170248017	A7J170248018	A7J170248019	A7J170253007	A7J170253008	A7J170253009
SAMPLE DATE:	10/15/2007	10/15/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007
LOCATION:	SB-390	SB-390	SB-391	SB-391	SB-391	SB-393	SB-393	SB-394
DEPTH RANGE:	4 - 5	7 - 8	1 - 2	2 - 3	4 - 5	4 - 5	7 - 8	1 - 2
MISCELLANEOUS (%)								
PERCENT SOLIDS	82.8	82.3	83.6	65.8	87	93.5	86.9	90
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	990	--	--	--	--	7.5 J	--	140 J
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	--	--	--	--	--

TABLE AF-3
SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL - FALL 2007 RESULTS
BLOCK F
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-392-0405	SB-392-0708	SB-393-0102	SB-393-0203	SB-395-0203	SB-395-0405	SB-395-0708	SB-396-0102
LABORATORY ID:	A7J170253003	A7J170253004	A7J170253005	A7J170253006	A7J170253014	A7J170253015	A7J170253016	A7J170253017
SAMPLE DATE:	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007
LOCATION:	SB-392	SB-392	SB-393	SB-393	SB-395	SB-395	SB-395	SB-396
DEPTH RANGE:	4 - 5	7 - 8	1 - 2	2 - 3	2 - 3	4 - 5	7 - 8	1 - 2
MISCELLANEOUS (%)								
PERCENT SOLIDS	84.9	84.4	94.6	92.6	95.9	86.9	87	85.5
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	20 J	--	450	--	--	--	--	80 J
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	22 J	--	--	--	--	--

SAMPLE ID:	SB-394-0203	SB-394-0405	SB-394-0708	SB-395-0102	SB-397-0102	SB-397-0203	SB-397-0405	SB-397-0708
LABORATORY ID:	A7J170253010	A7J170253011	A7J170253012	A7J170253013	A7J170258001	A7J170258002	A7J170258003	A7J170258004
SAMPLE DATE:	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007
LOCATION:	SB-394	SB-394	SB-394	SB-395	SB-397	SB-397	SB-397	SB-397
DEPTH RANGE:	2 - 3	4 - 5	7 - 8	1 - 2	1 - 2	2 - 3	4 - 5	7 - 8
MISCELLANEOUS (%)								
PERCENT SOLIDS	90.6	86.7	86.2	83.2	95.1	89.4	95.1	85.2
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	25 J	--	--	--	80 J	--	850	--
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	--	--	--	19 J	--

TABLE AF-3
SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL - FALL 2007 RESULTS
BLOCK F
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-396-0203	SB-396-0405	SB-396-0708	SB-398-0708	SB-399-0102	SB-399-0203	SB-399-0405	SB-399-0708
LABORATORY ID:	A7J170253018	A7J170253019	A7J170253020	A7J170258008	A7J170258009	A7J170258010	A7J170258011	A7J170258012
SAMPLE DATE:	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007
LOCATION:	SB-396	SB-396	SB-396	SB-398	SB-399	SB-399	SB-399	SB-399
DEPTH RANGE:	2 - 3	4 - 5	7 - 8	7 - 8	1 - 2	2 - 3	4 - 5	7 - 8
MISCELLANEOUS (%)								
PERCENT SOLIDS	86	84.8	83.8	86.3	90.8	89.9	84.5	83.3
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	--	--	--	--	--	--	22 J	--
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	--	--	--	--	--

SAMPLE ID:	SB-398-0102	SB-398-0203	SB-398-0405	SB-400-0405	SB-400-0708	SB-401-0102	SB-401-0203	SB-401-0405
LABORATORY ID:	A7J170258005	A7J170258006	A7J170258007	A7J170258015	A7J170258016	A7J170258017	A7J170258018	A7J170258019
SAMPLE DATE:	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007
LOCATION:	SB-398	SB-398	SB-398	SB-400	SB-400	SB-401	SB-401	SB-401
DEPTH RANGE:	1 - 2	2 - 3	4 - 5	4 - 5	7 - 8	1 - 2	2 - 3	4 - 5
MISCELLANEOUS (%)								
PERCENT SOLIDS	90.9	86	89.4	84.1	80.3	79.7	88.3	83.1
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	29 J	33 J	--	--	--	25 J	--	--
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	--	--	--	--	--

TABLE AF-3
SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL - FALL 2007 RESULTS
BLOCK F
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-400-0102	SB-400-0203	SB-402-0203	SB-402-0405	SB-402-0708	SB-403-0102	SB-403-0203	SB-403-0405
LABORATORY ID:	A7J170258013	A7J170258014	A7J170283002	A7J170283003	A7J170283004	A7J170283005	A7J170283006	A7J170283007
SAMPLE DATE:	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007
LOCATION:	SB-400	SB-400	SB-402	SB-402	SB-402	SB-403	SB-403	SB-403
DEPTH RANGE:	1 - 2	2 - 3	2 - 3	4 - 5	7 - 8	1 - 2	2 - 3	4 - 5
MISCELLANEOUS (%)								
PERCENT SOLIDS	91.6	92.1	84.7	83.6	84.1	88.6	88.4	84.7
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	9.1 J	--	--	--	--	--	--	--
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	--	--	--	--	--

SAMPLE ID:	SB-401-0708	SB-402-0102	SB-404-0102	SB-404-0203	SB-404-0405	SB-404-0708	SB-405-0102	SB-405-0203
LABORATORY ID:	A7J170258020	A7J170283001	A7J170283009	A7J170283010	A7J170283011	A7J170283012	A7J170283013	A7J170283014
SAMPLE DATE:	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007
LOCATION:	SB-401	SB-402	SB-404	SB-404	SB-404	SB-404	SB-405	SB-405
DEPTH RANGE:	7 - 8	1 - 2	1 - 2	2 - 3	4 - 5	7 - 8	1 - 2	2 - 3
MISCELLANEOUS (%)								
PERCENT SOLIDS	86	79.9	86.6	81.2	78	76.5	91.3	90.3
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	--	37 J	--	--	18 J	72 J	36 J	--
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	--	--	--	--	--

TABLE AF-3
SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL - FALL 2007 RESULTS
BLOCK F
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-403-0708	SB-405-0708	SB-406-0102	SB-406-0203	SB-406-0405	SB-406-0708	SB-407-0102	SB-407-0203
LABORATORY ID:	A7J170283008	A7J170283016	A7J170283017	A7J170283018	A7J170283019	A7J170283020	A7J180324001	A7J180324002
SAMPLE DATE:	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007
LOCATION:	SB-403	SB-405	SB-406	SB-406	SB-406	SB-406	SB-407	SB-407
DEPTH RANGE:	7 - 8	7 - 8	1 - 2	2 - 3	4 - 5	7 - 8	1 - 2	2 - 3
MISCELLANEOUS (%)								
PERCENT SOLIDS	83.5	77.4	87.2	87.5	79.9	78.3	78.6	78.1
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	--	230 J	510	320 J	62 J	85 J	130 J	190 J
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	21 J	--	--	--	--

SAMPLE ID:	SB-405-0405	SB-407-0405	SB-407-0708	SB-408-0102	SB-408-0203	SB-408-0405	SB-408-0708	SB-409-0102
LABORATORY ID:	A7J170283015	A7J180324003	A7J180324004	A7J180324005	A7J180324006	A7J180324007	A7J180324008	A7J180324011
SAMPLE DATE:	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007
LOCATION:	SB-405	SB-407	SB-407	SB-408	SB-408	SB-408	SB-408	SB-409
DEPTH RANGE:	4 - 5	4 - 5	7 - 8	1 - 2	2 - 3	4 - 5	7 - 8	1 - 2
MISCELLANEOUS (%)								
PERCENT SOLIDS	83.3	73.7	72.7	81.8	83.8	86.1	81.1	77.6
SEMIVOLATILE SOIL (ug/kg)								
BENZO(A)PYRENE	330 J	110 J	30 J	87 J	50 J	12 J	--	39 J
PESTICIDES/PCBs (ug/kg)								
AROCLOR-1260	--	--	--	--	--	15 J	--	--

TABLE AF-3
SUMMARY OF DETECTED CONCENTRATIONS IN SUBSURFACE SOIL - FALL 2007 RESULTS
BLOCK F
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

SAMPLE ID:	SB-409-0203	SB-409-0405	SB-409-0708	SB-489-0102	SB-489-0203	SB-489-0405	SB-489-0708
LABORATORY ID:	A7J180324012	A7J180324013	A7J180324014	A7J180324015	A7J180324016	A7J180324017	A7J180324018
SAMPLE DATE:	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007	10/16/2007
LOCATION:	SB-409	SB-409	SB-409	SB-489	SB-489	SB-489	SB-489
DEPTH RANGE:	2 - 3	4 - 5	7 - 8	1 - 2	2 - 3	4 - 5	7 - 8
MISCELLANEOUS (%)							
PERCENT SOLIDS	81.6	78.5	73.5	79.8	76.3	79.3	73.3
SEMIVOLATILE SOIL (ug/kg)							
BENZO(A)PYRENE	--	67 J	--	9.6 J	260 J	9.8 J	21 J
PESTICIDES/PCBs (ug/kg)							
AROCLOR-1260	--	--	--	--	--	--	--

SAMPLE ID:	SB-490-0405	SB-490-0708
LABORATORY ID:	A7J180324009	A7J180324010
SAMPLE DATE:	10/17/2007	10/17/2007
LOCATION:	SB-490	SB-490
DEPTH RANGE:	4 - 5	7 - 8
MISCELLANEOUS (%)		
PERCENT SOLIDS	79.4	86.6
SEMIVOLATILE SOIL (ug/kg)		
BENZO(A)PYRENE	110 J	31 J
PESTICIDES/PCBs (ug/kg)		
AROCLOR-1260	--	--

1 Highlighted values indicate positive detection in exceedance of cleanup goals.

µg/kg - Micrograms per kilogram.
MDE - Maryland Department of the Environment.
mg/kg - Milligrams per kilogram.
NA - Not applicable.
NC - No criterion.
SB - Soil boring.
S.U. - Standard Units.
SVOC - Semivolatile organic compound.
VOC - Volatile organic compound.
-- - Not detected.

B - Analyte was detected but is considered to be a laboratory contaminant.
J - Positive value is considered estimated as a result of technical noncompliance.
K - Positive value is considered biased high as a result of techical noncompliance.
L - Positive value is considered biased low as a result of technical noncompliance.

APPENDIX B - STATISTICAL SUMMARY OF PRE- AND POST-REMOVAL ACTION DATA

Appendix B

Statistical Summary of Pre- and Post-Removal Data
Block F
Lockheed Martin Middle River Complex
Middle River, Maryland

Arsenic, vanadium, mercury, carcinogenic polycyclic aromatic hydrocarbons (cPAH), polychlorinated biphenyls (PCBs), and total petroleum hydrocarbons (TPH) were identified as chemicals of concern (COC) in soil.

Arsenic and vanadium are considered to be present within site-specific background concentrations in surface and subsurface soil. For arsenic, Lockheed Martin, Inc. and the Maryland Department of the Environment (MDE) agreed that no sample can remain on site with a concentration greater than 12 milligrams per kilogram (mg/kg) and the upper confidence limit of the mean (UCL) concentration must be less than 6 mg/kg to be considered background. For vanadium, Lockheed Martin, Inc. and the MDE agreed that no sample can remain on site with a concentration greater than 91 mg/kg and the UCL concentration must be less than 55 mg/kg to be considered background. These criteria are attained under current conditions in surface soil and subsurface soil (Tables B-1 and B-2).

For mercury, the criteria being used for remediation is the average typical concentration (ATC). The post-excavation UCL concentration for mercury must be less than the ATC of 0.5 mg/kg. This criterion has not currently been met in surface soil, but has been met in subsurface soil (Tables B-1 and B-2). The removal of soil associated with cPAH contamination will reduce mercury's UCL concentration to a level less than the ATC.

Soil sample boring locations must be less than the target incremental lifetime cancer risk of 1 x 10-5 and the target hazard index of 1.0. Because arsenic and vanadium meet the background requirements, risks associated with exposure to arsenic and vanadium are removed from the total risk at each boring. In the surface and subsurface soil, the target hazard index is not exceeded. In surface soil, the target cancer risk is exceeded at boring locations SB-265, SB-266, SB-268, SB-269, SB-93, SB-94, and SB-95. In subsurface soil, the target cancer risk is exceeded at boring locations SB-238 and SB-268. The exceedance of the target cancer risk at subsurface soil location SB-238 results in the removal of soil at its surface soil location. The exceedance of the risks at these locations is primarily due to the presence of carcinogenic PAHs. The maximum benzo[a]pyrene concentration remaining following the virtual removal of soil is 401 ug/kg. Using benzo[a]pyrene to represent risks associated with carcinogenic PAHs, soil with benzo[a]pyrene concentrations greater than 400 ug/kg shold be excavated (Tables B-3 and B-4).

Sample locations with benzo[a]pyrene concentrations greater than 400 µg/kg are targeted for excavation. These samples are shaded in the attached tables (Tables B-5 and B-6). To determine if the target UCL concentrations are attained for arsenic, vanadium, and

mercury, replacement values must be included in the samples that are targeted for removal. The detection limits identified in the laboratory data were used as the replacement values. For arsenic, vanadium, and mercury, these values are 0.5 mg/kg, 0.1 mg/kg, and 0.1 mg/kg, respectively (Tables B-7 and B-8).

The UCLs were calculated using the United States Environmental Protection Agency's ProUCL software. The output of the software and the data used for the calculations are attached (Tables B-9 through B-20).

Soil associated with underground storage tanks with TPH concentrations greater than the MDE cleanup standard for TPH-DRO and TPH-GRO of 230 mg/kg will be removed.

Removal of soils associated with benzo[a]pyrene contamination coincidentally results in the attainment of cleanup standards for mercury, PCBs and TPH. Target risks are achieved across the block.

APPENDIX B

TABLE B-1
SUMMARY OF PRE- AND POST-REMOVAL ANALYSIS
BLOCK F
SURFACE SOIL
LOCKHEED MARTIN MIDDLE RIVER COMPLEX
MIDDLE RIVER, MARYLAND

Metal	Pre-Removal			Post-Removal			Individual Soil Sample Result	Post-Response Action UCL
	Maximum	UCL	Basis of UCL	Maximum	UCL	Basis of UCL		
Arsenic	6	2.9	Approximate Gamma	5	3.9	99% Chebyshev (Mean, SD)	< 12 mg/kg	< 6 mg/kg
Vanadium	49	36	Student's t UCL	41.9	25	Hall's Bootstrap UCL	< 91 mg/kg	< 55 mg/kg
Mercury	1.4	0.8	99% Chebyshev (Mean, SD)	1.4	0.38	95% Chebyshev (Mean, SD)	--	< 0.5 mg/kg

1 All concentrations in milligrams per kilogram (mg/kg).

UCL - Upper confidence limit of the mean

APPENDIX B

TABLE B-2
SUMMARY OF PRE- AND POST-REMOVAL ANALYSIS
BLOCK F
SUBSURFACE SOIL
LOCKHEED MARTIN MIDDLE RIVER COMPLEX
MIDDLE RIVER, MARYLAND

Metal	Pre-Removal			Post-Removal			Individual Soil Sample Result	Post-Response Action UCL
	Maximum	UCL	Basis of UCL	Maximum	UCL	Basis of UCL		
Arsenic	7	3.4	97.5% Chebyshev (Mean, SD)	7	3.3	97.5% Chebyshev (Mean, SD)	< 12 mg/kg	< 6 mg/kg
Vanadium	62	38	Approximate Gamma	62	37	Student's t UCL	< 91 mg/kg	< 55 mg/kg
Mercury	0.97	0.24	97.5% Chebyshev (Mean, SD)	0.97	0.24	97.5% Chebyshev (Mean, SD)	--	< 0.5 mg/kg

1 All concentrations in milligrams per kilogram (mg/kg).

UCL - Upper confidence limit of the mean

APPENDIX B

TABLE B-3
PRE- AND POST-RESPONSE ACTION RISKS
BLOCK F
SURFACE SOIL

Surface Soil Boring	Residential Risks (Pre-Response Action) (1)		Residential Risks (Pre-Response Minus Background)(2)		Residential Risks (Post-Response Action) (3)		B[a]P Concentration (ug/kg)(4)
	Cancer	Noncancer	Cancer	Noncancer	Cancer	Noncancer	
SB-22A	1.40E-05	0.34	1.10E-07	0.14	1.10E-07	0.14	ND
SB-236	1.20E-05	1.4	3.40E-07	0.35	3.40E-07	0.35	NA
SB-237	1.60E-05	2.1	2.10E-06	0.8	2.10E-06	0.8	NA
SB-238	1.80E-05	1.7	9.00E-06	0.28	0	0	245
SB-23A	1.60E-05	0.36	9.40E-06	0.26	9.40E-06	0.26	190
SB-24A	1.70E-05	0.73	7.00E-06	0.58	7.00E-06	0.58	63
SB-250	2.30E-07	0.63	2.30E-07	0.082	2.30E-07	0.082	NA
SB-251	2.80E-07	0.74	2.80E-07	0.086	2.80E-07	0.086	NA
SB-252	1.90E-07	0.61	1.90E-07	0.066	1.90E-07	0.066	NA
SB-253	2.50E-07	0.89	2.50E-07	0.1	2.50E-07	0.1	NA
SB-25A	1.20E-05	0.33	9.90E-06	0.3	9.90E-06	0.3	200
SB-265	6.10E-05	1.7	4.70E-05	0.23	0	0	1800
SB-266	2.80E-05	1.2	2.80E-05	0.31	0	0	977
SB-267	6.70E-06	0.8	6.70E-06	0.22	6.70E-06	0.22	212
SB-268	6.90E-04	1.6	6.80E-04	0.39	0	0	2560
SB-269	5.20E-05	1.6	3.40E-05	0.19	0	0	1310
SB-270	7.10E-06	0.82	7.10E-06	0.12	7.10E-06	0.12	258
SB-30A	1.50E-05	0.3	8.60E-06	0.19	8.60E-06	0.19	180
SB-31A	1.40E-05	0.27	9.10E-06	0.19	9.10E-06	0.19	185
SB-50	9.30E-06	0.35	1.20E-07	0.2	1.20E-07	0.2	NA
SB-55	1.10E-05	0.28	7.00E-06	0.21	7.00E-06	0.21	99
SB-56	2.20E-05	0.42	1.70E-07	0.11	1.70E-07	0.11	ND
SB-57	1.70E-05	0.34	1.40E-07	0.09	1.40E-07	0.09	ND
SB-58	8.00E-05	0.29	2.80E-07	0.1	2.80E-07	0.1	ND
SB-93	8.60E-05	0.71	8.00E-05	0.62	0	0	1500
SB-94	6.80E-05	1.1	6.20E-05	0.98	0	0	850
SB-95	4.50E-05	0.34	3.90E-05	0.25	0	0	1600
SB-96	1.50E-05	0.3	9.30E-06	0.2	9.30E-06	0.2	190

1 Soil boring location risks as identified in the Site Characterization Report (Tetra Tech, May 2006).

2 Soil boring location risks as identified in the Site Characterization Report (Tetra Tech, May 2006) minus risks associated with arsenic and vanadium.

3 Soil boring location risks excluding those attributable to arsenic and vanadium (less than Block D-specific background reference concentration of 12 and 91 mg/kg, respectively).

4 Concentration used to calculate risk in the Site Characterization Rerpot (Tetra Tech, May 2006)

APPENDIX B

TABLE B-4
PRE- AND POST-RESPONSE ACTION RISKS
BLOCK D
SUBSURFACE SOIL

Subsurface Soil Boring	Residential Risks (Pre-Response Action) (1)		Residential Risks (Pre-Response Minus Background)(2)		Residential Risks (Post-Response Action) (2)		B[a]P Concentration (ug/kg)(4)
	Cancer	Noncancer	Cancer	Noncancer	Cancer	Noncancer	
SB-22	1.70E-05	0.32	8.70E-06	0.18	8.70E-06	0.18	ND
SB-23	1.30E-05	0.22	8.40E-06	0.15	8.40E-06	0.15	ND
SB-236	2.00E-05	1.4	3.40E-07	0.37	3.40E-07	0.37	NA
SB-237	4.10E-07	1	4.10E-07	0.11	4.10E-07	0.11	NA
SB-238	6.20E-05	1.2	5.30E-05	0.16	0	0	1960
SB-24	1.90E-05	0.53	8.60E-06	0.37	8.60E-06	0.37	ND
SB-25	1.20E-05	0.27	8.60E-06	0.2	8.60E-06	0.2	ND
SB-250	2.20E-07	0.79	2.20E-07	0.066	2.20E-07	0.066	NA
SB-251	1.50E-05	1.3	3.50E-07	0.1	3.50E-07	0.1	N
SB-252	1.20E-05	1	2.30E-07	0.077	2.30E-07	0.077	NA
SB-253	2.20E-07	0.75	2.20E-07	0.076	2.20E-07	0.076	NA
SB-26	NA	NA	NA	NA	NA	NA	NA
SB-265	1.10E-05	NA	1.10E-05	NA	0	NA	401
SB-266	3.40E-06	NA	3.40E-06	NA	3.40E-06	NA	116
SB-267	2.60E-06	NA	2.60E-06	NA	2.60E-06	NA	80
SB-268	7.60E-05	NA	7.60E-05	NA	0	NA	3130
SB-269	1.70E-06	NA	1.70E-06	NA	1.70E-06	NA	ND
SB-27	NA	NA	NA	NA	NA	NA	NA
SB-270	2.20E-06	NA	2.20E-06	NA	2.20E-06	NA	62
SB-28	NA	NA	NA	NA	NA	NA	NA
SB-29	NA	NA	NA	NA	NA	NA	NA
SB-295	2.20E-05	1.4	8.70E-06	0.12	8.70E-06	0.12	ND
SB-296	2.60E-05	2.1	9.50E-06	0.21	9.50E-06	0.21	ND
SB-297	1.80E-05	1.2	8.40E-06	0.12	8.40E-06	0.12	ND
SB-298	1.90E-05	1.3	8.60E-06	0.12	8.60E-06	0.12	ND
SB-299	1.30E-05	0.9	8.40E-06	0.1	8.40E-06	0.1	ND
SB-30	1.10E-05	0.26	8.30E-06	0.21	8.30E-06	0.21	ND
SB-31	8.80E-06	0.25	8.80E-06	0.25	8.80E-06	0.25	ND
SB-50	3.30E-06	0.21	1.60E-07	0.16	1.60E-07	0.16	ND
SB-55	1.60E-05	0.53	1.00E-05	0.44	1.00E-05	0.44	ND
SB-56	1.00E-05	0.23	9.60E-06	0.22	9.60E-06	0.22	ND
SB-57	1.30E-05	0.25	9.70E-06	0.2	9.70E-06	0.2	ND
SB-58	2.10E-05	0.43	9.50E-06	0.25	9.50E-06	0.25	ND
SB-93	1.10E-05	0.25	9.90E-06	0.24	9.90E-06	0.24	ND
SB-94	1.90E-05	0.26	1.80E-05	0.24	0	0	NA
SB-95	1.10E-05	0.26	1.00E-05	0.25	1.00E-05	0.25	ND
SB-96	1.10E-05	0.22	9.80E-06	0.21	9.80E-06	0.21	ND

1 Soil boring location risks as identified in the Site Characterization Report (Tetra Tech, May 2006).
2 Soil boring location risks as identified in the Site Characterization Report (Tetra Tech, May 2006) minus risks associated with arsenic and vanadium.
3 Soil boring location risks excluding those attributable to arsenic and vanadium (less than Block D-specific background reference concentration of 12 and 91 mg/kg, respectively).
4 Concentration used to calculate risk in the Site Characterization Rerpot (Tetra Tech, May 2006)

APPENDIX B

TABLE B-5
PRE-RESPONSE ACTION COC CONCENTRATIONS
BLOCK F
SURFACE SOIL
LOCKHEED MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Soil Boring	Arsenic		Vanadium		Mercury	
MRC-MW46(0910)	NA		NA		NA	
SB-22A-SS	1.3		NA		0.12	U
SB-23A-SS	2.2		NA		0.1	U
SB-24A-SS	3.4		NA		1.4	
SB-25A-SS	0.6		NA		0.11	U
SB-30A-SS	2.3	L	NA		0.11	UL
SB-31A-SS	1.8	L	NA		0.11	UL
SB-50-SS	3.2		NA		0.42	
SB-55-SS	1.5	L	NA		0.11	UL
SB-56-SS	2.9	L	NA		0.16	UL
SB-57-SS	2.2	L	NA		0.13	UL
SB-58-SS	1.5	L	NA		0.1	UL
SB-93-SS	1.8	L	NA		0.68	
SB-94-SS	2.1	L	NA		0.97	
SB-95-SS	2	L	NA		0.15	
SB-96-SS	2	L	NA		0.12	U
SB-236-SS	3		29.9		0.29	L
SB-236-01	4		31		0.92	L
SB-237-SS	3	B	31		0.06	
SB-237-01	5		41.9		0.35	
SB-238-SS	3		49		0.24	
SB-238-01	3		35.9		0.08	
SB-250-SS	1	B	20.5		0.04	
SB-251-SS	3	B	24.8		0.02	
SB-252-SS	2	B	20.3		0.04	
SB-253-SS	3	B	29.5		0.07	
SB-265-SS	5		46.2		0.09	
SB-266-SS	3	B	33.4		0.51	
SB-267-SS	3	B	21.6		0.07	
SB-268-SS	5		35.8		0.49	
SB-269-SS	6		42.8		0.18	
SB-270-SS	3	B	26.2		0.11	

1 All concentrations are in milligrams per kilogram (mg/kg).
2 Highlighted samples are those targeted for removal.

COC - Chemical of concern.
SB - Soil boring
B - Blank contamination
U - Not detected.
L - Concentration is biased low.
NA - Not analyzed

APPENDIX B

TABLE B-6
PRE-RESPONSE ACTION COC CONCENTRATIONS
BLOCK F
SUBSURFACE SOIL
LOCKHEED MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Soil Boring	Arsenic		Vanadium		Mercury	
SB-22-05	2.9	L	NA		0.12	U
SB-22-10	2.7	L	NA		0.12	U
SB-23-05	1.5	L	NA		0.12	U
SB-23-10	1	L	NA		0.12	U
SB-24-05	3.5	L	NA		0.94	
SB-24-10	2.3	L	NA		0.17	
SB-25-05	0.92	L	NA		0.12	U
SB-25-10	1.7	L	NA		0.12	U
SB-26-10	NA		NA		NA	
SB-27-10	NA		NA		NA	
SB-28-10	NA		NA		NA	
SB-29-10	NA		NA		NA	
SB-30-05	0.99	L	NA		0.12	U
SB-31-05	0.59	UR	NA		0.12	U
SB-50-05	0.96		NA		0.11	U
SB-50-10	1.2		NA		0.11	U
SB-55-05	1.9		NA		0.11	U
SB-55-10	0.58	L	NA		0.11	UL
SB-56-05	0.53	UL	NA		0.11	UL
SB-56-10	0.58	UL	NA		0.12	UL
SB-56-15	0.56	UL	NA		0.11	UL
SB-57-05	0.65	L	NA		0.11	UL
SB-57-10	1.8	L	NA		0.12	UL
SB-57-15	0.66	L	NA		0.11	UL
SB-58-05	2.3	L	NA		0.12	UL
SB-58-10	4.1	L	NA		0.11	UL
SB-58-15	5.3	L	NA		0.12	UL
SB-58-20	2.5	L	NA		0.12	UL
SB-93-05	0.59	UL	NA		0.12	U
SB-93-10	0.56	UL	NA		0.11	U
SB-93-15	0.56	UL	NA		0.11	U
SB-94-05	0.58	UL	NA		0.12	U
SB-94-10	0.55	UL	NA		0.11	U
SB-94-15	0.59	UL	NA		0.12	U
SB-95-05	0.58	UL	NA		0.12	U
SB-95-10	0.59	UL	NA		0.12	U
SB-96-05	0.52	UL	NA		0.1	U
SB-96-10	0.59	UL	NA		0.12	U
SB-96-15	0.6	UL	NA		0.12	U
SB-236-05	7		26.9		0.97	L
SB-237-05	2	B	35.1		0.01	
SB-238-05	3		34.1		0.07	
SB-250-02	3		27.2		0.03	
SB-251-02	5		35.6		0.01	
SB-252-02	4		27.9		0.04	
SB-253-02	3		25.5		0.03	
SB-265-02	NA		NA		NA	
SB-266-02	NA		NA		NA	
SB-267-02	NA		NA		NA	
SB-268-02	NA		NA		NA	
SB-269-02	NA		NA		NA	
SB-270-02	NA		NA		NA	
SB-295-0405	4.6		40.4		0.01	
SB-294-0910	2.9	K	32.5		0.01	U
SB-296-0405	5.7		61.6		0.02	
SB-296-0910	2.4	K	32.8		0.01	
SB-297-0405	3.3		35.3		0.1	U
SB-297-0910	3	K	31.8		0.01	U
SB-298-0405	3.5		28.4		0.01	U
SB-298-0910	2	K	46.4		0.01	U
SB-299-0405	1.3	K	27.2		0.01	U
SB-299-0910	2.2	K	20.7		0.01	B

1 All concentrations are in milligrams per kilogram (mg/kg).
2 Highlighted samples are those targeted for removal.

COC - Chemical of concern.
SB - Soil boring
B - Analyte was detected but is considered to be a laboratory contaminant.
U - Not detected.
L - Concentration is biased low.
K - Concentration is biased high.
R - Rejected data.

APPENDIX B

TABLE B-7
POST-RESPONSE ACTION COC CONCENTRATIONS
BLOCK F
SURFACE SOIL
LOCKHEED MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Soil Boring	Arsenic		Vanadium		Mercury	
MRC-MW46(0910)	NA		NA		NA	
SB-22A-SS	1.3		NA		0.12	U
SB-23A-SS	2.2		NA		0.1	U
SB-24A-SS	3.4		NA		1.4	
SB-25A-SS	0.6		NA		0.11	U
SB-30A-SS	2.3	L	NA		0.11	UL
SB-31A-SS	1.8	L	NA		0.11	UL
SB-50-SS	3.2		NA		0.42	
SB-55-SS	1.5	L	NA		0.11	UL
SB-56-SS	2.9	L	NA		0.16	UL
SB-57-SS	2.2	L	NA		0.13	UL
SB-58-SS	1.5	L	NA		0.1	UL
SB-93-SS	0.5	U	NA		0.1	U
SB-94-SS	0.5	U	NA		0.1	U
SB-95-SS	0.5	U	NA		0.1	U
SB-96-SS	2	L	NA		0.12	U
SB-236-SS	3		29.9		0.29	L
SB-236-01	4		31		0.92	L
SB-237-SS	3	B	31		0.06	
SB-237-01	5		41.9		0.35	
SB-238-SS	0.5	U	0.1	U	0.1	U
SB-238-01	3		35.9		0.08	
SB-250-SS	1	B	20.5		0.04	
SB-251-SS	3	B	24.8		0.02	
SB-252-SS	2	B	20.3		0.04	
SB-253-SS	3	B	29.5		0.07	
SB-265-SS	0.5	U	0.1	U	0.1	U
SB-266-SS	0.5	U	0.1	U	0.1	U
SB-267-SS	3	B	21.6		0.07	
SB-268-SS	0.5	U	0.1	U	0.1	U
SB-269-SS	0.5	U	0.1	U	0.1	U
SB-270-SS	3	B	26.2		0.11	

2 Concentrations of excavated samples are replaced with the following detection limits:

Arsenic	0.5 U mg/kg
Vanadium	0.1 U mg/kg
Mercury	0.1 U mg/kg

3 Highlighted samples are those targeted for removal.

COC - Chemical of concern.
SB - Soil boring
B -Blank contamination.
U - Not detected.
L - Concentration is biased low.

APPENDIX B

TABLE B-8
POST-RESPONSE ACTION COC CONCENTRATIONS
BLOCK F
SUBSURFACE SOIL
LOCKHEED MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Soil Boring	Arsenic		Vanadium		Mercury	
SB-22-05	2.9	L	NA		0.12	U
SB-22-10	2.7	L	NA		0.12	U
SB-23-05	1.5	L	NA		0.12	U
SB-23-10	1	L	NA		0.12	U
SB-24-05	3.5	L	NA		0.94	
SB-24-10	2.3	L	NA		0.17	
SB-25-05	0.92	L	NA		0.12	U
SB-25-10	1.7	L	NA		0.12	U
SB-26-10	NA		NA		NA	
SB-27-10	NA		NA		NA	
SB-28-10	NA		NA		NA	
SB-29-10	NA		NA		NA	
SB-30-05	0.99	L	NA		0.12	U
SB-31-05	0.59	UR	NA		0.12	U
SB-50-05	0.96		NA		0.11	U
SB-50-10	1.2		NA		0.11	U
SB-55-05	1.9		NA		0.11	U
SB-55-10	0.58	L	NA		0.11	UL
SB-56-05	0.53	UL	NA		0.11	UL
SB-56-10	0.58	UL	NA		0.12	UL
SB-56-15	0.56	UL	NA		0.11	UL
SB-57-05	0.65	L	NA		0.11	UL
SB-57-10	1.8	L	NA		0.12	UL
SB-57-15	0.66	L	NA		0.11	UL
SB-58-05	2.3	L	NA		0.12	UL
SB-58-10	4.1	L	NA		0.11	UL
SB-58-15	5.3	L	NA		0.12	UL
SB-58-20	2.5	L	NA		0.12	UL
SB-93-05	0.59	UL	NA		0.12	U
SB-93-10	0.56	UL	NA		0.11	U
SB-93-15	0.56	UL	NA		0.11	U
SB-94-05	0.5	U	NA		0.1	U
SB-94-10	0.5	U	NA		0.1	U
SB-94-15	0.59	UL	NA		0.12	U
SB-95-05	0.58	UL	NA		0.12	U
SB-95-10	0.59	UL	NA		0.12	U
SB-96-05	0.52	UL	NA		0.1	U
SB-96-10	0.59	UL	NA		0.12	U
SB-96-15	0.6	UL	NA		0.12	U
SB-236-05	7		26.9		0.97	L
SB-237-05	2	B	35.1		0.01	
SB-238-05	0.5	U	0.1	U	0.1	U
SB-250-02	3		27.2		0.03	
SB-251-02	5		35.6		0.01	
SB-252-02	4		27.9		0.04	
SB-253-02	3		25.5		0.03	
SB-265-02	NA		NA		NA	
SB-266-02	NA		NA		NA	
SB-267-02	NA		NA		NA	
SB-268-02	0.5	U	NA		NA	
SB-269-02	NA		NA		NA	
SB-270-02	NA		NA		NA	
SB-295-0405	4.6		40.4		0.01	
SB-294-0910	2.9	K	32.5		0.01	U
SB-296-0405	5.7		61.6		0.02	
SB-296-0910	2.4	K	32.8		0.01	
SB-297-0405	3.3		35.3		0.1	U
SB-297-0910	3	K	31.8		0.01	U
SB-298-0405	3.5		28.4		0.01	U
SB-298-0910	2	K	46.4		0.01	U
SB-299-0405	1.3	K	27.2		0.01	U
SB-299-0910	2.2	K	20.7		0.01	B

1 All concentrations are in milligrams per kilogram (mg/kg).
2 Concentrations of excavated samples are replaced with the following detection limits:
Arsenic 0.5 U mg/kg
Vanadium 0.1 U mg/kg
Mercury 0.1 U mg/kg
3 Highlighted samples are those targeted for removal.

COC - Chemical of concern.
SB - Soil boring
B - Analyte was detected but is considered to be a laboratory contaminant.
U - Not detected.
L - Concentration is biased low.
K - Concentration is biased high.
R - Rejected data.

APPENDIX B

TABLE B-9
PRO-UCL PRE-REMOVAL ARSENIC CONCENTRATION
BLOCK F
SURFACE SOIL

Data File:	AS V HG BLOCK F APPENDIX.xls		Variable:	Arsenic (PRE SURF)	
Raw Statistics			Normal Distribution Test		
Number of Valid Samples	31		Shapiro-Wilk Test Statistic		0.88667
Number of Unique Samples	17		Shapiro-Wilk 5% Critical Value		0.929
Minimum	0.5		Data not normal at 5% significance level		
Maximum	6				
Mean	2.429032		95% UCL (Assuming Normal Distribution)		
Median	2		Student's-t UCL		2.84724
Standard Deviation	1.371907				
Variance	1.882129		Gamma Distribution Test		
Coefficient of Variation	0.564796		A-D Test Statistic		0.618497
Skewness	1.071467		A-D 5% Critical Value		0.751578
			K-S Test Statistic		0.132553
Gamma Statistics			K-S 5% Critical Value		0.158658
k hat	3.425873		Data follow approximate gamma distribution		
k star (bias corrected)	3.115843		at 5% significance level		
Theta hat	0.709026				
Theta star	0.779575		95% UCLs (Assuming Gamma Distribution)		
nu hat	212.4042		Approximate Gamma UCL		2.896096
nu star	193.1822		Adjusted Gamma UCL		2.924681
Approx.Chi Square Value (.05)	162.0271				
Adjusted Level of Significance	0.0413		Lognormal Distribution Test		
Adjusted Chi Square Value	160.4434		Shapiro-Wilk Test Statistic		0.952174
			Shapiro-Wilk 5% Critical Value		0.929
Log-transformed Statistics			Data are lognormal at 5% significance level		
Minimum of log data	-0.693147				
Maximum of log data	1.791759		95% UCLs (Assuming Lognormal Distribution		
Mean of log data	0.734503		95% H-UCL		3.041765
Standard Deviation of log data	0.578753		95% Chebyshev (MVUE) UCL		3.62381
Variance of log data	0.334955		97.5% Chebyshev (MVUE) UCL		4.132059
			99% Chebyshev (MVUE) UCL		5.130415
			95% Non-parametric UCLs		
			CLT UCL		2.834327
			Adj-CLT UCL (Adjusted for skewness)		2.884994
			Mod-t UCL (Adjusted for skewness)		2.855143
			Jackknife UCL		2.84724
			Standard Bootstrap UCL		2.834785
			Bootstrap-t UCL		2.919443
RECOMMENDATION			Hall's Bootstrap UCL		2.921775
Assuming gamma distribution (0.05)			Percentile Bootstrap UCL		2.83871
			BCA Bootstrap UCL		2.874194
Use Approximate Gamma UCL			95% Chebyshev (Mean, Sd) UCL		3.503073
			97.5% Chebyshev (Mean, Sd) UCL		3.967811
			99% Chebyshev (Mean, Sd) UCL		4.880699

APPENDIX B

TABLE B-10
PRO-UCL PRE-REMOVAL VANADIUM CONCENTRATION
BLOCK F
SURFACE SOIL

Data File:	AS V HG BLOCK F APPENDIX.xls	Variable:	Vanadium (PRE SURF)
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	16	Shapiro-Wilk Test Statistic	0.949257
Number of Unique Samples	15	Shapiro-Wilk 5% Critical Value	0.887
Minimum	20.3	Data are normal at 5% significance level	
Maximum	49		
Mean	32.4875	95% UCL (Assuming Normal Distribution)	
Median	31	Student's-t UCL	36.42136
Standard Deviation	8.976033		
Variance	80.56917	Gamma Distribution Test	
Coefficient of Variation	0.276292	A-D Test Statistic	0.244492
Skewness	0.369926	A-D 5% Critical Value	0.738006
		K-S Test Statistic	0.110064
Gamma Statistics		K-S 5% Critical Value	0.214961
k hat	13.97544	Data follow approximate gamma distribution	
k star (bias corrected)	11.39671	at 5% significance level	
Theta hat	2.324614		
Theta star	2.850603	95% UCLs (Assuming Gamma Distribution)	
nu hat	447.2141	Approximate Gamma UCL	36.85947
nu star	364.6948	Adjusted Gamma UCL	37.39709
Approx.Chi Square Value (.05)	321.4376		
Adjusted Level of Significance	0.03348	Lognormal Distribution Test	
Adjusted Chi Square Value	316.8167	Shapiro-Wilk Test Statistic	0.955836
		Shapiro-Wilk 5% Critical Value	0.887
Log-transformed Statistics		Data are lognormal at 5% significance level	
Minimum of log data	3.010621		
Maximum of log data	3.89182	95% UCLs (Assuming Lognormal Distribution	
Mean of log data	3.444652	95% H-UCL	37.25769
Standard Deviation of log data	0.279558	95% Chebyshev (MVUE) UCL	42.50322
Variance of log data	0.078153	97.5% Chebyshev (MVUE) UCL	46.83207
		99% Chebyshev (MVUE) UCL	55.33528
		95% Non-parametric UCLs	
		CLT UCL	36.17857
		Adj-CLT UCL (Adjusted for skewness)	36.40031
		Mod-t UCL (Adjusted for skewness)	36.45595
		Jackknife UCL	36.42136
		Standard Bootstrap UCL	35.91295
		Bootstrap-t UCL	36.59026
RECOMMENDATION		Hall's Bootstrap UCL	36.44348
Data are normal (0.05)		Percentile Bootstrap UCL	36.1
		BCA Bootstrap UCL	36.2875
Use Student's-t UCL		95% Chebyshev (Mean, Sd) UCL	42.26891
		97.5% Chebyshev (Mean, Sd) UCL	46.50133
		99% Chebyshev (Mean, Sd) UCL	54.8151

APPENDIX B

TABLE B-11
PRO-UCL PRE-REMOVAL MERCURY CONCENTRATION
BLOCK F
SURFACE SOIL

Data File:	AS V HG BLOCK F APPENDIX.xls	Variable:	Mercury PRE SURF
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	31	Shapiro-Wilk Test Statistic	0.684292
Number of Unique Samples	22	Shapiro-Wilk 5% Critical Value	0.929
Minimum	0.02	Data not normal at 5% significance level	
Maximum	1.4		
Mean	0.250484	95% UCL (Assuming Normal Distribution)	
Median	0.08	Student's-t UCL	0.352181
Standard Deviation	0.333612		
Variance	0.111297	Gamma Distribution Test	
Coefficient of Variation	1.331872	A-D Test Statistic	2.141092
Skewness	2.086285	A-D 5% Critical Value	0.781923
		K-S Test Statistic	0.248855
Gamma Statistics		K-S 5% Critical Value	0.163222
k hat	0.869621	Data does not follow a gamma distribution	
k star (bias corrected)	0.80697	at 5% significance level	
Theta hat	0.288038		
Theta star	0.310401	95% UCLs (Assuming Gamma Distribution)	
nu hat	53.91653	Approximate Gamma UCL	0.360214
nu star	50.03213	Adjusted Gamma UCL	0.367687
Approx.Chi Square Value (.05)	34.79112		
Adjusted Level of Significance	0.0413	Lognormal Distribution Test	
Adjusted Chi Square Value	34.08396	Shapiro-Wilk Test Statistic	0.896072
		Shapiro-Wilk 5% Critical Value	0.929
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	-3.912023		
Maximum of log data	0.336472	95% UCLs (Assuming Lognormal Distribution	
Mean of log data	-2.059538	95% H-UCL	0.409061
Standard Deviation of log data	1.127193	95% Chebyshev (MVUE) UCL	0.476264
Variance of log data	1.270565	97.5% Chebyshev (MVUE) UCL	0.581455
		99% Chebyshev (MVUE) UCL	0.788083
		95% Non-parametric UCLs	
		CLT UCL	0.349041
		Adj-CLT UCL (Adjusted for skewness)	0.373031
		Mod-t UCL (Adjusted for skewness)	0.355923
		Jackknife UCL	0.352181
		Standard Bootstrap UCL	0.346578
		Bootstrap-t UCL	0.399174
RECOMMENDATION		Hall's Bootstrap UCL	0.378058
Data are Non-parametric (0.05)		Percentile Bootstrap UCL	0.351452
		BCA Bootstrap UCL	0.382581
Use 99% Chebyshev (Mean, Sd) UCL		95% Chebyshev (Mean, Sd) UCL	0.511663
		97.5% Chebyshev (Mean, Sd) UCL	0.624675
		99% Chebyshev (Mean, Sd) UCL	0.846666

APPENDIX B

TABLE B-12
PRO-UCL PRE-REMOVAL ARSENIC CONCENTRATION
BLOCK F
SUBSURFACE SOIL

Data File:	AS V HG BLOCK F APPENDIX.xls	Variable:	Arsenic (PRE SUB)
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	52	Lilliefor's Test Statistic	0.154131
Number of Unique Samples	37	Lilliefor's 5% Critical Value	0.122866
Minimum	0.26	Data are normal at 5% significance level	
Maximum	7		
Mean	1.935481	95% UCL (Assuming Normal Distribution)	
Median	1.6	Student's-t UCL	2.324461
Standard Deviation	1.674329		
Variance	2.803377	Gamma Distribution Test	
Coefficient of Variation	0.865071	A-D Test Statistic	1.525294
Skewness	0.983457	A-D 5% Critical Value	0.775023
		K-S Test Statistic	0.178668
Gamma Statistics		K-S 5% Critical Value	0.126189
k hat	1.195318	Data does not follow a gamma distribution	
k star (bias corrected)	1.139178	at 5% significance level	
Theta hat	1.619219		
Theta star	1.699016	95% UCLs (Assuming Gamma Distribution)	
nu hat	124.3131	Approximate Gamma UCL	2.430573
nu star	118.4745	Adjusted Gamma UCL	2.446469
Approx.Chi Square Value (.05)	94.34198		
Adjusted Level of Significance	0.045385	Lognormal Distribution Test	
Adjusted Chi Square Value	93.729	Lilliefor's Test Statistic	0.190628
		Lilliefor's 5% Critical Value	0.122866
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	-1.347074		
Maximum of log data	1.94591	95% UCLs (Assuming Lognormal Distribution	
Mean of log data	0.186948	95% H-UCL	3.074237
Standard Deviation of log data	1.074905	95% Chebyshev (MVUE) UCL	3.759418
Variance of log data	1.155421	97.5% Chebyshev (MVUE) UCL	4.472242
		99% Chebyshev (MVUE) UCL	5.872447
		95% Non-parametric UCLs	
		CLT UCL	2.317395
		Adj-CLT UCL (Adjusted for skewness)	2.351231
		Mod-t UCL (Adjusted for skewness)	2.329739
		Jackknife UCL	2.324461
		Standard Bootstrap UCL	2.299671
		Bootstrap-t UCL	2.343338
RECOMMENDATION		Hall's Bootstrap UCL	2.352961
Data are Non-parametric (0.05)		Percentile Bootstrap UCL	2.303846
		BCA Bootstrap UCL	2.338269
Use 97.5% Chebyshev (Mean, Sd) UCL		95% Chebyshev (Mean, Sd) UCL	2.947563
		97.5% Chebyshev (Mean, Sd) UCL	3.385492
		99% Chebyshev (Mean, Sd) UCL	4.245718

APPENDIX B

TABLE B-13
PRO-UCL PRE-REMOVAL VANADIUM CONCENTRATION
BLOCK F
SUBSURFACE SOIL

Data File:	AS V HG BLOCK F APPENDIX.xls	Variable:	Vanadium (PRE SUB)
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	17	Shapiro-Wilk Test Statistic	0.845931
Number of Unique Samples	16	Shapiro-Wilk 5% Critical Value	0.892
Minimum	20.7	Data not normal at 5% significance level	
Maximum	61.6		
Mean	33.49412	95% UCL (Assuming Normal Distribution)	
Median	32.5	Student's-t UCL	37.49266
Standard Deviation	9.443018		
Variance	89.17059	Gamma Distribution Test	
Coefficient of Variation	0.281931	A-D Test Statistic	0.563242
Skewness	1.766255	A-D 5% Critical Value	0.738207
		K-S Test Statistic	0.194582
Gamma Statistics		K-S 5% Critical Value	0.208781
k hat	15.92763	Data follow approximate gamma distribution	
k star (bias corrected)	13.15609	at 5% significance level	
Theta hat	2.102894		
Theta star	2.545902	95% UCLs (Assuming Gamma Distribution)	
nu hat	541.5395	Approximate Gamma UCL	37.52365
nu star	447.3071	Adjusted Gamma UCL	37.97568
Approx.Chi Square Value (.05)	399.2723		
Adjusted Level of Significance	0.03461	Lognormal Distribution Test	
Adjusted Chi Square Value	394.5198	Shapiro-Wilk Test Statistic	0.939579
		Shapiro-Wilk 5% Critical Value	0.892
Log-transformed Statistics		Data are lognormal at 5% significance level	
Minimum of log data	3.030134		
Maximum of log data	4.120662	95% UCLs (Assuming Lognormal Distribution	
Mean of log data	3.479649	95% H-UCL	37.56811
Standard Deviation of log data	0.251224	95% Chebyshev (MVUE) UCL	42.38112
Variance of log data	0.063114	97.5% Chebyshev (MVUE) UCL	46.25648
		99% Chebyshev (MVUE) UCL	53.86887
		95% Non-parametric UCLs	
		CLT UCL	37.26127
		Adj-CLT UCL (Adjusted for skewness)	38.3096
		Mod-t UCL (Adjusted for skewness)	37.65618
		Jackknife UCL	37.49266
		Standard Bootstrap UCL	37.09539
		Bootstrap-t UCL	39.26035
RECOMMENDATION		Hall's Bootstrap UCL	58.15628
Assuming gamma distribution (0.05)		Percentile Bootstrap UCL	37.32353
		BCA Bootstrap UCL	38.1
Use Approximate Gamma UCL		95% Chebyshev (Mean, Sd) UCL	43.47717
		97.5% Chebyshev (Mean, Sd) UCL	47.79684
		99% Chebyshev (Mean, Sd) UCL	56.282

APPENDIX B

TABLE B-14
PRO-UCL PRE-REMOVAL MERCURY CONCENTRATION
BLOCK F
SUBSURFACE SOIL

Data File:	AS V HG BLOCK F APPENDIX.xls	Variable:	Mercury (PRE SUB)
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	52	Lilliefor's Test Statistic	0.473729
Number of Unique Samples	12	Lilliefor's 5% Critical Value	0.122866
Minimum	0.005	Data are normal at 5% significance level	
Maximum	0.97		
Mean	0.082692	95% UCL (Assuming Normal Distribution)	
Median	0.055	Student's-t UCL	0.124103
Standard Deviation	0.178247		
Variance	0.031772	Gamma Distribution Test	
Coefficient of Variation	2.155546	A-D Test Statistic	6.918564
Skewness	4.766812	A-D 5% Critical Value	0.788146
		K-S Test Statistic	0.385184
Gamma Statistics		K-S 5% Critical Value	0.12762
k hat	0.843733	Data does not follow a gamma distribution	
k star (bias corrected)	0.807877	at 5% significance level	
Theta hat	0.098008		
Theta star	0.102358	95% UCLs (Assuming Gamma Distribution)	
nu hat	87.74823	Approximate Gamma UCL	0.10874
nu star	84.01917	Adjusted Gamma UCL	0.109598
Approx.Chi Square Value (.05)	63.893		
Adjusted Level of Significance	0.045385	Lognormal Distribution Test	
Adjusted Chi Square Value	63.39287	Lilliefor's Test Statistic	0.301479
		Lilliefor's 5% Critical Value	0.122866
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	-5.298317		
Maximum of log data	-0.030459	95% UCLs (Assuming Lognormal Distribution	
Mean of log data	-3.19121	95% H-UCL	0.10861
Standard Deviation of log data	1.097071	95% Chebyshev (MVUE) UCL	0.13275
Variance of log data	1.203566	97.5% Chebyshev (MVUE) UCL	0.158289
		99% Chebyshev (MVUE) UCL	0.208456
		95% Non-parametric UCLs	
		CLT UCL	0.12335
		Adj-CLT UCL (Adjusted for skewness)	0.14081
		Mod-t UCL (Adjusted for skewness)	0.126826
		Jackknife UCL	0.124103
		Standard Bootstrap UCL	0.123576
		Bootstrap-t UCL	0.316296
RECOMMENDATION		Hall's Bootstrap UCL	0.355811
Data are Non-parametric (0.05)		Percentile Bootstrap UCL	0.13
		BCA Bootstrap UCL	0.148077
Use 97.5% Chebyshev (Mean, Sd) UCL		95% Chebyshev (Mean, Sd) UCL	0.190437
		97.5% Chebyshev (Mean, Sd) UCL	0.237059
		99% Chebyshev (Mean, Sd) UCL	0.328638

APPENDIX B

TABLE B-15
PRO-UCL POST-REMOVAL ARSENIC CONCENTRATION
BLOCK F
SURFACE SOIL

Data File:	AS V HG BLOCK F APPENDIX.xls	Variable:	Arsenic (POST SURF)
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	31	Shapiro-Wilk Test Statistic	0.902901
Number of Unique Samples	16	Shapiro-Wilk 5% Critical Value	0.929
Minimum	0.25	Data not normal at 5% significance level	
Maximum	5		
Mean	1.641935	95% UCL (Assuming Normal Distribution)	
Median	1.5	Student's-t UCL	2.025091
Standard Deviation	1.256921		
Variance	1.579849	Gamma Distribution Test	
Coefficient of Variation	0.765512	A-D Test Statistic	1.181236
Skewness	0.778034	A-D 5% Critical Value	0.765829
		K-S Test Statistic	0.184256
Gamma Statistics		K-S 5% Critical Value	0.160945
k hat	1.410785	Data does not follow a gamma distribution	
k star (bias corrected)	1.295763	at 5% significance level	
Theta hat	1.163845		
Theta star	1.267157	95% UCLs (Assuming Gamma Distribution)	
nu hat	87.46867	Approximate Gamma UCL	2.173664
nu star	80.33729	Adjusted Gamma UCL	2.208216
Approx.Chi Square Value (.05)	60.68493		
Adjusted Level of Significance	0.0413	Lognormal Distribution Test	
Adjusted Chi Square Value	59.73538	Shapiro-Wilk Test Statistic	0.85164
		Shapiro-Wilk 5% Critical Value	0.929
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	-1.386294		
Maximum of log data	1.609438	95% UCLs (Assuming Lognormal Distribution	
Mean of log data	0.101343	95% H-UCL	2.894345
Standard Deviation of log data	1.01144	95% Chebyshev (MVUE) UCL	3.448472
Variance of log data	1.023011	97.5% Chebyshev (MVUE) UCL	4.160842
		99% Chebyshev (MVUE) UCL	5.560154
		95% Non-parametric UCLs	
		CLT UCL	2.013261
		Adj-CLT UCL (Adjusted for skewness)	2.046968
		Mod-t UCL (Adjusted for skewness)	2.030349
		Jackknife UCL	2.025091
		Standard Bootstrap UCL	2.005565
		Bootstrap-t UCL	2.078939
RECOMMENDATION		Hall's Bootstrap UCL	2.045097
Data are Non-parametric (0.05)		Percentile Bootstrap UCL	2.016129
		BCA Bootstrap UCL	2.064516
Use 99% Chebyshev (Mean, Sd) UCL		95% Chebyshev (Mean, Sd) UCL	2.625955
		97.5% Chebyshev (Mean, Sd) UCL	3.051741
		99% Chebyshev (Mean, Sd) UCL	3.888116

APPENDIX B

TABLE B-16
PRO-UCL POST-REMOVAL VANADIUM CONCENTRATION
BLOCK F
SURFACE SOIL

Data File:	AS V HG BLOCK F APPENDIX.xls	Variable:	Vanadium (POST SURF)
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	16	Shapiro-Wilk Test Statistic	0.854421
Number of Unique Samples	11	Shapiro-Wilk 5% Critical Value	0.887
Minimum	0.05	Data not normal at 5% significance level	
Maximum	41.9		
Mean	19.55313	95% UCL (Assuming Normal Distribution)	
Median	23.2	Student's-t UCL	25.96822
Standard Deviation	14.63757		
Variance	214.2585	Gamma Distribution Test	
Coefficient of Variation	0.748605	A-D Test Statistic	2.758945
Skewness	-0.3893	A-D 5% Critical Value	0.816166
		K-S Test Statistic	0.395934
Gamma Statistics		K-S 5% Critical Value	0.229929
k hat	0.40426	Data does not follow a gamma distribution	
k star (bias corrected)	0.370128	at 5% significance level	
Theta hat	48.36765		
Theta star	52.82798	95% UCLs (Assuming Gamma Distribution)	
nu hat	12.93633	Approximate Gamma UCL	45.18763
nu star	11.8441	Adjusted Gamma UCL	50.01189
Approx.Chi Square Value (.05)	5.125058		
Adjusted Level of Significance	0.03348	Lognormal Distribution Test	
Adjusted Chi Square Value	4.630683	Shapiro-Wilk Test Statistic	0.643386
		Shapiro-Wilk 5% Critical Value	0.887
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	-2.995732		
Maximum of log data	3.735286	95% UCLs (Assuming Lognormal Distribution	
Mean of log data	1.347995	95% H-UCL	62450.12
Standard Deviation of log data	3.030508	95% Chebyshev (MVUE) UCL	640.576
Variance of log data	9.183977	97.5% Chebyshev (MVUE) UCL	857.1475
		99% Chebyshev (MVUE) UCL	1282.56
		95% Non-parametric UCLs	
		CLT UCL	25.57229
		Adj-CLT UCL (Adjusted for skewness)	25.19174
		Mod-t UCL (Adjusted for skewness)	25.90887
		Jackknife UCL	25.96822
		Standard Bootstrap UCL	25.47323
		Bootstrap-t UCL	25.62901
RECOMMENDATION		Hall's Bootstrap UCL	24.89489
Data are Non-parametric (0.05)		Percentile Bootstrap UCL	25.53438
		BCA Bootstrap UCL	24.83125
Use Hall's Bootstrap UCL		95% Chebyshev (Mean, Sd) UCL	35.50405
		97.5% Chebyshev (Mean, Sd) UCL	42.40603
In case Hall's Bootstrap method yields		99% Chebyshev (Mean, Sd) UCL	55.96362
an erratic, unreasonably large UCL value,			
use 99% Chebyshev (Mean, Sd) UCL			

APPENDIX B

TABLE B-17
PRO-UCL POST-REMOVAL MERCURY CONCENTRATION
BLOCK F
SURFACE SOIL

Data File:	AS V HG BLOCK F APPENDIX.xls	Variable:	(POST SURF)
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	31	Shapiro-Wilk Test Statistic	0.451759
Number of Unique Samples	14	Shapiro-Wilk 5% Critical Value	0.929
Minimum	0.02	Data not normal at 5% significance level	
Maximum	1.4		
Mean	0.156613	95% UCL (Assuming Normal Distribution)	
Median	0.055	Student's-t UCL	0.244954
Standard Deviation	0.289797		
Variance	0.083982	Gamma Distribution Test	
Coefficient of Variation	1.850403	A-D Test Statistic	5.376837
Skewness	3.46578	A-D 5% Critical Value	0.782206
		K-S Test Statistic	0.379649
Gamma Statistics		K-S 5% Critical Value	0.163257
k hat	0.863839	Data does not follow a gamma distribution	
k star (bias corrected)	0.801747	at 5% significance level	
Theta hat	0.181299		
Theta star	0.195339	95% UCLs (Assuming Gamma Distribution)	
nu hat	53.55804	Approximate Gamma UCL	0.225514
nu star	49.70833	Adjusted Gamma UCL	0.23021
Approx.Chi Square Value (.05)	34.52103		
Adjusted Level of Significance	0.0413	Lognormal Distribution Test	
Adjusted Chi Square Value	33.81682	Shapiro-Wilk Test Statistic	0.72153
		Shapiro-Wilk 5% Critical Value	0.929
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	-3.912023		
Maximum of log data	0.336472	95% UCLs (Assuming Lognormal Distribution	
Mean of log data	-2.53425	95% H-UCL	0.186445
Standard Deviation of log data	0.945576	95% Chebyshev (MVUE) UCL	0.223982
Variance of log data	0.894113	97.5% Chebyshev (MVUE) UCL	0.268296
		99% Chebyshev (MVUE) UCL	0.355343
		95% Non-parametric UCLs	
		CLT UCL	0.242226
		Adj-CLT UCL (Adjusted for skewness)	0.276845
		Mod-t UCL (Adjusted for skewness)	0.250354
		Jackknife UCL	0.244954
		Standard Bootstrap UCL	0.245472
		Bootstrap-t UCL	0.405174
RECOMMENDATION		Hall's Bootstrap UCL	0.558622
Data are Non-parametric (0.05)		Percentile Bootstrap UCL	0.254839
		BCA Bootstrap UCL	0.282581
Use 95% Chebyshev (Mean, Sd) UCL		95% Chebyshev (Mean, Sd) UCL	0.38349
		97.5% Chebyshev (Mean, Sd) UCL	0.481659
		99% Chebyshev (Mean, Sd) UCL	0.674495

APPENDIX B

TABLE B-18
PRO-UCL POST-REMOVAL ARSENIC CONCENTRATION
BLOCK F
SUBSURFACE SOIL

Data File:	AS V HG BLOCK F APPENDIX.xls	Variable:	Arsenic (POST SUB)
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	53	Lilliefor's Test Statistic	0.165015
Number of Unique Samples	37	Lilliefor's 5% Critical Value	0.121701
Minimum	0.25	Data are normal at 5% significance level	
Maximum	7		
Mean	1.850566	95% UCL (Assuming Normal Distribution)	
Median	1.3	Student's-t UCL	2.237804
Standard Deviation	1.683377		
Variance	2.833758	Gamma Distribution Test	
Coefficient of Variation	0.909655	A-D Test Statistic	1.676645
Skewness	1.05831	A-D 5% Critical Value	0.776889
		K-S Test Statistic	0.193087
Gamma Statistics		K-S 5% Critical Value	0.125313
k hat	1.118178	Data does not follow a gamma distribution	
k star (bias corrected)	1.067464	at 5% significance level	
Theta hat	1.654983		
Theta star	1.73361	95% UCLs (Assuming Gamma Distribution)	
nu hat	118.5269	Approximate Gamma UCL	2.33711
nu star	113.1512	Adjusted Gamma UCL	2.352472
Approx.Chi Square Value (.05)	89.59514		
Adjusted Level of Significance	0.045472	Lognormal Distribution Test	
Adjusted Chi Square Value	89.01009	Lilliefor's Test Statistic	0.202918
		Lilliefor's 5% Critical Value	0.121701
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	-1.386294		
Maximum of log data	1.94591	95% UCLs (Assuming Lognormal Distribution	
Mean of log data	0.10578	95% H-UCL	2.958617
Standard Deviation of log data	1.104467	95% Chebyshev (MVUE) UCL	3.61756
Variance of log data	1.219848	97.5% Chebyshev (MVUE) UCL	4.31349
		99% Chebyshev (MVUE) UCL	5.680509
		95% Non-parametric UCLs	
		CLT UCL	2.230905
		Adj-CLT UCL (Adjusted for skewness)	2.266822
		Mod-t UCL (Adjusted for skewness)	2.243406
		Jackknife UCL	2.237804
		Standard Bootstrap UCL	2.230206
		Bootstrap-t UCL	2.285323
RECOMMENDATION		Hall's Bootstrap UCL	2.262296
Data are Non-parametric (0.05)		Percentile Bootstrap UCL	2.255377
		BCA Bootstrap UCL	2.255094
Use 97.5% Chebyshev (Mean, Sd) UCL		95% Chebyshev (Mean, Sd) UCL	2.858473
		97.5% Chebyshev (Mean, Sd) UCL	3.294595
		99% Chebyshev (Mean, Sd) UCL	4.151272

APPENDIX B

TABLE B-19
PRO-UCL POST-REMOVAL VANADIUM CONCENTRATION
BLOCK F
SUBSURFACE SOIL

Data File:	AS V HG BLOCK F APPENDIX.xls		Variable:	Vanadium (POST SUB)	
Raw Statistics			Normal Distribution Test		
Number of Valid Samples	17		Shapiro-Wilk Test Statistic		0.896362
Number of Unique Samples	16		Shapiro-Wilk 5% Critical Value		0.892
Minimum	0.05		Data are normal at 5% significance level		
Maximum	61.6				
Mean	31.49118		95% UCL (Assuming Normal Distribution)		
Median	31.8		Student's-t UCL		36.75941
Standard Deviation	12.44154				
Variance	154.7919		Gamma Distribution Test		
Coefficient of Variation	0.39508		A-D Test Statistic		3.070931
Skewness	-0.051225		A-D 5% Critical Value		0.754961
			K-S Test Statistic		0.390081
Gamma Statistics			K-S 5% Critical Value		0.212759
k hat	1.558659		Data does not follow a gamma distribution		
k star (bias corrected)	1.322817		at 5% significance level		
Theta hat	20.20402				
Theta star	23.80614		95% UCLs (Assuming Gamma Distribution)		
nu hat	52.99442		Approximate Gamma UCL		46.29727
nu star	44.97579		Adjusted Gamma UCL		48.25497
Approx.Chi Square Value (.05)	30.59231				
Adjusted Level of Significance	0.03461		Lognormal Distribution Test		
Adjusted Chi Square Value	29.35119		Shapiro-Wilk Test Statistic		0.407024
			Shapiro-Wilk 5% Critical Value		0.892
Log-transformed Statistics			Data not lognormal at 5% significance level		
Minimum of log data	-2.995732				
Maximum of log data	4.120662		95% UCLs (Assuming Lognormal Distribution		
Mean of log data	3.095824		95% H-UCL		336.3086
Standard Deviation of log data	1.589683		95% Chebyshev (MVUE) UCL		201.4674
Variance of log data	2.527091		97.5% Chebyshev (MVUE) UCL		259.2974
			99% Chebyshev (MVUE) UCL		372.8931
			95% Non-parametric UCLs		
			CLT UCL		36.45455
			Adj-CLT UCL (Adjusted for skewness)		36.41449
			Mod-t UCL (Adjusted for skewness)		36.75316
			Jackknife UCL		36.75941
			Standard Bootstrap UCL		36.40723
			Bootstrap-t UCL		36.51498
RECOMMENDATION			Hall's Bootstrap UCL		37.75948
Data are normal (0.05)			Percentile Bootstrap UCL		36.37941
			BCA Bootstrap UCL		36.10588
Use Student's-t UCL			95% Chebyshev (Mean, Sd) UCL		44.64423
			97.5% Chebyshev (Mean, Sd) UCL		50.33556
			99% Chebyshev (Mean, Sd) UCL		61.51509

APPENDIX B

TABLE B-20
PRO-UCL POST-REMOVAL MERCURY CONCENTRATION
BLOCK F
SUBSURFACE SOIL

Data File:	AS V HG BLOCK F APPENDIX.xls	Variable:	Mercury (POST SUB)
Raw Statistics		Normal Distribution Test	
Number of Valid Samples	52	Lilliefor's Test Statistic	0.491439
Number of Unique Samples	11	Lilliefor's 5% Critical Value	0.122866
Minimum	0.005	Data are normal at 5% significance level	
Maximum	0.97		
Mean	0.082019	95% UCL (Assuming Normal Distribution)	
Median	0.055	Student's-t UCL	0.123452
Standard Deviation	0.178343		
Variance	0.031806	Gamma Distribution Test	
Coefficient of Variation	2.174402	A-D Test Statistic	6.913881
Skewness	4.770668	A-D 5% Critical Value	0.788352
		K-S Test Statistic	0.401207
Gamma Statistics		K-S 5% Critical Value	0.127642
k hat	0.83986	Data does not follow a gamma distribution	
k star (bias corrected)	0.804227	at 5% significance level	
Theta hat	0.097658		
Theta star	0.101985	95% UCLs (Assuming Gamma Distribution)	
nu hat	87.34545	Approximate Gamma UCL	0.107927
nu star	83.63962	Adjusted Gamma UCL	0.108781
Approx.Chi Square Value (.05)	63.56188		
Adjusted Level of Significance	0.045385	Lognormal Distribution Test	
Adjusted Chi Square Value	63.06311	Lilliefor's Test Statistic	0.305946
		Lilliefor's 5% Critical Value	0.122866
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	-5.298317		
Maximum of log data	-0.030459	95% UCLs (Assuming Lognormal Distribution	
Mean of log data	-3.203019	95% H-UCL	0.106719
Standard Deviation of log data	1.093465	95% Chebyshev (MVUE) UCL	0.130451
Variance of log data	1.195666	97.5% Chebyshev (MVUE) UCL	0.155489
		99% Chebyshev (MVUE) UCL	0.204672
		95% Non-parametric UCLs	
		CLT UCL	0.122699
		Adj-CLT UCL (Adjusted for skewness)	0.140182
		Mod-t UCL (Adjusted for skewness)	0.126179
		Jackknife UCL	0.123452
		Standard Bootstrap UCL	0.121155
		Bootstrap-t UCL	0.325825
RECOMMENDATION		Hall's Bootstrap UCL	0.352649
Data are Non-parametric (0.05)		Percentile Bootstrap UCL	0.127212
		BCA Bootstrap UCL	0.148173
Use 97.5% Chebyshev (Mean, Sd) UCL		95% Chebyshev (Mean, Sd) UCL	0.189822
		97.5% Chebyshev (Mean, Sd) UCL	0.236469
		99% Chebyshev (Mean, Sd) UCL	0.328096

APPENDIX C – FIELD DOCUMENTATION NOTES AND BORING LOGS

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MR
Project No.: 112IC00995

Sample ID No.: SB-315
Sample Location:
Sampled By: CW
C.O.C. No.:

[X] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0730	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MR
Project No.: 112IC00998

Sample ID No.: SB-346
Sample Location:
Sampled By: CW
C.O.C. No.:

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0735	SURFACE		
Method:				
Monitor Readings				
(Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: CMC MR
Project No.: 112IC.00745

Sample ID No.: SB-347
Sample Location:
Sampled By: CW
C.O.C. No.:

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0737	SURFACE		
Method:				
Monitor Readings				
(Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MR
Project No.: 112 IC 00998

Sample ID No.: SB-348
Sample Location:
Sampled By:
C.O.C. No.:

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0734	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PLB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MSL
Project No.: 112ILC00998

Sample ID No.: SB-349
Sample Location:
Sampled By: CW
C.O.C. No.:

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0745	SURFACE		
Method:				
Monitor Readings				
(Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC-NR
Project No.: 1121C00148

Sample ID No.: SB-350
Sample Location:
Sampled By: CW
C.O.C. No.:

[✓] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0750	SURFACE		
Method:				
Monitor Readings				
(Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PLB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC - MR
Project No.: 112IC00498

Sample ID No.: SB-351
Sample Location:
Sampled By: CW
C.O.C. No.:

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0754	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MR
Project No.: 112100998

Sample ID No.: SB-352
Sample Location:
Sampled By: CW
C.O.C. No.:

[✓] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: / Time: / Method: / Monitor Reading (ppm):	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0758	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MR
Project No.: 112ICW0998

Sample ID No.: SB-353
Sample Location:
Sampled By: CW
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0800	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MR
Project No.: 112C00998

Sample ID No.: SB-354
Sample Location:
Sampled By: CW
C.O.C. No.:

[✓] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0805	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
TCLP			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MR
Project No.: 112CO0998

Sample ID No.: SB-355
Sample Location:
Sampled By:
C.O.C. No.:

[✓] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0907	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: IML MR
Project No.: 112IC00448

Sample ID No.: SB-356
Sample Location:
Sampled By: CW
C.O.C. No.:

[✓] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0810	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMK MSR
Project No.: 112100493

Sample ID No.: SR-351
Sample Location:
Sampled By: CW
C.O.C. No.:

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0825	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MR
Project No.: 112IC00948

Sample ID No.: SB-358
Sample Location:
Sampled By:
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0926	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PLB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MVR
Project No.: 112100998

Sample ID No.: SB-359
Sample Location:
Sampled By: CW
C.O.C. No.:

[✓] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0830	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MR
Project No.: 112100998

Sample ID No.: SB-360
Sample Location:
Sampled By: CW
C.O.C. No.:

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0832	SURFACE		
Method:				
Monitor Readings				
(Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MR
Project No.: 112100998

Sample ID No.: SB-361
Sample Location:
Sampled By: CW
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0857	SURFACE		
Method:				
Monitor Readings				
(Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC - MR
Project No.: 112.1008948

Sample ID No.: SB-362
Sample Location:
Sampled By: CW
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0841	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MR
Project No.: 112IC00998

Sample ID No.: SB-363
Sample Location:
Sampled By: CW
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date:	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0843	Surface		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: LMC MR
Project No.: 112IC00498

Sample ID No.: SB-361
Sample Location:
Sampled By: CW
C.O.C. No.:

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: / Time: / Method: / Monitor Reading (ppm):	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0845	SURFACE		
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PLB			

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
SURFACE	

Signature(s):

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, Bike
PROJECT NUMBER: 112 IC 00885
DRILLING COMPANY: BL Myers Boss.
DRILLING RIG: Truck-mounted Geoprobe

BORING No.: SB-500
DATE: 11/27/07
GEOLOGIST: Jason Daliessio
DRILLER: Scott Montag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
0001	0-2					Olive	Olive to Black			0			
							silty clay loam,						
							organics, sl. moist						
0406	2-6					Orange Red	Sandy clay, clean,						
							stiff, dry to low						
							plasticity						
0810	6-12						Orange to Red						
							Sandy Clay, clean						
							soft, moist,						
							moderate plasticity						
	12						End of boring						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ____ No X Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, Blk E
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers Brod.
DRILLING RIG: Truck Mounted Geoprobe

BORING No.: SB-501
DATE: 11/27/07
GEOLOGIST: Jason Daviess
DRILLER: Scott Mortag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
0001	0-2						Olive to Black Silty Clay Loam, clean, Organics; sl. moist						
	2-4						Orange Sandy Clay; clean, sl. moist						
							medium stiff; low plasticity						
0406	4-6						Orange Sandy Clay; clean, moist; medium stiff;						
							moderate plasticity						
0810	6-10						Orange to Red Clay w/ trace fine-grained sand content; hard;						
							low plasticity, dry						
	10-12						Orange to Red Sandy Clay, saturated, loose						
	12'						12' - end of boring						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): 6

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, BIKE
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers Bros
DRILLING RIG: Truck mounted GP

BORING No.: SB-502
DATE: 11/27/07
GEOLOGIST: J. DALESSIO
DRILLER: Scott Montag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
0001	0-2						Olive to Black S. Hy Cly Loam, s. moist organic content, clean Crushed stone fill material w/ heavy sand content, moist			0			
0406	4-6						Orange / Yellow fine-grained sand, loose, wet, clean						
0810	6-10						Orange to Red F-med. grained sand w/ med. coarse-grained sand content, saturated						
	10						end of boring						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): 0

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, Bike
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers Bros
DRILLING RIG: TmGP

BORING No.: SB-503
DATE: 11/27/07
GEOLOGIST: J. DeLiesso
DRILLER: Scott Montag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	MATERIAL DESCRIPTION: Color	MATERIAL DESCRIPTION: Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
0001	0-1					Olive to Black	Sdy Clay Loam			0			
							organic, s. moist						
	1-2					Olive	Sandy Clay, clean						
							s. moist, m. soft						
0406	2-5					Yellow	f-m grain sand w/ high						
							f. gravel content,						
							wet						
	5-6.5					yellow	f. sand sand						
						saturated, dense							
	6.5-8					Olive to brown	sdy clay, clean, m. soft						
						saturated, med plasticity							
	8-10					No recovery							
1012	10-12					Gray to gray	clay w/ med f. med. grained sand cont'd						
						dense, moist							
						low plasticity							
	12					end of boring							

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ____ No X Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, RIKF
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: RL Myers Bros.
DRILLING RIG: TMGD

BORING No.: SB-504
DATE: 11/27/07
GEOLOGIST: J Dallessio
DRILLER: Scott Munjac

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-1						Concrete			0			
0001	1-2		1				Crushed stone fill material, dry						
	2-4						D. Gry/Brown to Blk						
							clay, moist,						
							firm						
0406	4-5						D Gry to blk						
							clay, s/ft, wet						
	5-6						Gry to yellow sandy						
							clay, moist,						
							Firm						
	6-8						Gry to blk Clay						
							clean, hard, sl						
							moist, low						
							plasticity						
0810	8-10						Olive to blk Clay						
							clean, wet, mod						
							soft, mod. plasticity						
	10-12						Brown to Red Clay						
							Soft, saturated,						
							low plasticity						
	12						End of boring			↓			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): 0

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, BLKE
PROJECT NUMBER: 112 IC 00885
DRILLING COMPANY: BL Myers Brow
DRILLING RIG: TMGP

BORING No.: SB505
DATE: 11/27/07
GEOLOGIST: J. DAMESSIN
DRILLER: Scott Montag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-0.5						Brown to Black			0			
							Sandy Clay Loam, organic						
0001	0.5-3						Grey Sandy Clay, mod						
							~~Firm~~ stiff, sl moist						
0406	3-6						Orange f-med grained						
							Sands, wet, moist						
							w/ crushed stone						
							Fill material						
	6-8						Orange Clay, ~~damp~~						
							clean, sl moist						
							firm						
0810	8-10						Org clay saturated						
							V. ~~soft~~ soft						
							low - plasticity						
	10-12						Org to Brown clay						
							~~Firm~~						
							sl. moist, stiff						
							mod. plasticity						
	12						end of boring						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): 0

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, Blke
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers Bros
DRILLING RIG: IMGP

BORING No.: SB-506
DATE: 11/28/07
GEOLOGIST: J. Dallesio
DRILLER:

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-2					Black	Macadam + crushed stone			0			
							fill material, dry						
0001	2-3.5						Yellow F Grained sand,						
							clean, el moist						
	3.5-4.5						Yellow to brown						
							F. med grained sand w/						
							med cobbles few fill						
							material, moist, stiff						
0906	4.5-6						Yellow to brown						
							Sandy clay, clean						
							moist, stiff, low						
							plasticity						
	6-7.5						Clay to Brown clay w/						
							med fine grained Sand, clean						
							moist, med stiff						
							med plasticity						
	7.5-9.0						Yellow to brown sandy						
							clay, wet, soft						
0810	9.0-10						Yellow to brown sandy clay						
							saturated, v soft						
	10-12						Brown/Red Clay w/ fine grained						
							trace sand (cont'd)						
							from prev pg						
							med plasticity						
	12'						End of boring						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ____ No X Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, BLKE
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers Boys
DRILLING RIG: TMGP

BORING No.: SB-507
DATE: 11/28/07
GEOLOGIST: J. D'ALESSIO
DRILLER: Scott Montag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-2						Concrete			0			
0001	2-4						Brown/Gray Sandy Clay w/trace fine gravel, cohesive, moist, mod firm						
0406	4-6						Gray Clay; clean, v. soft; saturated, low plasticity						
	6-10						Light to Dark Brown/Gray Clay; clean, v. firm, moist, m. plasticity						
0810	10-11						Gray sandy Clay; clean, saturated, soft, low plasticity						
	11-12						Brown Clay; clean, m. firm, s. moist, m. plasticity						
	12-						end of boring						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): 0

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

Page 1 of 1

PROJECT NAME: Lockheed Martin, BIKE
PROJECT NUMBER: 112Ic00885
DRILLING COMPANY: BC Myers Bros
DRILLING RIG: TNGP

BORING No.: GP-508
DATE: 11/28/07
GEOLOGIST: J DALIESIO
DRILLER: Scott Montag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-2						Concrete		bored through 0-2	0			
0001	2-4						Orange / Gray Clay, clean s. moist; stiff low-plasticity						
	4-5				Orange / Gray Clay		med stiff, moist						
0906	5-6						Yellow to Org Sandy Clay; wet, medium stiff, clean						
	6-8						Org to Red Clay, clean, sl moist						
							med stiff, low plasticity						
0910	8-10						Tan to Brown Sandy Clay, saturated, v. loose low-plasticity						
	10-11						Tan to brown sandy clay wet, soft, low plasticity						
	11-12						Tan to Maroon Clay, clean, sl moist stiff, high plasticity						
	12						End of boring						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: _____

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, BIKE
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers Bros
DRILLING RIG: TMGP

BORING No.: SB-509
DATE: 11/29/07
GEOLOGIST: J. Daliessio
DRILLER: Scott Montag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Sample	Sampler BZ	Borehole**	Driller BZ**
	0-2						Concrete		cored location	0			
0001	2-3						Yellow to orange						
							Sandy Clay; sl moist,						
							med stiff, low						
							plasticity						
0406	3-5						Tan to orange F-med.						
							grained sand w/						
							trace fine gravel cobbles,						
							moist, medium dense						
	5-8						Orange to Red						
							Clay; clean; sl moist						
							stiff, low-plasticity						
0810	8-12						Orange to Red sandy						
							clay; sl moist,						
							stiff, low plasticity						
	12-						EOB						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ____ No X ____ Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, Bldg E
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers Bros
DRILLING RIG: TM65D

BORING No.: SB-510
DATE: 11/28/07
GEOLOGIST: J. Daviesso
DRILLER: Scott Mortes

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	MATERIAL DESCRIPTION: Color	MATERIAL DESCRIPTION: Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-2						Concrete Crushed stone			0			
0001	2-3						Tan F. med. gravel sand,						
							clean, sl moist, dense						
	3-4						Org Sandy clay, stiff						
							dry, low plasticity						
0406	4-8						Brown to maroon						
							Clay w/ trace fine-grained sand						
							sl. moist, stiff						
							low-plasticity						
0810	8-9						Dark Brown to black						
							Sandy clay w/ high						
							fine gravel cont.						
							(fill?), dry						
							Very soft						
	9-12						Brown/maroon Clay,						
							clean stiff, low						
							plasticity						
	12'						12' - end of boring						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): 0

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, Bldg E
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: EL Mynus Bros
DRILLING RIG: TMGP

BORING No.: SB-511
DATE: 11/29/07
GEOLOGIST: J Dolfessio
DRILLER: Scott Montag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	MATERIAL DESCRIPTION: Color	MATERIAL DESCRIPTION: Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-1						Concrete / crushed stone			0			
							fill material						
0801	1-5						Orange to brown Clay;						
							clean; damp moist						
							Very stiff;						
							low plasticity						
0806	5-6						yellow to white						
							Sandy clay; wet;						
							soft; clean						
							low plasticity						
	6-8						Orange Clay; moist,						
							clean; med stiff						
							moderate plasticity						
0810	8-10						Orange & Red Sandy						
							clay; saturated, V. stiff						
							to low plasticity						
	10-12						Orange to Red Clay						
							w/ trace fine-grained Sand						
							content moist;						
							stiff, med-plasticity						
	12						end of boring						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): 0

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, BIKE
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: Burns
DRILLING RIG: TMGP

BORING No.: SB-S12
DATE: 11/29/07
GEOLOGIST: J Dawson
DRILLER: Scott Mantay

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	MATERIAL DESCRIPTION: Color	MATERIAL DESCRIPTION: Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-2						Asphalt + crushed stone/fill material			0			
0001	2-8						Org to L. Brown Clay / fine-grained to sandy, sl moist, stiff						
0406													
0810	8-9						low-plasticity Orange Sandy Clay, saturated soft						
	9-10					Org	Sandy Clay with mod fill material (crushed Stone + asphalt) saturated						
	10-12						Org to Red Sandy Clay, med. stiff, slightly moist						
	12						end of boring			↓			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm): 0

Converted to Well: Yes ____ No X Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers Rig
DRILLING RIG: TMGP

BORING No.: SB-513
DATE: 11/29/07
GEOLOGIST: J. Dalessio
DRILLER: Scott Montag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-2						Crushed stone fill			0			
							mtl, concrete, sands						
0001	2-6						Olive Sandy Clay, clean						
							moist, soft						
							mod-plasticity						
0906	6-8						~~Brown~~ yellow to D Brown						
							F-med. grained sands,						
							clean, saturated						
							loose						
0910	8-10						Brown to Orange						
							F-med. grained sands;						
							clean, moist						
							medium dense						
	10-12						Org to Brown F-med.						
							grained sands, stiff						
							sl moist						
	12						End of bg						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): 0

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, Bldg E
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL myers Co
DRILLING RIG: Targ P

BORING No.: SB-514
DATE: 11/29/07
GEOLOGIST: J. Dawson
DRILLER: Scott Montag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-1						Crushed stone fill material			0			
0001	1-2						Olive Sandy Clay, sl. moist, low-plasticity soft						
0416	2-6						Brown Clay, clean, sl moist, med. stiff, high-plasticity						
	6-7'						Red & White Clay, stained, v. soft						
0810	7-10'						D. Brown / Red Clay w/ trace sand & moist, med. stiff						
	10'						Refusal @ 10'						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: _____

Drilling Area Background (ppm): [ ]

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, BIKE
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers
DRILLING RIG: TMGP
BORING No.: SB-515
DATE: 11/29/07
GEOLOGIST: J. DALESSIO
DRILLER: Scott Montag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
0001	0-1						D. Brown to Black fill material (asphalt)			0			
	1-2						Sand & fine gravel fill materials						
	2-4						Orange/Grey Clay w/ trace fine grained sand cohesive; sl moist med stiff, med-plasticity						
0400	4-5						Orange Sandy clay, saturated, soft low plasticity						
	5-6						Brown to Orange Clay, clean, sl moist, stiff, low plasticity						
	6-8						Orange to Grey Clay; clean, sl moist med stiff, med-plasticity						
0810	8-10						Orange Sandy Clay, saturated v. soft, low-plasticity						
	10-12						Brown/Orange Clay; clean, sl moist; stiff, med-plasticity						
	12'						12' - end of boring			V			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: _____

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, Bldg E
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers Bros
DRILLING RIG: TMGP

BORING No.: SB-516
DATE: 11/30/07
GEOLOGIST: J Dalessio
DRILLER: Scott Mantay

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-2'						Concrete		Unlined stem	0			
							and crushed		drill to bounce				
							stone fill		through concrete				
							material		slab (0-1')				
0001	2-4'						Orange Clay and						
							crushed stone fill mixed						
							sl moist, med						
							stiff, med -						
							plasticity						
	4'						4' - End of boring		Geoprobe broke				
									while hammering -				
									not able to				
									go any deeper				
									than location				

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes ____ No X Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, BIKE
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers Bros.
DRILLING RIG: TNEP

BORING No.: SB-517
DATE: 11/30/07
GEOLOGIST: J DaCosta
DRILLER: Scott Montag

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	MATERIAL DESCRIPTION: Color	MATERIAL DESCRIPTION: Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-1						Black Silty Clay Loam,			0			
							organics						
0001	1-5						Orange to Brown Silty						
							Clay, med. stiff						
							med-plasticity, sl						
							moist						
0406	5-7						Orange Clay, clean,						
							sl moist, stiff,						
							med-plasticity						
	7-8						Olive Clay, clean						
							moist, med stiff						
							med-plasticity						
0810	8-9						Orange Sandy Clay,						
							silt, ~~soft~~ wet,						
							low plasticity						
	9-12						Orange / Grey Clay,						
							stiff, dry,						
							to moist plasticity						
	12						12' - end of boring						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin BLKE
PROJECT NUMBER: 112-IC00885
DRILLING COMPANY: BL Myers Bros.
DRILLING RIG: Truck mounted Geoprobe

BORING No.: SB-518
DATE: 11/30/07
GEOLOGIST: JASON DALIESSIO
DRILLER: SCOTT MINTING

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-2						Concrete		Cored through (0-2')	0			
0001	2-5						Sandy Clay; wet;						
							m. stiff, med-						
							plasticity						
0406	5-7						Org to Olive Clay;						
							med. stiff, med						
							plasticity; moist						
	7-8						Org Sandy Clay;						
							clean; wet;						
							low plasticity;						
							slt						
0810	8-10						F-med grained sandy						
							saturated; brown						
	10-12						Brown to Orange						
							Sandy Clay; clean						
							moist, low; soft						
							plasticity						
	12						12 - end of bag						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin BIKE
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers Burr
DRILLING RIG: TMGP

BORING No.: SB-SB
DATE: 11/30/07
GEOLOGIST: J. DALIESSIO
DRILLER: SCOTT MOWTAG

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	0-1						Concrete		Cored through (0'-2')	0			
0001	2-5						Orange Sandy Clay;						
							& moist, low						
							plasticity, med stiff						
0406	5-7.5						Brown to Orange Clay						
							with trace fine sand &						
							moist, med. stiff,						
							med. plasticity						
0810	7.5-10						Orange F med. sand						
							sand wet, medium						
							dense sand						
	10-12						Brown to Red						
							Clay; clean,						
							at moist, stiff						
							low plasticity						
	12						12' - end of boring						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks: _____

Converted to Well: Yes _____ No X Well I.D. #: _____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: Lockheed Martin, BIKE
PROJECT NUMBER: 112IC00885
DRILLING COMPANY: BL Myers Bros
DRILLING RIG: TMGP

BORING No.: SB-520
DATE: 11/30/07
GEOLOGIST: Jason Dalessio
DRILLER: Scott

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	MATERIAL DESCRIPTION: Color	MATERIAL DESCRIPTION: Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
0001	0-1						Silty Clay Loam, organic			0			
	1-4						Orange Clay; clean;						
							sl. moist, med						
							stiff, mod-						
							plasticity						
0406	4-6					Orange	Sandy Clay; sl						
							moist, med stiff						
							low-plasticity						
	6-8						Orange Sandy Clay;						
							wet, ~~med~~ stiff						
							mod-plasticity						
0810	8-11						Tan F-med grained						
							Sand; loose; saturated						
	11-12						Sandy Clay; sl						
							moist; medium stiff						
							low plasticity						
							12' - end of boring						

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0

Remarks:

Converted to Well: Yes _____ No ✓ Well I.D. #: _____

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-500-0001
Sample Location: SB-500
Sampled By: J. Foster
C.O.C. No.: 322417

[x] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[x] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: ~~1027~~ 0940	0-1 ft.	Black	Silty Clay Loam
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

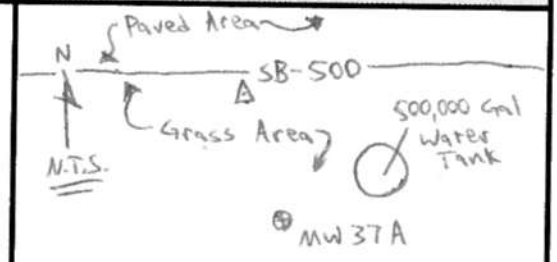
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4-oz clear glass	✓	
8015 TPH	1 8-oz clear glass	✓	
8270 SVOCs	↓	✓	
8082 PCBs		✓	
ICP/MS Metals		✓	
Be, Ni, Co, Fe, Mn		✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-500-0406
Sample Location: SB-500
Sampled By: J. Foster
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0950	4-6 ft	Gray	Sandy clay
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

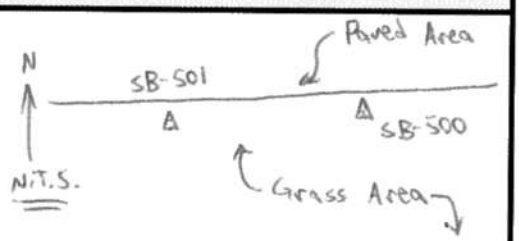
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4-oz clear glass	✓	
8015 TPH	1 8-oz clear glass	✓	
8270 SVOCs	↓	✓	
8082 PCBs		✓	
ICP/MS Metals		✓	
Be, Ni, Co, Fe, Mn	↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-500-0810
Sample Location: SB-500
Sampled By: J. Foster
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0955	8-10 ft.	Orange/Red	Clay
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

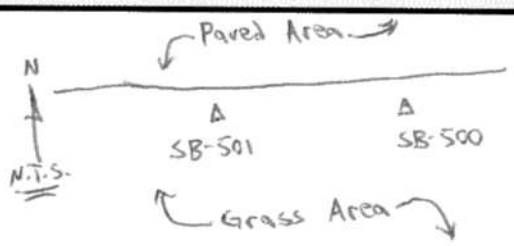
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4oz clear glass	✓	
8015 TPH	1 8oz clear glass	✓	
8270 SVOCs	↓	✓	
8082 PCBs		✓	
ICP/MS Metals		✓	
Be, Ni, Co, Fe, Mn	↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-S01-0001
Sample Location: SB-S01
Sampled By: JF
C.O.C. No.: 322417

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1027	0-1 ft.	Black	Silty Clay Loam
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

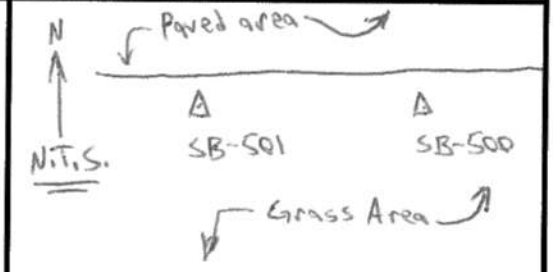
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4oz clear glass	✓	
8015 TPH	1 8oz clear glass	✓	
8270 SVOCs	↓	✓	
8082 PCBs		✓	
ICP/MS Metals		✓	
Be, Ni, Co, Fe, Mn	↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-501-0406
Sample Location: SB-501
Sampled By: JF
C.O.C. No.: 322417

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11.27.07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1035	4-6 ft	Orange	Sandy Clay
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4oz clear glass	✓	
8015	TPH	1 8oz clear glass	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn		↓	✓	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-501-0810
Sample Location: SB-501
Sampled By: JF
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-97	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1035	8-10 ft.	Orange-Red	Clay w/ trace fine grained sand
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

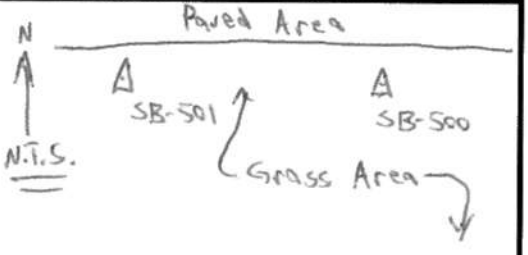
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4oz clear glass	✓	
8015	TPH	1 8oz clear glass	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn		↓	—	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-SO2-0001
Sample Location: SB-SO2
Sampled By: J. Foster
C.O.C. No.: 322417

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1109	0-1 ft.	Olive-Black	Silty Clay Loam; Slightly moist
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

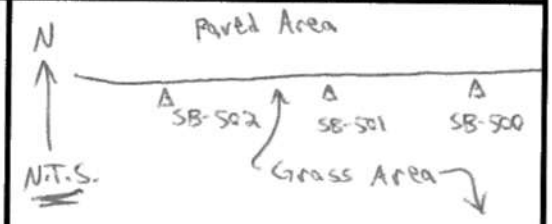
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4oz clear glass	✓	
8015	TPH	1 8oz clear glass	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn		↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-S02-0406
Sample Location: SB-S02
Sampled By: J. Foster
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1115	4-6 ft.	Orange-Yellow	Fine Sand; loose; wet
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

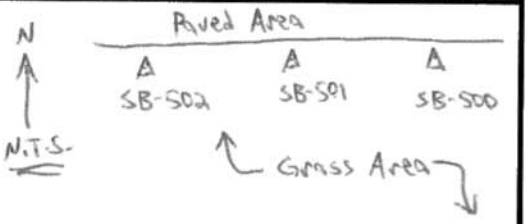
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4oz clear glass jar	✓	
8015	TPH	1 8oz clear glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn		↓	~	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-502-0810
Sample Location: SB-502
Sampled By: J. Foster
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1140	8-10 ft	Orange-Red	Fine-Medium Grained Sand
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

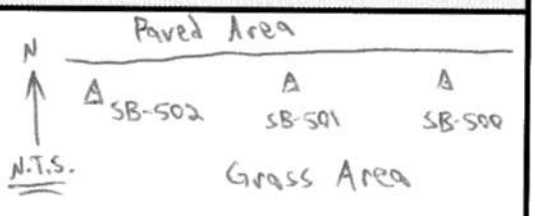
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz clear glass	✓	
8015	TPH	1 8 oz clear glass	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-503-0001
Sample Location: SB-503
Sampled By: J. Foster
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1245	0-1 ft.	Olive-Black	Silty Clay Loam
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

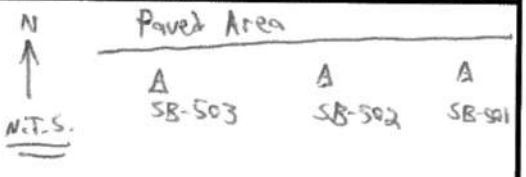
SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz clear glass	✓	
8015	TPH	1 8 oz clear glass	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn		↓	✓	

OBSERVATIONS / NOTES:

Duplicate collected. See below for nomenclature.

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	DUP-01

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-503-0406
Sample Location: SB-503
Sampled By: S. Foster
C.O.C. No.: 322417

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1255	4-6 ft	Yellow	Fine-Medium Sand; wet
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

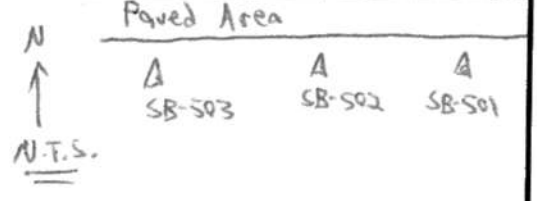
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn		↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-503-1012
Sample Location: SB-503
Sampled By: J. Foster
C.O.C. No.: 322417

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1313	10-12 ft.	Orange-Gray	Clay w/ Fine-Med. Grain Sand
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

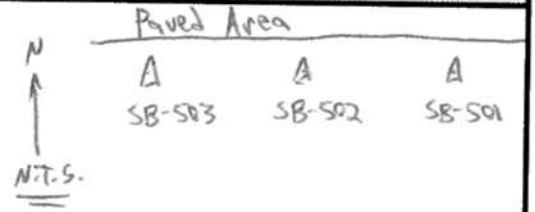
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	—	
8015	TPH	1 8 oz glass jar	—	
8270	SVOCs	↓	—	
8082	PCBs		—	
ICP/MS	Metals		—	
Be, Ni, Co, Fe, Mn			—	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-504-0001
Sample Location: SB-504
Sampled By: J. Foster
C.O.C. No.: 322417

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-01 / Time: 1340 / Method: DPT / Monitor Reading (ppm): 0	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
	0-1 Ft.	Grey	Crushed Stone fill material

COMPOSITE SAMPLE DATA:

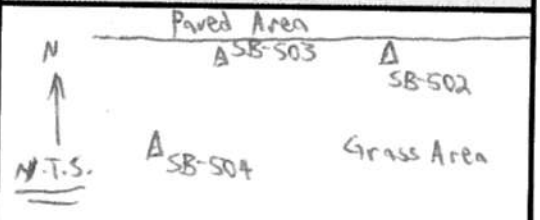
Date: / Method: / Monitor Readings (Range in ppm):	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4-oz glass jar	✓	
8015	TPH	1 8oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-504-0406
Sample Location: SB-504
Sampled By: J. Foster
C.O.C. No.: 322417

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1350	4-6 ft.	DK Grey-Black	Clay; wet
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

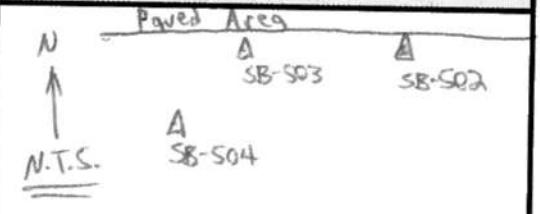
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz jar	✓	
8015	TPH	1 8 oz jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-504-0810
Sample Location: SB-504
Sampled By: J. Foster
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1355	8-10 ft.	Olive-Black	Clay; wet mod. soft
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

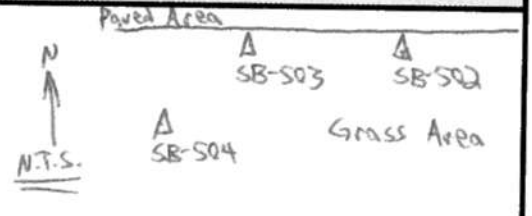
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn		↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-505-0001
Sample Location: SB-505
Sampled By: J. Foster
C.O.C. No.: 322417

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1425	0-1 Ft.	Gray	Sandy Clay; mod. stiff; sl. moist
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

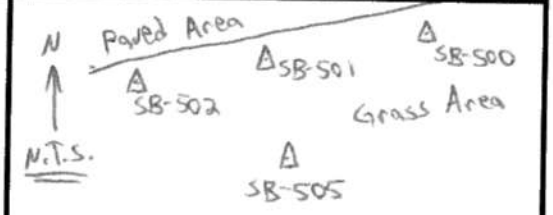
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4oz glass jar	✓	
8015	TPH	1 8oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-505-0406
Sample Location: SB-505
Sampled By: J Foster
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1430	4-6 ft.	Orange	Fine-Med-grain sand; wet; m stiff
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

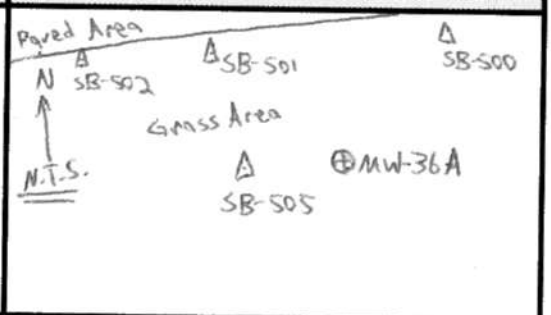
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4oz glass jar	—	
8015	TPH	1 8oz glass jar	—	
8270	SVOCs	↓	—	
8082	PCBs		—	
ICP/MS	Metals		—	
Be, Ni, Co, Fe, Mn			—	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-505-0810
Sample Location: SB-505
Sampled By: J. Foster
C.O.C. No.: 322417

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1435	8-10 ft.	Orange	Clay; saturated, soft non-plastic
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

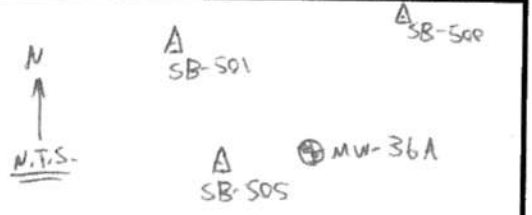
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	—	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		—	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-506-0001
Sample Location: SB-506
Sampled By: J. Foster
C.O.C. No.: 322417

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-28-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0934	0-1 ft	Black	Fine Grained Sand
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

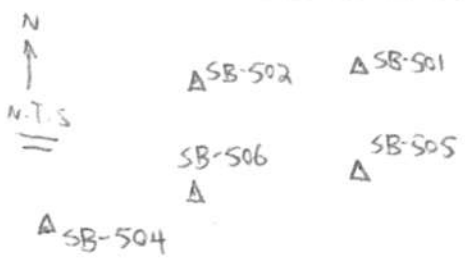
SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

Duplicate collected

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.: DUP-02

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[x] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB 506 0406
Sample Location: SB 506
Sampled By: J. Foster
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-28-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0952	4-6 ft	Yellow-Brown	Sandy Clay; moist, stiff
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

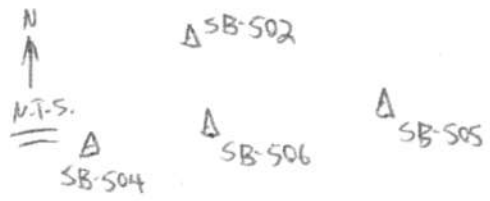
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-506 0810
Sample Location: SB-506
Sampled By: J. Foster
C.O.C. No.: 32417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-28-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0954	8-10 ft.	Yellow-Brown	Sandy Clay; saturated; soft
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

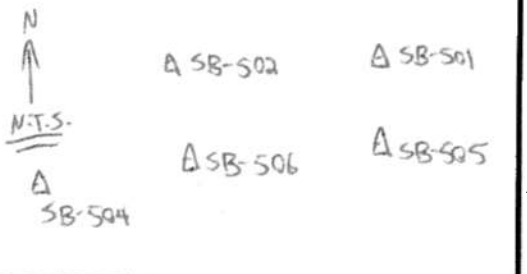
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-507-0001
Sample Location: SB-507
Sampled By: J. Foster
C.O.C. No.: 322417

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 11-28-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1110	0-1 ft.	Brown-Gray	Sandy Clay w/ trace fine gravel
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

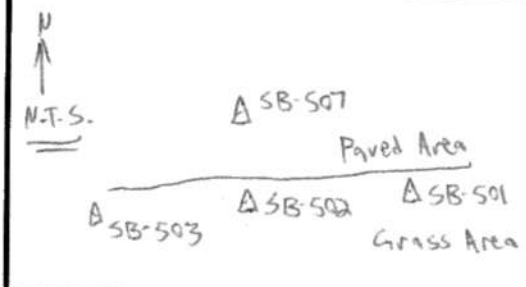
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-507-0406
Sample Location: SB-507
Sampled By: J. Foster
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-28-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1115	4-6 ft.	Grey	Clay; v. soft; saturated; low plas.
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

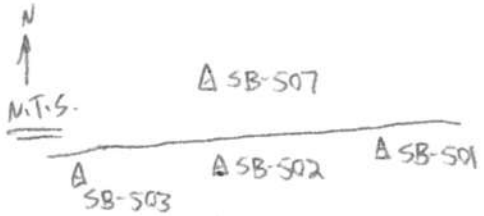
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-507-0810
Sample Location: SB-507
Sampled By: J. Foster
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-28-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1120	8-10 ft.	Brown-Grey	clay; clean; m. firm; moist
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

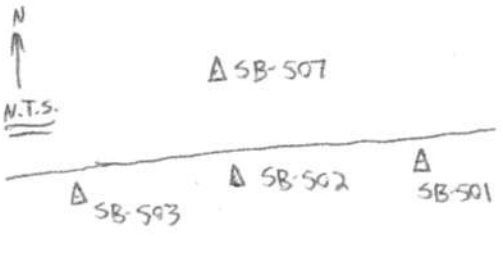
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: SB-508-0001
Sample Location: SB-508
Sampled By: J. Foster
C.O.C. No.: 322417

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 11-28-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1340	0-1 ft.	Orange-Gray	Clay, Slt, moist; Stiff - low plasticity
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

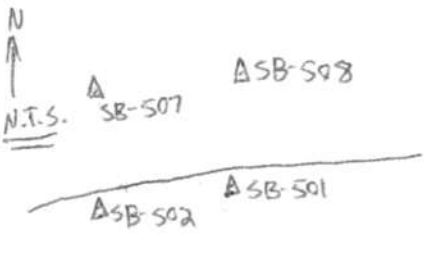
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-508-0406
Sample Location: SB-508
Sampled By: J. Foster
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-28-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1345	4-6 ft.	Yellow-Orange	Sandy Clay; wet; soft
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

Duplicate collected. See below for nomenclature.

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
	DUP-03

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-508-0810
Sample Location: SB-508
Sampled By: J. Foster
C.O.C. No.: 322417

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-28-07
Time: 1350
Method: DPT
Monitor Reading (ppm): 0

Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
8-10 Ft.	Tan-Brown	Sandy clay; Saturated; v. loose

COMPOSITE SAMPLE DATA:

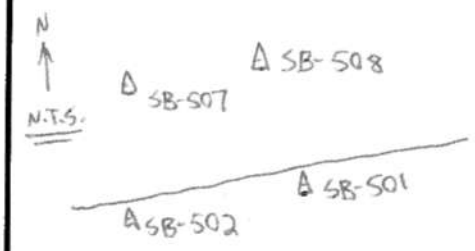
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-509-0001
Sample Location: SB-509
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1100	0-1 ft.	Yellow-Orange	Sandy Clay; Slt. Moist; mod. stiff
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

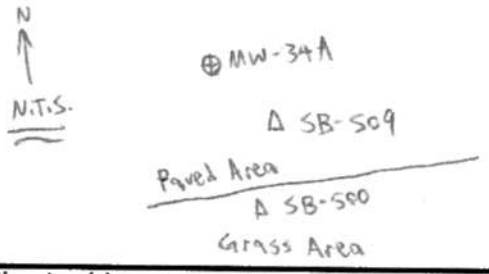
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4 oz glass jar	✓	
8015 TPH	1 8 oz glass jar	✓	
8270 SVOCs	↓	✓	
8082 PCBs		✓	
ICP/MS Metals		✓	
Be, Ni, Co, Fe, Mn	↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-509-0406
Sample Location: SB-509
Sampled By: J. Foster
C.O.C. No.: 26186

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1105	4-6 ft.	Tan-Orange	Fine/Med. Grain Sand; moist
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

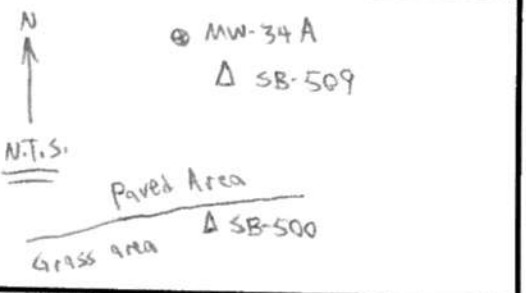
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn				

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-509-0810
Sample Location: SB-509
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1110	8-10 ft.	Orange-Red	Sandy Clay; Fine; Moist
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

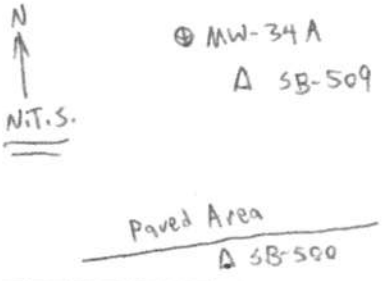
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn				

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-509-0001 510 (JF)
Sample Location: SB-509 510 (JF)
Sampled By: J. Foster
C.O.C. No.: 26186

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-28-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1525	0-1 ft.	Tan	Fine-Med grain sand.
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

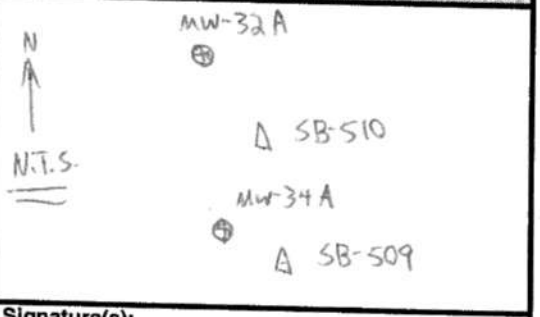
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn				

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-~~508~~ 510-0406
Sample Location: SB-~~508~~ 510
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-28-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1530	4-6 ft.	Brown	clay w/ fine sand; slt moist
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

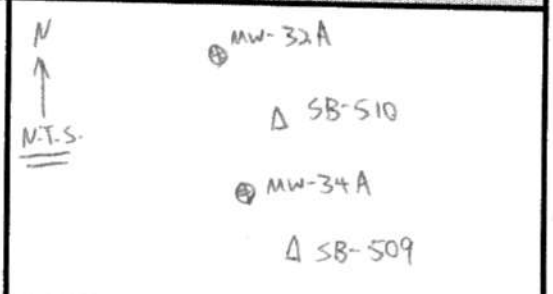
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	/	
8015	TPH	1 8 oz glass jar	/	
8270	SVOCs		/	
8082	PCBs		/	
ICP/MS	Metals		/	
Be, Ni, Co, Fe, Mn			/	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-502-0810 SIC
Sample Location: SB-509 510
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-28-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1535	8-10 ft.	Brown-Black	Sandy Clay w/ high fine cobble content
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

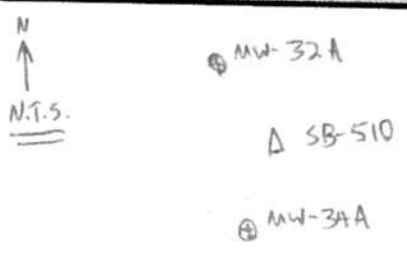
SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

Duplicate collected, see below for nomenclature.

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	DUP-04

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: SB-511-0001
Sample Location: SB-511
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 11-27-07
Time: 0820
Method: DPT
Monitor Reading (ppm): 0

Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
0-1 ft.	Orange-Brown	Clay; slt. moist; stiff-very stiff

COMPOSITE SAMPLE DATA:

Date:
Method:
Monitor Readings (Range in ppm):

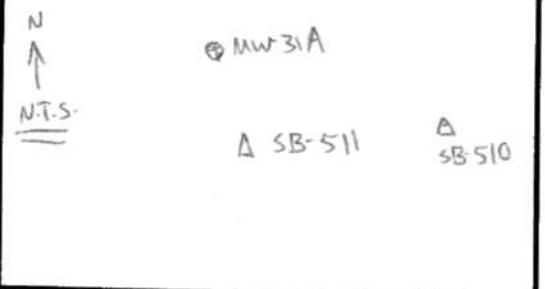
Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	/	
8015	TPH	1 8 oz glass jar	/	
8270	SVOCs		/	
8082	PCBs		/	
ICP/MS	Metals		/	
Be, Ni, Co, Fe, Mn			/	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-S11-0406
Sample Location: SB-S11
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0825	4-6 ft	Orange-Brown	Clay; slt. moist; stiff/very stiff
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

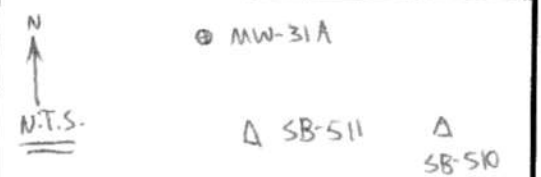
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-511-0810
Sample Location: SB-511
Sampled By: J. Foster
C.O.C. No.:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0830	8-10 Ft.	Orange-Red	Sandy Clay; saturated; low plasticity
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

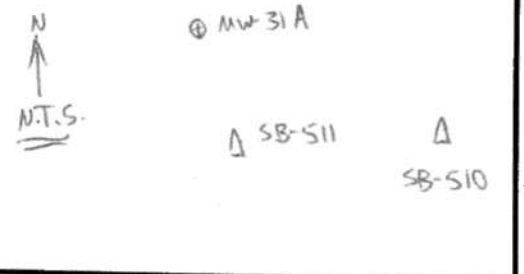
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-512-0001
Sample Location: SB-512
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0955	0-1 ft.	Orange-Lt Brown	Clay w/ trace sand; slt. moist.
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

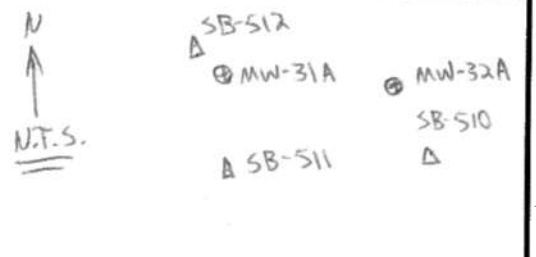
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		–	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			–	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-512-0406
Sample Location: SB-512
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1000	4-6 ft.	Orange-Lt Brown	clay w/ trace sand; slt. Moist.
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

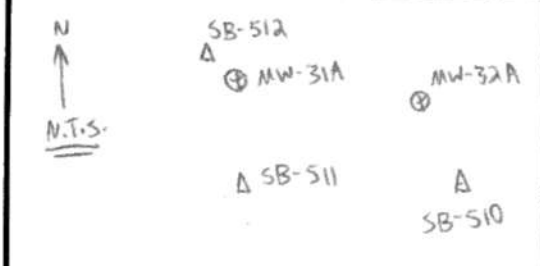
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	—	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[+] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-512-0810
Sample Location: SB-512
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07
Time: 1005
Method: DPT
Monitor Reading (ppm): 0

Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
8-10 ft.	Orange	Sandy Clay; saturated; loose

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

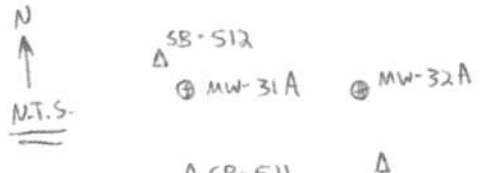
SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

Duplicate collected. See below for nomenclature.

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	DUP-05

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-513-0001
Sample Location: SB-513
Sampled By: J. Foster
C.O.C. No.: 26186

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1030	0-1 ft.	Olive	Sandy Clay; moist; mod. plasticity
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

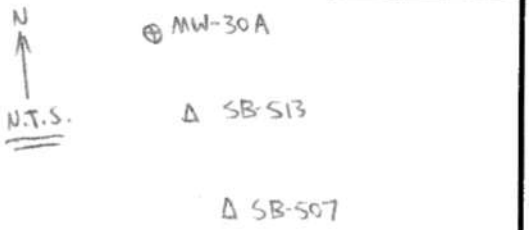
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn				

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-513-0406
Sample Location: SB-513
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1035	4-6 ft.	Olive	Sandy Clay; moist; mod. plasticity
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

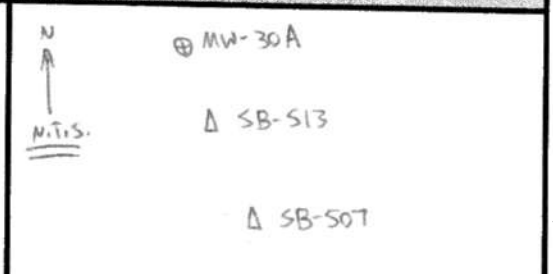
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn				

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-513-0810
Sample Location: SB-513
Sampled By: J. Foster
C.O.C. No.: 26186

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1040	8-10 ft.	Brown-Orange	Fine-Med grained sand. Moist Moderately Stiff.
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

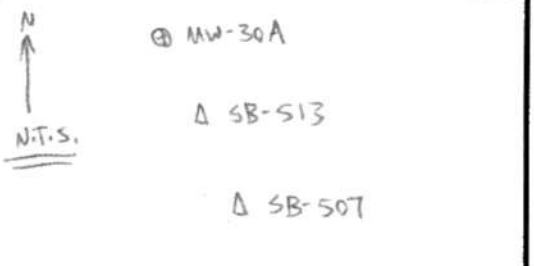
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn				

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-514-0001
Sample Location: SB-514
Sampled By: J. Foster
C.O.C. No.: 26186

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1145	0-1 ft.	Yellow-Orange	Sandy Clay; Mod. Stiff; Slt. Moist
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

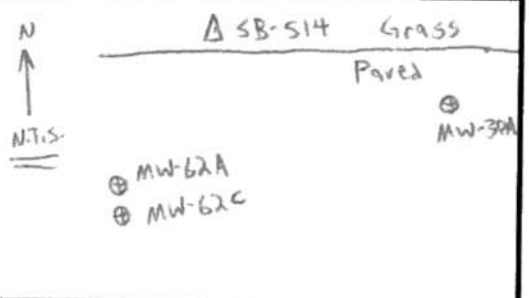
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4 oz glass jar	✓	
8015 TPH	1 8 oz glass jar	✓	
8270 SVOCs	↓	✓	
8082 PCBs		✓	
ICP/MS Metals		✓	
Be, Ni, Co, Fe, Mn		✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-514-0406
Sample Location: SB-514
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1150	4-6 ft.	Brown-Orange	Clay; High Plasticity; Slt. Moist
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

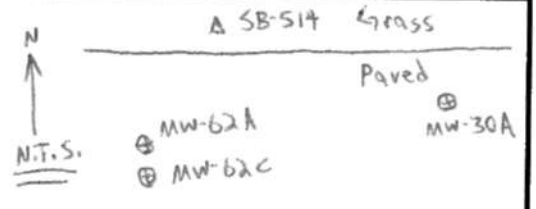
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-514-0810
Sample Location: SB-514
Sampled By: J. Foster
C.O.C. No.: 26186

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other: ____
[] QA Sample Type: ____

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1155	8-10 ft.	Dark Brown	Clay w/ trace sand; slt. moist
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

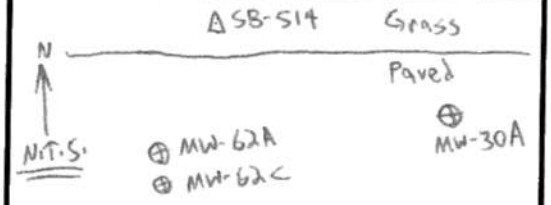
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar.	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	DUP-06

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-515-0001
Sample Location: SB-515
Sampled By: J. Foster
C.O.C. No.: 26186

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1330	0-1 Ft.	Brown/Black	Fill material
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

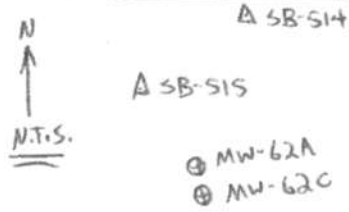
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[H] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-515-0406
Sample Location: SB-515
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1335	4-6 ft.	Orange	Sandy Clay, saturated, soft
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

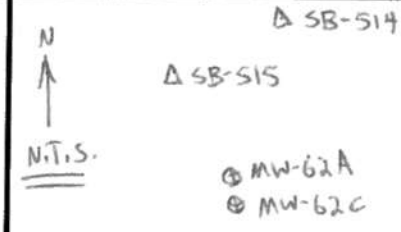
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs		✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-515-0810
Sample Location: SB-515
Sampled By: J. Foster
C.O.C. No.: 26186

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-29-97	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1340	8-10 ft.	ORange	Sandy Clay; saturated; very soft
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

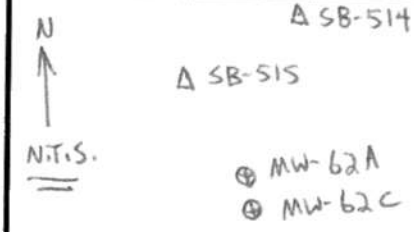
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4 oz glass jar	✓	
8015 TPH	1 8 oz glass jar	✓	
8270 SVOCs	↓	✓	
8082 PCBs		✓	
ICP/MS Metals		✓	
Be, Ni, Co, Fe, Mn	↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-516-0001
Sample Location: SB-516
Sampled By: J. Foster
C.O.C. No.: 26186

[H] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1105	0-1 ft.	Orange	clay; slt. moist; mod. stiff
Method: DPT			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

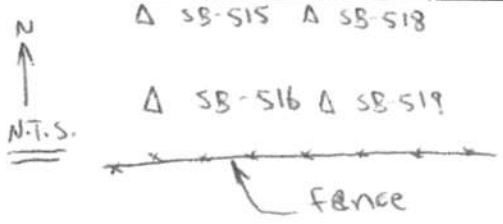
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar		
8015	TPH	1 8 oz glass jar		
8270	SVOCs			
8082	PCBs			
ICP/MS	Metals			
Be, Ni, Co, Fe, Mn				
			(JF)	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-517-0001
Sample Location: SB-517
Sampled By: J. Foster
C.O.C. No.: 26186

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other: ___
[] QA Sample Type: ___

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0820	0-1 ft.	Black	Silty Clay Loam high organics
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

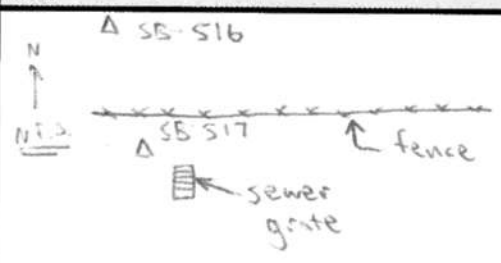
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4 oz glass jar	✓	
8015 TPH	1 8 oz glass jar	✓	
8270 SVOCs	↓	✓	
8082 PCBs		✓	
ICP/MS Metals		✓	
Be, Ni, Co, Fe, Mn	↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-517-0406
Sample Location: SB-517
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0830	4-6 ft	Orange/Brown	Silty Clay; mod. soft; slightly moist
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

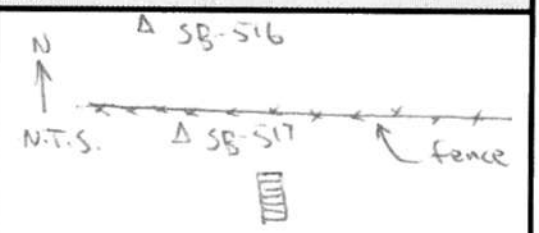
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4 oz glass jar	✓	
8015 TPH	1 8 oz glass jar	✓	
8270 SVOCs		✓	
8082 PCBs		✓	
ICP/MS Metals		✓	
Be, Ni, Co, Fe, Mn		✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00825

Sample ID No.: SB-S17-0810
Sample Location: SB-S17
Sampled By: J. Foster
C.O.C. No.: 26186

- [] Surface Soil
- [X] Subsurface Soil
- [] Sediment
- [] Other:
- [] QA Sample Type:

Type of Sample:
- [] Low Concentration
- [] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0825	8-10 ft	Olive	Clay; slightly moist; stiff
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

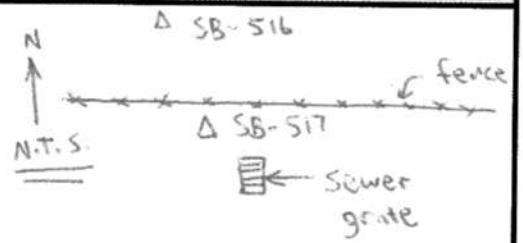
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4oz glass jar	✓	
8015 TPH	1 8oz glass jar	✓	
8270 SVOCs	↓	✓	
8082 PCBs		✓	
ICP/MS metals		✓	
Be, Ni, Co, Fe, Mn	↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-518-0001
Sample Location: SB-518
Sampled By: J. Foster
C.O.C. No.: 36186

[H] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0925	0-1 ft.	Gray	~~Concrete + Crushed Stone~~ Sandy Clay, ~~full material~~ wet
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

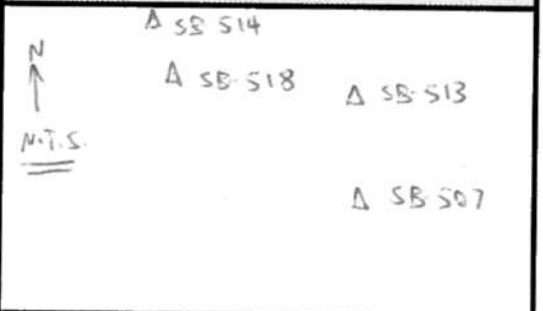
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4 OZ glass jar	✓	
8015 TPH	1 8 OZ glass jar	✓	
8270 SVOCs	↓	✓	
8082 PCBs		✓	
ICP/MS Metals		✓	
Be, Ni, Co, Fe, Mn	↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-518-0406
Sample Location: SB-518
Sampled By: J. Foster
C.O.C. No.: 36186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0935	4-6 ft.	Orange/ Olive	Clay; moderately stiff moist
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

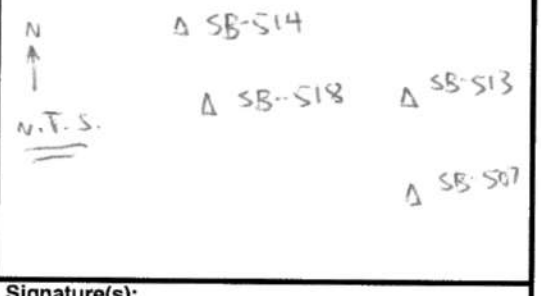
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn		↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-518-0810
Sample Location: SB-518
Sampled By: J. Foster
C.O.C. No.: 36186

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0945	8-10 ft.	Brown	Fine to medium grained Sand; saturated, loose
Method: DPT			
Monitor Reading (ppm): 0			

COMPOSITE SAMPLE DATA:

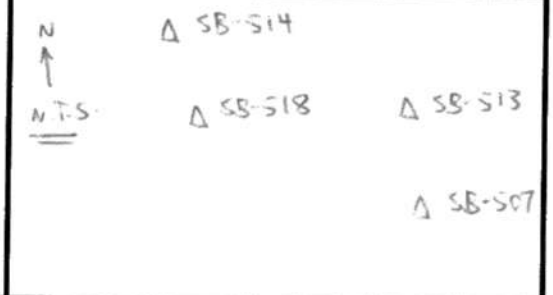
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn			✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[X] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-519-0001
Sample Location: SB-519
Sampled By: J. Foster
C.O.C. No.: 26136

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1020	0-1 ft	Orange	Sandy Clay; slightly moist moderately soft
Method: DPT			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

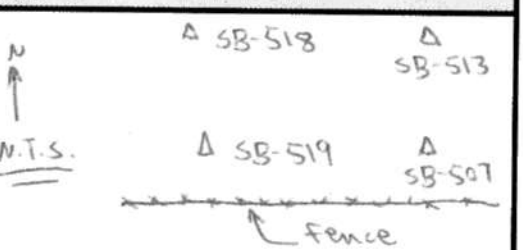
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	/	
8015	TPH	1 8 oz glass jar	/	
8270	SVOCs		/	
8082	PCBs		/	
ICP/MS	Metals		/	
Be, Ni, Co, Fe, Mn			/	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-519-0406
Sample Location: SB-519
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1025	4-6 ft.	Brown/ Orange	Clay w/ trace fine-grained sand; slightly moist
Method: DPT			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

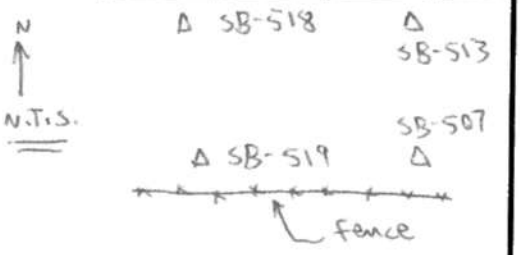
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn		↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Lockheed Martin, Block E
Project No.: 112I000885

Sample ID No.: SB-519-0810
Sample Location: SB-519
Sampled By: J. Foster
C.O.C. No.: 26186

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1030	8-10 ft.	Orange	Fine to medium grained Sand; wet; moderately loose
Method: DPT			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

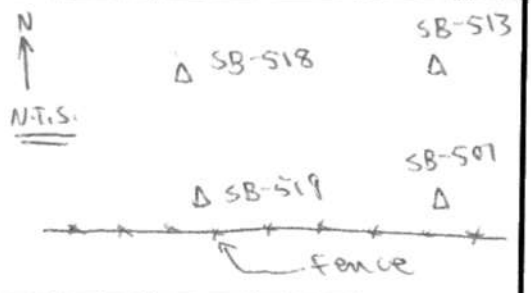
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz glass jar	✓	
8015	TPH	1 8 oz glass jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn		↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin Block E
Project No.: 112IC00885

[X] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: SB-520-0001
Sample Location: SB-520
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1135	0-1 Ft.	Orange	Silty Clay Loam
Method: DPT			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

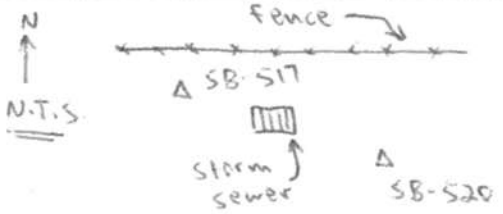
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis		Container Requirements	Collected	Other
8260	VOCs	1 4 oz jar	✓	
8015	TPH	1 8 oz jar	✓	
8270	SVOCs	↓	✓	
8082	PCBs		✓	
ICP/MS	Metals		✓	
Be, Ni, Co, Fe, Mn		↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page ___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-520-0406
Sample Location: SB-520
Sampled By: J. Foster
C.O.C. No.: 26186

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1140	4-6 ft.	Orange	Sandy clay; slt moist
Method: DPT			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

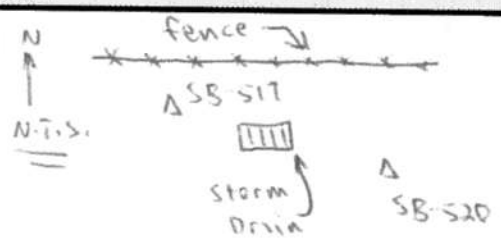
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4 oz glass jar	✓	
8015 TPH	1 8 oz glass jar	✓	
8270 SVOCs	↓	✓	
8082 PCBs		✓	
ICP/MS Metals		✓	
Be, Ni, Co, Fe, Mn	↓	✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Lockheed Martin, Block E
Project No.: 112IC00885

Sample ID No.: SB-S20-0810
Sample Location: SB-S20
Sampled By: J. Foster
C.O.C. No.: 26186

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 11-30-07	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1145	8-10 ft.	Tan	Fine-Med. grained sand; loose
Method: DPT			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

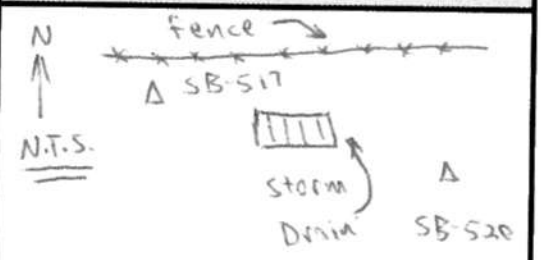
Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
8260 VOCs	1 4 oz glass jar	✓	
8015 TPH	1 8 oz glass jar	✓	
8270 SVOCs	↓	✓	
8082 PCBs		✓	
ICP/MS Metals		✓	
Be, Ni, Co, Fe, Mn		✓	

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

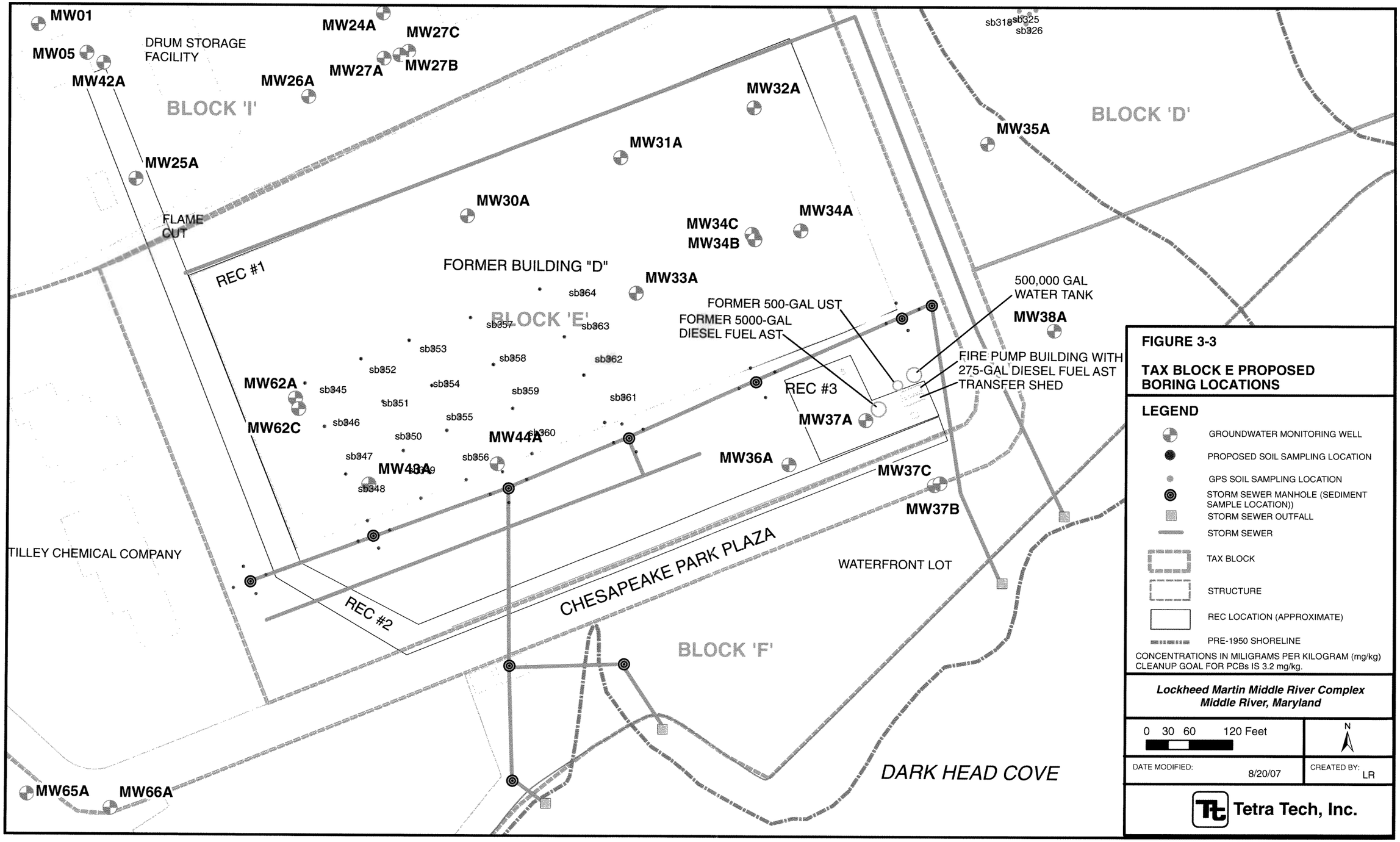


FIGURE 3-3

TAX BLOCK E PROPOSED BORING LOCATIONS

LEGEND

- GROUNDWATER MONITORING WELL
- PROPOSED SOIL SAMPLING LOCATION
- GPS SOIL SAMPLING LOCATION
- STORM SEWER MANHOLE (SEDIMENT SAMPLE LOCATION))
- STORM SEWER OUTFALL
- STORM SEWER
- TAX BLOCK
- STRUCTURE
- REC LOCATION (APPROXIMATE)
- PRE-1950 SHORELINE

CONCENTRATIONS IN MILIGRAMS PER KILOGRAM (mg/kg)
CLEANUP GOAL FOR PCBs IS 3.2 mg/kg.

Lockheed Martin Middle River Complex
Middle River, Maryland

0 30 60 120 Feet

N

DATE MODIFIED: 8/20/07

CREATED BY: LR

Tetra Tech, Inc.

Map Document: (K:\GProject\middle_river\Maps\GPS SOIL BORING LOC\Block E ProBorings.mxd) 12/21/2007 -- 10:35:12 AM

APPENDIX D- DATA VALIDATION REPORTS (IN-CD ONLY)

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **M. MARTIN** **DATE:** **DECEMBER 18, 2007**

FROM: **PRESTON SMITH** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – BENZO(a)PYRENE AND PCBs**
LOCKHEED MIDDLE RIVER COMPLEX
SAMPLE DELIVERY GROUP (SDG): 7J17235

SAMPLES: 20/Soil/

SB-382-0102	SB-382-0203
SB-382-0405	SB-382-0708
SB-383-0102	SB-383-0203
SB-383-0405	SB-383-0708
SB-384-0102	SB-384-0203
SB-384-0405	SB-384-0708
SB-385-0102	SB-385-0203
SB-385-0405	SB-385-0708
SB-386-0102	SB-386-0203
SB-386-0405	SB-386-0708

Overview

The sample set for SDG 7J17235, Lockheed MRC, consists of twenty (20) soil environmental samples.

All soil samples were analyzed for benzo(a)pyrene and PCBs. The samples were collected by TetraTech NUS on October 15, 2007 and analyzed by Test America Laboratories, Inc. Analyses were conducted using SW-846 Method 8270C and SW-846 Method 8082.

The findings in this report are based upon a general review of all available data including: data completeness, GC/MS tuning, holding times, initial/continuing calibrations, laboratory method/preparation blank results, surrogate spike/internal standard recoveries, laboratory control sample (LCS)/blank spike results, matrix spike/matrix spike duplicate results, analyte quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- None.

Minor Problems

- The positive results less than the CRQL reported for benzo(a)pyrene in samples SB-383-0203, SB-383-0405, SB-383-0708 and for Aroclor-1260 in sample SB-383-0102 were qualified estimated (J) due to uncertainty near the detection limit.

Notes

The MS/MSD and the check sample recovery were not spiked with the target compound benzo(a)pyrene. No validation action was required because the other surrogate recoveries were within permissible limits.

Percent recovery for the surrogate spike of decachlorobiphenyl was greater than the 199% recovery limit in sample # SB-383-0102. No action was taken because the other surrogate recovery was within the recovery

limits.

Executive Summary

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: The positive results less than the CRQL reported for benzo(a)pyrene and Aroclor-1260 were qualified due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (6/94) as modified by Region III.

Tetra Tech NUS
Preston R. Smith
Environmental Scientist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

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

Data Qualifier Key:

J - Positive result is considered estimated, "J", as a result of technical noncompliances.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-382-0102	nsample	SB-382-0203	nsample	SB-382-0405
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235001	lab_id	A7J170235002	lab_id	A7J170235003
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	86.0	Pct_Solids	76.0	Pct_Solids	80.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.7	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-382-0708	nsample	SB-383-0102DL	nsample	SB-383-0203
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235004	lab_id	A7J170235005	lab_id	A7J170235006
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	79.0	Pct_Solids	88.0	Pct_Solids	87.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	19000		

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	51	J	P

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-383-0405	nsample	SB-383-0708	nsample	SB-384-0102
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235007	lab_id	A7J170235008	lab_id	A7J170235009
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	79.0	Pct_Solids	83.0	Pct_Solids	87.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	38	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	10	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-384-0203	nsample	SB-384-0405	nsample	SB-384-0708
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235010	lab_id	A7J170235011	lab_id	A7J170235012
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	86.0	Pct_Solids	85.0	Pct_Solids	77.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.7	U	

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-385-0102	nsample	SB-385-0203	nsample	SB-385-0405
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235013	lab_id	A7J170235014	lab_id	A7J170235015
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	92.0	Pct_Solids	91.0	Pct_Solids	93.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-385-0708	nsample	SB-386-0102	nsample	SB-386-0203
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235016	lab_id	A7J170235017	lab_id	A7J170235018
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	85.0	Pct_Solids	90.0	Pct_Solids	89.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-386-0405	nsample	SB-386-0708
samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235019	lab_id	A7J170235020
qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG
Pct_Solids	90.0	Pct_Solids	84.0
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-382-0102	nsample	SB-382-0203	nsample	SB-382-0405
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235001	lab_id	A7J170235002	lab_id	A7J170235003
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	86.0	Pct_Solids	76.0	Pct_Solids	80.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	43	U	
AROCLOR-1221	43	U	
AROCLOR-1232	43	U	
AROCLOR-1242	43	U	
AROCLOR-1248	43	U	
AROCLOR-1254	43	U	
AROCLOR-1260	43	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	41	U	
AROCLOR-1221	41	U	
AROCLOR-1232	41	U	
AROCLOR-1242	41	U	
AROCLOR-1248	41	U	
AROCLOR-1254	41	U	
AROCLOR-1260	41	U	

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-382-0708	nsample	SB-383-0102	nsample	SB-383-0203
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235004	lab_id	A7J170235005	lab_id	A7J170235006
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	79.0	Pct_Solids	88.0	Pct_Solids	87.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	42	U	
AROCLOR-1221	42	U	
AROCLOR-1232	42	U	
AROCLOR-1242	42	U	
AROCLOR-1248	42	U	
AROCLOR-1254	42	U	
AROCLOR-1260	42	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	34	J	P

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-383-0405	nsample	SB-383-0708	nsample	SB-384-0102
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235007	lab_id	A7J170235008	lab_id	A7J170235009
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	79.0	Pct_Solids	83.0	Pct_Solids	87.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	42	U	
AROCLOR-1221	42	U	
AROCLOR-1232	42	U	
AROCLOR-1242	42	U	
AROCLOR-1248	42	U	
AROCLOR-1254	42	U	
AROCLOR-1260	42	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	40	U	
AROCLOR-1221	40	U	
AROCLOR-1232	40	U	
AROCLOR-1242	40	U	
AROCLOR-1248	40	U	
AROCLOR-1254	40	U	
AROCLOR-1260	40	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-384-0203	nsample	SB-384-0405	nsample	SB-384-0708RE
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235010	lab_id	A7J170235011	lab_id	A7J170235012
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	86.0	Pct_Solids	85.0	Pct_Solids	77.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	43	U	
AROCLOR-1221	43	U	
AROCLOR-1232	43	U	
AROCLOR-1242	43	U	
AROCLOR-1248	43	U	
AROCLOR-1254	43	U	
AROCLOR-1260	43	U	

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-385-0102RE
samp_date	10/15/2007
lab_id	A7J170235013
qc_type	NM
units	UG/KG
Pct_Solids	92.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	36	U	
AROCLOR-1221	36	U	
AROCLOR-1232	36	U	
AROCLOR-1242	36	U	
AROCLOR-1248	36	U	
AROCLOR-1254	36	U	
AROCLOR-1260	36	U	

nsample	SB-385-0203
samp_date	10/15/2007
lab_id	A7J170235014
qc_type	NM
units	UG/KG
Pct_Solids	91.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	36	U	
AROCLOR-1221	36	U	
AROCLOR-1232	36	U	
AROCLOR-1242	36	U	
AROCLOR-1248	36	U	
AROCLOR-1254	36	U	
AROCLOR-1260	36	U	

nsample	SB-385-0405
samp_date	10/15/2007
lab_id	A7J170235015
qc_type	NM
units	UG/KG
Pct_Solids	93.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	36	U	
AROCLOR-1221	36	U	
AROCLOR-1232	36	U	
AROCLOR-1242	36	U	
AROCLOR-1248	36	U	
AROCLOR-1254	36	U	
AROCLOR-1260	36	U	

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-385-0708	nsample	SB-386-0102	nsample	SB-386-0203
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235016	lab_id	A7J170235017	lab_id	A7J170235018
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	85.0	Pct_Solids	90.0	Pct_Solids	89.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

PROJ_NO: 00885

SDG: 7J17235 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-386-0405	nsample	SB-386-0708
samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170235019	lab_id	A7J170235020
qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG
Pct_Solids	90.0	Pct_Solids	84.0
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Tetra Tech NUS, Inc

Client Sample ID: SB-382-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-001 **Work Order #...:** J86FW1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 14:00 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 14 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	68	(24 - 112)
2-Fluorobiphenyl	66	(34 - 110)
Terphenyl-d14	81	(41 - 119)
Phenol-d5	74	(28 - 110)
2-Fluorophenol	71	(26 - 110)
2,4,6-Tribromophenol	60	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-382-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-002 **Work Order #...:** J86F91AD **Matrix.....:** SO
Date Sampled...: 10/15/07 14:10 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 24 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	430	ug/kg	1.7

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	59	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	75	(41 - 119)
Phenol-d5	69	(28 - 110)
2-Fluorophenol	67	(26 - 110)
2,4,6-Tribromophenol	60	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-382-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-003 **Work Order #...:** J86GA1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 14:15 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 20 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	410	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	77	(41 - 119)
Phenol-d5	68	(28 - 110)
2-Fluorophenol	63	(26 - 110)
2,4,6-Tribromophenol	45	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-382-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-004 **Work Order #...:** J86GC1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 14:20 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 21 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	420	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(24 - 112)
2-Fluorobiphenyl	49	(34 - 110)
Terphenyl-d14	75	(41 - 119)
Phenol-d5	62	(28 - 110)
2-Fluorophenol	61	(26 - 110)
2,4,6-Tribromophenol	50	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-383-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-005 **Work Order #...:** J86GD1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 14:40 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 20
% Moisture.....: 12 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**19000**	**7500**	**ug/kg**	**30**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	75 DIL	(24 - 112)
2-Fluorobiphenyl	80 DIL	(34 - 110)
Terphenyl-d14	92 DIL	(41 - 119)
Phenol-d5	76 DIL	(28 - 110)
2-Fluorophenol	70 DIL	(26 - 110)
2,4,6-Tribromophenol	54 DIL	(10 - 118)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-383-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-006 **Work Order #...:** J86GE1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 14:45 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**51 J**	**380**	**ug/kg**	**1.5**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	63	(24 - 112)
2-Fluorobiphenyl	64	(34 - 110)
Terphenyl-d14	75	(41 - 119)
Phenol-d5	64	(28 - 110)
2-Fluorophenol	62	(26 - 110)
2,4,6-Tribromophenol	47	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-383-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-007 **Work Order #...:** J86GG1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 14:50 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 21 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**38 J**	**420**	**ug/kg**	**1.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(24 - 112)
2-Fluorobiphenyl	52	(34 - 110)
Terphenyl-d14	74	(41 - 119)
Phenol-d5	65	(28 - 110)
2-Fluorophenol	62	(26 - 110)
2,4,6-Tribromophenol	49	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-383-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-008 **Work Order #...:** J86GJ1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 14:55 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 17 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**10 J**	**400**	**ug/kg**	**1.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(24 - 112)
2-Fluorobiphenyl	60	(34 - 110)
Terphenyl-d14	77	(41 - 119)
Phenol-d5	66	(28 - 110)
2-Fluorophenol	64	(26 - 110)
2,4,6-Tribromophenol	47	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-384-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-009 **Work Order #...:** J86GK1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 15:05 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	57	(24 - 112)
2-Fluorobiphenyl	59	(34 - 110)
Terphenyl-d14	71	(41 - 119)
Phenol-d5	58	(28 - 110)
2-Fluorophenol	59	(26 - 110)
2,4,6-Tribromophenol	50	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-384-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-010 **Work Order #...:** J86GM1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 15:10 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 14 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	60	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	73	(41 - 119)
Phenol-d5	63	(28 - 110)
2-Fluorophenol	62	(26 - 110)
2,4,6-Tribromophenol	52	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-384-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-011 **Work Order #...:** J86GN1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 15:15 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 15 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	70	(41 - 119)
Phenol-d5	60	(28 - 110)
2-Fluorophenol	59	(26 - 110)
2,4,6-Tribromophenol	41	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-384-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-012 **Work Order #...:** J86GP1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 15:20 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 23 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	430	ug/kg	1.7

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(24 - 112)
2-Fluorobiphenyl	52	(34 - 110)
Terphenyl-d14	76	(41 - 119)
Phenol-d5	65	(28 - 110)
2-Fluorophenol	64	(26 - 110)
2,4,6-Tribromophenol	49	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-385-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-013 **Work Order #...:** J86GQ1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 15:25 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 8.0 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	360	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(24 - 112)
2-Fluorobiphenyl	58	(34 - 110)
Terphenyl-d14	69	(41 - 119)
Phenol-d5	60	(28 - 110)
2-Fluorophenol	59	(26 - 110)
2,4,6-Tribromophenol	61	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-385-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-014 **Work Order #...:** J86GT1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 15:28 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 9.0 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	360	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	63	(24 - 112)
2-Fluorobiphenyl	62	(34 - 110)
Terphenyl-d14	72	(41 - 119)
Phenol-d5	65	(28 - 110)
2-Fluorophenol	65	(26 - 110)
2,4,6-Tribromophenol	64	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-385-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-015 **Work Order #...:** J86GV1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 15:32 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 7.0 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	360	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	63	(24 - 112)
2-Fluorobiphenyl	64	(34 - 110)
Terphenyl-d14	72	(41 - 119)
Phenol-d5	68	(28 - 110)
2-Fluorophenol	67	(26 - 110)
2,4,6-Tribromophenol	69	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-385-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-016 **Work Order #...:** J86GW1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 15:35 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 15 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	51	(24 - 112)
2-Fluorobiphenyl	48	(34 - 110)
Terphenyl-d14	60	(41 - 119)
Phenol-d5	53	(28 - 110)
2-Fluorophenol	53	(26 - 110)
2,4,6-Tribromophenol	42	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-386-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-017 **Work Order #...:** J86GX1AD **Matrix.....:** SO
Date Sampled...: 10/15/07 15:45 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 10 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	60	(24 - 112)
2-Fluorobiphenyl	61	(34 - 110)
Terphenyl-d14	73	(41 - 119)
Phenol-d5	62	(28 - 110)
2-Fluorophenol	62	(26 - 110)
2,4,6-Tribromophenol	60	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-386-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-018 **Work Order #...:** J86G31AD **Matrix.....:** SO
Date Sampled...: 10/15/07 15:48 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 11 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	70	(41 - 119)
Phenol-d5	64	(28 - 110)
2-Fluorophenol	62	(26 - 110)
2,4,6-Tribromophenol	62	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-386-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-019 **Work Order #...:** J86G41AD **Matrix.....:** SO
Date Sampled...: 10/15/07 15:50 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 10 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	68	(24 - 112)
2-Fluorobiphenyl	67	(34 - 110)
Terphenyl-d14	80	(41 - 119)
Phenol-d5	73	(28 - 110)
2-Fluorophenol	73	(26 - 110)
2,4,6-Tribromophenol	69	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-386-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170235-020 **Work Order #...:** J86G51AD **Matrix.....:** SO
Date Sampled...: 10/15/07 15:55 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295066
Dilution Factor: 1
% Moisture.....: 16 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	75	(41 - 119)
Phenol-d5	66	(28 - 110)
2-Fluorophenol	65	(26 - 110)
2,4,6-Tribromophenol	55	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-382-0102

GC Semivolatiles

Lot-Sample #...: A7J170235-001 **Work Order #...:** J86FW1AC **Matrix.....:** SO
Date Sampled...: 10/15/07 14:00 **Date Received..:** 10/17/07
Prep Date.....: 10/19/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7292031
Dilution Factor: 1 **Initial Wgt/Vol:** 30 g **Final Wgt/Vol..:** 10 mL
% Moisture.....: 14 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	99	(10 - 196)
Decachlorobiphenyl	114	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-382-0203

GC Semivolatiles

Lot-Sample #...:	A7J170235-002	**Work Order #...:**	J86F91AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 14:10	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.17 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	24	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	43	ug/kg
Aroclor 1221	ND	43	ug/kg
Aroclor 1232	ND	43	ug/kg
Aroclor 1242	ND	43	ug/kg
Aroclor 1248	ND	43	ug/kg
Aroclor 1254	ND	43	ug/kg
Aroclor 1260	ND	43	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(10 - 196)
Decachlorobiphenyl	118	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-382-0405

GC Semivolatiles

Lot-Sample #...:	A7J170235-003	**Work Order #...:**	J86GA1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 14:15	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	20	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	41	ug/kg
Aroclor 1221	ND	41	ug/kg
Aroclor 1232	ND	41	ug/kg
Aroclor 1242	ND	41	ug/kg
Aroclor 1248	ND	41	ug/kg
Aroclor 1254	ND	41	ug/kg
Aroclor 1260	ND	41	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	157	(10 - 196)
Decachlorobiphenyl	181	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-382-0708

GC Semivolatiles

Lot-Sample #...:	A7J170235-004	**Work Order #...:**	J86GC1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 14:20	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	21	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	42	ug/kg
Aroclor 1221	ND	42	ug/kg
Aroclor 1232	ND	42	ug/kg
Aroclor 1242	ND	42	ug/kg
Aroclor 1248	ND	42	ug/kg
Aroclor 1254	ND	42	ug/kg
Aroclor 1260	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	99	(10 - 196)
Decachlorobiphenyl	108	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-383-0102

GC Semivolatiles

Lot-Sample #...:	A7J170235-005	**Work Order #...:**	J86GD1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 14:40	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.08 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	**34 J**	**37**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(10 - 196)
Decachlorobiphenyl	816 *	(10 - 199)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-383-0203

GC Semivolatiles

Lot-Sample #...:	A7J170235-006	**Work Order #...:**	J86GE1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 14:45	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86	(10 - 196)
Decachlorobiphenyl	100	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-383-0405

GC Semivolatiles

Lot-Sample #...:	A7J170235-007	**Work Order #...:**	J86GG1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 14:50	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	21	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	42	ug/kg
Aroclor 1221	ND	42	ug/kg
Aroclor 1232	ND	42	ug/kg
Aroclor 1242	ND	42	ug/kg
Aroclor 1248	ND	42	ug/kg
Aroclor 1254	ND	42	ug/kg
Aroclor 1260	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	82	(10 - 196)
Decachlorobiphenyl	110	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-383-0708

GC Semivolatiles

Lot-Sample #...:	A7J170235-008	**Work Order #...:**	J86GJ1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 14:55	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.14 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	17	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(10 - 196)
Decachlorobiphenyl	112	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-384-0102

GC Semivolatiles

Lot-Sample #...:	A7J170235-009	**Work Order #...:**	J86GK1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 15:05	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	103	(10 - 196)
Decachlorobiphenyl	117	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-384-0203

GC Semivolatiles

Lot-Sample #...:	A7J170235-010	**Work Order #...:**	J86GM1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 15:10	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	14	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(10 - 196)
Decachlorobiphenyl	108	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-384-0405

GC Semivolatiles

Lot-Sample #...:	A7J170235-011	**Work Order #...:**	J86GN1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 15:15	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.05 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	15	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	87	(10 - 196)
Decachlorobiphenyl	97	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-384-0708

GC Semivolatiles

Lot-Sample #...:	A7J170235-012	**Work Order #...:**	J86GP2AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 15:20	**Date Received..:**	10/17/07		
Prep Date.....:	10/24/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7297357				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.1 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	23	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	43	ug/kg
Aroclor 1221	ND	43	ug/kg
Aroclor 1232	ND	43	ug/kg
Aroclor 1242	ND	43	ug/kg
Aroclor 1248	ND	43	ug/kg
Aroclor 1254	ND	43	ug/kg
Aroclor 1260	ND	43	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	63	(10 - 196)
Decachlorobiphenyl	81	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-385-0102

GC Semivolatiles

Lot-Sample #...:	A7J170235-013	**Work Order #...:**	J86GQ2AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 15:25	**Date Received..:**	10/17/07		
Prep Date.....:	10/24/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7297357				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	8.0	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	58	(10 - 196)
Decachlorobiphenyl	60	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-385-0203

GC Semivolatiles

Lot-Sample #...:	A7J170235-014	**Work Order #...:**	J86GT1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 15:28	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.0	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 196)
Decachlorobiphenyl	109	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-385-0405

GC Semivolatiles

Lot-Sample #...:	A7J170235-015	**Work Order #...:**	J86GV1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 15:32	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.15 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	7.0	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90	(10 - 196)
Decachlorobiphenyl	110	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-385-0708

GC Semivolatiles

Lot-Sample #...:	A7J170235-016	**Work Order #...:**	J86GW1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 15:35	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.2 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	15	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	95	(10 - 196)
Decachlorobiphenyl	112	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-386-0102

GC Semivolatiles

Lot-Sample #...:	A7J170235-017	**Work Order #...:**	J86GX1AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 15:45	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.1 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	10	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	88	(10 - 196)
Decachlorobiphenyl	106	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-386-0203

GC Semivolatiles

Lot-Sample #...:	A7J170235-018	**Work Order #...:**	J86G31AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 15:48	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.02 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	163	(10 - 196)
Decachlorobiphenyl	186	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-386-0405

GC Semivolatiles

Lot-Sample #...:	A7J170235-019	**Work Order #...:**	J86G41AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 15:50	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.19 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	10	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86	(10 - 196)
Decachlorobiphenyl	119	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-386-0708

GC Semivolatiles

Lot-Sample #...:	A7J170235-020	**Work Order #...:**	J86G51AC	**Matrix.....:**	SO
Date Sampled...:	10/15/07 15:55	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7292031				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.05 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	16	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	87	(10 - 196)
Decachlorobiphenyl	108	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

APPENDIX C

SUPPORT DOCUMENTATION

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. 112IC00855

LMC MR
SDG #: 7J17235

Michael Martin

Tetra Tech NUS Inc
20251 Century Blvd
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Germantown, MD 20874

TESTAMERICA LABORATORIES, INC.

Patrick J. O'Meara
Project Manager

November 6, 2007

CASE NARRATIVE

7J17235

The following report contains the analytical results for twenty solid samples submitted to TestAmerica North Canton by Tetra Tech NUS Inc from the LMC MR Site, project number 112IC00855. The samples were received October 17, 2007, according to documented sample acceptance procedures.

This SDG consists of (1) laboratory ID: A7J170235.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Dev Murali, John Poremba and Michael Martin on October 30, 2007. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters, which are never reported on a dry weight basis, is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Patrick J. O'Meara, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 3.6, 3.8 and 4.9°C.

GC/MS SEMIVOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

POLYCHLORINATED BIPHENYLS-8082

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

During the analytical sequence for PCB analysis, samples and QC in this NCM reflect an incorrect injection time on the raw data due to the system computer automatically adjusting from Daylight Savings Time to Eastern Standard Time on the wrong weekend.

Due to a Daylight Savings Time related software issue in the data acquisition system, sample(s) SB-385-0102 indicates an injection time of 0110 hours. Because of this software issue, this run appeared out of sequence on the Form 8 and was adjusted to reflect the true chronological order. The inject time for this sample was not changed to maintain data integrity.

For sample(s) SB-383-0102, the recovery for one surrogate compound is outside acceptance criteria. Since the method criterion is that one of two surrogate compounds must meet acceptance criteria, no corrective action was required.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton (formerly STL North Canton) conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton (formerly STL North Canton) requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

TestAmerica North Canton (formerly STL North Canton)Certifications and Approvals:

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),
Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), OhioVAP (#CL0024), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit,

ANALYTICAL METHODS SUMMARY

7J17235

PARAMETER	ANALYTICAL METHOD
PCBs by SW-846 8082	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Total Residue as Percent Solids	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

7J17235 : A7J170235

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
J86FW	001	SB-382-0102	10/15/07	14:00
J86F9	002	SB-382-0203	10/15/07	14:10
J86GA	003	SB-382-0405	10/15/07	14:15
J86GC	004	SB-382-0708	10/15/07	14:20
J86GD	005	SB-383-0102	10/15/07	14:40
J86GE	006	SB-383-0203	10/15/07	14:45
J86GG	007	SB-383-0405	10/15/07	14:50
J86GJ	008	SB-383-0708	10/15/07	14:55
J86GK	009	SB-384-0102	10/15/07	15:05
J86GM	010	SB-384-0203	10/15/07	15:10
J86GN	011	SB-384-0405	10/15/07	15:15
J86GP	012	SB-384-0708	10/15/07	15:20
J86GQ	013	SB-385-0102	10/15/07	15:25
J86GT	014	SB-385-0203	10/15/07	15:28
J86GV	015	SB-385-0405	10/15/07	15:32
J86GW	016	SB-385-0708	10/15/07	15:35
J86GX	017	SB-386-0102	10/15/07	15:45
J86G3	018	SB-386-0203	10/15/07	15:48
J86G4	019	SB-386-0405	10/15/07	15:50
J86G5	020	SB-386-0708	10/15/07	15:55

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: Tetra Tech	Project Manager: Mike Mahin	Date: 10/16/07	Chain of Custody Number: 322972
Address: 20251 Century Blvd #200	Telephone Number (Area Code)/Fax Number: 301-528-3022	Lab Number:	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Shawn Hadley	Lab Contact: Ken Ives	
Project Name and Location (State): LMC MR	Carrier/Waybill Number: N/A		
Contract/Purchase Order/Quote No.: 112IC00088A5			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: 8270 *	PCB 8082	Special Instructions/ Conditions of Receipt
SB-382-0102	10/15	1400				X	2						X	X	LL *benzo(a)pyrene
0203		1410													
0405		1415													
0708		1420													
383-0102		1440													
0203		1445													
0405		1450													
0708		1455													
384-0102		1505													
0203		1510													
0405		1515													
SB-3840708	10/15	1520				X	2						X	X	LL *benzo(a)pyrene

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal

☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STND

QC Requirements (Specify)

1. Relinquished By	Date: 10/16/07	Time: 1420	1. Received By	Date: 10-16-07	Time: 1430
2. Relinquished By	Date:	Time:	2. Received By	Date: 10-17-07	Time: 0940
3. Relinquished By	Date:	Time:	3. Received By	Date:	Time:

Comments

DISTRIBUTION: WHITE - Returned to Client with Report: CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: Tetra Tech	Project Manager: Mike Martin	Date: 10/16/07	Chain of Custody Number: 322973
Address: 20251 Century Blvd #200	Telephone Number (Area Code)/Fax Number: 301-528-3022	Lab Number:	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Shawn Hedley	Lab Contact: Ken Ives	
Project Name and Location (State): LMC MR	Carrier/Waybill Number: N/A		
Contract/Purchase Order/Quote No.: 112IC00885			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	ZnAc/NaOH	Analysis: 8270 *	8082 PCB	Special Instructions/ Conditions of Receipt
SB-385-0102	10/15	1525				X	2						X	X	Lab *benzo(a)pyrene
0203		1528													
0405		1532													
0708		1535													
386-0102		1545													
0203		1548													
0405		1550													
0708		1555													
387-0102		1600													
0203		1603													
0405		1607													
SB-387-0708	10/15	1610				X	2						X	X	Lab *benzo(a)pyrene

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STND

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/16/07	1420	1. Received By	10-16-07	1430
2. Relinquished By			2. Received By	10-17-07	0940
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

SW846 8270C SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17235

Lot #: A7J170235

Extraction: XXA13QL01

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	SRG05	SRG06	TOT OUT
01	SB-382-0102	68	66	81	74	71	60	00
02	SB-382-0203	59	57	75	69	67	60	00
03	SB-382-0405	58	57	77	68	63	45	00
04	SB-382-0708	56	49	75	62	61	50	00
05	SB-383-0102	75 D	80 D	92 D	76 D	70 D	54 D	00
06	SB-383-0203	63	64	75	64	62	47	00
07	SB-383-0405	56	52	74	65	62	49	00
08	SB-383-0708	61	60	77	66	64	47	00
09	SB-384-0102	57	59	71	58	59	50	00
10	SB-384-0203	60	57	73	63	62	52	00
11	SB-384-0405	58	57	70	60	59	41	00
12	SB-384-0708	58	52	76	65	64	49	00
13	SB-385-0102	58	58	69	60	59	61	00
14	SB-385-0203	63	62	72	65	65	64	00
15	SB-385-0405	63	64	72	68	67	69	00
16	SB-385-0708	51	48	60	53	53	42	00
17	SB-386-0102	60	61	73	62	62	60	00
18	SB-386-0203	58	57	70	64	62	62	00
19	SB-386-0405	68	67	80	73	73	69	00
20	SB-386-0708	61	57	75	66	65	55	00
21	METHOD BLK. J9JEV1AA	68	71	79	71	67	48	00
22	LCS J9JEV1AC	70	67	79	68	65	63	00
23	SB-382-0102 D	69	69	80	76	73	73	00
24	SB-382-0102 S	69	70	81	75	71	65	00

SURROGATES		QC LIMITS
SRG01	= Nitrobenzene-d5	(24-112)
SRG02	= 2-Fluorobiphenyl	(34-110)
SRG03	= Terphenyl-d14	(41-119)
SRG04	= Phenol-d5	(28-110)
SRG05	= 2-Fluorophenol	(26-110)
SRG06	= 2,4,6-Tribromophenol	(10-118)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17235

Lot #: A7J220000 WO #: J9JEV1AC

BATCH: 7295066

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
1,2,4-Trichlorobenzene	670	460	69	43 - 110	
Acenaphthene	670	450	67	46 - 110	
2,4-Dinitrotoluene	670	530	79	55 - 116	
Pyrene	670	520	78	58 - 113	
N-Nitrosodi-n-propylamine	670	450	68	40 - 114	
1,4-Dichlorobenzene	670	430	64	38 - 110	
Pentachlorophenol	670	250	38	10 - 110	
Phenol	670	430	65	39 - 110	
2-Chlorophenol	670	440	66	39 - 110	
4-Chloro-3-methylphenol	670	460	69	42 - 110	
4-Nitrophenol	670	420	63	24 - 117	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17235

Matrix Spike ID: SB-382-0102

Lot #: A7J170235 WO #: J86FW1AG
BATCH: 7295066

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
1,2,4-Trichlorobenzene	780	ND	560	72	33 - 110	
Acenaphthene	780	ND	530	68	10 - 200	
2,4-Dinitrotoluene	780	ND	610	79	42 - 118	
Pyrene	780	ND	620	79	10 - 200	
N-Nitrosodi-n-propylamine	780	ND	580	74	30 - 121	
1,4-Dichlorobenzene	780	ND	490	63	26 - 110	
Pentachlorophenol	780	ND	290	38	10 - 182	
Phenol	780	ND	570	73	10 - 144	
2-Chlorophenol	780	ND	580	74	32 - 110	
4-Chloro-3-methylphenol	780	ND	590	76	32 - 117	
4-Nitrophenol	780	ND	490	63	10 - 125	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17235

Matrix Spike ID: SB-382-0102

Lot #: A7J170235 WO #: J86FW1AH
BATCH: 7295066

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
1,2,4-Trichlorobenzene	780	570	73	0.94	30	33 - 110	
Acenaphthene	780	540	70	2.2	30	10 - 200	
2,4-Dinitrotoluene	780	660	84	6.8	30	42 - 118	
Pyrene	780	620	79	0.35	30	10 - 200	
N-Nitrosodi-n-propylamine	780	600	77	3.2	30	30 - 121	
1,4-Dichlorobenzene	780	510	66	3.0	30	26 - 110	
Pentachlorophenol	780	230	30	23	30	10 - 182	
Phenol	780	570	73	0.52	30	10 - 144	
2-Chlorophenol	780	580	75	1.7	30	32 - 110	
4-Chloro-3-methylphenol	780	620	80	4.0	30	32 - 117	
4-Nitrophenol	780	570	74	15	30	10 - 125	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17235

Lab File ID: 2DF1024 DFTPP Injection Date: 10/24/07

Instrument ID: A4AG2 DFTPP Injection Time: 1212

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	35.5
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Mass 69 relative abundance	40.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	50.2
197	Less than 1.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	24.7
365	Greater than 1.0% of mass 198	3.2
441	Present, but less than mass 443	10.9
442	Greater than 40.0% of mass 198	79.1
443	17.0 - 23.0% of mass 442	14.9 (18.9)2

1-Value is % of mass 69 2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD009	L9	2SHHH1024	10/24/07	1223
02	SSTD008	L8	2SHH1024	10/24/07	1240
03	SSTD007	L7	2SH1024	10/24/07	1257
04	SSTD006	L6	2SMH1024	10/24/07	1315
05	SSTD005	L5	2SMM1024	10/24/07	1332
06	SSTD004	L4	2SM1024	10/24/07	1349
07	SSTD003	L3	2SML1024	10/24/07	1406
08	SSTD002	L2	2SL1024	10/24/07	1424
09	SSTD001	L1	2SLL1024	10/24/07	1441
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-OCT-2007 15:56
End Cal Date : 24-OCT-2007 14:41
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\71024A.b\8270p.m
Last Edit : 24-Oct-2007 15:10 a4ag2.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
144 Hexachlorophene	*****	*****	*****	*****	*****	*****			
	*****	*****	*****				*****	*****	<-
145 Hexachlorophene product	*****	*****	*****	*****	*****	*****			
	*****	*****	*****				*****	*****	<-
146 Benzo(a)pyrene	1.13356	0.91950	0.94978	0.99564	1.01295	1.09296			
	1.09655	1.13883	1.25011				1.06554	9.852	
148 3-Methylcholanthrene	*****	*****	*****	*****	*****	*****			
	*****	*****	*****				*****	*****	<-
149 Indeno(1,2,3-cd)pyrene	1.11314	0.98476	1.04225	1.09901	1.11743	1.20553			
	1.21453	1.25502	1.37265				1.15604	10.210	
150 Dibenz(a,h)anthracene	0.95549	0.85855	0.90658	0.93889	0.95736	1.03913			
	1.04814	1.07257	1.18011				0.99520	9.898	
151 Benzo(g,h,i)perylene	1.07565	0.85637	0.88607	0.92765	0.94183	1.01237			
	1.02211	1.05245	1.14437				0.99099	9.537	
199 3-Picoline	*****	*****	*****	*****	*****	*****			
	*****	*****	*****				*****	*****	<-
200 N,N-Dimethylacetamide	*****	*****	*****	*****	*****	*****			
	*****	*****	*****				*****	*****	<-
201 Quinoline	*****	*****	*****	*****	*****	*****			
	*****	*****	*****				*****	*****	<-
202 Diphenyl	*****	*****	*****	*****	*****	*****			
	*****	*****	*****				*****	*****	<-

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17235

Lab File ID: 2DF1025 DFTPP Injection Date: 10/25/07

Instrument ID: A4AG2 DFTPP Injection Time: 1006

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.3
68	Less than 2.0% of mass 69	0.2 (0.7)1
69	Mass 69 relative abundance	38.6
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	40.0 - 60.0% of mass 198	48.5
197	Less than 1.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	24.9
365	Greater than 1.0% of mass 198	3.1
441	Present, but less than mass 443	11.7
442	Greater than 40.0% of mass 198	83.7
443	17.0 - 23.0% of mass 442	15.5 (18.6)2

1-Value is % of mass 69 2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD006	L6	2SMH1025	10/25/07	1016
02	J9JEVBLK	J9JEV1AA	J9JEV1AA	10/25/07	1338
03	J9JEVCHK	J9JEV1AC	J9JEV1AC	10/25/07	1356
04	SB-382-0102	J86FW1AD	J86FW1AD	10/25/07	1505
05	SB-382-0102	J86FW1AG	J86FW1AG	10/25/07	1522
06	SB-382-0102	J86FW1AH	J86FW1AH	10/25/07	1539
07	SB-382-0203	J86F91AD	J86F91AD	10/25/07	2124
08	SB-382-0405	J86GA1AD	J86GA1AD	10/25/07	2141
09	SB-382-0708	J86GC1AD	J86GC1AD	10/25/07	2158
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STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4ag2.i Injection Date: 25-OCT-2007 10:16
Lab File ID: 2SMH1025.D Init. Cal. Date(s): 17-OCT-2007 24-OCT-2007
Analysis Type: Init. Cal. Times: 15:56 14:41
Lab Sample ID: Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4ag2.i\71025A.b\8270p.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
146 Benzo(a)pyrene	1.06554	1.08282	1.08282	0.010	-1.62122	20.00000	Averaged
149 Indeno(1,2,3-cd)pyrene	1.15604	1.21134	1.21134	0.010	-4.78348	50.00000	Averaged
150 Dibenz(a,h)anthracene	0.99520	1.02369	1.02369	0.010	-2.86228	50.00000	Averaged
151 Benzo(g,h,i)perylene	0.99099	1.01766	1.01766	0.010	-2.69153	50.00000	Averaged
$ 154 Nitrobenzene-d5	0.30387	0.31433	0.31433	0.010	-3.44206	50.00000	Averaged
$ 155 2-Fluorobiphenyl	1.19376	1.24748	1.24748	0.010	-4.49966	50.00000	Averaged
$ 156 Terphenyl-d14	0.81794	0.86382	0.86382	0.010	-5.60931	50.00000	Averaged
$ 157 Phenol-d5	1.52843	1.52673	1.52673	0.010	0.11082	50.00000	Averaged
$ 158 2-Fluorophenol	1.19836	1.18057	1.18057	0.010	1.48433	50.00000	Averaged
$ 159 2,4,6-Tribromophenol	0.15460	0.16563	0.16563	0.010	-7.12826	50.00000	Averaged
$ 186 2-Chlorophenol-d4	1.30490	1.32134	1.32134	0.010	-1.25989	50.00000	Averaged
$ 187 1,2-Dichlorobenzene-d4	0.82867	0.84301	0.84301	0.010	-1.72938	50.00000	Averaged
M 195 Cresols, total	2.49329	2.46155	2.46155	0.010	1.27300	50.00000	Averaged
101 Diphenylamine	0.51130	0.52679	0.52679	0.010	-3.02948	50.00000	Averaged

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17235

Lab File ID: 2DF1026 DFTPP Injection Date: 10/26/07

Instrument ID: A4AG2 DFTPP Injection Time: 0642

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.1
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Mass 69 relative abundance	39.1
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	49.3
197	Less than 1.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	25.8
365	Greater than 1.0% of mass 198	3.4
441	Present, but less than mass 443	11.8
442	Greater than 40.0% of mass 198	82.3
443	17.0 - 23.0% of mass 442	15.6 (18.9)2

1-Value is % of mass 69 2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD006	L6	2SMH1026	10/26/07	0653
02	SB-383-0203	J86GE1AD	J86GE1AD	10/26/07	1058
03	SB-383-0405	J86GG1AD	J86GG1AD	10/26/07	1115
04	SB-383-0708	J86GJ1AD	J86GJ1AD	10/26/07	1132
05	SB-384-0102	J86GK1AD	J86GK1AD	10/26/07	1150
06	SB-384-0203	J86GM1AD	J86GM1AD	10/26/07	1207
07	SB-384-0405	J86GN1AD	J86GN1AD	10/26/07	1224
08	SB-384-0708	J86GP1AD	J86GP1AD	10/26/07	1241
09	SB-385-0102	J86GQ1AD	J86GQ1AD	10/26/07	1259
10	SB-385-0203	J86GT1AD	J86GT1AD	10/26/07	1316
11	SB-385-0405	J86GV1AD	J86GV1AD	10/26/07	1333
12	SB-385-0708	J86GW1AD	J86GW1AD	10/26/07	1350
13	SB-386-0405	J86G41AD	J86G41AD	10/26/07	1408
14	SB-386-0102	J86GX1AD	J86GX1AD	10/26/07	1425
15	SB-386-0708	J86G51AD	J86G51AD	10/26/07	1442
16	SB-386-0203	J86G31AD	J86G31AD	10/26/07	1459
17	SB-383-0102	J86GD1AD	J86GD1AD	10/26/07	1517
18					
19					
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21					
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STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4ag2.i
Lab File ID: 2SMH1026.D
Analysis Type:
Lab Sample ID: L6
Method: \\cansvr11\dd\chem\MSS\a4ag2.i\71026A.b\8270p.m

Injection Date: 26-OCT-2007 06:53
Init. Cal. Date(s): 17-OCT-2007 24-OCT-2007
Init. Cal. Times: 15:56 14:41
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
146 Benzo(a)pyrene	1.06554	1.07886	1.07886	0.010	-1.24937	20.00000	Averaged
149 Indeno(1,2,3-cd)pyrene	1.15604	1.21994	1.21994	0.010	-5.52819	50.00000	Averaged
150 Dibenz(a,h)anthracene	0.99520	1.03062	1.03062	0.010	-3.55865	50.00000	Averaged
151 Benzo(g,h,i)perylene	0.99099	1.02047	1.02047	0.010	-2.97552	50.00000	Averaged
$ 154 Nitrobenzene-d5	0.30387	0.30639	0.30639	0.010	-0.82935	50.00000	Averaged
$ 155 2-Fluorobiphenyl	1.19376	1.24421	1.24421	0.010	-4.22587	50.00000	Averaged
$ 156 Terphenyl-d14	0.81794	0.86631	0.86631	0.010	-5.91389	50.00000	Averaged
$ 157 Phenol-d5	1.52843	1.49359	1.49359	0.010	2.27930	50.00000	Averaged
$ 158 2-Fluorophenol	1.19836	1.20823	1.20823	0.010	-0.82385	50.00000	Averaged
$ 159 2,4,6-Tribromophenol	0.15460	0.16507	0.16507	0.010	-6.76783	50.00000	Averaged
$ 186 2-Chlorophenol-d4	1.30490	1.29772	1.29772	0.010	0.55008	50.00000	Averaged
$ 187 1,2-Dichlorobenzene-d4	0.82867	0.82929	0.82929	0.010	-0.07473	50.00000	Averaged
M 195 Cresols, total	2.49329	2.68822	2.68822	0.010	-7.81826	50.00000	Averaged
101 Diphenylamine	0.51130	0.53341	0.53341	0.010	-4.32578	50.00000	Averaged

SW846 8270C METHOD BLANK SUMMARY

BLANK WORKORDER NO.: J9JEV1AA

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN | SDG Number: 7J17235

Lab File ID: J9JEV1AA. | Lot Number: A7J170235

Date Analyzed: 10/25/07 | Time Analyzed: 13:38

Matrix: SOLID | Date Extracted: 10/22/07

GC Column: DB-5.625 ID: .18 | Extraction Method: 3550B

Instrument ID: AG2 | Level: (low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SB-382-0102	J86FW1AD	J86FW1AD.	10/25/07	15:05
02	SB-382-0102	J86FW1AG S	J86FW1AG.	10/25/07	15:22
03	SB-382-0102	J86FW1AH D	J86FW1AH.	10/25/07	15:39
04	SB-382-0203	J86F91AD	J86F91AD.	10/25/07	21:24
05	SB-382-0405	J86GA1AD	J86GA1AD.	10/25/07	21:41
06	SB-382-0708	J86GC1AD	J86GC1AD.	10/25/07	21:58
07	SB-383-0102	J86GD1AD	J86GD1AD.	10/26/07	15:17
08	SB-383-0203	J86GE1AD	J86GE1AD.	10/26/07	10:58
09	SB-383-0405	J86GG1AD	J86GG1AD.	10/26/07	11:15
10	SB-383-0708	J86GJ1AD	J86GJ1AD.	10/26/07	11:32
11	SB-384-0102	J86GK1AD	J86GK1AD.	10/26/07	11:50
12	SB-384-0203	J86GM1AD	J86GM1AD.	10/26/07	12:07
13	SB-384-0405	J86GN1AD	J86GN1AD.	10/26/07	12:24
14	SB-384-0708	J86GP1AD	J86GP1AD.	10/26/07	12:41
15	SB-385-0102	J86GQ1AD	J86GQ1AD.	10/26/07	12:59
16	SB-385-0203	J86GT1AD	J86GT1AD.	10/26/07	13:16
17	SB-385-0405	J86GV1AD	J86GV1AD.	10/26/07	13:33
18	SB-385-0708	J86GW1AD	J86GW1AD.	10/26/07	13:50
19	SB-386-0102	J86GX1AD	J86GX1AD.	10/26/07	14:25
20	SB-386-0203	J86G31AD	J86G31AD.	10/26/07	14:59
21	SB-386-0405	J86G41AD	J86G41AD.	10/26/07	14:08
22	SB-386-0708	J86G51AD	J86G51AD.	10/26/07	14:42
23	CHECK SAMPLE	J9JEV1AC C	J9JEV1AC.	10/25/07	13:56
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COMMENTS:

FORM IV

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: 7J17235 **Work Order #...:** J9JEV1AA **Matrix.....:** SOLID
MB Lot-Sample #: A7J220000-066

Prep Date.....: 10/22/07 **Final Wgt/Vol..:** 2 mL
Analysis Date..: 10/25/07 **Prep Batch #...:** 7295066
Dilution Factor: 1 **Initial Wgt/Vol:** 30 g

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzo(a)pyrene	ND	330	ug/kg	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	68	(24 - 112)
2-Fluorobiphenyl	71	(34 - 110)
Terphenyl-d14	79	(41 - 119)
Phenol-d5	71	(28 - 110)
2-Fluorophenol	67	(26 - 110)
2,4,6-Tribromophenol	48	(10 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17235

Lab File ID (Standard): 2SMH1025 Date Analyzed: 10/25/07

Instrument ID: A4AG2 Time Analyzed: 1016

		IS1 (DCB) AREA #	RT	IS2 (NPT) AREA #	RT	IS3 (ANT) AREA #	RT
	12 HOUR STD	481781	3.62	2043835	4.52	1022011	5.79
	UPPER LIMIT	963562	4.12	4087670	5.02	2044022	6.29
	LOWER LIMIT	240891	3.12	1021918	4.02	511006	5.29
	EPA SAMPLE NO.						
01	J9JEVBLK	537952	3.62	2376990	4.51	1219234	5.78
02	J9JEVCHK	551528	3.62	2378351	4.51	1245863	5.78
03	SB-382-0102	422938	3.62	1909219	4.52	1047028	5.79
04	SB-382-0102	428388	3.62	1942116	4.52	1069629	5.79
05	SB-382-0102	335445	3.62	1549447	4.52	880008	5.79
06	SB-382-0203	373065	3.62	1731654	4.52	934902	5.80
07	SB-382-0405	409523	3.63	1879185	4.52	1013648	5.80
08	SB-382-0708	325694	3.63	1502770	4.52	860719	5.80
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8C
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17235

Lab File ID (Standard): 2SMH1025 Date Analyzed: 10/25/07

Instrument ID: A4AG2 Time Analyzed: 1016

		IS4 (PHN) AREA #	RT	IS5 (CRY) AREA #	RT	IS6 (PRY) AREA #	RT
	12 HOUR STD	1733227	6.88	1575705	8.85	1527308	10.35
	UPPER LIMIT	3466454	7.38	3151410	9.35	3054616	10.85
	LOWER LIMIT	866614	6.38	787853	8.35	763654	9.85
	EPA SAMPLE NO.						
01	J9JEVBLK	2102542	6.88	1945670	8.85	1872681	10.34
02	J9JEVCHK	2168542	6.88	2022569	8.85	1953744	10.34
03	SB-382-0102	1908871	6.88	1776459	8.85	1703515	10.36
04	SB-382-0102	1900667	6.88	1781084	8.86	1692660	10.36
05	SB-382-0102	1642035	6.88	1595633	8.86	1567366	10.36
06	SB-382-0203	1719415	6.89	1651818	8.87	1557063	10.38
07	SB-382-0405	1821115	6.89	1748064	8.87	1597408	10.38
08	SB-382-0708	1525731	6.89	1447046	8.87	1366664	10.38
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8B
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17235

Lab File ID (Standard): 2SMH1026 Date Analyzed: 10/26/07

Instrument ID: A4AG2 Time Analyzed: 0653

		IS1 (DCB) AREA #	RT	IS2 (NPT) AREA #	RT	IS3 (ANT) AREA #	RT
	12 HOUR STD	304679	3.60	1259272	4.50	623790	5.77
	UPPER LIMIT	609358	4.10	2518544	5.00	1247580	6.27
	LOWER LIMIT	152340	3.10	629636	4.00	311895	5.27
	EPA SAMPLE NO.						
01	SB-383-0203	356495	3.60	1525222	4.50	812305	5.77
02	SB-383-0405	482037	3.60	2071032	4.50	1104368	5.77
03	SB-383-0708	485372	3.60	2089078	4.50	1113402	5.77
04	SB-384-0102	279900	3.60	1200610	4.50	621050	5.77
05	SB-384-0203	448724	3.60	1922764	4.50	1024611	5.77
06	SB-384-0405	378578	3.60	1586951	4.50	861860	5.77
07	SB-384-0708	262021	3.60	1111623	4.50	591493	5.77
08	SB-385-0102	374702	3.60	1571904	4.50	848399	5.77
09	SB-385-0203	490888	3.60	2033894	4.50	1110828	5.77
10	SB-385-0405	457296	3.60	2040934	4.50	1056951	5.77
11	SB-385-0708	392805	3.60	1671542	4.50	887532	5.77
12	SB-386-0405	385280	3.60	1719963	4.50	923893	5.77
13	SB-386-0102	278310	3.60	1188853	4.50	627208	5.77
14	SB-386-0708	472908	3.60	2082927	4.50	1104484	5.77
15	SB-386-0203	501505	3.60	2236922	4.50	1177436	5.77
16	SB-383-0102	391346	3.60	1790326	4.50	947037	5.77
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

FORM VIII SV-1 1/87 Rev.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17235

Lab File ID (Standard): 2SMH1026 Date Analyzed: 10/26/07

Instrument ID: A4AG2 Time Analyzed: 0653

		IS4 (PHN) AREA #	RT	IS5 (CRY) AREA #	RT	IS6 (PRY) AREA #	RT
	12 HOUR STD	1072166	6.86	972413	8.83	947293	10.32
	UPPER LIMIT	2144332	7.36	1944826	9.33	1894586	10.82
	LOWER LIMIT	536083	6.36	486207	8.33	473647	9.82
	EPA SAMPLE NO.						
01	SB-383-0203	1403405	6.85	1293250	8.82	1296540	10.31
02	SB-383-0405	1910439	6.85	1754743	8.82	1723772	10.31
03	SB-383-0708	1917922	6.85	1769305	8.82	1752091	10.31
04	SB-384-0102	1092125	6.85	1003846	8.82	975028	10.31
05	SB-384-0203	1792485	6.85	1654918	8.82	1629128	10.31
06	SB-384-0405	1502460	6.85	1375148	8.82	1341033	10.31
07	SB-384-0708	1026559	6.85	934698	8.82	915745	10.31
08	SB-385-0102	1429157	6.85	1348852	8.82	1311735	10.31
09	SB-385-0203	1959759	6.85	1787388	8.82	1755491	10.31
10	SB-385-0405	1906799	6.85	1746103	8.82	1744207	10.31
11	SB-385-0708	1536673	6.86	1375945	8.82	1376712	10.31
12	SB-386-0405	1563545	6.85	1437551	8.82	1419425	10.31
13	SB-386-0102	1063536	6.85	953318	8.82	957495	10.31
14	SB-386-0708	1908931	6.86	1749353	8.82	1718864	10.31
15	SB-386-0203	2053344	6.86	1865876	8.83	1843730	10.32
16	SB-383-0102	1645542	6.86	1543041	8.84	1570145	10.33
17							
18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...:	7J17235	**Work Order #...:**	J86FW1AG-MS J86FW1AH-MSD	**Matrix.....:**	SO
MS Lot-Sample #:	A7J170235-001				
Date Sampled...:	10/15/07 14:00	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295066				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	2 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichloro-benzene	**72**	**(33 - 110)**			**SW846 8270C**
	73	**(33 - 110)**	**0.94**	**(0-30)**	**SW846 8270C**
Acenaphthene	**68**	**(10 - 200)**			**SW846 8270C**
	70	**(10 - 200)**	**2.2**	**(0-30)**	**SW846 8270C**
2,4-Dinitrotoluene	**79**	**(42 - 118)**			**SW846 8270C**
	84	**(42 - 118)**	**6.8**	**(0-30)**	**SW846 8270C**
Pyrene	**79**	**(10 - 200)**			**SW846 8270C**
	79	**(10 - 200)**	**0.35**	**(0-30)**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**74**	**(30 - 121)**			**SW846 8270C**
	77	**(30 - 121)**	**3.2**	**(0-30)**	**SW846 8270C**
1,4-Dichlorobenzene	**63**	**(26 - 110)**			**SW846 8270C**
	66	**(26 - 110)**	**3.0**	**(0-30)**	**SW846 8270C**
Pentachlorophenol	**38**	**(10 - 182)**			**SW846 8270C**
	30	**(10 - 182)**	**23**	**(0-30)**	**SW846 8270C**
Phenol	**73**	**(10 - 144)**			**SW846 8270C**
	73	**(10 - 144)**	**0.52**	**(0-30)**	**SW846 8270C**
2-Chlorophenol	**74**	**(32 - 110)**			**SW846 8270C**
	75	**(32 - 110)**	**1.7**	**(0-30)**	**SW846 8270C**
4-Chloro-3-methylphenol	**76**	**(32 - 117)**			**SW846 8270C**
	80	**(32 - 117)**	**4.0**	**(0-30)**	**SW846 8270C**
4-Nitrophenol	**63**	**(10 - 125)**			**SW846 8270C**
	74	**(10 - 125)**	**15**	**(0-30)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	69	(24 - 112)
	69	(24 - 112)
2-Fluorobiphenyl	70	(34 - 110)
	69	(34 - 110)
Terphenyl-d14	81	(41 - 119)
	80	(41 - 119)
Phenol-d5	75	(28 - 110)
	76	(28 - 110)
2-Fluorophenol	71	(26 - 110)
	73	(26 - 110)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 7J17235 **Work Order #...:** J86FW1AG-MS **Matrix.....:** SO
MS Lot-Sample #: A7J170235-001 J86FW1AH-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	65	(10 - 118)
	73	(10 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...:	7J17235	**Work Order #...:**	J86FW1AG-MS	**Matrix.....:**	SO
MS Lot-Sample #:	A7J170235-001		J86FW1AH-MSD		
Date Sampled...:	10/15/07 14:00	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295066				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	2 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2,4-Trichloro-benzene	**ND**	**780**	**560**	**ug/kg**	**72**		**SW846 8270C**
	ND	**780**	**570**	**ug/kg**	**73**	**0.94**	**SW846 8270C**
Acenaphthene	**ND**	**780**	**530**	**ug/kg**	**68**		**SW846 8270C**
	ND	**780**	**540**	**ug/kg**	**70**	**2.2**	**SW846 8270C**
2,4-Dinitrotoluene	**ND**	**780**	**610**	**ug/kg**	**79**		**SW846 8270C**
	ND	**780**	**660**	**ug/kg**	**84**	**6.8**	**SW846 8270C**
Pyrene	**ND**	**780**	**620**	**ug/kg**	**79**		**SW846 8270C**
	ND	**780**	**620**	**ug/kg**	**79**	**0.35**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**ND**	**780**	**580**	**ug/kg**	**74**		**SW846 8270C**
	ND	**780**	**600**	**ug/kg**	**77**	**3.2**	**SW846 8270C**
1,4-Dichlorobenzene	**ND**	**780**	**490**	**ug/kg**	**63**		**SW846 8270C**
	ND	**780**	**510**	**ug/kg**	**66**	**3.0**	**SW846 8270C**
Pentachlorophenol	**ND**	**780**	**290**	**ug/kg**	**38**		**SW846 8270C**
	ND	**780**	**230**	**ug/kg**	**30**	**23**	**SW846 8270C**
Phenol	**ND**	**780**	**570**	**ug/kg**	**73**		**SW846 8270C**
	ND	**780**	**570**	**ug/kg**	**73**	**0.52**	**SW846 8270C**
2-Chlorophenol	**ND**	**780**	**580**	**ug/kg**	**74**		**SW846 8270C**
	ND	**780**	**580**	**ug/kg**	**75**	**1.7**	**SW846 8270C**
4-Chloro-3-methylphenol	**ND**	**780**	**590**	**ug/kg**	**76**		**SW846 8270C**
	ND	**780**	**620**	**ug/kg**	**80**	**4.0**	**SW846 8270C**
4-Nitrophenol	**ND**	**780**	**490**	**ug/kg**	**63**		**SW846 8270C**
	ND	**780**	**570**	**ug/kg**	**74**	**15**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	69	(24 - 112)
	69	(24 - 112)
2-Fluorobiphenyl	70	(34 - 110)
	69	(34 - 110)
Terphenyl-d14	81	(41 - 119)
	80	(41 - 119)
Phenol-d5	75	(28 - 110)
	76	(28 - 110)
2-Fluorophenol	71	(26 - 110)
	73	(26 - 110)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 7J17235 **Work Order #...:** J86FW1AG-MS **Matrix.....:** SO
MS Lot-Sample #: A7J170235-001 J86FW1AH-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	65	(10 - 118)
	73	(10 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 7J17235 **Work Order #...:** J9JEV1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7J220000-066
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295066
Dilution Factor: 1 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 30 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,2,4-Trichloro-benzene	**69**	**(43 - 110)**	**SW846 8270C**
Acenaphthene	**67**	**(46 - 110)**	**SW846 8270C**
2,4-Dinitrotoluene	**79**	**(55 - 116)**	**SW846 8270C**
Pyrene	**78**	**(58 - 113)**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**68**	**(40 - 114)**	**SW846 8270C**
1,4-Dichlorobenzene	**64**	**(38 - 110)**	**SW846 8270C**
Pentachlorophenol	**38**	**(10 - 110)**	**SW846 8270C**
Phenol	**65**	**(39 - 110)**	**SW846 8270C**
2-Chlorophenol	**66**	**(39 - 110)**	**SW846 8270C**
4-Chloro-3-methylphenol	**69**	**(42 - 110)**	**SW846 8270C**
4-Nitrophenol	**63**	**(24 - 117)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	70	(24 - 112)
2-Fluorobiphenyl	67	(34 - 110)
Terphenyl-d14	79	(41 - 119)
Phenol-d5	68	(28 - 110)
2-Fluorophenol	65	(26 - 110)
2,4,6-Tribromophenol	63	(10 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 7J17235 **Work Order #...:** J9JEV1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7J220000-066
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295066
Dilution Factor: 1 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 30 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,2,4-Trichloro-benzene	**670**	**460**	**ug/kg**	**69**	**SW846 8270C**
Acenaphthene	**670**	**450**	**ug/kg**	**67**	**SW846 8270C**
2,4-Dinitrotoluene	**670**	**530**	**ug/kg**	**79**	**SW846 8270C**
Pyrene	**670**	**520**	**ug/kg**	**78**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**670**	**450**	**ug/kg**	**68**	**SW846 8270C**
1,4-Dichlorobenzene	**670**	**430**	**ug/kg**	**64**	**SW846 8270C**
Pentachlorophenol	**670**	**250**	**ug/kg**	**38**	**SW846 8270C**
Phenol	**670**	**430**	**ug/kg**	**65**	**SW846 8270C**
2-Chlorophenol	**670**	**440**	**ug/kg**	**66**	**SW846 8270C**
4-Chloro-3-methylphenol	**670**	**460**	**ug/kg**	**69**	**SW846 8270C**
4-Nitrophenol	**670**	**420**	**ug/kg**	**63**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	70	(24 - 112)
2-Fluorobiphenyl	67	(34 - 110)
Terphenyl-d14	79	(41 - 119)
Phenol-d5	68	(28 - 110)
2-Fluorophenol	65	(26 - 110)
2,4,6-Tribromophenol	63	(10 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Report Date : 10-Oct-2007 14:11

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2007 15:17
End Cal Date : 10-OCT-2007 01:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\cansvr11\DD\chem\GCS\a2hp10.i\710091C-1.b\PCB10.m
Last Edit : 10-Oct-2007 14:09 serraa
Curve Type : Average

Calibration File Names:
Level 1: \\cansvr11\DD\chem\GCS\a2hp10.i\710091C-1.b\038F3801.D
Level 2: \\cansvr11\DD\chem\GCS\a2hp10.i\710091C-1.b\039F3901.D
Level 3: \\cansvr11\DD\chem\GCS\a2hp10.i\710091C-1.b\040F4001.D
Level 4: \\cansvr11\DD\chem\GCS\a2hp10.i\710091C-1.b\041F4101.D
Level 5: \\cansvr11\DD\chem\GCS\a2hp10.i\710091C-1.b\042F4201.D
Level 6: \\cansvr11\DD\chem\GCS\a2hp10.i\710091C-1.b\043F4301.D

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.000 Level 6	RRF	% RSD	
2 AROCLOR-1221(1)	678100	753730	691025	640198	621883	587058	661999	8.864	
(2)	486460	417000	354830	324334	287307	280975	358484	22.335	<-
(3)	1935960	1886340	1751380	1624940	1614415	1512056	1720849	9.679	<-
3 AROCLOR-1016(1)	738140	688730	661085	641250	590896	554687	645798	10.257	
(2)	1180600	1102910	1074925	1032464	956096	896292	1040548	9.866	
(3)	2048180	1953320	1927230	1943544	1833867	1784738	1915147	4.883	
(4)	794520	713600	702735	684156	636405	617216	691439	9.109	
(5)	842160	803130	781010	759270	719439	695683	766782	7.037	
4 AROCLOR-1232(1)	909420	759800	801615	752382	695680	698493	769565	10.312	
(2)	550940	508980	474295	481080	441697	436240	482205	8.924	
(3)	919860	876080	869335	862766	830448	827894	864397	3.915	
(4)	329400	310150	284120	273960	257524	252011	284527	10.624	
(5)	355720	356580	328375	319788	299196	293046	325451	8.319	
5 AROCLOR-1242(1)	1188780	1095630	996815	955676	912315	993855	1023845	9.871	
(2)	1850160	1932410	1838105	1801868	1721974	1624316	1794805	6.016	
(3)	4549800	4254100	4029210	4017942	3942745	3613601	4067900	7.719	
(4)	2537540	2300550	2144135	2143750	2083180	1975266	2197403	8.974	
(5)	1872740	1791500	1665130	1624270	1571524	1495548	1670119	8.387	
6 AROCLOR-1248(1)	1059440	933850	965705	923242	916200	886184	947437	6.399	
(2)	1107800	1007150	1037860	985462	965568	938387	1007038	5.958	
(3)	1546740	1446520	1427750	1375000	1363279	1317925	1412869	5.678	
(4)	946600	858930	854480	819962	799323	776194	842581	7.125	
(5)	627200	562890	546055	538706	529444	509476	552295	7.378	
7 AROCLOR-1254(1)	826460	791160	753320	711906	696912	695009	745795	7.280	
(2)	1416380	1366390	1301955	1224660	1217626	1195399	1287068	6.980	
(3)	1792540	1898890	1834435	1761442	1783768	1740365	1801907	3.169	
(4)	1417560	1381880	1310430	1276862	1267377	1251647	1317626	5.115	
(5)	1618160	1623280	1541820	1511688	1515928	1471464	1547057	3.966	

3 RRs = 13646

Report Date : 10-Oct-2007 14:11

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2007 15:17
End Cal Date : 10-OCT-2007 01:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\cansvr11\DD\chem\GCS\a2hp10.i\710091C-1.b\PCB10.m
Last Edit : 10-Oct-2007 14:09 serraa
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.000 Level 6	___ RRF	% RSD	
8 AROCLOR-1260 (1)	3180860	3038230	3000710	2930810	2732604	2624020	2917872	7.046	
(2)	5844480	5460170	5391810	5297106	4980783	4793397	5294624	7.011	
(3)	5244780	5099250	5046105	4978016	4721476	4591578	4946867	4.950	
(4)	7737060	6900710	6856545	6906292	6616813	6394635	6902009	6.602	
(5)	3847540	3449700	3381540	3348944	3243204	3164055	3405831	7.019	
9 AROCLOR-1262 (1)	1112740	1109350	983425	1003246	951413	972456	1022105	6.938	
(2)	1511140	1522570	1342595	1382294	1317340	1337690	1402272	6.510	
(3)	1780220	1794110	1612085	1668702	1563287	1617112	1672586	5.675	
(4)	3319320	3383230	3097430	3296254	3109510	3209141	3235814	3.609	
(5)	1363960	1375810	1240770	1287444	1226640	1263144	1292961	4.885	
10 AROCLOR-1268 (1)	729480	711290	615475	642646	618481	588524	650983	8.713	
(2)	4147760	4076870	3704450	4083982	3904123	3708627	3937635	4.988	
(3)	3879660	3835340	3518520	3845300	3753593	3521614	3725671	4.417	
(4)	3293700	3267220	2947545	3243182	3174266	2993644	3153260	4.683	
(5)	10441220	10696290	9594670	10641734	10379413	9611009	10227389	4.870	
M 11 TOTAL PCB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 1 TCMX	71926400	69253600	69552400	69891800	66106520	63416240	68357827	4.476	
$ 12 DCB	72339600	66344600	65454200	61427600	59264780	57453440	63714037	8.555	

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\710091C-1.b\044F4401.D
Report Date: 10-Oct-2007 14:12

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 10-OCT-2007 01:51
Lab File ID: 044F4401.D Init. Cal. Date(s): 14-SEP-2007 10-OCT-2007
Analysis Type: Init. Cal. Times: 15:17 01:35
Lab Sample ID: ICV Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\710091C-1.b\PCB10.m

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
3 AROCLOR-1016 (1)	645798	575877	0.010	10.82706	15.00000	Averaged
(2)	1040548	1011997	0.010	2.74383	15.00000	Averaged
(3)	1915147	1922380	0.010	-0.37770	15.00000	Averaged
(4)	691439	689650	0.010	0.25868	15.00000	Averaged
(5)	766782	751750	0.010	1.96040	15.00000	Averaged
8 AROCLOR-1260 (1)	2917872	2906216	0.010	0.39948	15.00000	Averaged
(2)	5294624	5254358	0.010	0.76051	15.00000	Averaged
(3)	4946867	5342754	0.010	-8.00277	15.00000	Averaged
(4)	6902009	6238265	0.010	9.61668	15.00000	Averaged
(5)	3405831	3320304	0.010	2.51118	15.00000	Averaged

Data File: \\CANSVR11\dd\chem\GCS\a2hp10.i\71023-1.b\002F0201.D
Report Date: 23-Oct-2007 07:47

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 23-OCT-2007 07:36
Lab File ID: 002F0201.D Init. Cal. Date(s): 14-SEP-2007 10-OCT-2007
Analysis Type: wipe Init. Cal. Times: 15:17 01:35
Lab Sample ID: E142 Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\71023-1.b\PCB10.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	68357827	70832840	0.010	-3.62067	15.00000	Averaged
3 AROCLOR-1016 (1)	645798	601944	0.010	6.79066	15.00000	Averaged
(2)	1040548	1015182	0.010	2.43774	15.00000	Averaged
(3)	1915147	1960134	0.010	-2.34904	15.00000	Averaged
(4)	691439	691330	0.010	0.01570	15.00000	Averaged
(5)	766782	765498	0.010	0.16745	15.00000	Averaged
8 AROCLOR-1260 (1)	2917872	2972184	0.010	-1.86134	15.00000	Averaged
(2)	5294624	5446636	0.010	-2.87106	15.00000	Averaged
(3)	4946867	5208410	0.010	-5.28703	15.00000	Averaged
(4)	6902009	7317136	0.010	-6.01458	15.00000	Averaged
(5)	3405831	3588278	0.010	-5.35692	15.00000	Averaged
$ 12 DCB	63714037	66810480	0.010	-4.85991	15.00000	Averaged

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17235

GC Column: RESTEK PEST CLPI ID: 0.53 (mm) Init. Calib. Date(s): 09/14/07 10/10/0

Instrument ID: A2HP10

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.27 S2 : 6.87

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		E142	10/23/07	0736	1.27	6.87
02	SB-382-0102	J86FW1AC	10/23/07	0852	1.27	6.87
03	SB-382-0102	J86FW1AE	10/23/07	0907	1.27	6.87
04	SB-382-0102	J86FW1AF	10/23/07	0923	1.27	6.87
05	SB-382-0203	J86F91AC	10/23/07	0938	1.27	6.87
06	SB-382-0405	J86GA1AC	10/23/07	0953	1.27	6.87
07	SB-382-0708	J86GC1AC	10/23/07	1008	1.27	6.87
08	SB-383-0102	J86GD1AC	10/23/07	1024	1.27	6.85
09	SB-383-0203	J86GE1AC	10/23/07	1039	1.27	6.87
10	SB-383-0405	J86GG1AC	10/23/07	1054	1.27	6.87
11	SB-383-0708	J86GJ1AC	10/23/07	1110	1.27	6.87
12	SB-384-0102	J86GK1AC	10/23/07	1125	1.27	6.87
13	SB-384-0203	J86GM1AC	10/23/07	1140	1.27	6.87
14	J9C2NBLK	J9C2N1AA	10/23/07	1155	1.27	6.87
15		E178	10/23/07	1211	1.27	6.87
16	SB-384-0405	J86GN1AC	10/23/07	1226	1.27	6.87
17	SB-385-0203	J86GT1AC	10/23/07	1312	1.27	6.87
18	SB-385-0405	J86GV1AC	10/23/07	1327	1.27	6.87
19	SB-385-0708	J86GW1AC	10/23/07	1342	1.27	6.87
20	SB-386-0102	J86GX1AC	10/23/07	1358	1.27	6.87
21	SB-386-0203	J86G31AC	10/23/07	1413	1.27	6.87
22	SB-386-0405	J86G41AC	10/23/07	1428	1.27	6.87
23	SB-386-0708	J86G51AC	10/23/07	1443	1.27	6.87
24	J9C2NCHK	J9C2N1AC	10/23/07	1459	1.27	6.87
25		E178	10/23/07	1514	1.27	6.87
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = TCMX (+/- 0.10 MINUTES)
S2 = DCB (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Data File: \\CANSVR11\dd\chem\GCS\a2hp10.i\71023-1.b\020F2001.D
Report Date: 23-Oct-2007 12:34

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 23-OCT-2007 12:11
Lab File ID: 020F2001.D Init. Cal. Date(s): 14-SEP-2007 10-OCT-2007
Analysis Type: wipe Init. Cal. Times: 15:17 01:35
Lab Sample ID: E178 Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\71023-1.b\PCB10.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	68357827	65768440	0.010	3.78799	15.00000	Averaged
3 AROCLOR-1016 (1)	645798	606598	0.010	6.07000	15.00000	Averaged
(2)	1040548	1019962	0.010	1.97836	15.00000	Averaged
(3)	1915147	2011098	0.010	-5.01014	15.00000	Averaged
(4)	691439	712276	0.010	-3.01363	15.00000	Averaged
(5)	766782	790118	0.010	-3.04337	15.00000	Averaged
8 AROCLOR-1260 (1)	2917872	3032672	0.010	-3.93436	15.00000	Averaged
(2)	5294624	5566666	0.010	-5.13807	15.00000	Averaged
(3)	4946867	5314324	0.010	-7.42807	15.00000	Averaged
(4)	6902009	7510682	0.010	-8.81878	15.00000	Averaged
(5)	3405831	3700776	0.010	-8.66002	15.00000	Averaged
$ 12 DCB	63714037	64033920	0.010	-0.50206	15.00000	Averaged

Data File: \\CANSVR11\dd\chem\GCS\a2hp10.i\71023-1.b\032F3201.D
Report Date: 23-Oct-2007 15:58

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 23-OCT-2007 15:14
Lab File ID: 032F3201.D Init. Cal. Date(s): 14-SEP-2007 10-OCT-2007
Analysis Type: wipe Init. Cal. Times: 15:17 01:35
Lab Sample ID: E178 Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\71023-1.b\PCB10.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	68357827	67470320	0.010	1.29832	15.00000	Averaged
3 AROCLOR-1016 (1)	645798	714326	0.010	-10.61138	15.00000	Averaged
(2)	1040548	1115004	0.010	-7.15548	15.00000	Averaged
(3)	1915147	2090746	0.010	-9.16899	15.00000	Averaged
(4)	691439	733102	0.010	-6.02561	15.00000	Averaged
(5)	766782	817608	0.010	-6.62848	15.00000	Averaged
8 AROCLOR-1260 (1)	2917872	3095332	0.010	-6.08182	15.00000	Averaged
(2)	5294624	5695948	0.010	-7.57983	15.00000	Averaged
(3)	4946867	5412466	0.010	-9.41199	15.00000	Averaged
(4)	6902009	7642932	0.010	-10.73489	15.00000	Averaged
(5)	3405831	3775638	0.010	-10.85807	15.00000	Averaged
$ 12 DCB	63714037	64932400	0.010	-1.91224	15.00000	Averaged

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17235

GC Column: RESTEK PEST CLPI ID: 0.53 (mm) Init. Calib. Date(s): 09/14/07 10/10/07

Instrument ID: A2HP10

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 6.87 S2 : 1.27

	TETRA TECH N SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	S2 RT	#
01		E178	10/28/07	0139	6.87		1.27	
02	SB-384-0708	J86GP2AC	10/28/07	0155	6.87		1.27	
03	SB-385-0102	J86GQ2AC	10/28/07	0110	6.87		1.27	
04	J9PMTBLK	J9PMT1AA	10/28/07	0524	6.87		1.27	
05	J9PMTCHK	J9PMT1AC	10/28/07	0539	6.87		1.27	
06		E178	10/28/07	0554	6.87		1.27	
07								
08								
09								
10								
11								
12								
13								
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29								
30								
31								
32								

QC LIMITS

S1 = DCB (+/- 0.10 MINUTES)
S2 = TCMX (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Data File: \\CANSVR11\dd\chem\GCS\a2hp10.i\71027-1.b\020F2001.D
Report Date: 28-Oct-2007 01:53

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 28-OCT-2007 01:39
Lab File ID: 020F2001.D Init. Cal. Date(s): 14-SEP-2007 10-OCT-2007
Analysis Type: wipe Init. Cal. Times: 15:17 01:35
Lab Sample ID: E178 Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\71027-1.b\PCB10.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	68357827	66618720	0.010	2.54412	15.00000	Averaged
3 AROCLOR-1016 (1)	645798	629302	0.010	2.55435	15.00000	Averaged
(2)	1040548	1028466	0.010	1.16110	15.00000	Averaged
(3)	1915147	2014166	0.010	-5.17034	15.00000	Averaged
(4)	691439	706068	0.010	-2.11579	15.00000	Averaged
(5)	766782	786608	0.010	-2.58561	15.00000	Averaged
8 AROCLOR-1260 (1)	2917872	3044554	0.010	-4.34158	15.00000	Averaged
(2)	5294624	5576946	0.010	-5.33223	15.00000	Averaged
(3)	4946867	5275510	0.010	-6.64345	15.00000	Averaged
(4)	6902009	7418848	0.010	-7.48824	15.00000	Averaged
(5)	3405831	3635742	0.010	-6.75053	15.00000	Averaged
$ 12 DCB	63714037	62101840	0.010	2.53036	15.00000	Averaged

Data File: \\CANSVR11\dd\chem\GCS\a2hp10.i\71027-1.b\041F4101.D
Report Date: 28-Oct-2007 07:07

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp10.i Injection Date: 28-OCT-2007 05:54
Lab File ID: 041F4101.D Init. Cal. Date(s): 14-SEP-2007 10-OCT-2007
Analysis Type: wipe Init. Cal. Times: 15:17 01:35
Lab Sample ID: E178 Quant Type: ESTD
Method: \\CANSVR11\dd\chem\GCS\a2hp10.i\71027-1.b\PCB10.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	68357827	65537240	0.010	4.12621	15.00000	Averaged
3 AROCLOR-1016 (1)	645798	657818	0.010	-1.86128	15.00000	Averaged
(2)	1040548	1054978	0.010	-1.38679	15.00000	Averaged
(3)	1915147	1991416	0.010	-3.98244	15.00000	Averaged
(4)	691439	693704	0.010	-0.32764	15.00000	Averaged
(5)	766782	772936	0.010	-0.80257	15.00000	Averaged
8 AROCLOR-1260 (1)	2917872	2974162	0.010	-1.92913	15.00000	Averaged
(2)	5294624	5441200	0.010	-2.76839	15.00000	Averaged
(3)	4946867	5184048	0.010	-4.79456	15.00000	Averaged
(4)	6902009	7273078	0.010	-5.37624	15.00000	Averaged
(5)	3405831	3537734	0.010	-3.87287	15.00000	Averaged
$ 12 DCB	63714037	61384040	0.010	3.65696	15.00000	Averaged

SW846 8082 METHOD BLANK SUMMARY

BLANK WORKORDER NO.: J9C2N1AA

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN

SDG Number:7J17235

Lab File ID: 019F1901.

Lot Number: A7J170235

Matrix: SOLID

Extraction Method: 3550B/3665A

Date Extracted: 10/19/07

Date Analyzed(1): 10/23/07

Date Analyzed(2): N/A

Time Analyzed(1): 11:55

Time Analyzed(2): N/A

Instrument ID(1): P10

Instrument ID(2): N/A

GC Column(1): RTXOPPPEST ID: 032 GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	SB-382-0102	J86FW1AC	10/23/07	N/A
02	SB-382-0102	J86FW1AE S	10/23/07	N/A
03	SB-382-0102	J86FW1AF D	10/23/07	N/A
04	SB-382-0203	J86F91AC	10/23/07	N/A
05	SB-382-0405	J86GA1AC	10/23/07	N/A
06	SB-382-0708	J86GC1AC	10/23/07	N/A
07	SB-383-0102	J86GD1AC	10/23/07	N/A
08	SB-383-0203	J86GE1AC	10/23/07	N/A
09	SB-383-0405	J86GG1AC	10/23/07	N/A
10	SB-383-0708	J86GJ1AC	10/23/07	N/A
11	SB-384-0102	J86GK1AC	10/23/07	N/A
12	SB-384-0203	J86GM1AC	10/23/07	N/A
13	SB-384-0405	J86GN1AC	10/23/07	N/A
14	SB-385-0203	J86GT1AC	10/23/07	N/A
15	SB-385-0405	J86GV1AC	10/23/07	N/A
16	SB-385-0708	J86GW1AC	10/23/07	N/A
17	SB-386-0102	J86GX1AC	10/23/07	N/A
18	SB-386-0203	J86G31AC	10/23/07	N/A
19	SB-386-0405	J86G41AC	10/23/07	N/A
20	SB-386-0708	J86G51AC	10/23/07	N/A
21	CHECK SAMPLE	J9C2N1AC C	10/23/07	N/A

COMMENTS:

SW846 8082 METHOD BLANK SUMMARY

BLANK WORKORDER NO.: J9PMT1AA

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN

SDG Number: 7J17235

Lab File ID: 039F3901.

Lot Number: A7J170235

Matrix: SOLID

Extraction Method: 3550B/3665A

Date Extracted: 10/24/07

Date Analyzed(1): 10/28/07

Date Analyzed(2): N/A

Time Analyzed(1): 05:24

Time Analyzed(2): N/A

Instrument ID(1): P10

Instrument ID(2): N/A

GC Column(1): RTXOPPPEST ID: 032 GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	SB-384-0708	J86GP2AC	10/28/07	N/A
02	SB-385-0102	J86GQ2AC	10/28/07	N/A
03	INTRA-LAB QC	J9EHC1AK	10/28/07	N/A
04	LAB MS/MSD	J9EHC1AL S	10/28/07	N/A
05	LAB MS/MSD	J9EHC1AM D	10/28/07	N/A
06	CHECK SAMPLE	J9PMT1AC C	10/28/07	N/A
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: 7J17235
MB Lot-Sample #: A7J190000-031

Work Order #...: J9C2N1AA
Prep Date.....: 10/19/07
Prep Batch #...: 7292031
Initial Wgt/Vol: 30 g

Matrix.....: SOLID
Final Wgt/Vol..: 10 mL

Analysis Date..: 10/23/07
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 196)
Decachlorobiphenyl	94	(10 - 199)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: 7J17235 **Work Order #...:** J9PMT1AA **Matrix.....:** SOLID
MB Lot-Sample #: A7J240000-357

Prep Date.....: 10/24/07 **Final Wgt/Vol..:** 10 mL
Analysis Date..: 10/28/07 **Prep Batch #...:** 7297357
Dilution Factor: 1 **Initial Wgt/Vol:** 30 g

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(10 - 196)
Decachlorobiphenyl	107	(10 - 199)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\71023-1.b\019F1901.D
Report Date: 24-Oct-2007 12:21

STL North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\71023-1.b\019F1901.D
Lab Smp Id: J9C2N1AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 23-OCT-2007 11:55
Operator : Inst ID: a2hp10.i
Smp Info : J9C2N1AA
Misc Info : ALL.SUB
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\71023-1.b\PCB10.m
Meth Date : 24-Oct-2007 07:59 Quant Type: ESTD
Cal Date : 10-OCT-2007 01:35 Cal File: 043F4301.D
Als bottle: 19 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ALL.SUB
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

				CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)		
RT	EXP RT	DLT RT	RESPONSE			TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.269	1.269	0.000	1220951	0.01786	5.954		
2 AROCLOR-1221					CAS #: 11104-28-2		
Peaks not detected for Quant. or Qual. signal(s).							
3 AROCLOR-1016					CAS #: 12674-11-2		
Peaks not detected for Quant. or Qual. signal(s).							
4 AROCLOR-1232					CAS #: 11141-16-5		
Peaks not detected for Quant. or Qual. signal(s).							

Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\71023-1.b\019F1901.D
Report Date: 24-Oct-2007 12:21

				CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
RT	EXP RT	DLT RT	RESPONSE				

5 AROCLOR-1242 CAS #: 53469-21-9

Peaks not detected for Quant. or Qual. signal(s).

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6 AROCLOR-1248 CAS #: 12672-29-6

Peaks not detected for Quant. or Qual. signal(s).

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7 AROCLOR-1254 CAS #: 11097-69-1

Peaks not detected for Quant. or Qual. signal(s).

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8 AROCLOR-1260 CAS #: 11096-82-5

Peaks not detected for Quant. or Qual. signal(s).

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9 AROCLOR-1262 CAS #: 37324-23-5

Peaks not detected for Quant. or Qual. signal(s).

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10 AROCLOR-1268 CAS #: 11100-14-4

Peaks not detected for Quant. or Qual. signal(s).

M 11 TOTAL PCB CAS #: 1336-36-3

Compound Not Detected

$ 12 DCB CAS #: 2051-24-3

6.867	6.868	-0.001	1204156	0.01890	6.300	

SW846 8082 SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17235

Lot #: A7J170235

Extraction: XXA71QH01

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	SB-382-0102	99	114	00
02	SB-382-0203	98	118	00
03	SB-382-0405	157	181	00
04	SB-382-0708	99	108	00
05	SB-383-0102	79	816*	01
06	SB-383-0203	86	100	00
07	SB-383-0405	82	110	00
08	SB-383-0708	93	112	00
09	SB-384-0102	103	117	00
10	SB-384-0203	84	108	00
11	SB-384-0405	87	97	00
12	SB-384-0708 RE-1	63	81	00
13	SB-385-0102 RE-1	58	60	00
14	SB-385-0203	89	109	00
15	SB-385-0405	90	110	00
16	SB-385-0708	95	112	00
17	SB-386-0102	88	106	00
18	SB-386-0203	163	186	00
19	SB-386-0405	86	119	00
20	SB-386-0708	87	108	00
21	INTRA-LAB QC	78	84	00
22	METHOD BLK. J9C2N1AA	89	94	00
23	METHOD BLK. J9PMT1AA	98	107	00
24	LCS J9C2N1AC	97	120	00
25	LCS J9PMT1AC	99	107	00
26	SB-382-0102 D	97	115	00
27	LAB MS/MSD D	83	88	00

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17235

Lot #: A7J170235

Extraction: XXA71QH01

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	SB-382-0102 S	105	117	00
02	LAB MS/MSD S	63	73	00

SURROGATES		QC LIMITS
SRG01	= Tetrachloro-m-xylene	(10-196)
SRG02	= Decachlorobiphenyl	(10-199)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17235

Lot #: A7J190000 WO #: J9C2N1AC
BATCH: 7292031

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	330	98	34 - 127	
Aroclor 1260	330	370	111	32 - 141	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17235

Lot #: A7J240000 WO #: J9PMT1AC

BATCH: 7297357

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	330	98	34 - 127	
Aroclor 1260	330	330	100	32 - 141	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17235

Matrix Spike ID: SB-382-0102

Lot #: A7J170235 WO #: J86FW1AE
BATCH: 7292031

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
Aroclor 1016	390	ND	390	101	10- 199	
Aroclor 1260	390	ND	430	110	10- 199	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17235

Matrix Spike ID: SB-382-0102

Lot #: A7J170235 WO #: J86FW1AF
BATCH: 7292031

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
Aroclor 1016	390	390	101	0.14	30	10- 199	
Aroclor 1260	390	420	109	0.080	30	10- 199	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17235

Matrix Spike ID: LAB MS/MSD Level: (low/med) LOW

Lot #: A7J190235 WO #: J9EHC1AL
BATCH: 7297357

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
Aroclor 1016	400	ND	260	66	10 - 199	
Aroclor 1260	400	ND	270	67	10 - 199	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17235

Matrix Spike ID: LAB MS/MSD Level: (low/med) LOW

Lot #: A7J190235 WO #: J9EHC1AM
BATCH: 7297357

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
Aroclor 1016	400	330	83	23	30	10- 199	
Aroclor 1260	400	330	82	19	30	10- 199	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: 7J17235 **Work Order #...:** J9C2N1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7J190000-031
Prep Date.....: 10/19/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7292031
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	**98**	**(34 - 127)**	**SW846 8082**
Aroclor 1260	**111**	**(32 - 141)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(10 - 196)
Decachlorobiphenyl	120	(10 - 199)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: 7J17235 **Work Order #...:** J9C2N1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7J190000-031
Prep Date.....: 10/19/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7292031
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aroclor 1016	**330**	**330**	**ug/kg**	**98**	**SW846 8082**
Aroclor 1260	**330**	**370**	**ug/kg**	**111**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(10 - 196)
Decachlorobiphenyl	120	(10 - 199)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: 7J17235 **Work Order #...:** J9PMT1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7J240000-357
Prep Date.....: 10/24/07 **Analysis Date..:** 10/28/07
Prep Batch #...: 7297357
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	**98**	**(34 - 127)**	**SW846 8082**
Aroclor 1260	**100**	**(32 - 141)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	99	(10 - 196)
Decachlorobiphenyl	107	(10 - 199)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: 7J17235 **Work Order #...:** J9PMT1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7J240000-357
Prep Date.....: 10/24/07 **Analysis Date..:** 10/28/07
Prep Batch #...: 7297357
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aroclor 1016	**330**	**330**	**ug/kg**	**98**	**SW846 8082**
Aroclor 1260	**330**	**330**	**ug/kg**	**100**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	99	(10 - 196)
Decachlorobiphenyl	107	(10 - 199)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **M. MARTIN** **DATE:** **JANUARY 4, 2008**

FROM: **PRESTON SMITH** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – BENZO(a)PYRENE AND PCBs**
LOCKHEED MIDDLE RIVER COMPLEX
SAMPLE DELIVERY GROUP (SDG): 7J17248

SAMPLES: 20/Soil/

SB-387-0102	SB-387-0203
SB-387-0405	SB-387-0708
SB-388-0102	SB-388-0203
SB-388-0405	SB-388-0708
SB-389-0102	SB-389-0203
SB-389-0405	SB-389-0708
SB-390-0102	SB-390-0203
SB-390-0405	SB-390-0708
SB-391-0102	SB-391-0203
SB-391-0405	SB-391-0708

Overview

The sample set for SDG 7J17248, Lockheed MRC, consists of twenty (20) soil environmental samples.

All soil samples were analyzed for benzo(a)pyrene and PCBs. The samples were collected by TetraTech NUS on October 15, 2007 and October 16, 2007 and analyzed by Test America Laboratories, Inc. Analyses were conducted using SW-846 Method 8270C and SW-846 Method 8082.

The findings in this report are based upon a general review of all available data including: data completeness, GC/MS tuning, holding times, initial/continuing calibrations, laboratory method/preparation blank results, surrogate spike/internal standard recoveries, laboratory control sample (LCS)/blank spike results, matrix spike/matrix spike duplicate results, analyte quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- None.

Minor Problems

- The positive results less than the CRQL reported for benzo(a)pyrene in samples SB-387-0102, SB-389-0102, SB-389-0405, SB-389-0708, and SB-390-0102 were qualified estimated (J) due to uncertainty near the detection limit.

Notes

The MS/MSD and the check sample recovery were not spiked with the target compound benzo(a)pyrene. Therefore, potential matrix effects could not be evaluated. No validation action was required because the surrogate recoveries were within permissible limits.

Percent recovery for the surrogate spike of decachlorobiphenyl was greater than the upper quality control recovery limit in the PCB MS sample. No action was taken because the other surrogate recovery was within the recovery limits.

Executive Summary

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: The positive results less than the CRQL reported for benzo(a)pyrene were qualified due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (9/94) as modified by Region III.

Tetra Tech NUS
Preston R. Smith
Environmental Scientist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

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

Data Qualifier Key:

J - Positive result is considered estimated, "J", as a result of technical noncompliances.

U - Nondetected result.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-387-0102	nsample	SB-387-0203	nsample	SB-387-0405
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170248001	lab_id	A7J170248002	lab_id	A7J170248003
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.7	Pct_Solids	91.4	Pct_Solids	84.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	12	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-387-0708	nsample	SB-388-0102	nsample	SB-388-0203
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170248004	lab_id	A7J170248005	lab_id	A7J170248006
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	89.0	Pct_Solids	93.6	Pct_Solids	88.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	380		

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-388-0405	nsample	SB-388-0708	nsample	SB-389-0102
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170248007	lab_id	A7J170248008	lab_id	A7J170248009
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	90.8	Pct_Solids	90.3	Pct_Solids	91.2
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	220	J	P

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-389-0203	nsample	SB-389-0405	nsample	SB-389-0708
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170248010	lab_id	A7J170248011	lab_id	A7J170248012
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	85.0	Pct_Solids	87.0	Pct_Solids	86.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	33	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	9.7	J	P

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-390-0102	nsample	SB-390-0203	nsample	SB-390-0405
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170248013	lab_id	A7J170248014	lab_id	A7J170248015
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	87.0	Pct_Solids	78.0	Pct_Solids	83.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	9.9	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.7	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	990		

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-390-0708	nsample	SB-391-0102	nsample	SB-391-0203
samp_date	10/15/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170248016	lab_id	A7J170248017	lab_id	A7J170248018
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	82.0	Pct_Solids	84.0	Pct_Solids	66.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	2	U	

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-391-0405	nsample	SB-391-0708
samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170248019	lab_id	A7J170248020
qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG
Pct_Solids	87.0	Pct_Solids	85.0
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-387-0102	nsample	SB-387-0203	nsample	SB-387-0405
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170248001	lab_id	A7J170248002	lab_id	A7J170248003
qc_type	NM	qc_type	NM	qc_type	NM
Pct_Solids	93.7	Pct_Solids	91.4	Pct_Solids	84.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	35	U	
AROCLOR-1221	UG/KG	35	U	
AROCLOR-1232	UG/KG	35	U	
AROCLOR-1242	UG/KG	35	U	
AROCLOR-1248	UG/KG	35	U	
AROCLOR-1254	UG/KG	35	U	
AROCLOR-1260	UG/KG	35	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	36	U	
AROCLOR-1221	UG/KG	36	U	
AROCLOR-1232	UG/KG	36	U	
AROCLOR-1242	UG/KG	36	U	
AROCLOR-1248	UG/KG	36	U	
AROCLOR-1254	UG/KG	36	U	
AROCLOR-1260	UG/KG	36	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	39	U	
AROCLOR-1221	UG/KG	39	U	
AROCLOR-1232	UG/KG	39	U	
AROCLOR-1242	UG/KG	39	U	
AROCLOR-1248	UG/KG	39	U	
AROCLOR-1254	UG/KG	39	U	
AROCLOR-1260	UG/KG	39	U	

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-387-0708	nsample	SB-388-0102	nsample	SB-388-0203
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170248004	lab_id	A7J170248005	lab_id	A7J170248006
qc_type	NM	qc_type	NM	qc_type	NM
Pct_Solids	89.0	Pct_Solids	93.6	Pct_Solids	88.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	37	U	
AROCLOR-1221	UG/KG	37	U	
AROCLOR-1232	UG/KG	37	U	
AROCLOR-1242	UG/KG	37	U	
AROCLOR-1248	UG/KG	37	U	
AROCLOR-1254	UG/KG	37	U	
AROCLOR-1260	UG/KG	37	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	35	U	
AROCLOR-1221	UG/KG	35	U	
AROCLOR-1232	UG/KG	35	U	
AROCLOR-1242	UG/KG	35	U	
AROCLOR-1248	UG/KG	35	U	
AROCLOR-1254	UG/KG	35	U	
AROCLOR-1260	UG/KG	35	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	38	U	
AROCLOR-1221	UG/KG	38	U	
AROCLOR-1232	UG/KG	38	U	
AROCLOR-1242	UG/KG	38	U	
AROCLOR-1248	UG/KG	38	U	
AROCLOR-1254	UG/KG	38	U	
AROCLOR-1260	UG/KG	38	U	

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-388-0405	nsample	SB-388-0708	nsample	SB-389-0102
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170248007	lab_id	A7J170248008	lab_id	A7J170248009
qc_type	NM	qc_type	NM	qc_type	NM
Pct_Solids	90.8	Pct_Solids	90.3	Pct_Solids	91.2
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	36	U	
AROCLOR-1221	UG/KG	36	U	
AROCLOR-1232	UG/KG	36	U	
AROCLOR-1242	UG/KG	36	U	
AROCLOR-1248	UG/KG	36	U	
AROCLOR-1254	UG/KG	36	U	
AROCLOR-1260	UG/KG	36	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	37	U	
AROCLOR-1221	UG/KG	37	U	
AROCLOR-1232	UG/KG	37	U	
AROCLOR-1242	UG/KG	37	U	
AROCLOR-1248	UG/KG	37	U	
AROCLOR-1254	UG/KG	37	U	
AROCLOR-1260	UG/KG	37	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	36	U	
AROCLOR-1221	UG/KG	36	U	
AROCLOR-1232	UG/KG	36	U	
AROCLOR-1242	UG/KG	36	U	
AROCLOR-1248	UG/KG	36	U	
AROCLOR-1254	UG/KG	36	U	
AROCLOR-1260	UG/KG	36	U	

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-389-0203	nsample	SB-389-0405	nsample	SB-389-0708
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170248010	lab_id	A7J170248011	lab_id	A7J170248012
qc_type	NM	qc_type	NM	qc_type	NM
Pct_Solids	85.0	Pct_Solids	87.0	Pct_Solids	86.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	39	U	
AROCLOR-1221	UG/KG	39	U	
AROCLOR-1232	UG/KG	39	U	
AROCLOR-1242	UG/KG	39	U	
AROCLOR-1248	UG/KG	39	U	
AROCLOR-1254	UG/KG	39	U	
AROCLOR-1260	UG/KG	39	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	38	U	
AROCLOR-1221	UG/KG	38	U	
AROCLOR-1232	UG/KG	38	U	
AROCLOR-1242	UG/KG	38	U	
AROCLOR-1248	UG/KG	38	U	
AROCLOR-1254	UG/KG	38	U	
AROCLOR-1260	UG/KG	38	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	38	U	
AROCLOR-1221	UG/KG	38	U	
AROCLOR-1232	UG/KG	38	U	
AROCLOR-1242	UG/KG	38	U	
AROCLOR-1248	UG/KG	38	U	
AROCLOR-1254	UG/KG	38	U	
AROCLOR-1260	UG/KG	38	U	

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-390-0102	nsample	SB-390-0203	nsample	SB-390-0405
samp_date	10/15/2007	samp_date	10/15/2007	samp_date	10/15/2007
lab_id	A7J170248013	lab_id	A7J170248014	lab_id	A7J170248015
qc_type	NM	qc_type	NM	qc_type	NM
Pct_Solids	87.0	Pct_Solids	78.0	Pct_Solids	83.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	38	U	
AROCLOR-1221	UG/KG	38	U	
AROCLOR-1232	UG/KG	38	U	
AROCLOR-1242	UG/KG	38	U	
AROCLOR-1248	UG/KG	38	U	
AROCLOR-1254	UG/KG	38	U	
AROCLOR-1260	UG/KG	38	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	42	U	
AROCLOR-1221	UG/KG	42	U	
AROCLOR-1232	UG/KG	42	U	
AROCLOR-1242	UG/KG	42	U	
AROCLOR-1248	UG/KG	42	U	
AROCLOR-1254	UG/KG	42	U	
AROCLOR-1260	UG/KG	42	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	40	U	
AROCLOR-1221	UG/KG	40	U	
AROCLOR-1232	UG/KG	40	U	
AROCLOR-1242	UG/KG	40	U	
AROCLOR-1248	UG/KG	40	U	
AROCLOR-1254	UG/KG	40	U	
AROCLOR-1260	UG/KG	40	U	

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-390-0708	nsample	SB-391-0102	nsample	SB-391-0203
samp_date	10/15/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170248016	lab_id	A7J170248017	lab_id	A7J170248018
qc_type	NM	qc_type	NM	qc_type	NM
Pct_Solids	82.0	Pct_Solids	84.0	Pct_Solids	66.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	40	U	
AROCLOR-1221	UG/KG	40	U	
AROCLOR-1232	UG/KG	40	U	
AROCLOR-1242	UG/KG	40	U	
AROCLOR-1248	UG/KG	40	U	
AROCLOR-1254	UG/KG	40	U	
AROCLOR-1260	UG/KG	40	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	39	U	
AROCLOR-1221	UG/KG	39	U	
AROCLOR-1232	UG/KG	39	U	
AROCLOR-1242	UG/KG	39	U	
AROCLOR-1248	UG/KG	39	U	
AROCLOR-1254	UG/KG	39	U	
AROCLOR-1260	UG/KG	39	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	50	U	
AROCLOR-1221	UG/KG	50	U	
AROCLOR-1232	UG/KG	50	U	
AROCLOR-1242	UG/KG	50	U	
AROCLOR-1248	UG/KG	50	U	
AROCLOR-1254	UG/KG	50	U	
AROCLOR-1260	UG/KG	50	U	

PROJ_NO: 00885

SDG: 7J17248 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-391-0405	nsample	SB-391-0708
samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170248019	lab_id	A7J170248020
qc_type	NM	qc_type	NM
Pct_Solids	87.0	Pct_Solids	85.0
DUP_OF:		DUP_OF:	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	38	U	
AROCLOR-1221	UG/KG	38	U	
AROCLOR-1232	UG/KG	38	U	
AROCLOR-1242	UG/KG	38	U	
AROCLOR-1248	UG/KG	38	U	
AROCLOR-1254	UG/KG	38	U	
AROCLOR-1260	UG/KG	38	U	

Parameter	units	Result	Val Qual	Qual Code
AROCLOR-1016	UG/KG	39	U	
AROCLOR-1221	UG/KG	39	U	
AROCLOR-1232	UG/KG	39	U	
AROCLOR-1242	UG/KG	39	U	
AROCLOR-1248	UG/KG	39	U	
AROCLOR-1254	UG/KG	39	U	
AROCLOR-1260	UG/KG	39	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Tetra Tech NUS, Inc

Client Sample ID: SB-387-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-001 **Work Order #...:** J86J41AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:00 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 6.3 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**12 J**	**350**	**ug/kg**	**1.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	75	(24 - 112)
2-Fluorobiphenyl	78	(34 - 110)
Terphenyl-d14	91	(41 - 119)
Phenol-d5	86	(28 - 110)
2-Fluorophenol	81	(26 - 110)
2,4,6-Tribromophenol	55	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-387-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-002 **Work Order #...:** J86J91AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:03 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 8.6 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	360	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	69	(24 - 112)
2-Fluorobiphenyl	68	(34 - 110)
Terphenyl-d14	84	(41 - 119)
Phenol-d5	70	(28 - 110)
2-Fluorophenol	67	(26 - 110)
2,4,6-Tribromophenol	49	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-387-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-003 **Work Order #...:** J86KC1AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:07 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 16 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(24 - 112)
2-Fluorobiphenyl	67	(34 - 110)
Terphenyl-d14	86	(41 - 119)
Phenol-d5	68	(28 - 110)
2-Fluorophenol	68	(26 - 110)
2,4,6-Tribromophenol	59	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-387-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-004 **Work Order #...:** J86KJ1AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:10 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 11 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(24 - 112)
2-Fluorobiphenyl	61	(34 - 110)
Terphenyl-d14	85	(41 - 119)
Phenol-d5	64	(28 - 110)
2-Fluorophenol	57	(26 - 110)
2,4,6-Tribromophenol	57	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-388-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-005 **Work Order #...:** J86KK1AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:15 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 6.4 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**380**	**350**	**ug/kg**	**1.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	71	(24 - 112)
2-Fluorobiphenyl	75	(34 - 110)
Terphenyl-d14	83	(41 - 119)
Phenol-d5	79	(28 - 110)
2-Fluorophenol	77	(26 - 110)
2,4,6-Tribromophenol	80	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-388-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-006 **Work Order #...:** J86KL1AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:17 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 12 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	65	(24 - 112)
2-Fluorobiphenyl	69	(34 - 110)
Terphenyl-d14	87	(41 - 119)
Phenol-d5	70	(28 - 110)
2-Fluorophenol	71	(26 - 110)
2,4,6-Tribromophenol	73	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-388-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-007 **Work Order #...:** J86KM1AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:20 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 9.2 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	360	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	59	(24 - 112)
2-Fluorobiphenyl	61	(34 - 110)
Terphenyl-d14	86	(41 - 119)
Phenol-d5	62	(28 - 110)
2-Fluorophenol	58	(26 - 110)
2,4,6-Tribromophenol	47	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-388-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-008 **Work Order #...:** J86KN1AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:22 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 9.7 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	67	(24 - 112)
2-Fluorobiphenyl	72	(34 - 110)
Terphenyl-d14	89	(41 - 119)
Phenol-d5	72	(28 - 110)
2-Fluorophenol	70	(26 - 110)
2,4,6-Tribromophenol	45	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-389-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-009 **Work Order #...:** J86KP1AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:33 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 8.8 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**220 J**	**360**	**ug/kg**	**1.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	63	(24 - 112)
2-Fluorobiphenyl	67	(34 - 110)
Terphenyl-d14	83	(41 - 119)
Phenol-d5	66	(28 - 110)
2-Fluorophenol	66	(26 - 110)
2,4,6-Tribromophenol	39	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-389-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-010 **Work Order #...:** J86KR1AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:36 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 15 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(24 - 112)
2-Fluorobiphenyl	63	(34 - 110)
Terphenyl-d14	88	(41 - 119)
Phenol-d5	67	(28 - 110)
2-Fluorophenol	67	(26 - 110)
2,4,6-Tribromophenol	54	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-389-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-011 **Work Order #...:** J86KT1AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:39 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**33 J**	**380**	**ug/kg**	**1.5**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(24 - 112)
2-Fluorobiphenyl	59	(34 - 110)
Terphenyl-d14	87	(41 - 119)
Phenol-d5	60	(28 - 110)
2-Fluorophenol	62	(26 - 110)
2,4,6-Tribromophenol	56	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-389-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-012 **Work Order #...:** J86KV1AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:41 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 14 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**9.7 J**	**380**	**ug/kg**	**1.5**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(24 - 112)
2-Fluorobiphenyl	61	(34 - 110)
Terphenyl-d14	88	(41 - 119)
Phenol-d5	65	(28 - 110)
2-Fluorophenol	65	(26 - 110)
2,4,6-Tribromophenol	38	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-390-0102

GC/MS Semivolatiles

Lot-Sample #...:	A7J170248-013	**Work Order #...:**	J86KX1AD	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:45	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295068				
Dilution Factor:	1				
% Moisture.....:	13	**Method.....:**	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**9.9 J**	**380**	**ug/kg**	**1.5**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(24 - 112)
2-Fluorobiphenyl	70	(34 - 110)
Terphenyl-d14	85	(41 - 119)
Phenol-d5	66	(28 - 110)
2-Fluorophenol	65	(26 - 110)
2,4,6-Tribromophenol	40	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-390-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-014 **Work Order #...:** J86K01AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:47 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 22 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	420	ug/kg	1.7

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(24 - 112)
2-Fluorobiphenyl	66	(34 - 110)
Terphenyl-d14	91	(41 - 119)
Phenol-d5	66	(28 - 110)
2-Fluorophenol	67	(26 - 110)
2,4,6-Tribromophenol	57	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-390-0405

GC/MS Semivolatiles

Lot-Sample #...:	A7J170248-015	**Work Order #...:**	J86K11AD	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:51	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295068				
Dilution Factor:	1				
% Moisture.....:	17	**Method.....:**	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**990**	**400**	**ug/kg**	**1.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(24 - 112)
2-Fluorobiphenyl	66	(34 - 110)
Terphenyl-d14	79	(41 - 119)
Phenol-d5	63	(28 - 110)
2-Fluorophenol	63	(26 - 110)
2,4,6-Tribromophenol	40	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-390-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-016 **Work Order #...:** J86K41AD **Matrix.....:** SOLID
Date Sampled...: 10/15/07 16:53 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 18 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	400	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	60	(24 - 112)
2-Fluorobiphenyl	60	(34 - 110)
Terphenyl-d14	88	(41 - 119)
Phenol-d5	66	(28 - 110)
2-Fluorophenol	64	(26 - 110)
2,4,6-Tribromophenol	57	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-391-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-017 **Work Order #...:** J86K61AD **Matrix.....:** SOLID
Date Sampled...: 10/16/07 08:45 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 16 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(24 - 112)
2-Fluorobiphenyl	69	(34 - 110)
Terphenyl-d14	89	(41 - 119)
Phenol-d5	66	(28 - 110)
2-Fluorophenol	67	(26 - 110)
2,4,6-Tribromophenol	50	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-391-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-018 **Work Order #...:** J86LC1AD **Matrix.....:** SOLID
Date Sampled...: 10/16/07 08:47 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 34 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	500	ug/kg	2.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	57	(24 - 112)
2-Fluorobiphenyl	59	(34 - 110)
Terphenyl-d14	85	(41 - 119)
Phenol-d5	60	(28 - 110)
2-Fluorophenol	58	(26 - 110)
2,4,6-Tribromophenol	39	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-391-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-019 **Work Order #...:** J86LD1AD **Matrix.....:** SOLID
Date Sampled...: 10/16/07 08:50 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(24 - 112)
2-Fluorobiphenyl	65	(34 - 110)
Terphenyl-d14	84	(41 - 119)
Phenol-d5	64	(28 - 110)
2-Fluorophenol	62	(26 - 110)
2,4,6-Tribromophenol	33	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-391-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170248-020 **Work Order #...:** J86LE1AD **Matrix.....:** SOLID
Date Sampled...: 10/16/07 08:52 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295068
Dilution Factor: 1
% Moisture.....: 15 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	62	(24 - 112)
2-Fluorobiphenyl	66	(34 - 110)
Terphenyl-d14	85	(41 - 119)
Phenol-d5	60	(28 - 110)
2-Fluorophenol	61	(26 - 110)
2,4,6-Tribromophenol	35	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-387-0102

GC Semivolatiles

Lot-Sample #...: A7J170248-001	**Work Order #...:** J86J41AC	**Matrix.....:** SOLID	
Date Sampled...: 10/15/07 16:00	**Date Received..:** 10/17/07		
Prep Date.....: 10/19/07	**Analysis Date..:** 10/24/07		
Prep Batch #...: 7292024			
Dilution Factor: 1	**Initial Wgt/Vol:** 30.01 g	**Final Wgt/Vol..:** 10 mL	
% Moisture.....: 6.3	**Method.....:** SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	117	(10 - 196)
Decachlorobiphenyl	144	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-387-0203

GC Semivolatiles

Lot-Sample #...:	A7J170248-002	**Work Order #...:**	J86J91AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:03	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.12 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	8.6	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	107	(10 - 196)
Decachlorobiphenyl	119	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-387-0405

GC Semivolatiles

Lot-Sample #...:	A7J170248-003	**Work Order #...:**	J86KC1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:07	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.13 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	16	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(10 - 196)
Decachlorobiphenyl	115	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-387-0708

GC Semivolatiles

Lot-Sample #...:	A7J170248-004	**Work Order #...:**	J86KJ1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:10	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	95	(10 - 196)
Decachlorobiphenyl	121	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-388-0102

GC Semivolatiles

Lot-Sample #...:	A7J170248-005	**Work Order #...:**	J86KK1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:15	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.02 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	6.4	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	91	(10 - 196)
Decachlorobiphenyl	108	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-388-0203

GC Semivolatiles

Lot-Sample #...:	A7J170248-006	**Work Order #...:**	J86KL1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:17	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(10 - 196)
Decachlorobiphenyl	118	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-388-0405

GC Semivolatiles

Lot-Sample #...:	A7J170248-007	**Work Order #...:**	J86KM1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:20	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.2	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	113	(10 - 196)
Decachlorobiphenyl	116	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-388-0708

GC Semivolatiles

Lot-Sample #...:	A7J170248-008	**Work Order #...:**	J86KN1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:22	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.7	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(10 - 196)
Decachlorobiphenyl	113	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-389-0102

GC Semivolatiles

Lot-Sample #...:	A7J170248-009	**Work Order #...:**	J86KP1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:33	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.05 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	8.8	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	115	(10 - 196)
Decachlorobiphenyl	118	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-389-0203

GC Semivolatiles

Lot-Sample #...:	A7J170248-010	**Work Order #...:**	J86KR1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:36	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	15	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(10 - 196)
Decachlorobiphenyl	118	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-389-0405

GC Semivolatiles

Lot-Sample #...:	A7J170248-011	**Work Order #...:**	J86KT1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:39	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.04 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	108	(10 - 196)
Decachlorobiphenyl	120	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-389-0708

GC Semivolatiles

Lot-Sample #...:	A7J170248-012	**Work Order #...:**	J86KV1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:41	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.17 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	14	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	92	(10 - 196)
Decachlorobiphenyl	118	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-390-0102

GC Semivolatiles

Lot-Sample #...:	A7J170248-013	**Work Order #...:**	J86KX1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:45	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.05 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	102	(10 - 196)
Decachlorobiphenyl	114	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-390-0203

GC Semivolatiles

Lot-Sample #...:	A7J170248-014	**Work Order #...:**	J86K01AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:47	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	22	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	42	ug/kg
Aroclor 1221	ND	42	ug/kg
Aroclor 1232	ND	42	ug/kg
Aroclor 1242	ND	42	ug/kg
Aroclor 1248	ND	42	ug/kg
Aroclor 1254	ND	42	ug/kg
Aroclor 1260	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90	(10 - 196)
Decachlorobiphenyl	121	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-390-0405

GC Semivolatiles

Lot-Sample #...:	A7J170248-015	**Work Order #...:**	J86K11AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:51	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.19 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	17	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(10 - 196)
Decachlorobiphenyl	106	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-390-0708

GC Semivolatiles

Lot-Sample #...:	A7J170248-016	**Work Order #...:**	J86K41AC	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:53	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	18	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(10 - 196)
Decachlorobiphenyl	112	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-391-0102

GC Semivolatiles

Lot-Sample #...:	A7J170248-017	**Work Order #...:**	J86K61AC	**Matrix.....:**	SOLID
Date Sampled...:	10/16/07 08:45	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	16	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	87	(10 - 196)
Decachlorobiphenyl	107	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-391-0203

GC Semivolatiles

Lot-Sample #...:	A7J170248-018	**Work Order #...:**	J86LC1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/16/07 08:47	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	34	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	50	ug/kg
Aroclor 1221	ND	50	ug/kg
Aroclor 1232	ND	50	ug/kg
Aroclor 1242	ND	50	ug/kg
Aroclor 1248	ND	50	ug/kg
Aroclor 1254	ND	50	ug/kg
Aroclor 1260	ND	50	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	103	(10 - 196)
Decachlorobiphenyl	129	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-391-0405

GC Semivolatiles

Lot-Sample #...:	A7J170248-019	**Work Order #...:**	J86LD1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/16/07 08:50	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(10 - 196)
Decachlorobiphenyl	120	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-391-0708

GC Semivolatiles

Lot-Sample #...:	A7J170248-020	**Work Order #...:**	J86LE1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/16/07 08:52	**Date Received..:**	10/17/07		
Prep Date.....:	10/19/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7292024				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.2 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	15	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	75	(10 - 196)
Decachlorobiphenyl	109	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

APPENDIX C

SUPPORT DOCUMENTATION

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. 112IC00885

LMC MR
SDG #: 7J17248

Michael Martin

Tetra Tech NUS Inc
20251 Century Blvd
Suite 200
Germantown, MD 20874

TESTAMERICA LABORATORIES, INC.

Patrick J. O'Meara
Project Manager

November 7, 2007

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CASE NARRATIVE

7J17248

The following report contains the analytical results for twenty solid samples submitted to TestAmerica North Canton by Tetra Tech NUS Inc. from the LMC MR Site, project number 112IC00885. The samples were received October 17, 2007, according to documented sample acceptance procedures.

This SDG consists of (1) laboratory ID's: A7J170248.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to John Poremba and Michael Martin on October 30, 2007. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Patrick J. O'Meara, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 3.6, 3.8, and 4.9°C.

GC/MS SEMIVOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

POLYCHLORINATED BIPHENYLS-8082

For sample(s) SB-387-0102 (MS/MSD), the recovery for one surrogate compound is outside acceptance criteria. Since the method criterion is that one of two surrogate compounds must meet acceptance criteria, no corrective action was required.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton (formerly STL North Canton) conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton (formerly STL North Canton) requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

ANALYTICAL METHODS SUMMARY

7J17248

PARAMETER	ANALYTICAL METHOD
PCBs by SW-846 8082	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Total Residue as Percent Solids	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

7J17248 : A7J170248

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
J86J4	001	SB-387-0102	10/15/07	16:00
J86J9	002	SB-387-0203	10/15/07	16:03
J86KC	003	SB-387-0405	10/15/07	16:07
J86KJ	004	SB-387-0708	10/15/07	16:10
J86KK	005	SB-388-0102	10/15/07	16:15
J86KL	006	SB-388-0203	10/15/07	16:17
J86KM	007	SB-388-0405	10/15/07	16:20
J86KN	008	SB-388-0708	10/15/07	16:22
J86KP	009	SB-389-0102	10/15/07	16:33
J86KR	010	SB-389-0203	10/15/07	16:36
J86KT	011	SB-389-0405	10/15/07	16:39
J86KV	012	SB-389-0708	10/15/07	16:41
J86KX	013	SB-390-0102	10/15/07	16:45
J86K0	014	SB-390-0203	10/15/07	16:47
J86K1	015	SB-390-0405	10/15/07	16:51
J86K4	016	SB-390-0708	10/15/07	16:53
J86K6	017	SB-391-0102	10/16/07	08:45
J86LC	018	SB-391-0203	10/16/07	08:47
J86LD	019	SB-391-0405	10/16/07	08:50
J86LE	020	SB-391-0708	10/16/07	08:52

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: Tetra Tech	Project Manager: Mike Morkin	Date: 10/16/07	Chain of Custody Number: 322973
Address: 20251 Century Blvd #200	Telephone Number (Area Code)/Fax Number: 301-528-3022	Lab Number:	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Shawn Hadley	Lab Contact: Ken Ives	
Project Name and Location (State): LMC MR	Carrier/Waybill Number: N/A		
Contract/Purchase Order/Quote No.: 112IC00885			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: 8270	8082 PCB	Special Instructions/ Conditions of Receipt
SB-385-0102	10/15	1525				X	2						X	X	14 *benzo(a)pyrene
0203		1528													
0405		1532													
0708		1535													
386-0102		1545													
0203		1548													
0405		1550													
0708		1555													
387-0102		1600													
0203		1603													
0405		1607													
SB-387-0708	10/15	1610				X	2						X	X	*benzo(a)pyrene

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STND

QC Requirements (Specify):

1. Relinquished By	Date: 10/16/07	Time: 1420	1. Received By	Date: 10-16-07	Time: 1430
2. Relinquished By	Date:	Time:	2. Received By	Date: 10-17-07	Time: 0940
3. Relinquished By	Date:	Time:	3. Received By	Date:	Time:

Comments:

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

16

STL-4124 (0901)

Client: Tetra Tech	Project Manager: Mike Martin	Date: 10/16/07	Chain of Custody Number: 322974
Address: 20251 Century Blvd #200	Telephone Number (Area Code)/Fax Number: 301-528-3022	Lab Number:	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Shawn Hadley	Lab Contact: Ken Ives	
Project Name and Location (State): LMC MR	Carrier/Waybill Number: NA		
Contract/Purchase Order/Quote No.: 112IC00885			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis (Attach list if more space is needed): 8270 *	PCB 8082	Special Instructions/ Conditions of Receipt
SB-388-0102	10/15	1615				X	2						X	X	LL * Benzo(a) pyrene
0203		1617													
0405		1620													
0708		1622													
389-0102		1633													
0203		1636													
0405		1639													
0708		1641													
390-0102		1645													
0203		1647													
0405		1651													
SB-390-0708	10/15	1653				X	2						X	X	LL * Benzo(a) pyrene

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STND

QC Requirements (Specify)

1. Relinquished By	Date: 10/16/07	Time: 1420	1. Received By	Date: 10-16-07	Time: 1430
2. Relinquished By	Date:	Time:	2. Received By	Date: 10-17-07	Time: 0940
3. Relinquished By	Date:	Time:	3. Received By	Date:	Time:

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

17

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
TetraTech	Mike Martin	10/16/07	322967
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
20251 Century Blvd #200	301-528-3022		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Germantown / MD / 20874	Shawn Hadley	Ken Ives	
Project Name and Location (State)	**Carrier/Waybill Number**		
LMC MA	N/A		
Contract/Purchase Order/Quote No.			
112IC00985			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	ZnAc/NaOH	Analysis: 8270 *	Analysis: PCB 8082	Special Instructions/ Conditions of Receipt
SB-391-0102	10/16	0845				X	2						X	X	*benzo(a)pyrene
-0203		0847													
-0405		0850													
391-0708		0852													
392-0102		0855													
0203		0857													
0405		0859													
392 0708		0901													
393-0102		0924													
0203		0926													
0405		0928													
SB-393-0708	10/16	0930				X	2						X	X	*benzo(g) pyrene

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STND

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1.		10/16/07	1420		10-16-07	1430
2.					10-17-07	0940
3.						

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

SW846 8270C SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17248

Lot #: A7J170248

Extraction: XXA13QL01

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	SRG05	SRG06	TOT OUT
01	SB-387-0102	75	78	91	86	81	55	00
02	SB-387-0203	69	68	84	70	67	49	00
03	SB-387-0405	64	67	86	68	68	59	00
04	SB-387-0708	56	61	85	64	57	57	00
05	SB-388-0102	71	75	83	79	77	80	00
06	SB-388-0203	65	69	87	70	71	73	00
07	SB-388-0405	59	61	86	62	58	47	00
08	SB-388-0708	67	72	89	72	70	45	00
09	SB-389-0102	63	67	83	66	66	39	00
10	SB-389-0203	61	63	88	67	67	54	00
11	SB-389-0405	56	59	87	60	62	56	00
12	SB-389-0708	61	61	88	65	65	38	00
13	SB-390-0102	64	70	85	66	65	40	00
14	SB-390-0203	64	66	91	66	67	57	00
15	SB-390-0405	61	66	79	63	63	40	00
16	SB-390-0708	60	60	88	66	64	57	00
17	SB-391-0102	64	69	89	66	67	50	00
18	SB-391-0203	57	59	85	60	58	39	00
19	SB-391-0405	61	65	84	64	62	33	00
20	SB-391-0708	62	66	85	60	61	35	00
21	METHOD BLK. J9JEW1AA	68	70	85	67	68	37	00
22	LCS J9JEW1AC	72	74	84	74	73	64	00
23	SB-387-0102 D	58	66	80	69	63	73	00
24	SB-387-0102 S	67	72	84	73	67	76	00

SURROGATES		QC LIMITS
SRG01	= Nitrobenzene-d5	(24-112)
SRG02	= 2-Fluorobiphenyl	(34-110)
SRG03	= Terphenyl-d14	(41-119)
SRG04	= Phenol-d5	(28-110)
SRG05	= 2-Fluorophenol	(26-110)
SRG06	= 2,4,6-Tribromophenol	(10-118)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8270C CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17248

Lot #: A7J220000 WO #: J9JEW1AC

BATCH: 7295068

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
1,2,4-Trichlorobenzene	670	480	73	43 - 110	
Acenaphthene	670	500	75	46 - 110	
2,4-Dinitrotoluene	670	550	82	55 - 116	
Pyrene	670	530	80	58 - 113	
N-Nitrosodi-n-propylamine	670	520	77	40 - 114	
1,4-Dichlorobenzene	670	440	67	38 - 110	
Pentachlorophenol	670	190	29	10 - 110	
Phenol	670	480	72	39 - 110	
2-Chlorophenol	670	470	71	39 - 110	
4-Chloro-3-methylphenol	670	500	74	42 - 110	
4-Nitrophenol	670	330	49	24 - 117	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17248

Matrix Spike ID: SB-387-0102 Level: (low/med) LOW

Lot #: A7J170248 WO #: J86J41AG
BATCH: 7295068

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
1,2,4-Trichlorobenzene	710	ND	490	69	33 - 110	
Acenaphthene	710	ND	510	73	10 - 200	
2,4-Dinitrotoluene	710	ND	600	85	42 - 118	
Pyrene	710	22	630	86	10 - 200	
N-Nitrosodi-n-propylamine	710	ND	520	74	30 - 121	
1,4-Dichlorobenzene	710	ND	430	61	26 - 110	
Pentachlorophenol	710	ND	380	54	10 - 182	
Phenol	710	ND	500	70	10 - 144	
2-Chlorophenol	710	ND	490	70	32 - 110	
4-Chloro-3-methylphenol	710	ND	550	78	32 - 117	
4-Nitrophenol	710	ND	510	72	10 - 125	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17248

Matrix Spike ID: SB-387-0102 Level: (low/med) LOW

Lot #: A7J170248 WO #: J86J41AH
BATCH: 7295068

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD		QC LIMITS RPD	QC LIMITS REC	QUAL
1,2,4-Trichlorobenzene	710	420	59	15		30	33 - 110	
Acenaphthene	710	490	68	5.9		30	10 - 200	
2,4-Dinitrotoluene	710	560	80	6.0		30	42 - 118	
Pyrene	710	530	72	17		30	10 - 200	
N-Nitrosodi-n-propylamine	710	480	67	9.0		30	30 - 121	
1,4-Dichlorobenzene	710	380	54	11		30	26 - 110	
Pentachlorophenol	710	350	50	7.0		30	10 - 182	
Phenol	710	490	69	2.2		30	10 - 144	
2-Chlorophenol	710	470	66	5.5		30	32 - 110	
4-Chloro-3-methylphenol	710	530	74	5.3		30	32 - 117	
4-Nitrophenol	710	480	68	5.2		30	10 - 125	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17248

Lab File ID: 8DF1024 DFTPP Injection Date: 10/24/07

Instrument ID: A4HP8 DFTPP Injection Time: 1405

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	✓43.3
68	Less than 2.0% of mass 69	✓ 0.2 (0.4)1
69	Mass 69 relative abundance	✓53.0
70	Less than 2.0% of mass 69	✓ 0.3 (0.5)1
127	40.0 - 60.0% of mass 198	✓51.9
197	Less than 1.0% of mass 198	✓ 0.0
198	Base Peak, 100% relative abundance	✓100.0
199	5.0 - 9.0% of mass 198	✓ 6.5
275	10.0 - 30.0% of mass 198	✓26.5
365	Greater than 1.0% of mass 198	✓ 3.3
441	Present, but less than mass 443	✓ 8.3
442	Greater than 40.0% of mass 198	✓52.9
443	17.0 - 23.0% of mass 442	✓ 9.8 (18.6)2

1-Value is % of mass 69 2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD005	L5	8SMM1024	10/24/07	1522
02	SSTD004	L4	8SM1024	10/24/07	1541
03	SSTD003	L3	8SML1024	10/24/07	1600
04	SSTD002	L2	8SL1024	10/24/07	1619
05	SSTD001	L1	8SLL1024	10/24/07	1638
06	SSTD009	L9	8HHH1024	10/24/07	1656
07	SSTD008	L8	8SHH1024	10/24/07	1715
08	SSTD007	L7	8SH1024	10/24/07	1734
09	SSTD006	L6	8SMH1024	10/24/07	1753
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 24-OCT-2007 15:22
End Cal Date : 24-OCT-2007 17:53
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp8.i\71024a.b\8270P.m
Last Edit : 24-Oct-2007 17:15 gruberj
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
144 Hexachlorophene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
145 Hexachlorophene product	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
146 Benzo(a)pyrene	1.16862	0.94500	0.99660	1.06264	1.04702	1.14009			
	1.17535	1.24000	1.40500				1.13115	12.298	
148 3-Methylcholanthrene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
149 Indeno(1,2,3-cd)pyrene	1.15525	1.02036	1.08130	1.16366	1.14381	1.23994			
	1.26288	1.32864	1.47228				1.20757	11.285	
150 Dibenz(a,h)anthracene	0.98770	0.87713	0.89316	0.96975	0.95807	1.05400			
	1.09661	1.15927	1.28968				1.03171	12.905	
151 Benzo(g,h,i)perylene	1.12101	0.90918	0.87601	0.98078	0.94801	1.00857			
	1.02246	1.07093	1.17786				1.01275	9.694	
232 Bis(2-hydroxyphenyl)methane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
233 Bis(4-hydroxyphenyl)methane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
234 4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
235 2,3-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17248

Lab File ID: 8DF1024A DFTPP Injection Date: 10/24/07

Instrument ID: A4HP8 DFTPP Injection Time: 1831

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	✓41.2
68	Less than 2.0% of mass 69	✓0.0 (0.0)1
69	Mass 69 relative abundance	✓49.2
70	Less than 2.0% of mass 69	✓0.2 (0.5)1
127	40.0 - 60.0% of mass 198	✓50.0
197	Less than 1.0% of mass 198	✓0.0
198	Base Peak, 100% relative abundance	✓100.0
199	5.0 - 9.0% of mass 198	✓ 6.6
275	10.0 - 30.0% of mass 198	✓25.6
365	Greater than 1.0% of mass 198	✓ 3.4
441	Present, but less than mass 443	✓ 8.3
442	Greater than 40.0% of mass 198	✓52.6
443	17.0 - 23.0% of mass 442	✓10.1 (19.1)2

1-Value is % of mass 69 2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SB-389-0203	J86KR1AD	J86KR1AD	10/24/07	0000
02	SSTD006	L6	8SMH024A	10/24/07	1850
03	J9JEWBLK	J9JEW1AA	J9JEW1AA	10/24/07	1948
04	J9JEWCHK	J9JEW1AC	J9JEW1AC	10/24/07	2008
05	SB-387-0102	J86J41AD	J86J41AD	10/24/07	2027
06	SB-387-0102	J86J41AG	J86J41AG	10/24/07	2046
07	SB-387-0102	J86J41AH	J86J41AH	10/24/07	2106
08	SB-387-0203	J86J91AD	J86J91AD	10/24/07	2125
09	SB-387-0405	J86KC1AD	J86KC1AD	10/24/07	2144
10	SB-388-0102	J86KK1AD	J86KK1AD	10/24/07	2223
11	SB-388-0203	J86KL1AD	J86KL1AD	10/24/07	2243
12	SB-388-0405	J86KM1AD	J86KM1AD	10/24/07	2302
13	SB-388-0708	J86KN1AD	J86KN1AD	10/24/07	2321
14	SB-389-0102	J86KP1AD	J86KP1AD	10/24/07	2340
15	SB-389-0405	J86KT1AD	J86KT1AD	10/25/07	0019
16	SB-389-0708	J86KV1AD	J86KV1AD	10/25/07	0038
17	SB-390-0102	J86KX1AD	J86KX1AD	10/25/07	0058
18	SB-390-0203	J86K01AD	J86K01AD	10/25/07	0117
19	SB-390-0405	J86K11AD	J86K11AD	10/25/07	0136
20	SB-390-0708	J86K41AD	J86K41AD	10/25/07	0156
21	SB-391-0102	J86K61AD	J86K61AD	10/25/07	0215
22	SB-391-0203	J86LC1AD	J86LC1AD	10/25/07	0234

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17248

Lab File ID: 8DF1024A DFTPP Injection Date: 10/24/07

Instrument ID: A4HP8 DFTPP Injection Time: 1831

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	✓41.2
68	Less than 2.0% of mass 69	✓0.0 (0.0)1
69	Mass 69 relative abundance	✓49.2
70	Less than 2.0% of mass 69	✓0.2 (0.5)1
127	40.0 - 60.0% of mass 198	✓50.0
197	Less than 1.0% of mass 198	✓0.0
198	Base Peak, 100% relative abundance	✓100.0
199	5.0 - 9.0% of mass 198	✓6.6
275	10.0 - 30.0% of mass 198	✓25.6
365	Greater than 1.0% of mass 198	✓3.4
441	Present, but less than mass 443	✓8.3
442	Greater than 40.0% of mass 198	✓52.6
443	17.0 - 23.0% of mass 442	✓10.1 (19.1)2

1-Value is % of mass 69 2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SB-391-0405	J86LD1AD	J86LD1AD	10/25/07	0254
02	SB-391-0708	J86LE1AD	J86LE1AD	10/25/07	0313
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp8.i
Lab File ID: 8SMH024A.D
Analysis Type:
Lab Sample ID: L6
Method: \\cansvr11\dd\chem\MSS\a4hp8.i\71024b.b\8270p.m

Injection Date: 24-OCT-2007 18:50
Init. Cal. Date(s): 24-OCT-2007 24-OCT-2007
Init. Cal. Times: 15:22 17:53
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
142 Benzo(k)fluoranthene	1.27628	1.29509	1.29509	0.010	-1.47383	50.00000	Averaged
146 Benzo(a)pyrene	1.13115	1.16736	1.16736	0.010	✓-3.20127	20.00000	Averaged
149 Indeno(1,2,3-cd)pyrene	1.20757	1.25840	1.25840	0.010	-4.20901	50.00000	Averaged
150 Dibenz(a,h)anthracene	1.03171	1.07928	1.07928	0.010	-4.61089	50.00000	Averaged
151 Benzo(g,h,i)perylene	1.01275	1.03520	1.03520	0.010	-2.21580	50.00000	Averaged
198 1,4-Dioxane	0.61653	0.59923	0.59923	0.010	2.80650	50.00000	Averaged
$ 154 Nitrobenzene-d5	0.49725	0.50470	0.50470	0.010	✓-1.49839	50.00000	Averaged
$ 155 2-Fluorobiphenyl	1.28432	1.32854	1.32854	0.010	✓-3.44284	50.00000	Averaged
$ 156 Terphenyl-d14	0.79730	0.82165	0.82165	0.010	✓-3.05357	50.00000	Averaged
$ 157 Phenol-d5	1.85917	1.80727	1.80727	0.010	✓ 2.79164	50.00000	Averaged
$ 158 2-Fluorophenol	1.28007	1.26893	1.26893	0.010	✓ 0.87050	50.00000	Averaged
$ 159 2,4,6-Tribromophenol	0.14264	0.14359	0.14359	0.010	✓-0.66803	50.00000	Averaged
$ 186 2-Chlorophenol-d4	1.23332	1.23641	1.23641	0.010	-0.25067	50.00000	Averaged
$ 187 1,2-Dichlorobenzene-d4	0.82588	0.83081	0.83081	0.010	-0.59745	50.00000	Averaged
M 195 Cresols, total	2.85006	2.81030	2.81030	0.010	1.39505	50.00000	Averaged
101 Diphenylamine	0.50153	0.51579	0.51579	0.010	-2.84175	50.00000	Averaged

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17248

Lab File ID: 8DF1025 DFTPP Injection Date: 10/25/07

Instrument ID: A4HP8 DFTPP Injection Time: 1049

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	✓39.7
68	Less than 2.0% of mass 69	✓0.0 (0.0)1
69	Mass 69 relative abundance	✓48.8
70	Less than 2.0% of mass 69	✓0.2 (0.4)1
127	40.0 - 60.0% of mass 198	✓49.8
197	Less than 1.0% of mass 198	✓0.0
198	Base Peak, 100% relative abundance	✓100.0
199	5.0 - 9.0% of mass 198	✓6.6
275	10.0 - 30.0% of mass 198	✓26.3
365	Greater than 1.0% of mass 198	✓3.5
441	Present, but less than mass 443	✓8.5
442	Greater than 40.0% of mass 198	✓55.7
443	17.0 - 23.0% of mass 442	✓10.4 (18.7)2

1-Value is % of mass 69 2-Value is % of mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD006	L6	8SMH1025	10/25/07	1108
02	SB-387-0708	J86KJ1AD	J86KJ1AD	10/25/07	1748
03					
04					
05					
06					
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11					
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22					

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4hp8.i
Lab File ID: 8SMH1025.D
Analysis Type:
Lab Sample ID: L6
Method: \\cansvr11\dd\chem\MSS\a4hp8.i\71025a.b\8270p.m

Injection Date: 25-OCT-2007 11:08
Init. Cal. Date(s): 24-OCT-2007 24-OCT-2007
Init. Cal. Times: 15:22 17:53
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
142 Benzo(k)fluoranthene	1.27628	1.27362	1.27362	0.010	0.20863	50.00000	Averaged
146 Benzo(a)pyrene	1.13115	1.14710	1.14710	0.010	✓-1.40995	20.00000	Averaged
149 Indeno(1,2,3-cd)pyrene	1.20757	1.26215	1.26215	0.010	-4.52013	50.00000	Averaged
150 Dibenz(a,h)anthracene	1.03171	1.07447	1.07447	0.010	-4.14468	50.00000	Averaged
151 Benzo(g,h,i)perylene	1.01275	1.05340	1.05340	0.010	-4.01368	50.00000	Averaged
198 1,4-Dioxane	0.61653	0.53467	0.53467	0.010	13.27802	50.00000	Averaged
$ 154 Nitrobenzene-d5	0.49725	0.49318	0.49318	0.010	✓0.81811	50.00000	Averaged
$ 155 2-Fluorobiphenyl	1.28432	1.30074	1.30074	0.010	✓-1.27859	50.00000	Averaged
$ 156 Terphenyl-d14	0.79730	0.79771	0.79771	0.010	✓-0.05047	50.00000	Averaged
$ 157 Phenol-d5	1.85917	1.78653	1.78653	0.010	✓3.90724	50.00000	Averaged
$ 158 2-Fluorophenol	1.28007	1.17239	1.17239	0.010	✓8.41221	50.00000	Averaged
$ 159 2,4,6-Tribromophenol	0.14264	0.13803	0.13803	0.010	3.23016	50.00000	Averaged
$ 186 2-Chlorophenol-d4	1.23332	1.19584	1.19584	0.010	3.03869	50.00000	Averaged
$ 187 1,2-Dichlorobenzene-d4	0.82588	0.82139	0.82139	0.010	0.54356	50.00000	Averaged
M 195 Cresols, total	2.85006	2.77915	2.77915	0.010	2.48812	50.00000	Averaged
101 Diphenylamine	0.50153	0.51552	0.51552	0.010	-2.78889	50.00000	Averaged

SW846 8270C METHOD BLANK SUMMARY

BLANK WORKORDER NO.: J9JEW1AA

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN

SDG Number: 7J17248

Lab File ID: J9JEW1AA.

Lot Number: A7J170248

Date Analyzed: 10/24/07

Time Analyzed: 19:48

Matrix: SOLID

Date Extracted: 10/22/07

GC Column: DB 5.625 ID: .00

Extraction Method: 3550B

Instrument ID: HP8

Level: (low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SB-387-0102	J86J41AD	J86J41AD.	10/24/07	20:27
02	SB-387-0102	J86J41AG S	J86J41AG.	10/24/07	20:46
03	SB-387-0102	J86J41AH D	J86J41AH.	10/24/07	21:06
04	SB-387-0203	J86J91AD	J86J91AD.	10/24/07	21:25
05	SB-387-0405	J86KC1AD	J86KC1AD.	10/24/07	21:44
06	SB-387-0708	J86KJ1AD	J86KJ1AD.	10/25/07	17:48
07	SB-388-0102	J86KK1AD	J86KK1AD.	10/24/07	22:23
08	SB-388-0203	J86KL1AD	J86KL1AD.	10/24/07	22:43
09	SB-388-0405	J86KM1AD	J86KM1AD.	10/24/07	23:02
10	SB-388-0708	J86KN1AD	J86KN1AD.	10/24/07	23:21
11	SB-389-0102	J86KP1AD	J86KP1AD.	10/24/07	23:40
12	SB-389-0203	J86KR1AD	J86KR1AD.	10/24/07	00:00
13	SB-389-0405	J86KT1AD	J86KT1AD.	10/25/07	00:19
14	SB-389-0708	J86KV1AD	J86KV1AD.	10/25/07	00:38
15	SB-390-0102	J86KX1AD	J86KX1AD.	10/25/07	00:58
16	SB-390-0203	J86K01AD	J86K01AD.	10/25/07	01:17
17	SB-390-0405	J86K11AD	J86K11AD.	10/25/07	01:36
18	SB-390-0708	J86K41AD	J86K41AD.	10/25/07	01:56
19	SB-391-0102	J86K61AD	J86K61AD.	10/25/07	02:15
20	SB-391-0203	J86LC1AD	J86LC1AD.	10/25/07	02:34
21	SB-391-0405	J86LD1AD	J86LD1AD.	10/25/07	02:54
22	SB-391-0708	J86LE1AD	J86LE1AD.	10/25/07	03:13
23	CHECK SAMPLE	J9JEW1AC C	J9JEW1AC.	10/24/07	20:08
24					
25					
26					
27					
28					
29					
30					

COMMENTS:

FORM IV

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: 7J17248
MB Lot-Sample #: A7J220000-068

Work Order #...: J9JEW1AA

Matrix.....: SOLID

Prep Date.....: 10/22/07
Prep Batch #...: 7295068
Initial Wgt/Vol: 30 g

Final Wgt/Vol..: 2 mL

Analysis Date..: 10/24/07
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzo(a)pyrene	ND	330	ug/kg	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	68	(24 - 112)
2-Fluorobiphenyl	70	(34 - 110)
Terphenyl-d14	85	(41 - 119)
Phenol-d5	67	(28 - 110)
2-Fluorophenol	68	(26 - 110)
2,4,6-Tribromophenol	37	(10 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

8B
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17248

Lab File ID (Standard): 8SMH024A Date Analyzed: 10/24/07

Instrument ID: A4HP8 Time Analyzed: 1850

		IS1 (DCB) AREA #	RT	IS2 (NPT) AREA #	RT	IS3 (ANT) AREA #	RT
	12 HOUR STD	178549	3.59	708147	4.49	394655	5.76
	UPPER LIMIT	357098	4.09	1416294	4.99	789310	6.26
	LOWER LIMIT	89275	3.09	354074	3.99	197328	5.26
	EPA SAMPLE NO.						
01	SB-389-0203	133209	3.59	565508	4.49	328881	5.76
02	J9JEWBLK	127813	3.59	519687	4.48	287717	5.76
03	J9JEWCHK	128327	3.59	535500	4.48	303162	5.76
04	SB-387-0102	106176	3.59	483260	4.48	295992	5.76
05	SB-387-0102	104693	3.59	460557	4.49	271045	5.76
06	SB-387-0102	120643	3.59	561354	4.49	330721	5.76
07	SB-387-0203	110676	3.59	467498	4.48	282423	5.76
08	SB-387-0405	118839	3.59	502318	4.48	296832	5.76
09	SB-388-0102	125069	3.59	555307	4.49	318791	5.76
10	SB-388-0203	128160	3.59	553153	4.49	313603	5.76
11	SB-388-0405	129262	3.59	541208	4.49	313667	5.76
12	SB-388-0708	118691	3.59	516502	4.48	296409	5.75
13	SB-389-0102	133133	3.59	575305	4.48	335028	5.76
14	SB-389-0405	133842	3.59	561474	4.49	320255	5.76
15	SB-389-0708	129722	3.59	551436	4.49	319230	5.76
16	SB-390-0102	136092	3.59	553947	4.48	321185	5.76
17	SB-390-0203	122517	3.59	512942	4.49	306487	5.76
18	SB-390-0405	118619	3.59	505544	4.48	290162	5.76
19	SB-390-0708	122217	3.59	517155	4.48	294056	5.76
20	SB-391-0102	130009	3.59	546009	4.48	308977	5.76
21	SB-391-0203	129724	3.59	554202	4.49	318841	5.76
22	SB-391-0405	118210	3.59	511147	4.49	298519	5.76

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8C
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17248

Lab File ID (Standard): 8SMH024A Date Analyzed: 10/24/07

Instrument ID: A4HP8 Time Analyzed: 1850

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	741681	6.84	737253	8.86	607133	10.39
	UPPER LIMIT	1483362	7.34	1474506	9.36	1214266	10.89
	LOWER LIMIT	370841	6.34	368627	8.36	303567	9.89
	EPA SAMPLE NO.						
01	SB-389-0203	616089	6.85	620598	8.84	492160	10.37
02	J9JEWBLK	555229	6.84	621316	8.85	538172	10.38
03	J9JEWCHK	572200	6.85	575172	8.87	483181	10.39
04	SB-387-0102	566345	6.84	548595	8.84	472376	10.38
05	SB-387-0102	520693	6.85	503070	8.84	392779	10.37
06	SB-387-0102	610523	6.85	571542	8.84	435195	10.37
07	SB-387-0203	537032	6.85	517220	8.85	428970	10.38
08	SB-387-0405	560747	6.85	526974	8.84	426742	10.37
09	SB-388-0102	609420	6.85	644768	8.85	437030	10.38
10	SB-388-0203	588518	6.85	588022	8.84	467439	10.37
11	SB-388-0405	613745	6.85	600056	8.85	481815	10.38
12	SB-388-0708	602197	6.85	592822	8.84	491289	10.37
13	SB-389-0102	617814	6.84	632133	8.84	505796	10.37
14	SB-389-0405	616414	6.85	590008	8.86	466891	10.39
15	SB-389-0708	611345	6.85	599394	8.87	492175	10.41
16	SB-390-0102	609804	6.85	624254	8.86	494038	10.39
17	SB-390-0203	587836	6.85	593474	8.84	453872	10.36
18	SB-390-0405	575517	6.85	613914	8.84	464972	10.37
19	SB-390-0708	563643	6.85	555531	8.84	451302	10.37
20	SB-391-0102	605699	6.85	608575	8.83	486871	10.36
21	SB-391-0203	612449	6.85	623305	8.84	508370	10.36
22	SB-391-0405	596945	6.85	641294	8.84	496750	10.37

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8B
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17248

Lab File ID (Standard): 8SMH024A Date Analyzed: 10/24/07

Instrument ID: A4HP8 Time Analyzed: 1850

		IS1 (DCB) AREA #	RT	IS2 (NPT) AREA #	RT	IS3 (ANT) AREA #	RT
	12 HOUR STD	178549	3.59	708147	4.49	394655	5.76
	UPPER LIMIT	357098	4.09	1416294	4.99	789310	6.26
	LOWER LIMIT	89275	3.09	354074	3.99	197328	5.26
	EPA SAMPLE NO.						
01	SB-391-0708	119670	3.59	499169	4.49	281031	5.76
02							
03							
04							
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19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

FORM VIII SV-1 1/87 Rev.

8C
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17248

Lab File ID (Standard): 8SMH024A Date Analyzed: 10/24/07

Instrument ID: A4HP8 Time Analyzed: 1850

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	741681	6.84	737253	8.86	607133	10.39
	UPPER LIMIT	1483362	7.34	1474506	9.36	1214266	10.89
	LOWER LIMIT	370841	6.34	368627	8.36	303567	9.89
	EPA SAMPLE NO.						
01	SB-391-0708	563333	6.85	567701	8.83	458809	10.36
02							
03							
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20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8B
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17248

Lab File ID (Standard): 8SMH1025 Date Analyzed: 10/25/07

Instrument ID: A4HP8 Time Analyzed: 1108

		IS1 (DCB) AREA #	RT	IS2 (NPT) AREA #	RT	IS3 (ANT) AREA #	RT
	12 HOUR STD	112616	3.52	443095	4.42	256037	5.69
	UPPER LIMIT	225232	4.02	886190	4.92	512074	6.19
	LOWER LIMIT	56308	3.02	221548	3.92	128019	5.19
	EPA SAMPLE NO.						
01	SB-387-0708	105484	3.53	466560	4.42	260148	5.69
02							
03							
04							
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20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17248

Lab File ID (Standard): 8SMH1025 Date Analyzed: 10/25/07

Instrument ID: A4HP8 Time Analyzed: 1108

		IS4 (PHN) AREA #	RT	IS5 (CRY) AREA #	RT	IS6 (PRY) AREA #	RT
	12 HOUR STD	477512	6.78	483632	8.80	416820	10.28
	UPPER LIMIT	955024	7.28	967264	9.30	833640	10.78
	LOWER LIMIT	238756	6.28	241816	8.30	208410	9.78
	EPA SAMPLE NO.						
01	SB-387-0708	502176	6.78	471930	8.78	239065	10.26
02							
03							
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19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 7J17248 **Work Order #...:** J86J41AG-MS **Matrix.....:** SOLID
MS Lot-Sample #: A7J170248-001 J86J41AH-MSD
Date Sampled...: 10/15/07 16:00 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1 **Initial Wgt/Vol:** 30.14 g **Final Wgt/Vol..:** 2 mL
% Moisture.....: 6.3

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,2,4-Trichloro-benzene	69	(33 - 110)			SW846 8270C
	59	(33 - 110)	15	(0-30)	SW846 8270C
Acenaphthene	73	(10 - 200)			SW846 8270C
	68	(10 - 200)	5.9	(0-30)	SW846 8270C
2,4-Dinitrotoluene	85	(42 - 118)			SW846 8270C
	80	(42 - 118)	6.0	(0-30)	SW846 8270C
Pyrene	86	(10 - 200)			SW846 8270C
	72	(10 - 200)	17	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	74	(30 - 121)			SW846 8270C
	67	(30 - 121)	9.0	(0-30)	SW846 8270C
1,4-Dichlorobenzene	61	(26 - 110)			SW846 8270C
	54	(26 - 110)	11	(0-30)	SW846 8270C
Pentachlorophenol	54	(10 - 182)			SW846 8270C
	50	(10 - 182)	7.0	(0-30)	SW846 8270C
Phenol	70	(10 - 144)			SW846 8270C
	69	(10 - 144)	2.2	(0-30)	SW846 8270C
2-Chlorophenol	70	(32 - 110)			SW846 8270C
	66	(32 - 110)	5.5	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	78	(32 - 117)			SW846 8270C
	74	(32 - 117)	5.3	(0-30)	SW846 8270C
4-Nitrophenol	72	(10 - 125)			SW846 8270C
	68	(10 - 125)	5.2	(0-30)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	67	(24 - 112)
	58	(24 - 112)
2-Fluorobiphenyl	72	(34 - 110)
	66	(34 - 110)
Terphenyl-d14	84	(41 - 119)
	80	(41 - 119)
Phenol-d5	73	(28 - 110)
	69	(28 - 110)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 7J17248 **Work Order #...:** J86J41AG-MS **Matrix.....:** SOLID
MS Lot-Sample #: A7J170248-001 J86J41AH-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	67	(26 - 110)
	63	(26 - 110)
2,4,6-Tribromophenol	76	(10 - 118)
	73	(10 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 7J17248 **Work Order #...:** J86J41AG-MS **Matrix.....:** SOLID
MS Lot-Sample #: A7J170248-001 J86J41AH-MSD
Date Sampled...: 10/15/07 16:00 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1 **Initial Wgt/Vol:** 30.14 g **Final Wgt/Vol..:** 2 mL
% Moisture.....: 6.3

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2,4-Trichlorobenzene	ND	710	490	ug/kg	69		SW846 8270C
	ND	710	420	ug/kg	59	15	SW846 8270C
Acenaphthene	ND	710	510	ug/kg	73		SW846 8270C
	ND	710	490	ug/kg	68	5.9	SW846 8270C
2,4-Dinitrotoluene	ND	710	600	ug/kg	85		SW846 8270C
	ND	710	560	ug/kg	80	6.0	SW846 8270C
Pyrene	22	710	630	ug/kg	86		SW846 8270C
	22	710	530	ug/kg	72	17	SW846 8270C
N-Nitrosodi-n-propylamine	ND	710	520	ug/kg	74		SW846 8270C
	ND	710	480	ug/kg	67	9.0	SW846 8270C
1,4-Dichlorobenzene	ND	710	430	ug/kg	61		SW846 8270C
	ND	710	380	ug/kg	54	11	SW846 8270C
Pentachlorophenol	ND	710	380	ug/kg	54		SW846 8270C
	ND	710	350	ug/kg	50	7.0	SW846 8270C
Phenol	ND	710	500	ug/kg	70		SW846 8270C
	ND	710	490	ug/kg	69	2.2	SW846 8270C
2-Chlorophenol	ND	710	490	ug/kg	70		SW846 8270C
	ND	710	470	ug/kg	66	5.5	SW846 8270C
4-Chloro-3-methylphenol	ND	710	550	ug/kg	78		SW846 8270C
	ND	710	530	ug/kg	74	5.3	SW846 8270C
4-Nitrophenol	ND	710	510	ug/kg	72		SW846 8270C
	ND	710	480	ug/kg	68	5.2	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	67	(24 - 112)
	58	(24 - 112)
2-Fluorobiphenyl	72	(34 - 110)
	66	(34 - 110)
Terphenyl-d14	84	(41 - 119)
	80	(41 - 119)
Phenol-d5	73	(28 - 110)
	69	(28 - 110)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 7J17248 **Work Order #...:** J86J41AG-MS **Matrix.....:** SOLID
MS Lot-Sample #: A7J170248-001 J86J41AH-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	67	(26 - 110)
	63	(26 - 110)
2,4,6-Tribromophenol	76	(10 - 118)
	73	(10 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: 7J17248 **Work Order #...:** J9JEW1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7J220000-068
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1 **Final Wgt/Vol..:** 2 mL
Initial Wgt/Vol: 30 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,2,4-Trichloro-benzene	**73**	**(43 - 110)**	**SW846 8270C**
Acenaphthene	**75**	**(46 - 110)**	**SW846 8270C**
2,4-Dinitrotoluene	**82**	**(55 - 116)**	**SW846 8270C**
Pyrene	**80**	**(58 - 113)**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**77**	**(40 - 114)**	**SW846 8270C**
1,4-Dichlorobenzene	**67**	**(38 - 110)**	**SW846 8270C**
Pentachlorophenol	**29**	**(10 - 110)**	**SW846 8270C**
Phenol	**72**	**(39 - 110)**	**SW846 8270C**
2-Chlorophenol	**71**	**(39 - 110)**	**SW846 8270C**
4-Chloro-3-methylphenol	**74**	**(42 - 110)**	**SW846 8270C**
4-Nitrophenol	**49**	**(24 - 117)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	72	(24 - 112)
2-Fluorobiphenyl	74	(34 - 110)
Terphenyl-d14	84	(41 - 119)
Phenol-d5	74	(28 - 110)
2-Fluorophenol	73	(26 - 110)
2,4,6-Tribromophenol	64	(10 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: 7J17248 Work Order #...: J9JEW1AC Matrix.....: SOLID
LCS Lot-Sample#: A7J220000-068
Prep Date.....: 10/22/07 Analysis Date..: 10/24/07
Prep Batch #...: 7295068
Dilution Factor: 1 Final Wgt/Vol..: 2 mL
Initial Wgt/Vol: 30 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,2,4-Trichloro-benzene	**670**	**480**	**ug/kg**	**73**	**SW846 8270C**
Acenaphthene	**670**	**500**	**ug/kg**	**75**	**SW846 8270C**
2,4-Dinitrotoluene	**670**	**550**	**ug/kg**	**82**	**SW846 8270C**
Pyrene	**670**	**530**	**ug/kg**	**80**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**670**	**520**	**ug/kg**	**77**	**SW846 8270C**
1,4-Dichlorobenzene	**670**	**440**	**ug/kg**	**67**	**SW846 8270C**
Pentachlorophenol	**670**	**190**	**ug/kg**	**29**	**SW846 8270C**
Phenol	**670**	**480**	**ug/kg**	**72**	**SW846 8270C**
2-Chlorophenol	**670**	**470**	**ug/kg**	**71**	**SW846 8270C**
4-Chloro-3-methylphenol	**670**	**500**	**ug/kg**	**74**	**SW846 8270C**
4-Nitrophenol	**670**	**330**	**ug/kg**	**49**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	72	(24 - 112)
2-Fluorobiphenyl	74	(34 - 110)
Terphenyl-d14	84	(41 - 119)
Phenol-d5	74	(28 - 110)
2-Fluorophenol	73	(26 - 110)
2,4,6-Tribromophenol	64	(10 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Report Date : 06-Nov-2007 10:39

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2007 15:36
End Cal Date : 19-OCT-2007 02:34
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\CANSVR11\DD\chem\GCS\a2hp4.i\71018IC-1.b\HP4PCBF.m
Last Edit : 21-Oct-2007 15:48 serraa
Curve Type : Average

Calibration File Names:
Level 1: \\CANSVR11\DD\chem\GCS\a2hp4.i\71018IC-1.b\038B3801.D
Level 2: \\CANSVR11\DD\chem\GCS\a2hp4.i\71018IC-1.b\039B3901.D
Level 3: \\CANSVR11\DD\chem\GCS\a2hp4.i\71018IC-1.b\040B4001.D
Level 4: \\CANSVR11\DD\chem\GCS\a2hp4.i\71018IC-1.b\041B4101.D
Level 5: \\CANSVR11\DD\chem\GCS\a2hp4.i\71018IC-1.b\042B4201.D
Level 6: \\CANSVR11\DD\chem\GCS\a2hp4.i\71018IC-1.b\043B4301.D

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.000 Level 6	RRF	% RSD	
2 AROCLOR 1221(1)	518480	452400	419620	405356	358130	345615	416600	15.278	
(2)	354060	303060	280605	271220	237506	222834	278214	16.973	
(3)	1217420	1050190	978090	956968	857013	818798	979747	14.645	
3 AROCLOR-1016(1)	591320	795420	739945	644938	688251	589437	674885	12.240	
(2)	923840	1263210	1188845	1052580	1064053	959606	1075356	12.137	
(3)	1418860	2051050	1875900	1716230	1764566	1671578	1749697	12.087	
(4)	776560	1085130	1021050	900944	933004	872429	931520	11.765	
(5)	691040	1239470	887400	789962	791002	733321	855366	23.316	<-
4 AROCLOR-1232(1)	984600	893870	889710	798404	818660	740506	854292	10.089	
(2)	599760	549200	548775	502184	506467	454233	526770	9.527	
(3)	974200	872230	866220	814644	835575	779229	857016	7.802	
(4)	486120	478180	475985	445014	451894	412614	458301	6.005	
(5)	452140	398480	391950	341850	339665	307352	371906	14.052	
5 AROCLOR 1242(1)	791360	609530	607160	541674	470427	471625	581963	20.545	<-
(2)	1300500	969030	947970	871498	786271	778140	942235	20.435	<-
(3)	2026160	1525290	1509720	1406476	1334904	1350372	1525487	16.894	<-
(4)	1103660	830450	840505	756518	704027	702982	823024	18.194	<-
(5)	1016580	746010	729515	652170	609056	599890	725537	21.342	<-
6 AROCLOR 1248(1)	564480	497900	489880	431424	433486	399348	469420	12.750	
(2)	1054140	882050	968905	840950	864933	835134	907685	9.528	
(3)	1312880	1148270	1199690	1031456	1075501	1018242	1131006	9.988	
(4)	1118240	960690	1040280	885948	927548	885019	969621	9.574	
(5)	776400	680320	710775	597658	610822	582924	659817	11.499	
7 AROCLOR-1254(1)	1414160	1166290	1072675	1084044	1010670	970789	1119771	14.200	
(2)	1815320	1585830	1434385	1464408	1387951	1328715	1502768	11.686	
(3)	2470360	2150580	1989965	2086302	2007348	1910477	2102505	9.429	
(4)	1698720	1495610	1385190	1475510	1475254	1441896	1495363	7.149	
(5)	2094700	1830480	1676420	1793706	1709596	1645944	1791808	9.157	

Report Date : 06-Nov-2007 10:39

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2007 15:36
End Cal Date : 19-OCT-2007 02:34
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\CANSVR11\DD\chem\GCS\a2hp4.i\71018IC-1.b\HP4PCBF.m
Last Edit : 21-Oct-2007 15:48 serraa
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.000 Level 6	RRF	% RSD	
8 AROCLOR-1260 (1)	1218220	1655990	1560695	1432826	1411768	1374603	1442350	10.537	
(2)	1919900	2555770	2502850	2296150	2255632	2228079	2293064	9.905	
(3)	1539200	2071740	2027050	1863588	1853342	1894552	1874912	9.994	
(4)	2613500	3721890	3919530	3698272	3589994	3670572	3535626	13.145	
(5)	1323000	1830470	1781860	1671928	1608351	1679435	1649174	10.846	
9 AROCLOR-1262 (1)	1546760	1390460	1158790	1240718	1177491	1146879	1276850	12.519	
(2)	3082520	2763250	2268905	2591596	2525994	2464248	2616085	10.697	
(3)	2630600	2272480	1815790	2099984	2050296	2005920	2145845	13.028	
(4)	5326640	4648490	3977370	4759200	4643122	4509350	4644029	9.346	
(5)	2497400	2142440	1832075	2038288	1982310	1937804	2071720	11.231	
10 AROCLOR-1268 (1)	1172680	1152400	982315	998212	1036289	945044	1047823	8.950	
(2)	1701120	1709850	1412215	1444846	1519203	1368287	1525920	9.672	
(3)	6427980	6414420	5854005	6067210	6412832	5885982	6177071	4.440	
(4)	5190460	5150000	4756995	5014834	5329616	4868745	5051775	4.226	
(5)	13506280	13628210	12769225	13096372	13840974	12944545	13297601	3.177	
M 11 TOTAL PCB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 1 TCMX	30018800	45070600	44314000	41277600	48934680	40504680	41686727	15.494	
$ 12 DCB	23533600	31680000	32129000	29662160	27720300	29179850	28984152	10.796	

Data File: \\cansvr11\DD\chem\GCS\a2hp4.i\71018IC-1.b\044B4401.D
Report Date: 21-Oct-2007 15:29

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp4.i
Lab File ID: 044B4401.D
Analysis Type:
Lab Sample ID: ICV
Method: \\cansvr11\dd\chem\GCS\a2hp4.i\71018IC-1.b\HP4PCBF.m

Injection Date: 19-OCT-2007 02:51
Init. Cal. Date(s): 27-JUN-2007 19-OCT-2007
Init. Cal. Times: 15:36 02:34
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
3 AROCLOR-1016(1)	674885	646890	0.010	4.14814	15.00000	Averaged	
(2)	1075356	1134220	0.010	-5.47394	15.00000	Averaged	
(3)	1749697	1842130	0.010	-5.28279	15.00000	Averaged	
(4)	931520	976674	0.010	-4.84740	15.00000	Averaged	
(5)	855366	827269	0.010	3.28477	15.00000	Averaged	
8 AROCLOR-1260(1)	1442350	1533633	0.010	-6.32875	15.00000	Averaged	
(2)	2293064	2522848	0.010	-10.02085	15.00000	Averaged	
(3)	1874912	2258634	0.010	-20.46613	15.00000	Averaged	<-
(4)	3535626	3618792	0.010	-2.35222	15.00000	Averaged	
(5)	1649174	1808421	0.010	-9.65617	15.00000	Averaged	

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17248

GC Column: RESTEK PEST CLPI ID: 0.53 (mm) Init. Calib. Date(s): 06/27/07 10/19/0

Instrument ID: A2HP4

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.57 S2 : 8.07

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660	10/24/07	0820	1.57	8.08
02	SB-387-0102	J86J41AC	10/24/07	0946	1.57	8.07
03	SB-387-0102	J86J41AE	10/24/07	1003	1.57	8.07
04	SB-387-0102	J86J41AF	10/24/07	1020	1.57	8.07
05	SB-387-0203	J86J91AC	10/24/07	1037	1.57	8.07
06	SB-387-0405	J86KC1AC	10/24/07	1055	1.57	8.07
07	SB-387-0708	J86KJ1AC	10/24/07	1112	1.57	8.07
08	SB-388-0102	J86KK1AC	10/24/07	1129	1.57	8.07
09	SB-388-0203	J86KL1AC	10/24/07	1146	1.57	8.07
10	SB-388-0405	J86KM1AC	10/24/07	1203	1.57	8.07
11	SB-388-0708	J86KN1AC	10/24/07	1220	1.57	8.07
12	SB-389-0102	J86KP1AC	10/24/07	1237	1.57	8.07
13	SB-389-0203	J86KR1AC	10/24/07	1254	1.57	8.07
14	J9C2ABLK	J9C2A1AA	10/24/07	1311	1.57	8.07
15		E178	10/24/07	1329	1.57	8.07
16	SB-389-0405	J86KT1AC	10/24/07	1346	1.57	8.07
17	SB-389-0708	J86KV1AC	10/24/07	1403	1.57	8.07
18	SB-390-0102	J86KX1AC	10/24/07	1420	1.57	8.07
19	SB-390-0203	J86K01AC	10/24/07	1438	1.57	8.07
20	SB-390-0405	J86K11AC	10/24/07	1455	1.57	8.07
21	SB-390-0708	J86K41AC	10/24/07	1512	1.57	8.07
22	SB-391-0102	J86K61AC	10/24/07	1529	1.57	8.07
23	SB-391-0203	J86LC1AC	10/24/07	1546	1.57	8.07
24	SB-391-0405	J86LD1AC	10/24/07	1603	1.57	8.07
25	SB-391-0708	J86LE1AC	10/24/07	1620	1.57	8.07
26	J9C2ACHK	J9C2A1AC	10/24/07	1746	1.57	8.07
27		E178	10/24/07	1803	1.57	8.07
28						
29						
30						
31						
32						

QC LIMITS
S1 = TCMX (+/- 0.10 MINUTES)
S2 = DCB (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Data File: \\cansvr11\dd\chem\GCS\a2hp4.i\71024-1.b\002B0201.D
Report Date: 24-Oct-2007 08:33

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp4.i Injection Date: 24-OCT-2007 08:20
Lab File ID: 002B0201.D Init. Cal. Date(s): 27-JUN-2007 19-OCT-2007
Analysis Type: Init. Cal. Times: 15:36 02:34
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\cansvr11\dd\chem\GCS\a2hp4.i\71024-1.b\HP4PCBF.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	41686727	50865720	0.010	-22.01898	15.00000	Averaged	<-
3 AROCLOR-1016 (1)	674885	717450	0.010	-6.30697	15.00000	Averaged	
(2)	1075356	1160184	0.010	-7.88840	15.00000	Averaged	
(3)	1749697	1765124	0.010	-0.88168	15.00000	Averaged	
(4)	931520	934176	0.010	-0.28518	15.00000	Averaged	
(5)	855366	812020	0.010	5.06752	15.00000	Averaged	
8 AROCLOR-1260 (1)	1442350	1451802	0.010	-0.65530	15.00000	Averaged	
(2)	2293064	2363448	0.010	-3.06945	15.00000	Averaged	
(3)	1874912	1977156	0.010	-5.45327	15.00000	Averaged	
(4)	3535626	3816352	0.010	-7.93991	15.00000	Averaged	
(5)	1649174	1811900	0.010	-9.86712	15.00000	Averaged	
$ 12 DCB	28984152	32624600	0.010	-12.56013	15.00000	Averaged	

Data File: \\cansvr11\dd\chem\GCS\a2hp4.i\71024-1.b\036B3601.D
Report Date: 24-Oct-2007 18:16

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp4.i Injection Date: 24-OCT-2007 18:03
Lab File ID: 036B3601.D Init. Cal. Date(s): 27-JUN-2007 19-OCT-2007
Analysis Type: Init. Cal. Times: 15:36 02:34
Lab Sample ID: E178 Quant Type: ESTD
Method: \\cansvr11\dd\chem\GCS\a2hp4.i\71024-1.b\HP4PCBF.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	41686727	53801000	0.010	-29.06027	15.00000	Averaged	<-
3 AROCLOR-1016 (1)	674885	824048	0.010	-22.10196	15.00000	Averaged	<-
(2)	1075356	1314588	0.010	-22.24681	15.00000	Averaged	<-
(3)	1749697	2121234	0.010	-21.23434	15.00000	Averaged	<-
(4)	931520	1114846	0.010	-19.68037	15.00000	Averaged	<-
(5)	855366	942802	0.010	-10.22208	15.00000	Averaged	
8 AROCLOR-1260 (1)	1442350	1721690	0.010	-19.36698	15.00000	Averaged	<-
(2)	2293064	2847758	0.010	-24.19011	15.00000	Averaged	<-
(3)	1874912	2366526	0.010	-26.22064	15.00000	Averaged	<-
(4)	3535626	4675906	0.010	-32.25114	15.00000	Averaged	<-
(5)	1649174	2115186	0.010	-28.25730	15.00000	Averaged	<-
$ 12 DCB	28984152	35216440	0.010	-21.50240	15.00000	Averaged	<-

SW846 8082 METHOD BLANK SUMMARY

BLANK WORKORDER NO.: J9C2A1AA

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN

SDG Number:7J17248

Lab File ID: 019B1901.

Lot Number: A7J170248

Matrix: SOLID

Extraction Method: 3550B/3665A

Date Extracted: 10/19/07

Date Analyzed(1): 10/24/07

Date Analyzed(2): N/A

Time Analyzed(1): 13:11

Time Analyzed(2): N/A

Instrument ID(1): P4

Instrument ID(2): N/A

GC Column(1): N/A ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	SB-387-0102	J86J41AC	10/24/07	N/A
02	SB-387-0102	J86J41AE S	10/24/07	N/A
03	SB-387-0102	J86J41AF D	10/24/07	N/A
04	SB-387-0203	J86J91AC	10/24/07	N/A
05	SB-387-0405	J86KC1AC	10/24/07	N/A
06	SB-387-0708	J86KJ1AC	10/24/07	N/A
07	SB-388-0102	J86KK1AC	10/24/07	N/A
08	SB-388-0203	J86KL1AC	10/24/07	N/A
09	SB-388-0405	J86KM1AC	10/24/07	N/A
10	SB-388-0708	J86KN1AC	10/24/07	N/A
11	SB-389-0102	J86KP1AC	10/24/07	N/A
12	SB-389-0203	J86KR1AC	10/24/07	N/A
13	SB-389-0405	J86KT1AC	10/24/07	N/A
14	SB-389-0708	J86KV1AC	10/24/07	N/A
15	SB-390-0102	J86KX1AC	10/24/07	N/A
16	SB-390-0203	J86K01AC	10/24/07	N/A
17	SB-390-0405	J86K11AC	10/24/07	N/A
18	SB-390-0708	J86K41AC	10/24/07	N/A
19	SB-391-0102	J86K61AC	10/24/07	N/A
20	SB-391-0203	J86LC1AC	10/24/07	N/A
21	SB-391-0405	J86LD1AC	10/24/07	N/A
22	SB-391-0708	J86LE1AC	10/24/07	N/A
23	CHECK SAMPLE	J9C2A1AC C	10/24/07	N/A

COMMENTS:

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: 7J17248 **Work Order #...:** J9C2A1AA **Matrix.....:** SOLID
MB Lot-Sample #: A7J190000-024

Prep Date.....: 10/19/07 **Final Wgt/Vol..:** 10 mL
Analysis Date..: 10/24/07 **Prep Batch #...:** 7292024
Dilution Factor: 1 **Initial Wgt/Vol:** 30 g

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(10 - 196)
Decachlorobiphenyl	124	(10 - 199)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

STL North Canton

Data file : \\cansvr11\dd\chem\GCS\a2hp4.i\71024-1.b\019B1901.D
Lab Smp Id: J9C2A1AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 24-OCT-2007 13:11
Operator : Inst ID: a2hp4.i
Smp Info : J9C2A1AA
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\GCS\a2hp4.i\71024-1.b\HP4PCBF.m
Meth Date : 24-Oct-2007 09:42 Quant Type: ESTD
Cal Date : 19-OCT-2007 02:34 Cal File: 043B4301.D
Als bottle: 1 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.571	1.571	0.000	699125	0.01677	5.590		
2 AROCLOR-1221					CAS #: 11104-28-2		

Peaks not detected for Quant. or Qual. signal(s).

3 AROCLOR-1016					CAS #: 12674-11-2		

Peaks not detected for Quant. or Qual. signal(s).

4 AROCLOR-1232					CAS #: 11141-16-5		

Peaks not detected for Quant. or Qual. signal(s).

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		

Peaks not detected for Quant. or Qual. signal(s).

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6 AROCLOR-1248 CAS #: 12672-29-6

Peaks not detected for Quant. or Qual. signal(s).

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7 AROCLOR-1254 CAS #: 11097-69-1

Peaks not detected for Quant. or Qual. signal(s).

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8 AROCLOR-1260 CAS #: 11096-82-5

Peaks not detected for Quant. or Qual. signal(s).

$ 12 DCB CAS #: 2051-24-3

8.074	8.076	-0.002	718802	0.02480	8.267	

M 11 TOTAL PCB CAS #: 1336-36-3

Compound Not Detected

SW846 8082 SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17248

Lot #: A7J170248

Extraction: XXA71QH01

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	SB-387-0102	117	144	00
02	SB-387-0203	107	119	00
03	SB-387-0405	98	115	00
04	SB-387-0708	95	121	00
05	SB-388-0102	91	108	00
06	SB-388-0203	98	118	00
07	SB-388-0405	113	116	00
08	SB-388-0708	98	113	00
09	SB-389-0102	115	118	00
10	SB-389-0203	98	118	00
11	SB-389-0405	108	120	00
12	SB-389-0708	92	118	00
13	SB-390-0102	102	114	00
14	SB-390-0203	90	121	00
15	SB-390-0405	84	106	00
16	SB-390-0708	97	112	00
17	SB-391-0102	87	107	00
18	SB-391-0203	103	129	00
19	SB-391-0405	97	120	00
20	SB-391-0708	75	109	00
21	METHOD BLK. J9C2A1AA	84	124	00
22	LCS J9C2A1AC	91	133	00
23	SB-387-0102 D	111	203*	01
24	SB-387-0102 S	99	302*	01

SURROGATES		QC LIMITS
SRG01	= Tetrachloro-m-xylene	(10-196)
SRG02	= Decachlorobiphenyl	(10-199)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17248

Lot #: A7J190000 WO #: J9C2A1AC

BATCH: 7292024

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	320	95	34 - 127	
Aroclor 1260	330	410	123	32 - 141	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17248

Matrix Spike ID: SB-387-0102 Level: (low/med) LOW

Lot #: A7J170248 WO #: J86J41AE
BATCH: 7292024

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
Aroclor 1016	360	ND	340	97	10 - 199	
Aroclor 1260	360	ND	370	104	10 - 199	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17248

Matrix Spike ID: SB-387-0102 Level: (low/med) LOW

Lot #: A7J170248 WO #: J86J41AF
BATCH: 7292024

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
Aroclor 1016	350	360	101	3.5	30	10 - 199	
Aroclor 1260	350	370	105	0.11	30	10 - 199	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: 7J17248 **Work Order #...:** J9C2A1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7J190000-024
Prep Date.....: 10/19/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7292024
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	**95**	**(34 - 127)**	**SW846 8082**
Aroclor 1260	**123**	**(32 - 141)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	91	(10 - 196)
Decachlorobiphenyl	133	(10 - 199)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: 7J17248 **Work Order #...:** J9C2A1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A7J190000-024
Prep Date.....: 10/19/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7292024
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aroclor 1016	**330**	**320**	**ug/kg**	**95**	**SW846 8082**
Aroclor 1260	**330**	**410**	**ug/kg**	**123**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	91	(10 - 196)
Decachlorobiphenyl	133	(10 - 199)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Tetra Tech NUS, Inc

Client Sample ID: SB-387-0102

GC/MS Semivolatiles

Lot-Sample #...:	A7J170248-001	**Work Order #...:**	J86J41AD	**Matrix.....:**	SOLID
Date Sampled...:	10/15/07 16:00	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295068				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.18 g	**Final Wgt/Vol..:**	2 mL
% Moisture.....:	6.3	**Method.....:**	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzo(a)pyrene	**12 J**	**350**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	75	(24 - 112)
2-Fluorobiphenyl	78	(34 - 110)
Terphenyl-d14	91	(41 - 119)
Phenol-d5	86	(28 - 110)
2-Fluorophenol	81	(26 - 110)
2,4,6-Tribromophenol	55	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

STL North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp8.i\71024b.b\J86J41AD.D
Lab Smp Id: j86j41ad Client Smp ID: SB-387-0102
Inj Date : 24-OCT-2007 20:27
Operator : 001710 Inst ID: a4hp8.i
Smp Info : j86j41ad,71024b.b,8270p,1-827042d.sub
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp8.i\71024b.b\8270P.m
Meth Date : 25-Oct-2007 12:35 gruberj Quant Type: ISTD
Cal Date : 24-OCT-2007 17:53 Cal File: 8SMH1024.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANPMSSV01

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws *) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)(1000 low, 2
Vi	0.50000	Volume injected (uL)
Ws	30.180	Weight of sample extracted (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/kg)	
* 1	1,4-Dichlorobenzene-d4	152	3.588	3.588	(1.000)	106176	2.00000		(Q)
* 2	Naphthalene-d8	136	4.483	4.487	(1.000)	483260	2.00000		
* 3	Acenaphthene-d10	164	5.757	5.757	(1.000)	295992	2.00000		
* 4	Phenanthrene-d10	188	6.844	6.844	(1.000)	566345	2.00000		
* 5	Chrysene-d12	240	8.844	8.863	(1.000)	548595	2.00000		
* 6	Perylene-d12	264	10.378	10.392	(1.000)	472376	2.00000		
9	Pyridine	79	Compound Not Detected.						
10	N-Nitrosodimethylamine	74	Compound Not Detected.						
11	Ethyl methacrylate	69	Compound Not Detected.						
12	3-Chloropropionitrile	54	Compound Not Detected.						
13	Malononitrile	66	Compound Not Detected.						
209	Benzaldehyde	77	Compound Not Detected.						
21	Aniline	93	Compound Not Detected.						
22	Phenol	94	Compound Not Detected.						
23	bis(2-Chloroethyl)ether	93	Compound Not Detected.						
24	2-Chlorophenol	128	Compound Not Detected.						
26	1,3-Dichlorobenzene	146	Compound Not Detected.						
27	1,4-Dichlorobenzene	146	Compound Not Detected.						

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/kg)
115 Phenanthrene	178	6.863	6.863	(1.003)	37148	0.12133	16.080
116 Anthracene	178	Compound Not Detected.					
119 Carbazole	167	Compound Not Detected.					
120 Di-n-Butylphthalate	149	Compound Not Detected.					
123 Fluoranthene	202	7.738	7.743	(1.131)	68129	0.20796	27.563(QM)
124 Benzidine	184	Compound Not Detected.					
125 Pyrene	202	7.912	7.926	(0.895)	52265	0.15573	20.640
131 Butylbenzylphthalate	149	Compound Not Detected.					
133 3,3'-Dimethoxybenzidine	244	Compound Not Detected.					
135 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
136 Benzo(a)Anthracene	228	8.835	8.854	(0.999)	20382	0.06372	8.4448(H)
137 Chrysene	228	8.869	8.887	(1.003)	43008	0.14475	19.185
138 4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.					
139 bis(2-ethylhexyl)Phthalate	149	8.763	8.777	(0.991)	26153	0.11847	15.702
140 Di-n-octylphthalate	149	Compound Not Detected.					
141 Benzo(b)fluoranthene	252	9.898	9.916	(0.954)	53990	0.18105	23.996
142 Benzo(k)fluoranthene	252	9.926	9.945	(0.956)	20387	0.06763	8.9637(QM)
146 Benzo(a)pyrene	252	10.306	10.325	(0.993)	22182	0.08303	11.004
149 Indeno(1,2,3-cd)pyrene	276	12.042	12.076	(1.160)	21943	0.07694	10.197
150 Dibenz(a,h)anthracene	278	Compound Not Detected.					
151 Benzo(g,h,i)perylene	276	12.557	12.595	(1.210)	24843	0.10386	13.765
198 1,4-Dioxane	88	Compound Not Detected.					
$ 154 Nitrobenzene-d5	82	3.964	3.968	(0.884)	448669	3.73425	494.93
$ 155 2-Fluorobiphenyl	172	5.243	5.247	(0.911)	743799	3.91320	518.65
$ 156 Terphenyl-d14	244	7.993	8.002	(0.904)	991369	4.53303	600.80
$ 157 Phenol-d5	99	3.295	3.290	(0.918)	638985	6.47404	858.06
$ 158 2-Fluorophenol	112	2.761	2.713	(0.770)	413734	6.08823	806.92
$ 159 2,4,6-Tribromophenol	330	6.329	6.329	(1.099)	87689	4.15400	550.56
$ 186 2-Chlorophenol-d4	132	3.439	3.434	(0.958)	421872	6.44332	853.98
$ 187 1,2-Dichlorobenzene-d4	152	3.699	3.699	(1.031)	152895	3.48723	462.19
M 195 Cresols, total	100	Compound Not Detected.					
101 Diphenylamine	169	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

SAMPLE CALC SAMPLE ID: COMPOUND: BAP

IS AREA	DILUTION	COMPOUND OF INTEREST AREA	IS AMOUNT (NG)	Final Extract Volume (UL)	AVE RRF	PERCENT SOLIDS	AMOUNT INJECTED (UL)	CONCENTRATION PPB
472376	1	22182	2	2000	1.1312	0.937	0.5	11.74

Sample Amount (g)
30.18

C. 12

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO :	**MIKE MARTIN**	**DATE:**	**JANUARY 4, 2008**
FROM:	**THOMAS JACKMAN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – BENZO(A)PYRENE/PCBS**
LOCKHEED MIDDLE RIVER FACILITY
SAMPLE DELIVERY GROUP (SDG) –7J17253

SAMPLES: 20/Solid

SB-392-0102	SB-392-0203	SB-392-0405	SB-392-0708
SB-393-0102	SB-393-0203	SB-393-0405	SB-393-0708
SB-394-0102	SB-394-0203	SB-394-0405	SB-394-0708
SB-395-0102	SB-395-0203	SB-395-0405	SB-395-0708
SB-396-0102	SB-396-0203	SB-396-0405	SB-396-0708

Overview

This sample set for the Lockheed Middle River, SDG 7J17253, consists of 20 environmental soil samples. The samples were analyzed for benzo(a)pyrene and polychlorinated biphenyls(PCBs). No field duplicates were included in this data set.

The samples were collected by Tetra Tech NUS, Inc. on October 16, 2007 and analyzed by Test America. The samples were analyzed by SW-846 Method 8270C for benzo(a)pyrene and Method 8082 for PCBs.

Summary

The findings in this report are based upon a general review of all available data including: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank contamination, surrogate spike, matrix spike/matrix spike duplicate (MS/MSD) results, Laboratory Control Sample (LCS) results, compound identification, compound quantitation, and detection limits. Areas of concern are listed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Major Problems

- None.

Minor Problems

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, "J".

Notes

In the analysis of benzo(a)pyrene, matrix spike/matrix spike duplicate recoveries and RPDs were outside quality criteria for sample SB-392-0102MS/MSD and the batch MS/MSD used by the laboratory. No data were qualified on the basis of the MS/MSD results because benzo(a)pyrene was not one of the spiked compounds.

In the PCB analysis, matrix spike/matrix spike duplicate RPDs were outside quality criteria for sample SB-392-0102MS/MSD. No data were qualified on the basis of the MS/MSD results because these analytes were not detected in the unspiked sample. In addition, percent recoveries were acceptable for both compounds in the MS and MSD analyses.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "Region III Modifications to the National Functional Guidelines for Organic Data Review" (9/94). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Thomas Jackman
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

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

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-392-0102	nsample	SB-392-0203	nsample	SB-392-0405
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170253001	lab_id	A7J170253002	lab_id	A7J170253003
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	90.2	Pct_Solids	89.0	Pct_Solids	85.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	20	J	P

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-392-0708RE	nsample	SB-393-0102	nsample	SB-393-0203
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170253004	lab_id	A7J170253005	lab_id	A7J170253006
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	84.0	Pct_Solids	94.6	Pct_Solids	92.6
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	450		

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-393-0405	nsample	SB-393-0708	nsample	SB-394-0102
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170253007	lab_id	A7J170253008	lab_id	A7J170253009
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	93.5	Pct_Solids	87.0	Pct_Solids	90.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	7.5	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	140	J	P

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-394-0203	nsample	SB-394-0405	nsample	SB-394-0708RE
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170253010	lab_id	A7J170253011	lab_id	A7J170253012
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	90.6	Pct_Solids	87.0	Pct_Solids	86.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	25	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-395-0102	nsample	SB-395-0203RE	nsample	SB-395-0405
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170253013	lab_id	A7J170253014	lab_id	A7J170253015
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	83.0	Pct_Solids	95.9	Pct_Solids	87.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-395-0708	nsample	SB-396-0102	nsample	SB-396-0203
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170253016	lab_id	A7J170253017	lab_id	A7J170253018
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	87.0	Pct_Solids	85.0	Pct_Solids	86.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	80	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-396-0405	nsample	SB-396-0708
samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170253019	lab_id	A7J170253020
qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG
Pct_Solids	85.0	Pct_Solids	84.0
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-392-0102
samp_date	10/16/2007
lab_id	A7J170253001
qc_type	NM
units	UG/KG
Pct_Solids	90.2
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

nsample	SB-392-0203
samp_date	10/16/2007
lab_id	A7J170253002
qc_type	NM
units	UG/KG
Pct_Solids	89.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

nsample	SB-392-0405
samp_date	10/16/2007
lab_id	A7J170253003
qc_type	NM
units	UG/KG
Pct_Solids	85.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-392-0708
samp_date	10/16/2007
lab_id	A7J170253004
qc_type	NM
units	UG/KG
Pct_Solids	84.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

nsample	SB-393-0102
samp_date	10/16/2007
lab_id	A7J170253005
qc_type	NM
units	UG/KG
Pct_Solids	94.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	35	U	
AROCLOR-1221	35	U	
AROCLOR-1232	35	U	
AROCLOR-1242	35	U	
AROCLOR-1248	35	U	
AROCLOR-1254	35	U	
AROCLOR-1260	22	J	P

nsample	SB-393-0203
samp_date	10/16/2007
lab_id	A7J170253006
qc_type	NM
units	UG/KG
Pct_Solids	92.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	36	U	
AROCLOR-1221	36	U	
AROCLOR-1232	36	U	
AROCLOR-1242	36	U	
AROCLOR-1248	36	U	
AROCLOR-1254	36	U	
AROCLOR-1260	36	U	

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-393-0405
samp_date	10/16/2007
lab_id	A7J170253007
qc_type	NM
units	UG/KG
Pct_Solids	93.5
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	35	U	
AROCLOR-1221	35	U	
AROCLOR-1232	35	U	
AROCLOR-1242	35	U	
AROCLOR-1248	35	U	
AROCLOR-1254	35	U	
AROCLOR-1260	35	U	

nsample	SB-393-0708
samp_date	10/16/2007
lab_id	A7J170253008
qc_type	NM
units	UG/KG
Pct_Solids	87.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

nsample	SB-394-0102
samp_date	10/16/2007
lab_id	A7J170253009
qc_type	NM
units	UG/KG
Pct_Solids	90.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-394-0203
samp_date	10/16/2007
lab_id	A7J170253010
qc_type	NM
units	UG/KG
Pct_Solids	90.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	36	U	
AROCLOR-1221	36	U	
AROCLOR-1232	36	U	
AROCLOR-1242	36	U	
AROCLOR-1248	36	U	
AROCLOR-1254	36	U	
AROCLOR-1260	36	U	

nsample	SB-394-0405
samp_date	10/16/2007
lab_id	A7J170253011
qc_type	NM
units	UG/KG
Pct_Solids	87.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

nsample	SB-394-0708
samp_date	10/16/2007
lab_id	A7J170253012
qc_type	NM
units	UG/KG
Pct_Solids	86.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-395-0102
samp_date	10/16/2007
lab_id	A7J170253013
qc_type	NM
units	UG/KG
Pct_Solids	83.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	40	U	
AROCLOR-1221	40	U	
AROCLOR-1232	40	U	
AROCLOR-1242	40	U	
AROCLOR-1248	40	U	
AROCLOR-1254	40	U	
AROCLOR-1260	40	U	

nsample	SB-395-0203
samp_date	10/16/2007
lab_id	A7J170253014
qc_type	NM
units	UG/KG
Pct_Solids	95.9
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	34	U	
AROCLOR-1221	34	U	
AROCLOR-1232	34	U	
AROCLOR-1242	34	U	
AROCLOR-1248	34	U	
AROCLOR-1254	34	U	
AROCLOR-1260	34	U	

nsample	SB-395-0405
samp_date	10/16/2007
lab_id	A7J170253015
qc_type	NM
units	UG/KG
Pct_Solids	87.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-395-0708
samp_date	10/16/2007
lab_id	A7J170253016
qc_type	NM
units	UG/KG
Pct_Solids	87.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

nsample	SB-396-0102
samp_date	10/16/2007
lab_id	A7J170253017
qc_type	NM
units	UG/KG
Pct_Solids	85.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

nsample	SB-396-0203
samp_date	10/16/2007
lab_id	A7J170253018
qc_type	NM
units	UG/KG
Pct_Solids	86.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

PROJ_NO: 00885

SDG: 7J17253 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-396-0405
samp_date	10/16/2007
lab_id	A7J170253019
qc_type	NM
units	UG/KG
Pct_Solids	85.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

nsample	SB-396-0708
samp_date	10/16/2007
lab_id	A7J170253020
qc_type	NM
units	UG/KG
Pct_Solids	84.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Tetra Tech NUS, Inc

Client Sample ID: SB-392-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-001 **Work Order #...:** J86LQ1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 08:55 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 9.8 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	46	(24 - 112)
2-Fluorobiphenyl	48	(34 - 110)
Terphenyl-d14	60	(41 - 119)
Phenol-d5	49	(28 - 110)
2-Fluorophenol	46	(26 - 110)
2,4,6-Tribromophenol	49	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-392-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-002 **Work Order #...:** J86LV1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 08:57 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 11 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	62	(24 - 112)
2-Fluorobiphenyl	66	(34 - 110)
Terphenyl-d14	76	(41 - 119)
Phenol-d5	63	(28 - 110)
2-Fluorophenol	59	(26 - 110)
2,4,6-Tribromophenol	42	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-392-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-003 **Work Order #...:** J86LX1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 08:59 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 15 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**20 J**	**390**	**ug/kg**	**1.5**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	63	(24 - 112)
2-Fluorobiphenyl	66	(34 - 110)
Terphenyl-d14	77	(41 - 119)
Phenol-d5	66	(28 - 110)
2-Fluorophenol	65	(26 - 110)
2,4,6-Tribromophenol	63	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-392-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-004 **Work Order #...:** J86L12AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:01 **Date Received..:** 10/17/07
Prep Date.....: 10/27/07 **Analysis Date..:** 10/29/07
Prep Batch #...: 7299474
Dilution Factor: 1
% Moisture.....: 16 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	65	(24 - 112)
2-Fluorobiphenyl	67	(34 - 110)
Terphenyl-d14	87	(41 - 119)
Phenol-d5	64	(28 - 110)
2-Fluorophenol	64	(26 - 110)
2,4,6-Tribromophenol	49	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-393-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-005 **Work Order #...:** J86L21AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:24 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 5.4 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**450**	**350**	**ug/kg**	**1.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	57	(24 - 112)
2-Fluorobiphenyl	63	(34 - 110)
Terphenyl-d14	75	(41 - 119)
Phenol-d5	64	(28 - 110)
2-Fluorophenol	57	(26 - 110)
2,4,6-Tribromophenol	61	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-393-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-006 **Work Order #...:** J86L41AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:26 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 7.4 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	360	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	57	(24 - 112)
2-Fluorobiphenyl	60	(34 - 110)
Terphenyl-d14	70	(41 - 119)
Phenol-d5	62	(28 - 110)
2-Fluorophenol	61	(26 - 110)
2,4,6-Tribromophenol	56	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-393-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-007 **Work Order #...:** J86L51AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:28 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 6.5 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**7.5 J**	**350**	**ug/kg**	**1.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	62	(24 - 112)
2-Fluorobiphenyl	65	(34 - 110)
Terphenyl-d14	80	(41 - 119)
Phenol-d5	70	(28 - 110)
2-Fluorophenol	59	(26 - 110)
2,4,6-Tribromophenol	53	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-393-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-008 **Work Order #...:** J86L71AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:30 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	75	(41 - 119)
Phenol-d5	62	(28 - 110)
2-Fluorophenol	51	(26 - 110)
2,4,6-Tribromophenol	47	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-394-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-009 **Work Order #...:** J86L81AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:37 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 10 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**140 J**	**370**	**ug/kg**	**1.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(24 - 112)
2-Fluorobiphenyl	67	(34 - 110)
Terphenyl-d14	72	(41 - 119)
Phenol-d5	67	(28 - 110)
2-Fluorophenol	64	(26 - 110)
2,4,6-Tribromophenol	53	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-394-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-010 **Work Order #...:** J86L91AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:39 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 9.4 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**25 J**	**360**	**ug/kg**	**1.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(24 - 112)
2-Fluorobiphenyl	64	(34 - 110)
Terphenyl-d14	80	(41 - 119)
Phenol-d5	68	(28 - 110)
2-Fluorophenol	61	(26 - 110)
2,4,6-Tribromophenol	61	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-394-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-011 **Work Order #...:** J86MA1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:41 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	54	(24 - 112)
2-Fluorobiphenyl	54	(34 - 110)
Terphenyl-d14	71	(41 - 119)
Phenol-d5	56	(28 - 110)
2-Fluorophenol	49	(26 - 110)
2,4,6-Tribromophenol	33	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-394-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-012 **Work Order #...:** J86MC2AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:43 **Date Received..:** 10/17/07
Prep Date.....: 10/27/07 **Analysis Date..:** 10/29/07
Prep Batch #...: 7299474
Dilution Factor: 1
% Moisture.....: 14 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	51	(24 - 112)
2-Fluorobiphenyl	51	(34 - 110)
Terphenyl-d14	67	(41 - 119)
Phenol-d5	51	(28 - 110)
2-Fluorophenol	48	(26 - 110)
2,4,6-Tribromophenol	29	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-395-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-013 **Work Order #...:** J86MD1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:48 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 17 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	400	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	44	(24 - 112)
2-Fluorobiphenyl	56	(34 - 110)
Terphenyl-d14	75	(41 - 119)
Phenol-d5	58	(28 - 110)
2-Fluorophenol	56	(26 - 110)
2,4,6-Tribromophenol	69	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-395-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-014 **Work Order #...:** J86ME2AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:50 **Date Received..:** 10/17/07
Prep Date.....: 10/27/07 **Analysis Date..:** 10/29/07
Prep Batch #...: 7299474
Dilution Factor: 1
% Moisture.....: 4.1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	340	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	74	(41 - 119)
Phenol-d5	58	(28 - 110)
2-Fluorophenol	57	(26 - 110)
2,4,6-Tribromophenol	41	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-395-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-015 **Work Order #...:** J86MF1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:52 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	59	(24 - 112)
2-Fluorobiphenyl	66	(34 - 110)
Terphenyl-d14	79	(41 - 119)
Phenol-d5	67	(28 - 110)
2-Fluorophenol	63	(26 - 110)
2,4,6-Tribromophenol	53	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-395-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-016 **Work Order #...:** J86MG1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 09:54 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	57	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	75	(41 - 119)
Phenol-d5	61	(28 - 110)
2-Fluorophenol	61	(26 - 110)
2,4,6-Tribromophenol	59	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-396-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-017 **Work Order #...:** J86MH1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:05 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 15 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**80 J**	**390**	**ug/kg**	**1.5**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	59	(24 - 112)
2-Fluorobiphenyl	62	(34 - 110)
Terphenyl-d14	70	(41 - 119)
Phenol-d5	64	(28 - 110)
2-Fluorophenol	60	(26 - 110)
2,4,6-Tribromophenol	67	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-396-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-018 **Work Order #...:** J86MJ1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:07 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 14 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	74	(41 - 119)
Phenol-d5	65	(28 - 110)
2-Fluorophenol	63	(26 - 110)
2,4,6-Tribromophenol	67	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-396-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-019 **Work Order #...:** J86MK1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:09 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 15 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(24 - 112)
2-Fluorobiphenyl	64	(34 - 110)
Terphenyl-d14	79	(41 - 119)
Phenol-d5	72	(28 - 110)
2-Fluorophenol	71	(26 - 110)
2,4,6-Tribromophenol	55	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-396-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170253-020 **Work Order #...:** J86ML1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:11 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295069
Dilution Factor: 1
% Moisture.....: 16 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	55	(24 - 112)
2-Fluorobiphenyl	54	(34 - 110)
Terphenyl-d14	74	(41 - 119)
Phenol-d5	62	(28 - 110)
2-Fluorophenol	60	(26 - 110)
2,4,6-Tribromophenol	57	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-392-0102

GC Semivolatiles

Lot-Sample #...:	A7J170253-001	**Work Order #...:**	J86LQ1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 08:55	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.8	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	88	(10 - 196)
Decachlorobiphenyl	72	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-392-0203

GC Semivolatiles

Lot-Sample #...:	A7J170253-002	**Work Order #...:**	J86LV1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 08:57	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 196)
Decachlorobiphenyl	88	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-392-0405

GC Semivolatiles

Lot-Sample #...: A7J170253-003	**Work Order #...:** J86LX1AC	**Matrix.....:** SO
Date Sampled...: 10/16/07 08:59	**Date Received..:** 10/17/07	
Prep Date.....: 10/23/07	**Analysis Date..:** 10/29/07	
Prep Batch #...: 7295394		
Dilution Factor: 1	**Initial Wgt/Vol:** 30.09 g	**Final Wgt/Vol..:** 10 mL
% Moisture.....: 15	**Method.....:** SW846 8082	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	91	(10 - 196)
Decachlorobiphenyl	79	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-392-0708

GC Semivolatiles

Lot-Sample #...: A7J170253-004	**Work Order #...:** J86L11AC	**Matrix.....:** SO
Date Sampled...: 10/16/07 09:01	**Date Received..:** 10/17/07	
Prep Date.....: 10/23/07	**Analysis Date..:** 10/29/07	
Prep Batch #...: 7295394		
Dilution Factor: 1	**Initial Wgt/Vol:** 30.19 g	**Final Wgt/Vol..:** 10 mL
% Moisture.....: 16	**Method.....:** SW846 8082	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	96	(10 - 196)
Decachlorobiphenyl	92	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-393-0102

GC Semivolatiles

Lot-Sample #...:	A7J170253-005	**Work Order #...:**	J86L21AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:24	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.04 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	5.4	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	**22 J**	**35**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	104	(10 - 196)
Decachlorobiphenyl	108	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-393-0203

GC Semivolatiles

Lot-Sample #...:	A7J170253-006	**Work Order #...:**	J86L41AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:26	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.08 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	7.4	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90	(10 - 196)
Decachlorobiphenyl	82	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-393-0405

GC Semivolatiles

Lot-Sample #...:	A7J170253-007	**Work Order #...:**	J86L51AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:28	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.14 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	6.5	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	92	(10 - 196)
Decachlorobiphenyl	137	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-393-0708

GC Semivolatiles

Lot-Sample #...:	A7J170253-008	**Work Order #...:**	J86L71AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:30	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(10 - 196)
Decachlorobiphenyl	93	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-394-0102

GC Semivolatiles

Lot-Sample #...:	A7J170253-009	**Work Order #...:**	J86L81AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:37	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.14 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	10	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(10 - 196)
Decachlorobiphenyl	98	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-394-0203

GC Semivolatiles

Lot-Sample #...:	A7J170253-010	**Work Order #...:**	J86L91AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:39	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.17 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.4	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	109	(10 - 196)
Decachlorobiphenyl	96	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-394-0405

GC Semivolatiles

Lot-Sample #...:	A7J170253-011	**Work Order #...:**	J86MA1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:41	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.08 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(10 - 196)
Decachlorobiphenyl	97	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-394-0708

GC Semivolatiles

Lot-Sample #...:	A7J170253-012	**Work Order #...:**	J86MC1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:43	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.1 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	14	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	81	(10 - 196)
Decachlorobiphenyl	87	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-395-0102

GC Semivolatiles

Lot-Sample #...:	A7J170253-013	**Work Order #...:**	J86MD1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:48	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/31/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	17	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 196)
Decachlorobiphenyl	85	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-395-0203

GC Semivolatiles

Lot-Sample #...:	A7J170253-014	**Work Order #...:**	J86ME1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:50	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/31/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	4.1	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	34	ug/kg
Aroclor 1221	ND	34	ug/kg
Aroclor 1232	ND	34	ug/kg
Aroclor 1242	ND	34	ug/kg
Aroclor 1248	ND	34	ug/kg
Aroclor 1254	ND	34	ug/kg
Aroclor 1260	ND	34	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	87	(10 - 196)
Decachlorobiphenyl	81	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-395-0405

GC Semivolatiles

Lot-Sample #...:	A7J170253-015	**Work Order #...:**	J86MF1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:52	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/31/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90	(10 - 196)
Decachlorobiphenyl	64	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-395-0708

GC Semivolatiles

Lot-Sample #...:	A7J170253-016	**Work Order #...:**	J86MG1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:54	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90	(10 - 196)
Decachlorobiphenyl	70	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-396-0102

GC Semivolatiles

Lot-Sample #...:	A7J170253-017	**Work Order #...:**	J86MH1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:05	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/31/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	15	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	92	(10 - 196)
Decachlorobiphenyl	89	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-396-0203

GC Semivolatiles

Lot-Sample #...:	A7J170253-018	**Work Order #...:**	J86MJ1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:07	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/31/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	14	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 196)
Decachlorobiphenyl	93	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-396-0405

GC Semivolatiles

Lot-Sample #...:	A7J170253-019	**Work Order #...:**	J86MK1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:09	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	15	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	83	(10 - 196)
Decachlorobiphenyl	96	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-396-0708

GC Semivolatiles

Lot-Sample #...:	A7J170253-020	**Work Order #...:**	J86ML1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:11	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.15 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	16	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	130	(10 - 196)
Decachlorobiphenyl	103	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

7J17253

The following report contains the analytical results for twenty solid samples submitted to TestAmerica North Canton by Tetra Tech NUS Inc. from the LMC MR Site, project number 112IC00885. The samples were received October 17, 2007, according to documented sample acceptance procedures.

This SDG consists of (1) laboratory ID's: A7J170253.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Dev Murali, John Poremba, and Michael Martin on November 02, 2007. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Patrick J. O'Meara, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 3.6, 3.8, and 4.9°C.

GC/MS SEMIVOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for SB-392-0102 had RPD's and recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

The matrix spike/matrix spike duplicate(s) for batch(es) 7299474 had RPD's outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

POLYCHLORINATED BIPHENYLS-8082

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for SB-392-0102 had RPD's outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton (formerly STL North Canton) conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton (formerly STL North Canton) requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: Tetra Tech	Project Manager: Mike Martin	Date: 10/16/07	Chain of Custody Number: 322967
Address: 20251 Century Blvd #200	Telephone Number (Area Code)/Fax Number: 301-528-3022	Lab Number:	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Shawn Hadley	Lab Contact: Ken Ives	
Project Name and Location (State): LMC MA	Carrier/Waybill Number: N/A		
Contract/Purchase Order/Quote No.: 112IC00885			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: 8270 #	PCB 8082	Special Instructions/ Conditions of Receipt
SB-391-0102	10/16	0845				X	2						X	X	*benzo(g)fluorene
-0203		0847													
-0405		0850													
391-0708		0852													
392-0102		0855													
0203		0857													
0405		0859													
392 0708		0901													
393-0102		0924													
0203		0926													
0405		0928													
SB-393-0708	10/16	0930				X	2						X	X	*benzo(g)fluorene

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STND

QC Requirements (Specify)

1. Relinquished By	Date: 10/16/07	Time: 1420	1. Received By	Date: 10-16-07	Time: 1430
2. Relinquished By	Date:	Time:	2. Received By	Date: 10-17-07	Time: 0940
3. Relinquished By	Date:	Time:	3. Received By	Date:	Time:

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

16

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
Tetra Tech	Mike Marlin	10/16/07	322968
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
20251 Century Blvd #200	301-528-3022		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Germantown / MD / 20874	Shawn Medley	Ken Ives	
Project Name and Location (State)	**Carrier/Waybill Number**		
LMC MR			
Contract/Purchase Order/Quote No.			
112 IC 00885			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: 8270 *	Analysis: 8082 PCB	Special Instructions/ Conditions of Receipt
SB-394-0102	10/16	0937				X	X						X	X	* benzo(a) pyrene
-0203		0939													
-0405		0941													
394-0708		0943													
395-0102		0948													
0203		0950													
0405		0952													
395-0708		0954													
396-0102		1005													
0203		1007													
0405		1009													
SB 396 0708	10/16	1011				X	X						X	X	* benzo(a) pyrene

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STND

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/16/07	1420	1. Received By	10-16-07	1430
2. Relinquished By			2. Received By	10-17-07	0940
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report: CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

17

HOLDTIME

SDG 7J17253

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	SB-393-0203	A7J170253006	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-396-0708	A7J170253020	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-392-0102	A7J170253001	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-392-0203	A7J170253002	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-392-0405	A7J170253003	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-393-0102	A7J170253005	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-393-0405	A7J170253007	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-393-0708	A7J170253008	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-394-0102	A7J170253009	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-394-0203	A7J170253010	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-396-0203	A7J170253018	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-392-0708	A7J170253004	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-396-0405	A7J170253019	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-394-0405	A7J170253011	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-396-0102	A7J170253017	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	SB-395-0708	A7J170253016	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-395-0405	A7J170253015	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-395-0203	A7J170253014	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-395-0102	A7J170253013	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-394-0708	A7J170253012	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
OS	%	SB-394-0708RE	A7J170253012	NM	10/16/2007	10/27/2007	10/29/2007	11	2	13
OS	%	SB-394-0405	A7J170253011	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-396-0708	A7J170253020	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-396-0405	A7J170253019	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-396-0203	A7J170253018	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-396-0102	A7J170253017	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-395-0708	A7J170253016	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-395-0405	A7J170253015	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-395-0203RE	A7J170253014	NM	10/16/2007	10/27/2007	10/29/2007	11	2	13
OS	%	SB-392-0102	A7J170253001	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-394-0203	A7J170253010	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-394-0102	A7J170253009	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-393-0708	A7J170253008	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	%	SB-393-0405	A7J170253007	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-393-0203	A7J170253006	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-393-0102	A7J170253005	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-392-0708RE	A7J170253004	NM	10/16/2007	10/27/2007	10/29/2007	11	2	13
OS	%	SB-392-0203	A7J170253002	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-395-0102	A7J170253013	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	%	SB-392-0405	A7J170253003	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-396-0203	A7J170253018	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-394-0405	A7J170253011	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-394-0708RE	A7J170253012	NM	10/16/2007	10/27/2007	10/29/2007	11	2	13
OS	UG/KG	SB-395-0102	A7J170253013	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-395-0203RE	A7J170253014	NM	10/16/2007	10/27/2007	10/29/2007	11	2	13
OS	UG/KG	SB-395-0405	A7J170253015	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-396-0102	A7J170253017	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-393-0203	A7J170253006	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-396-0405	A7J170253019	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-395-0708	A7J170253016	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-394-0203	A7J170253010	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
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OS	UG/KG	SB-393-0405	A7J170253007	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-393-0102	A7J170253005	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-392-0708RE	A7J170253004	NM	10/16/2007	10/27/2007	10/29/2007	11	2	13
OS	UG/KG	SB-392-0405	A7J170253003	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-392-0203	A7J170253002	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-392-0102	A7J170253001	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-396-0708	A7J170253020	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-393-0708	A7J170253008	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
PCB	%	SB-394-0405	A7J170253011	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-395-0708	A7J170253016	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-394-0102	A7J170253009	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-392-0102	A7J170253001	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-396-0708	A7J170253020	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-396-0405	A7J170253019	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-396-0102	A7J170253017	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
PCB	%	SB-395-0405	A7J170253015	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
PCB	%	SB-395-0203	A7J170253014	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	%	SB-395-0102	A7J170253013	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
PCB	%	SB-392-0405	A7J170253003	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-396-0203	A7J170253018	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
PCB	%	SB-392-0203	A7J170253002	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-394-0708	A7J170253012	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-392-0708	A7J170253004	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-393-0102	A7J170253005	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-393-0203	A7J170253006	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-393-0405	A7J170253007	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-393-0708	A7J170253008	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-394-0203	A7J170253010	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-394-0708	A7J170253012	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-392-0102	A7J170253001	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-396-0405	A7J170253019	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-396-0203	A7J170253018	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
PCB	UG/KG	SB-396-0102	A7J170253017	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
PCB	UG/KG	SB-395-0708	A7J170253016	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-395-0405	A7J170253015	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	UG/KG	SB-395-0203	A7J170253014	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
PCB	UG/KG	SB-395-0102	A7J170253013	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
PCB	UG/KG	SB-396-0708	A7J170253020	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-394-0405	A7J170253011	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-394-0203	A7J170253010	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-394-0102	A7J170253009	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-393-0708	A7J170253008	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-393-0405	A7J170253007	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-393-0203	A7J170253006	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-393-0102	A7J170253005	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-392-0708	A7J170253004	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-392-0203	A7J170253002	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-392-0405	A7J170253003	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13

CALCULATION WORKSHEET

CLIENT: LOCKHEED MIDDLE RIVER	**SDG No.** 7J17253
SUBJECT: EXAMPLE CALCULATION - BENZO(A)PYRENE - SOIL	
BY: T. JACKMAN	**DATE:** **11/28/07**

Sample ID = SB-392-0708
Concentration = 450 ug/kg

Benzo(a)pyrene

EQUATION:

$$C_s = \frac{A_x \times Is \times Vt \times Df}{Ais \times RRF \times V_i \times W_s \times D}$$

Where:

C_s	=	analyte concentration in soil		ug/kg
A_x	=	analyte response	=	2822007
Is	=	amount of internal standard	=	2 ng
V_t	=	volume of final extract	=	2000 uL
Df	=	dilution factor	=	1
Ais	=	response of internal standard	=	1666602
RRF	=	response factor of compound	=	1.06554
V_i	=	volume injected	=	0.5 uL
Ws	=	sample weight	=	30.09 g
D	=	percent solids	=	0.946

Therefore: benzo(a)pyrene concentration in soil =

$$\frac{2822007 \times 2ng \times 2000uL \times 1}{1666602 \times 1.06554 \times 0.5uL \times 30.09g \times 0.946}$$

C_s = 447 ug/kg

Tetra Tech NUS, Inc

Client Sample ID: SB-393-0102

GC/MS Semivolatiles

Lot-Sample #...:	A7J170253-005	**Work Order #...:**	J86L21AD	**Matrix.....:**	SO
Date Sampled...:	10/16/07 09:24	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295069				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	2 mL
% Moisture.....:	5.4	**Method.....:**	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzo(a)pyrene	**450**	**350**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	57	(24 - 112)
2-Fluorobiphenyl	63	(34 - 110)
Terphenyl-d14	75	(41 - 119)
Phenol-d5	64	(28 - 110)
2-Fluorophenol	57	(26 - 110)
2,4,6-Tribromophenol	61	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

STL North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4ag2.i\71025A.b\J86L21AD.D
Lab Smp Id: J86L21AD Client Smp ID: SB-393-0102
Inj Date : 25-OCT-2007 16:48
Operator : 046900 Inst ID: a4ag2.i
Smp Info : J86L21AD,71025A.b,8270P,PAH.SUB
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4ag2.i\71025A.b\8270p.m
Meth Date : 26-Oct-2007 08:06 hulat Quant Type: ISTD
Cal Date : 24-OCT-2007 12:23 Cal File: 2SHHH1024.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PAH.SUB
Target Version: 4.14
Processing Host: CANPMSSV04

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)(1000 low, 2
Vi	0.50000	Volume injected (uL)
Ws	30.090	Weight of sample extracted (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/kg)	
* 1 1,4-Dichlorobenzene-d4	152	3.625	3.624	(1.000)	384923	2.00000		(Q)
* 2 Naphthalene-d8	136	4.519	4.518	(1.000)	1833380	2.00000		
* 3 Acenaphthene-d10	164	5.789	5.789	(1.000)	969704	2.00000		
* 4 Phenanthrene-d10	188	6.883	6.877	(1.000)	1849095	2.00000		
* 5 Chrysene-d12	240	8.865	8.853	(1.000)	1717122	2.00000		
* 6 Perylene-d12	264	10.377	10.347	(1.000)	1666602	2.00000		
23 bis(2-Chloroethyl)ether	93	Compound Not Detected.						
35 Nitrobenzene	77	Compound Not Detected.						
51 Naphthalene	128	4.536	4.536	(1.004)	104001	0.13356	17.755	
62 2-Methylnaphthalene	142	5.030	5.024	(1.113)	33558	0.06737	8.9555	
63 1-Methylnaphthalene	142	5.101	5.101	(1.129)	29820	0.05616	7.4654	
70 2-Chloronaphthalene	162	Compound Not Detected.						
79 Acenaphthylene	152	5.695	5.689	(0.984)	59465	0.07352	9.7729	
82 Acenaphthene	153	5.813	5.812	(1.004)	280064	0.51500	68.462	(Q)
86 Dibenzofuran	168	5.936	5.936	(1.025)	136687	0.19358	25.734	
94 Fluorene	166	6.189	6.189	(1.069)	243226	0.39890	53.027	
107 Hexachlorobenzene	284	Compound Not Detected.						
115 Phenanthrene	178	6.901	6.895	(1.003)	4479430	4.79991	638.07	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/kg)
125 Pyrene	202	7.954	7.948	(0.897)	6902650	7.13375	948.32
136 Benzo(a)Anthracene	228	8.859	8.842	(0.999)	3657873	3.62680	482.13
137 Chrysene	228	8.889	8.877	(1.003)	3254485	3.59809	478.31
141 Benzo(b)fluoranthene	252	9.906	9.877	(0.955)	3994980	4.07382	541.55(M)
142 Benzo(k)fluoranthene	252	9.930	9.912	(0.957)	1688747	1.67428	222.57(QM)
146 Benzo(a)pyrene	252	10.306	10.283	(0.993)	2822007	3.17823	422.50
149 Indeno(1,2,3-cd)pyrene	276	12.036	12.000	(1.160)	1692826	1.75727	233.60
150 Dibenz(a,h)anthracene	278	12.042	12.006	(1.160)	421835	0.50866	67.619
151 Benzo(g,h,i)perylene	276	12.553	12.506	(1.210)	1574752	1.90697	253.50
$ 154 Nitrobenzene-d5	82	4.001	4.001	(0.885)	789239	2.83337	376.65
$ 155 2-Fluorobiphenyl	172	5.277	5.277	(0.912)	1828556	3.15923	419.97
$ 156 Terphenyl-d14	244	8.030	8.024	(0.906)	2630448	3.74574	497.94
$ 157 Phenol-d5	99	3.336	3.318	(0.920)	1414163	4.80741	639.07
$ 158 2-Fluorophenol	112	2.789	2.742	(0.770)	986554	4.27750	568.63
$ 159 2,4,6-Tribromophenol	330	6.366	6.359	(1.100)	340139	4.53757	603.20

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 26-OCT-2007 16:09
End Cal Date : 26-OCT-2007 18:50
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp7.i\71026a.b\8270P.m
Last Edit : 27-Oct-2007 08:58 ulmanm
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
144 Hexachlorophene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
145 Hexachlorophene product	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
146 Benzo(a)pyrene	1.17968	0.97166	1.01188	1.05737	1.09953	1.12316			
	1.13493	1.16596	1.25556				1.11108	7.898	
148 3-Methylcholanthrene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
149 Indeno(1,2,3-cd)pyrene	1.23781	1.06242	1.07379	1.12596	1.20599	1.23476			
	1.22933	1.27705	1.37576				1.20254	8.349	
150 Dibenz(a,h)anthracene	1.02771	0.83559	0.86017	0.92198	0.95752	0.97952			
	0.98402	1.01704	1.10090				0.96494	8.618	
151 Benzo(g,h,i)perylene	1.07704	0.89128	0.93016	0.97952	1.02707	1.01343			
	1.01579	1.05027	1.13828				1.01365	7.332	
230 2-Chloroacetophenone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
199 3-Picoline	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
200 N,N-Dimethylacetamide	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
201 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

CALCULATION WORKSHEET

CLIENT: LOCKHEED MIDDLE RIVER	**SDG No.** 7J17253
SUBJECT: EXAMPLE CALCULATION - AROCLOR-1260 - SOIL	
BY: T. JACKMAN	**DATE:** **11/28/07**

Sample ID = SB-393-0102
Concentration = 22 ug/kg

Aroclor-1260

EQUATION:

$$C_w = \frac{A_x \times V_t \times Df}{CF \times V_i \times W_s \times D}$$

Where:

C_s	=	analyte concentration in soil		ug/kg
A_x	=	analyte response	=	416153.8
V_t	=	volume of final extract	=	10000 uL
Df	=	dilution factor	=	1
CF	=	calibration factor	=	6449886
V_i	=	volume injected	=	1 uL
Ws	=	sample weight	=	30.04 g
D	=	percent solids	=	0.946

Therefore: Aroclor-1260 concentration in soil =

$$\frac{416153.8 \times 10000uL \times 1}{6449885.6 \times 1uL \times 30.04g \times 0.946}$$

C_s = 22.7 ug/kg

Tetra Tech NUS, Inc

Client Sample ID: SB-393-0102

GC Semivolatiles

Lot-Sample #...:	A7J170253-005	Work Order #...:	J86L21AC	Matrix.....:	SO
Date Sampled...:	10/16/07 09:24	Date Received..:	10/17/07		
Prep Date.....:	10/23/07	Analysis Date..:	10/29/07		
Prep Batch #...:	7295394				
Dilution Factor:	1	Initial Wgt/Vol:	30.04 g	Final Wgt/Vol..:	10 mL
% Moisture.....:	5.4	Method.....:	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	**22 J**	**35**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	104	(10 - 196)
Decachlorobiphenyl	108	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Data File: 022F1601.D
Report Date: 29-Oct-2007 15:05

STL North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp11.i\71029-1.b\71029-1.b\022F1601.D
Lab Smp Id: J86L21AC Client Smp ID: SB-393-0102
Inj Date : 29-OCT-2007 13:59
Operator : Inst ID: a2hp11.i
Smp Info : J86L21AC
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\GCS\a2hp11.i\71029-1.b\HP11PCBF.m\HP11PCBr.m
Meth Date : 29-Oct-2007 12:20 hassl Quant Type: ESTD
Cal Date : 27-JUN-2007 22:15 Cal File: 038F3801.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.364	2.363	0.001	2143065	0.02090	6.957		
2 AROCLOR-1221					CAS #: 11104-28-2		

Peaks not detected for Quant. or Qual. signal(s).

3 AROCLOR-1016 CAS #: 12674-11-2

Compound Not Detected

4 AROCLOR-1232 CAS #: 11141-16-5

Compound Not Detected

Data File: 022F1601.D
Report Date: 29-Oct-2007 15:05

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
6.492	6.493	-0.001	180066	0.03490	11.62	80.00- 120.00	100.00(M)
6.773	6.773	0.000	597041	0.10432	34.73	83.32- 138.87	331.57
7.737	7.739	-0.002	143753	0.02967	9.877	69.28- 115.46	79.83
8.073	8.076	-0.003	683209	0.07020	23.37	138.14- 230.23	379.42
8.550	8.550	0.000	476700	0.07022	23.38	94.04- 156.73	264.74
Average of Peak Concentrations =					20.59		
M 15 TOTAL PCB					CAS #: 1336-36-3		
			0	0.06186	20.59		
$ 9 DCB					CAS #: 2051-24-3		
9.879	9.880	-0.001	1728227	0.02167	7.212		

QC Flag Legend

M - Compound response manually integrated.

Report Date : 28-Jun-2007 07:57

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2007 12:58
End Cal Date : 27-JUN-2007 23:32
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\cansvr11\DD\chem\GCS\a2hp11.i\706271C-1.b\HP11PCBF.m\HP1
Last Edit : 28-Jun-2007 07:56 serraa
Curve Type : Average

AV6

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.000 Level 6	___ RRF	% RSD	
8 AROCLOR-1260 (1)	5619060	5309300	5189900	5273346	5014942	4549596	5159357	6.937	
(2)	5982620	5940750	5757505	5897484	5638916	5122556	5723305	5.602	
(3)	4976800	4915680	4869605	5034908	4845129	4428800	4845169	4.448	
(4)	9593840	9663650	9685460	10326272	9980749	9147788	9732960	4.064	
(5)	6732520	6758720	6799125	7179472	6923776	6338210	6788637	4.051	
13 AROCLOR-1262 (1)	5304280	5084140	5081400	5144048	4743262	4746378	5017251	4.505	
(2)	7289680	7009510	7066455	7244928	6713596	6774967	7016523	3.369	
(3)	6766180	6508850	6601355	6813800	6326529	6417589	6572384	2.928	
(4)	12436820	12222000	12635460	13322140	12373435	12570904	12593460	3.063	
(5)	8707440	8544480	8802440	9189122	8504111	8748166	8749293	2.800	
14 AROCLOR-1268 (1)	4733460	4524700	4258475	4069628	3887989	4079057	4258885	7.437	
(2)	15468840	15157150	14998095	14945972	13915699	14769228	14875831	3.537	
(3)	10833940	10588580	10453835	10442432	9750985	10348368	10403023	3.472	
(4)	4204700	4124770	4154730	4131326	3815695	4038651	4078312	3.421	
(5)	28220620	27166370	27467175	28172432	25720422	27383993	27355169	3.326	
M 15 TOTAL PCB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 1 TCMX	101900400	101905600	101298600	109250960	105079860	95836250	102545278	4.334	
$ 9 DCB	98010000	83298800	83255900	78201080	71147460	64675930	79764862	14.425	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO : **MIKE MARTIN** **DATE:** **JANUARY 7, 2008**

FROM: **THOMAS JACKMAN** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – BENZO(A)PYRENE/PCBS**
LOCKHEED MIDDLE RIVER FACILITY
SAMPLE DELIVERY GROUP (SDG) – 7J17258

SAMPLES: 20/Solid

SB-397-0102	SB-397-0203	SB-397-0405	SB-397-0708
SB-398-0102	SB-398-0203	SB-398-0405	SB-398-0708
SB-399-0102	SB-399-0203	SB-399-0405	SB-399-0708
SB-400-0102	SB-400-0203	SB-400-0405	SB-400-0708
SB-401-0102	SB-401-0203	SB-401-0405	SB-401-0708

Overview

This sample set for the Lockheed Middle River, SDG 7J17258, consists of 20 environmental soil samples. The samples were analyzed for benzo(a)pyrene and polychlorinated biphenyls(PCBs). No field duplicates were included in this data set.

The samples were collected by Tetra Tech NUS, Inc. on October 16, 2007 and analyzed by Test America Laboratories. The samples were analyzed by SW-846 Method 8270C for benzo(a)pyrene and Method 8082 for PCBs.

Summary

The findings in this report are based upon a general review of all available data including: data completeness, system performance, holding times, initial/continuing calibrations, laboratory method blank contamination, surrogate spike, matrix spike/matrix spike duplicate (MS/MSD) results, Laboratory Control Sample (LCS) results, compound identification, compound quantitation, and detection limits. Areas of concern are listed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Major Problems

- None.

Minor Problems

- The internal standard area count for perylene-d12 in sample SB-397-0203 was less than the lower acceptance limit. The nondetected result for benzo(a)pyrene in this sample is qualified as estimated "UJ".

- The continuing calibration verification %Ds for Aroclor-1016 and Aroclor-1260 were slightly greater than the 15% quality control limit on instrument CLPII on 10/26/07 at 08:59. The positive result for Aroclor-1260 in sample SB-397-0405 is qualified as estimated "J". No validation actions were taken for PCBs in the other associated samples because results for these analytes were nondetects.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, "J".

Notes

The continuing calibration verification %Ds for Aroclor-1016 and Aroclor-1260 were slightly greater than the 15% quality control limit on instrument CLPI on 10/24/07 at 18:03 and on 10/25/07 at 00:03. No validation actions were taken for PCBs in the samples associated with these CCVs because results for PCBs in these samples were nondetects.

Aroclor-1260 was reported as positively detected in one sample (SB-397-0405) on column CLPII. The laboratory did not confirm this result on a second column as specified by Method 8082. The lack of second column confirmation should not affect the identification of Aroclor-1260 in this sample because PCBs are identified by pattern recognition rather than by retention times. The chromatograms of this sample and associated standards are provided in Appendix C.

Executive Summary

Laboratory Performance: The internal standard area count for one sample was outside of quality control limits in the benzo(a)pyrene analysis. Continuing calibration %Ds for PCBs exceeded the 15% quality control limit specified by SW-846 Method 8082.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "Region III Modifications to the National Functional Guidelines for Organic Data Review" (9/94). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Thomas Jackman
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

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

Data Qualifier Key:

J - Positive result is considered estimated, "J", as a result of technical noncompliances.

U - Nondetected result.

UJ - Nondetected result is considered estimated, "UJ", as a result of technical noncompliances.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-397-0102	nsample	SB-397-0203	nsample	SB-397-0405
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170258001	lab_id	A7J170258002	lab_id	A7J170258003
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	95.1	Pct_Solids	89.0	Pct_Solids	95.1
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	80	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	UJ	N

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	850		

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-397-0708
samp_date	10/16/2007
lab_id	A7J170258004
qc_type	NM
units	UG/KG
Pct_Solids	85.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

nsample	SB-398-0102
samp_date	10/16/2007
lab_id	A7J170258005
qc_type	NM
units	UG/KG
Pct_Solids	90.9
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	29	J	P

nsample	SB-398-0203
samp_date	10/16/2007
lab_id	A7J170258006
qc_type	NM
units	UG/KG
Pct_Solids	86.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	33	J	P

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-398-0405	nsample	SB-398-0708	nsample	SB-399-0102
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170258007	lab_id	A7J170258008	lab_id	A7J170258009
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	89.0	Pct_Solids	86.0	Pct_Solids	90.8
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-399-0203	nsample	SB-399-0405	nsample	SB-399-0708RE
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170258010	lab_id	A7J170258011	lab_id	A7J170258012
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	90.0	Pct_Solids	85.0	Pct_Solids	83.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	22	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-400-0102	nsample	SB-400-0203	nsample	SB-400-0405
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170258013	lab_id	A7J170258014	lab_id	A7J170258015
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	91.6	Pct_Solids	92.1	Pct_Solids	84.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	9.1	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-400-0708	nsample	SB-401-0102	nsample	SB-401-0203
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170258016	lab_id	A7J170258017	lab_id	A7J170258018
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	80.0	Pct_Solids	80.0	Pct_Solids	88.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	25	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-401-0405RE	nsample	SB-401-0708
samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170258019	lab_id	A7J170258020
qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG
Pct_Solids	83.0	Pct_Solids	86.0
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-397-0102
samp_date	10/16/2007
lab_id	A7J170258001
qc_type	NM
units	UG/KG
Pct_Solids	95.1
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	35	U	
AROCLOR-1221	35	U	
AROCLOR-1232	35	U	
AROCLOR-1242	35	U	
AROCLOR-1248	35	U	
AROCLOR-1254	35	U	
AROCLOR-1260	35	U	

nsample	SB-397-0203
samp_date	10/16/2007
lab_id	A7J170258002
qc_type	NM
units	UG/KG
Pct_Solids	89.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

nsample	SB-397-0405
samp_date	10/16/2007
lab_id	A7J170258003
qc_type	NM
units	UG/KG
Pct_Solids	95.1
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	35	U	
AROCLOR-1221	35	U	
AROCLOR-1232	35	U	
AROCLOR-1242	35	U	
AROCLOR-1248	35	U	
AROCLOR-1254	35	U	
AROCLOR-1260	19	J	CP

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-397-0708	nsample	SB-398-0102	nsample	SB-398-0203
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170258004	lab_id	A7J170258005	lab_id	A7J170258006
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	85.0	Pct_Solids	90.9	Pct_Solids	86.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	36	U	
AROCLOR-1221	36	U	
AROCLOR-1232	36	U	
AROCLOR-1242	36	U	
AROCLOR-1248	36	U	
AROCLOR-1254	36	U	
AROCLOR-1260	36	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-398-0405	nsample	SB-398-0708	nsample	SB-399-0102
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170258007	lab_id	A7J170258008	lab_id	A7J170258009
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	89.0	Pct_Solids	86.0	Pct_Solids	90.8
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	36	U	
AROCLOR-1221	36	U	
AROCLOR-1232	36	U	
AROCLOR-1242	36	U	
AROCLOR-1248	36	U	
AROCLOR-1254	36	U	
AROCLOR-1260	36	U	

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-399-0203
samp_date	10/16/2007
lab_id	A7J170258010
qc_type	NM
units	UG/KG
Pct_Solids	90.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

nsample	SB-399-0405
samp_date	10/16/2007
lab_id	A7J170258011
qc_type	NM
units	UG/KG
Pct_Solids	85.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

nsample	SB-399-0708
samp_date	10/16/2007
lab_id	A7J170258012
qc_type	NM
units	UG/KG
Pct_Solids	83.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	40	U	
AROCLOR-1221	40	U	
AROCLOR-1232	40	U	
AROCLOR-1242	40	U	
AROCLOR-1248	40	U	
AROCLOR-1254	40	U	
AROCLOR-1260	40	U	

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-400-0102
samp_date	10/16/2007
lab_id	A7J170258013
qc_type	NM
units	UG/KG
Pct_Solids	91.6
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	36	U	
AROCLOR-1221	36	U	
AROCLOR-1232	36	U	
AROCLOR-1242	36	U	
AROCLOR-1248	36	U	
AROCLOR-1254	36	U	
AROCLOR-1260	36	U	

nsample	SB-400-0203
samp_date	10/16/2007
lab_id	A7J170258014
qc_type	NM
units	UG/KG
Pct_Solids	92.1
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	36	U	
AROCLOR-1221	36	U	
AROCLOR-1232	36	U	
AROCLOR-1242	36	U	
AROCLOR-1248	36	U	
AROCLOR-1254	36	U	
AROCLOR-1260	36	U	

nsample	SB-400-0405
samp_date	10/16/2007
lab_id	A7J170258015
qc_type	NM
units	UG/KG
Pct_Solids	84.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-400-0708	nsample	SB-401-0102	nsample	SB-401-0203
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170258016	lab_id	A7J170258017	lab_id	A7J170258018
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	80.0	Pct_Solids	80.0	Pct_Solids	88.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	41	U	
AROCLOR-1221	41	U	
AROCLOR-1232	41	U	
AROCLOR-1242	41	U	
AROCLOR-1248	41	U	
AROCLOR-1254	41	U	
AROCLOR-1260	41	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	41	U	
AROCLOR-1221	41	U	
AROCLOR-1232	41	U	
AROCLOR-1242	41	U	
AROCLOR-1248	41	U	
AROCLOR-1254	41	U	
AROCLOR-1260	41	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

PROJ_NO: 00885

SDG: 7J17258 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-401-0405	nsample	SB-401-0708
samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170258019	lab_id	A7J170258020
qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG
Pct_Solids	83.0	Pct_Solids	86.0
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	40	U	
AROCLOR-1221	40	U	
AROCLOR-1232	40	U	
AROCLOR-1242	40	U	
AROCLOR-1248	40	U	
AROCLOR-1254	40	U	
AROCLOR-1260	40	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Tetra Tech NUS, Inc

Client Sample ID: SB-397-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-001 **Work Order #...:** J86M51AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:18 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/24/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 4.9 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**80 J**	**350**	**ug/kg**	**1.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	68	(24 - 112)
2-Fluorobiphenyl	74	(34 - 110)
Terphenyl-d14	78	(41 - 119)
Phenol-d5	64	(28 - 110)
2-Fluorophenol	68	(26 - 110)
2,4,6-Tribromophenol	61	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-397-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-002 **Work Order #...:** J86M71AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:20 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 11 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	45	(24 - 112)
2-Fluorobiphenyl	58	(34 - 110)
Terphenyl-d14	90	(41 - 119)
Phenol-d5	62	(28 - 110)
2-Fluorophenol	50	(26 - 110)
2,4,6-Tribromophenol	70	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-397-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-003 **Work Order #...:** J86M81AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:22 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 4.9 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**850**	**350**	**ug/kg**	**1.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	42	(24 - 112)
2-Fluorobiphenyl	59	(34 - 110)
Terphenyl-d14	87	(41 - 119)
Phenol-d5	60	(28 - 110)
2-Fluorophenol	47	(26 - 110)
2,4,6-Tribromophenol	62	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-397-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-004 **Work Order #...:** J86NC1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:24 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 15 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	41	(24 - 112)
2-Fluorobiphenyl	37	(34 - 110)
Terphenyl-d14	73	(41 - 119)
Phenol-d5	59	(28 - 110)
2-Fluorophenol	55	(26 - 110)
2,4,6-Tribromophenol	60	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-398-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-005 **Work Order #...:** J86ND1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:30 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 9.1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**29 J**	**360**	**ug/kg**	**1.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(24 - 112)
2-Fluorobiphenyl	63	(34 - 110)
Terphenyl-d14	86	(41 - 119)
Phenol-d5	73	(28 - 110)
2-Fluorophenol	68	(26 - 110)
2,4,6-Tribromophenol	75	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-398-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-006 **Work Order #...:** J86NE1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:32 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 14 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**33 J**	**380**	**ug/kg**	**1.5**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(24 - 112)
2-Fluorobiphenyl	65	(34 - 110)
Terphenyl-d14	86	(41 - 119)
Phenol-d5	67	(28 - 110)
2-Fluorophenol	67	(26 - 110)
2,4,6-Tribromophenol	72	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-398-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-007 **Work Order #...:** J86NF1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:34 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 11 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	41	(24 - 112)
2-Fluorobiphenyl	47	(34 - 110)
Terphenyl-d14	74	(41 - 119)
Phenol-d5	54	(28 - 110)
2-Fluorophenol	48	(26 - 110)
2,4,6-Tribromophenol	48	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-398-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-008 **Work Order #...:** J86NG1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:36 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 14 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	63	(24 - 112)
2-Fluorobiphenyl	64	(34 - 110)
Terphenyl-d14	87	(41 - 119)
Phenol-d5	74	(28 - 110)
2-Fluorophenol	75	(26 - 110)
2,4,6-Tribromophenol	74	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-399-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-009 **Work Order #...:** J86NH1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:48 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 9.2 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	360	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	60	(24 - 112)
2-Fluorobiphenyl	60	(34 - 110)
Terphenyl-d14	85	(41 - 119)
Phenol-d5	70	(28 - 110)
2-Fluorophenol	69	(26 - 110)
2,4,6-Tribromophenol	72	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-399-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-010 **Work Order #...:** J86NJ1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:50 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 10 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	44	(24 - 112)
2-Fluorobiphenyl	46	(34 - 110)
Terphenyl-d14	74	(41 - 119)
Phenol-d5	58	(28 - 110)
2-Fluorophenol	53	(26 - 110)
2,4,6-Tribromophenol	63	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-399-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-011 **Work Order #...:** J86NK1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:52 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 15 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**22 J**	**390**	**ug/kg**	**1.5**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	29	(24 - 112)
2-Fluorobiphenyl	43	(34 - 110)
Terphenyl-d14	73	(41 - 119)
Phenol-d5	43	(28 - 110)
2-Fluorophenol	34	(26 - 110)
2,4,6-Tribromophenol	64	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-399-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-012 **Work Order #...:** J86NL2AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:54 **Date Received..:** 10/17/07
Prep Date.....: 10/24/07 **Analysis Date..:** 10/28/07
Prep Batch #...: 7297362
Dilution Factor: 1
% Moisture.....: 17 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	400	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	68	(24 - 112)
2-Fluorobiphenyl	71	(34 - 110)
Terphenyl-d14	93	(41 - 119)
Phenol-d5	73	(28 - 110)
2-Fluorophenol	68	(26 - 110)
2,4,6-Tribromophenol	74	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-400-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-013 **Work Order #...:** J86NN1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 10:59 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 8.4 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**9.1 J**	**360**	**ug/kg**	**1.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	54	(24 - 112)
2-Fluorobiphenyl	59	(34 - 110)
Terphenyl-d14	83	(41 - 119)
Phenol-d5	65	(28 - 110)
2-Fluorophenol	62	(26 - 110)
2,4,6-Tribromophenol	65	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-400-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-014 **Work Order #...:** J86NQ1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:01 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 7.9 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	360	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	51	(24 - 112)
2-Fluorobiphenyl	53	(34 - 110)
Terphenyl-d14	66	(41 - 119)
Phenol-d5	58	(28 - 110)
2-Fluorophenol	57	(26 - 110)
2,4,6-Tribromophenol	58	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-400-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-015 **Work Order #...:** J86NR1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:03 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 16 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(24 - 112)
2-Fluorobiphenyl	60	(34 - 110)
Terphenyl-d14	85	(41 - 119)
Phenol-d5	72	(28 - 110)
2-Fluorophenol	71	(26 - 110)
2,4,6-Tribromophenol	74	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-400-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-016 **Work Order #...:** J86NT1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:05 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 20 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	410	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	62	(24 - 112)
2-Fluorobiphenyl	62	(34 - 110)
Terphenyl-d14	87	(41 - 119)
Phenol-d5	74	(28 - 110)
2-Fluorophenol	73	(26 - 110)
2,4,6-Tribromophenol	76	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-401-0102

GC/MS Semivolatiles

Lot-Sample #...:	A7J170258-017	**Work Order #...:**	J86NV1AD	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:22	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/23/07		
Prep Batch #...:	7295325				
Dilution Factor:	1				
% Moisture.....:	20	**Method.....:**	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**25 J**	**410**	**ug/kg**	**1.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	67	(24 - 112)
2-Fluorobiphenyl	74	(34 - 110)
Terphenyl-d14	91	(41 - 119)
Phenol-d5	69	(28 - 110)
2-Fluorophenol	65	(26 - 110)
2,4,6-Tribromophenol	84	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-401-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-018 **Work Order #...:** J86NW1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:24 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 12 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	49	(24 - 112)
2-Fluorobiphenyl	56	(34 - 110)
Terphenyl-d14	82	(41 - 119)
Phenol-d5	67	(28 - 110)
2-Fluorophenol	60	(26 - 110)
2,4,6-Tribromophenol	75	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-401-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-019 **Work Order #...:** J86N12AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:26 **Date Received..:** 10/17/07
Prep Date.....: 10/25/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7298390
Dilution Factor: 1
% Moisture.....: 17 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	400	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	96	(41 - 119)
Phenol-d5	66	(28 - 110)
2-Fluorophenol	64	(26 - 110)
2,4,6-Tribromophenol	83	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-401-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-020 **Work Order #...:** J86N21AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:28 **Date Received..:** 10/17/07
Prep Date.....: 10/22/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7295325
Dilution Factor: 1
% Moisture.....: 14 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	24	(24 - 112)
2-Fluorobiphenyl	36	(34 - 110)
Terphenyl-d14	69	(41 - 119)
Phenol-d5	39	(28 - 110)
2-Fluorophenol	32	(26 - 110)
2,4,6-Tribromophenol	59	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-397-0102

GC Semivolatiles

Lot-Sample #...:	A7J170258-001	**Work Order #...:**	J86M51AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:18	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.12 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	4.9	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	113	(10 - 196)
Decachlorobiphenyl	128	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-397-0203

GC Semivolatiles

Lot-Sample #...:	A7J170258-002	**Work Order #...:**	J86M71AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:20	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	87	(10 - 196)
Decachlorobiphenyl	114	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-397-0405

GC Semivolatiles

Lot-Sample #...:	A7J170258-003	**Work Order #...:**	J86M81AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:22	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/26/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.05 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	4.9	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	**19 J**	**35**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	103	(10 - 196)
Decachlorobiphenyl	136	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-397-0708

GC Semivolatiles

Lot-Sample #...:	A7J170258-004	**Work Order #...:**	J86NC1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:24	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	15	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	78	(10 - 196)
Decachlorobiphenyl	102	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-398-0102

GC Semivolatiles

Lot-Sample #...:	A7J170258-005	**Work Order #...:**	J86ND1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:30	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/26/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.14 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.1	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(10 - 196)
Decachlorobiphenyl	120	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-398-0203

GC Semivolatiles

Lot-Sample #...:	A7J170258-006	**Work Order #...:**	J86NE1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:32	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/26/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.2 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	14	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	106	(10 - 196)
Decachlorobiphenyl	121	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-398-0405

GC Semivolatiles

Lot-Sample #...:	A7J170258-007	**Work Order #...:**	J86NF1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:34	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	108	(10 - 196)
Decachlorobiphenyl	110	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-398-0708

GC Semivolatiles

Lot-Sample #...:	A7J170258-008	**Work Order #...:**	J86NG1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:36	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	14	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	104	(10 - 196)
Decachlorobiphenyl	118	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-399-0102

GC Semivolatiles

Lot-Sample #...:	A7J170258-009	**Work Order #...:**	J86NH1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:48	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.2	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(10 - 196)
Decachlorobiphenyl	114	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-399-0203

GC Semivolatiles

Lot-Sample #...:	A7J170258-010	**Work Order #...:**	J86NJ1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:50	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.11 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	10	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(10 - 196)
Decachlorobiphenyl	109	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-399-0405

GC Semivolatiles

Lot-Sample #...:	A7J170258-011	**Work Order #...:**	J86NK1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:52	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	15	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(10 - 196)
Decachlorobiphenyl	104	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-399-0708

GC Semivolatiles

Lot-Sample #...:	A7J170258-012	**Work Order #...:**	J86NL1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 10:54	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.1 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	17	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	101	(10 - 196)
Decachlorobiphenyl	117	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-400-0102

GC Semivolatiles

Lot-Sample #...: A7J170258-013	**Work Order #...:** J86NN1AC	**Matrix.....:** SO	
Date Sampled...: 10/16/07 10:59	**Date Received..:** 10/17/07		
Prep Date.....: 10/22/07	**Analysis Date..:** 10/24/07		
Prep Batch #...: 7295324			
Dilution Factor: 1	**Initial Wgt/Vol:** 30.03 g	**Final Wgt/Vol..:** 10 mL	
% Moisture.....: 8.4	**Method.....:** SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	119	(10 - 196)
Decachlorobiphenyl	118	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-400-0203

GC Semivolatiles

Lot-Sample #...: A7J170258-014	**Work Order #...:** J86NQ1AC	**Matrix.....:** SO	
Date Sampled...: 10/16/07 11:01	**Date Received..:** 10/17/07		
Prep Date.....: 10/22/07	**Analysis Date..:** 10/24/07		
Prep Batch #...: 7295324			
Dilution Factor: 1	**Initial Wgt/Vol:** 30.16 g	**Final Wgt/Vol..:** 10 mL	
% Moisture.....: 7.9	**Method.....:** SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	116	(10 - 196)
Decachlorobiphenyl	102	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-400-0405

GC Semivolatiles

Lot-Sample #...:	A7J170258-015	**Work Order #...:**	J86NR1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:03	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.02 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	16	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 196)
Decachlorobiphenyl	96	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-400-0708

GC Semivolatiles

Lot-Sample #...: A7J170258-016	**Work Order #...:** J86NT1AC	**Matrix.....:** SO	
Date Sampled...: 10/16/07 11:05	**Date Received..:** 10/17/07		
Prep Date.....: 10/22/07	**Analysis Date..:** 10/24/07		
Prep Batch #...: 7295324			
Dilution Factor: 1	**Initial Wgt/Vol:** 30.19 g	**Final Wgt/Vol..:** 10 mL	
% Moisture.....: 20	**Method.....:** SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	41	ug/kg
Aroclor 1221	ND	41	ug/kg
Aroclor 1232	ND	41	ug/kg
Aroclor 1242	ND	41	ug/kg
Aroclor 1248	ND	41	ug/kg
Aroclor 1254	ND	41	ug/kg
Aroclor 1260	ND	41	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	66	(10 - 196)
Decachlorobiphenyl	108	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-401-0102

GC Semivolatiles

Lot-Sample #...:	A7J170258-017	**Work Order #...:**	J86NV1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:22	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/26/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	20	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	41	ug/kg
Aroclor 1221	ND	41	ug/kg
Aroclor 1232	ND	41	ug/kg
Aroclor 1242	ND	41	ug/kg
Aroclor 1248	ND	41	ug/kg
Aroclor 1254	ND	41	ug/kg
Aroclor 1260	ND	41	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	109	(10 - 196)
Decachlorobiphenyl	135	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-401-0203

GC Semivolatiles

Lot-Sample #...:	A7J170258-018	**Work Order #...:**	J86NW1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:24	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/26/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.02 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	81	(10 - 196)
Decachlorobiphenyl	92	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-401-0405

GC Semivolatiles

Lot-Sample #...:	A7J170258-019	**Work Order #...:**	J86N11AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:26	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	17	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	96	(10 - 196)
Decachlorobiphenyl	120	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-401-0708

GC Semivolatiles

Lot-Sample #...:	A7J170258-020	**Work Order #...:**	J86N21AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:28	**Date Received..:**	10/17/07		
Prep Date.....:	10/22/07	**Analysis Date..:**	10/24/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	14	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	64	(10 - 196)
Decachlorobiphenyl	104	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

7J17258

The following report contains the analytical results for twenty solid samples submitted to TestAmerica North Canton by Tetra Tech NUS Inc. from the LMC MR Site, project number 112C00885. The samples were received October 17, 2007, according to documented sample acceptance procedures.

This SDG consists of (1) laboratory ID's: A7J170258.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Patrick J. O'Meara, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 3.6, 3.8, and 4.9°C.

GC/MS SEMIVOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The internal standard areas were outside acceptance limits for sample(s) SB-397-0203 due to matrix effects. (Refer to IS report following this Case Narrative for additional detail.)

POLYCHLORINATED BIPHENYLS-8082

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

For batch(es) 7295324, the CCV exceeded method criteria on the high side. Since the sample(s) results were below the requested reporting limit, the results have been accepted.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: Tetra Tech	Project Manager: Mike Martin	Date: 10/16/07	Chain of Custody Number: 322969
Address: 20251 Century Blvd #200	Telephone Number (Area Code)/Fax Number: 301-528-3022	Lab Number:	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Shawn Hadley	Lab Contact: Ken Ives	
Project Name and Location (State): ~~112IC00885~~ KSK LMC MR	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 112IC00885			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): 8270 *	8082 PCB	Special Instructions/ Conditions of Receipt
SB-397-0102	10/16	1018				X	X						X	X	* benzo(a) pyrene
-0203		1020													
-0405		1022													
397-0708		1024													
398-0102		1030													
0203		1032													
0405		1034													
398-0708		1036													
399-0102		1048													
-0203		1050													
-0405		1052													
SB-399-0708	10/16	1054				X	X						X	X	* benzo(a) pyrene

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STND

QC Requirements (Specify)

1. Relinquished By	Date: 10/16/07	Time: 1420	1. Received By	Date: 10-16-07	Time: 1430
2. Relinquished By	Date:	Time:	2. Received By	Date: 10-17-07	Time: 0910
3. Relinquished By	Date:	Time:	3. Received By	Date:	Time:

Comments:

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

17

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: Tetra Tech	Project Manager: Mike Martin	Date: 10/16/07	Chain of Custody Number: 322970
Address: 20251 Century Blvd #200	Telephone Number (Area Code)/Fax Number: 301-528-3022	Lab Number:	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Shawn Hadley	Lab Contact: Ken Ives	
Project Name and Location (State): LMC MA	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 112 IC 00885			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: 8270 *	Analysis: 8082 PCB	Special Instructions/ Conditions of Receipt
SB-400-0102	10/16	1059				X	X						X	X	* benzo (a) pyrene
-0203		1101													
-0405		1103													
400-0708		1105													
401-0102		1122													
-0203		1124													
-0405		1126													
401-0708		1128													
402-0102		1131													
-0203		1133													
-0405		1135													
SB 402-0708	10/16	1137				X	X soil						X	X	* benzo (a) pyrene

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STND

QC Requirements (Specify)

1. Relinquished By	Date: 10/16/07	Time: 1420	1. Received By	Date: 10-16-07	Time: 1430
2. Relinquished By	Date:	Time:	2. Received By	Date: 10-17-07	Time: 0940
3. Relinquished By	Date:	Time:	3. Received By	Date:	Time:

Comments:

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	SB-400-0708	A7J170258016	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-400-0405	A7J170258015	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-400-0203	A7J170258014	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-400-0102	A7J170258013	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-399-0708	A7J170258012	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
OS	%	SB-399-0708RE	A7J170258012	NM	10/16/2007	10/24/2007	10/28/2007	8	4	12
OS	%	SB-399-0405	A7J170258011	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-401-0708	A7J170258020	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-401-0405RE	A7J170258019	NM	10/16/2007	10/25/2007	10/26/2007	9	1	10
OS	%	SB-401-0203	A7J170258018	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-401-0102	A7J170258017	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-400-0708	A7J170258016	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-400-0405	A7J170258015	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-400-0203	A7J170258014	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-397-0102	A7J170258001	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
OS	%	SB-399-0203	A7J170258010	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-399-0102	A7J170258009	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-398-0708	A7J170258008	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	%	SB-398-0405	A7J170258007	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-398-0203	A7J170258006	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-398-0102	A7J170258005	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-397-0708	A7J170258004	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-397-0203	A7J170258002	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-400-0102	A7J170258013	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	%	SB-397-0405	A7J170258003	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-401-0203	A7J170258018	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-399-0405	A7J170258011	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-399-0708RE	A7J170258012	NM	10/16/2007	10/24/2007	10/28/2007	8	4	12
OS	UG/KG	SB-400-0102	A7J170258013	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-400-0203	A7J170258014	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-400-0405	A7J170258015	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-401-0102	A7J170258017	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-398-0203	A7J170258006	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-401-0405RE	A7J170258019	NM	10/16/2007	10/25/2007	10/26/2007	9	1	10
OS	UG/KG	SB-400-0708	A7J170258016	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-399-0203	A7J170258010	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	SB-399-0102	A7J170258009	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-398-0405	A7J170258007	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-398-0102	A7J170258005	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-397-0708	A7J170258004	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-397-0405	A7J170258003	NM	10/16/2007	10/22/2007	10/25/2007	6	3	9
OS	UG/KG	SB-397-0203	A7J170258002	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-397-0102	A7J170258001	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
OS	UG/KG	SB-401-0708	A7J170258020	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
OS	UG/KG	SB-398-0708	A7J170258008	NM	10/16/2007	10/22/2007	10/23/2007	6	1	7
PCB	%	SB-399-0405	A7J170258011	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-400-0708	A7J170258016	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-399-0102	A7J170258009	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-397-0102	A7J170258001	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-401-0708	A7J170258020	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-401-0405	A7J170258019	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-401-0102	A7J170258017	NM	10/16/2007	10/22/2007	10/26/2007	6	4	10
PCB	%	SB-400-0405	A7J170258015	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-400-0203	A7J170258014	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	%	SB-400-0102	A7J170258013	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-397-0405	A7J170258003	NM	10/16/2007	10/22/2007	10/26/2007	6	4	10
PCB	%	SB-401-0203	A7J170258018	NM	10/16/2007	10/22/2007	10/26/2007	6	4	10
PCB	%	SB-397-0203	A7J170258002	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-399-0708	A7J170258012	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-397-0708	A7J170258004	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-398-0102	A7J170258005	NM	10/16/2007	10/22/2007	10/26/2007	6	4	10
PCB	%	SB-398-0203	A7J170258006	NM	10/16/2007	10/22/2007	10/26/2007	6	4	10
PCB	%	SB-398-0405	A7J170258007	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-398-0708	A7J170258008	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	%	SB-399-0203	A7J170258010	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-399-0708	A7J170258012	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-397-0102	A7J170258001	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-401-0405	A7J170258019	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-401-0203	A7J170258018	NM	10/16/2007	10/22/2007	10/26/2007	6	4	10
PCB	UG/KG	SB-401-0102	A7J170258017	NM	10/16/2007	10/22/2007	10/26/2007	6	4	10
PCB	UG/KG	SB-400-0708	A7J170258016	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-400-0405	A7J170258015	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	UG/KG	SB-400-0203	A7J170258014	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-400-0102	A7J170258013	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-401-0708	A7J170258020	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-399-0405	A7J170258011	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-399-0203	A7J170258010	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-399-0102	A7J170258009	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-398-0708	A7J170258008	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-398-0405	A7J170258007	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-398-0203	A7J170258006	NM	10/16/2007	10/22/2007	10/26/2007	6	4	10
PCB	UG/KG	SB-398-0102	A7J170258005	NM	10/16/2007	10/22/2007	10/26/2007	6	4	10
PCB	UG/KG	SB-397-0708	A7J170258004	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-397-0203	A7J170258002	NM	10/16/2007	10/22/2007	10/24/2007	6	2	8
PCB	UG/KG	SB-397-0405	A7J170258003	NM	10/16/2007	10/22/2007	10/26/2007	6	4	10

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17258

Lab File ID (Standard): 7SMH1023 Date Analyzed: 10/23/07

Instrument ID: A4HP7 Time Analyzed: 1559

		IS4 (PHN) AREA #	RT	IS5 (CRY) AREA #	RT	IS6 (PRY) AREA #	RT
	12 HOUR STD	537061	6.70	477206	8.67	399841	10.06
	UPPER LIMIT	1074122	7.20	954412	9.17	799682	10.56
	LOWER LIMIT	268531	6.20	238603	8.17	199921	9.56
	EPA SAMPLE NO.						
01	J9J49BLK	454070	6.70	425703	8.66	360275	10.06
02	J9J49CHK	374965	6.70	326911	8.66	278739	10.06
03	SB-397-0203	290982	6.70	241710	8.66	197513*	10.06
04	SB-397-0708	477072	6.70	429686	8.66	347820	10.06
05	SB-398-0203	329651	6.70	314886	8.65	258689	10.05
06	SB-398-0405	342761	6.70	305584	8.66	259687	10.06
07	SB-398-0708	493616	6.70	436215	8.65	352763	10.05
08	SB-399-0102	434506	6.70	387114	8.65	330810	10.05
09	SB-399-0203	415293	6.70	381082	8.65	316761	10.05
10	SB-399-0405	357253	6.70	314605	8.64	260312	10.04
11	SB-400-0102	393340	6.70	342615	8.64	293224	10.05
12	SB-400-0405	506369	6.70	433462	8.65	359730	10.05
13	SB-400-0708	368179	6.70	325297	8.64	275172	10.05
14	SB-401-0203	385481	6.70	363691	8.64	292586	10.04
15	SB-401-0708	396522	6.70	366167	8.65	309253	10.05
16	SB-398-0102	330623	6.70	298264	8.65	259954	10.05
17	SB-400-0203	391847	6.70	315051	8.64	273759	10.05
18	SB-401-0102	279103	6.70	240979	8.65	223517	10.06
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

FORM VIII SV-2 1/87 Rev.

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17258

GC Column: RESTEK PEST CLPI ID: 0.53 (mm) Init. Calib. Date(s): 06/27/07 10/19/0

Instrument ID: A2HP4

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.57 S2 : 8.07

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		E178	10/24/07	1329	1.57	8.07
02	SB-397-0102	J86M51AC	10/24/07	1638	1.57	8.07
03	SB-397-0203	J86M71AC	10/24/07	1655	1.57	8.07
04	SB-397-0203	J86M71AE	10/24/07	1712	1.57	8.07
05	SB-397-0203	J86M71AF	10/24/07	1729	1.57	8.07
06		E178	10/24/07	1803	1.57	8.07
07	SB-397-0708	J86NC1AC	10/24/07	1837	1.57	8.07
08	SB-398-0405	J86NF1AC	10/24/07	1929	1.57	8.07
09	SB-398-0708	J86NG1AC	10/24/07	1946	1.57	8.07
10	SB-399-0102	J86NH1AC	10/24/07	2003	1.57	8.07
11	SB-399-0203	J86NJ1AC	10/24/07	2020	1.57	8.07
12	SB-399-0405	J86NK1AC	10/24/07	2037	1.57	8.07
13	SB-399-0708	J86NL1AC	10/24/07	2054	1.57	8.07
14	SB-400-0102	J86NN1AC	10/24/07	2112	1.57	8.07
15	SB-400-0203	J86NQ1AC	10/24/07	2129	1.57	8.07
16	SB-400-0405	J86NR1AC	10/24/07	2146	1.57	8.07
17	SB-400-0708	J86NT1AC	10/24/07	2203	1.57	8.07
18	SB-401-0405	J86N11AC	10/24/07	2254	1.57	8.07
19	SB-401-0708	J86N21AC	10/24/07	2311	1.57	8.07
20	J9J5DBLK	J9J5D1AA	10/24/07	2329	1.57	8.07
21	J9J5DCHK	J9J5D1AC	10/24/07	2346	1.57	8.07
22		E178	10/25/07	0003	1.57	8.07
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = TCMX (+/- 0.10 MINUTES)
S2 = DCB (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Data File: \\cansvr11\dd\chem\GCS\a2hp4.i\71024-1.b\036B3601.D
Report Date: 24-Oct-2007 18:16

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp4.i Injection Date: 24-OCT-2007 18:03
Lab File ID: 036B3601.D Init. Cal. Date(s): 27-JUN-2007 19-OCT-2007
Analysis Type: Init. Cal. Times:. 15:36 02:34
Lab Sample ID: E178 Quant Type: ESTD
Method: \\cansvr11\dd\chem\GCS\a2hp4.i\71024-1.b\HP4PCBF.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	41686727	53801000	0.010	-29.06027	15.00000	Averaged	<-
3 AROCLOR-1016(1)	674885	824048	0.010	-22.10196	15.00000	Averaged	<-
(2)	1075356	1314588	0.010	-22.24681	15.00000	Averaged	<-
(3)	1749697	2121234	0.010	-21.23434	15.00000	Averaged	<-
(4)	931520	1114846	0.010	-19.68037	15.00000	Averaged	<-
(5)	855366	942802	0.010	-10.22208	15.00000	Averaged	
8 AROCLOR-1260(1)	1442350	1721690	0.010	-19.36698	15.00000	Averaged	<-
(2)	2293064	2847758	0.010	-24.19011	15.00000	Averaged	<-
(3)	1874912	2366526	0.010	-26.22064	15.00000	Averaged	<-
(4)	3535626	4675906	0.010	-32.25114	15.00000	Averaged	<-
(5)	1649174	2115186	0.010	-28.25730	15.00000	Averaged	<-
$ 12 DCB	28984152	35216440	0.010	-21.50240	15.00000	Averaged	<-

CCPI

Data File: \\cansvr11\dd\chem\GCS\a2hp4.i\71024-1.b\057B5701.D
Report Date: 25-Oct-2007 00:16

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp4.i
Lab File ID: 057B5701.D
Analysis Type:
Lab Sample ID: E178
Method: \\cansvr11\dd\chem\GCS\a2hp4.i\71024-1.b\HP4PCBF.m

Injection Date: 25-OCT-2007 00:03
Init. Cal. Date(s): 27-JUN-2007 19-OCT-2007
Init. Cal. Times: 15:36 02:34
Quant Type: ESTD

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	41686727	5389040	0.010	-29.27866	15.00000	Averaged	<-
3 AROCLOR-1016(1)	674885	841896	0.010	-24.74656	15.00000	Averaged	<-
(2)	1075356	1337652	0.010	-24.39159	15.00000	Averaged	<-
(3)	1749697	2186166	0.010	-24.94539	15.00000	Averaged	<-
(4)	931520	1145524	0.010	-22.97370	15.00000	Averaged	<-
(5)	855366	958898	0.010	-12.10385	15.00000	Averaged	
8 AROCLOR-1260(1)	1442350	1735400	0.010	-20.31752	15.00000	Averaged	<-
(2)	2293064	2888176	0.010	-25.95273	15.00000	Averaged	<-
(3)	1874912	2399252	0.010	-27.96611	15.00000	Averaged	<-
(4)	3535626	4787572	0.010	-35.40945	15.00000	Averaged	<-
(5)	1649174	2194262	0.010	-33.05218	15.00000	Averaged	<-
$ 12 DCB	28984152	33729280	0.010	-16.37146	15.00000	Averaged	<-

CAPI

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17258

GC Column: RESTEK PEST CLPII ID: 0.53 (mm) Init. Calib. Date(s): 06/27/07 10/19/

Instrument ID: A2HP4

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.09 S2 : 9.71

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660	10/26/07	0859	2.09	9.71
02	SB-397-0405	J86M81AC	10/26/07	1025	2.10	9.71
03	SB-398-0102	J86ND1AC	10/26/07	1042	2.10	9.71
04	SB-398-0203	J86NE1AC	10/26/07	1059	2.09	9.71
05	SB-401-0102	J86NV1AC	10/26/07	1116	2.09	9.71
06	SB-401-0203	J86NW1AC	10/26/07	1133	2.09	9.71
07		E178	10/26/07	1150	2.09	9.71
08						
09						
10						
11						
12						
13						
14						
15						
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29						
30						
31						
32						

QC LIMITS

S1 = TCMX (+/- 0.10 MINUTES)
S2 = DCB (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Data File: 002B0201.D
Report Date: 26-Oct-2007 09:13

CAP II

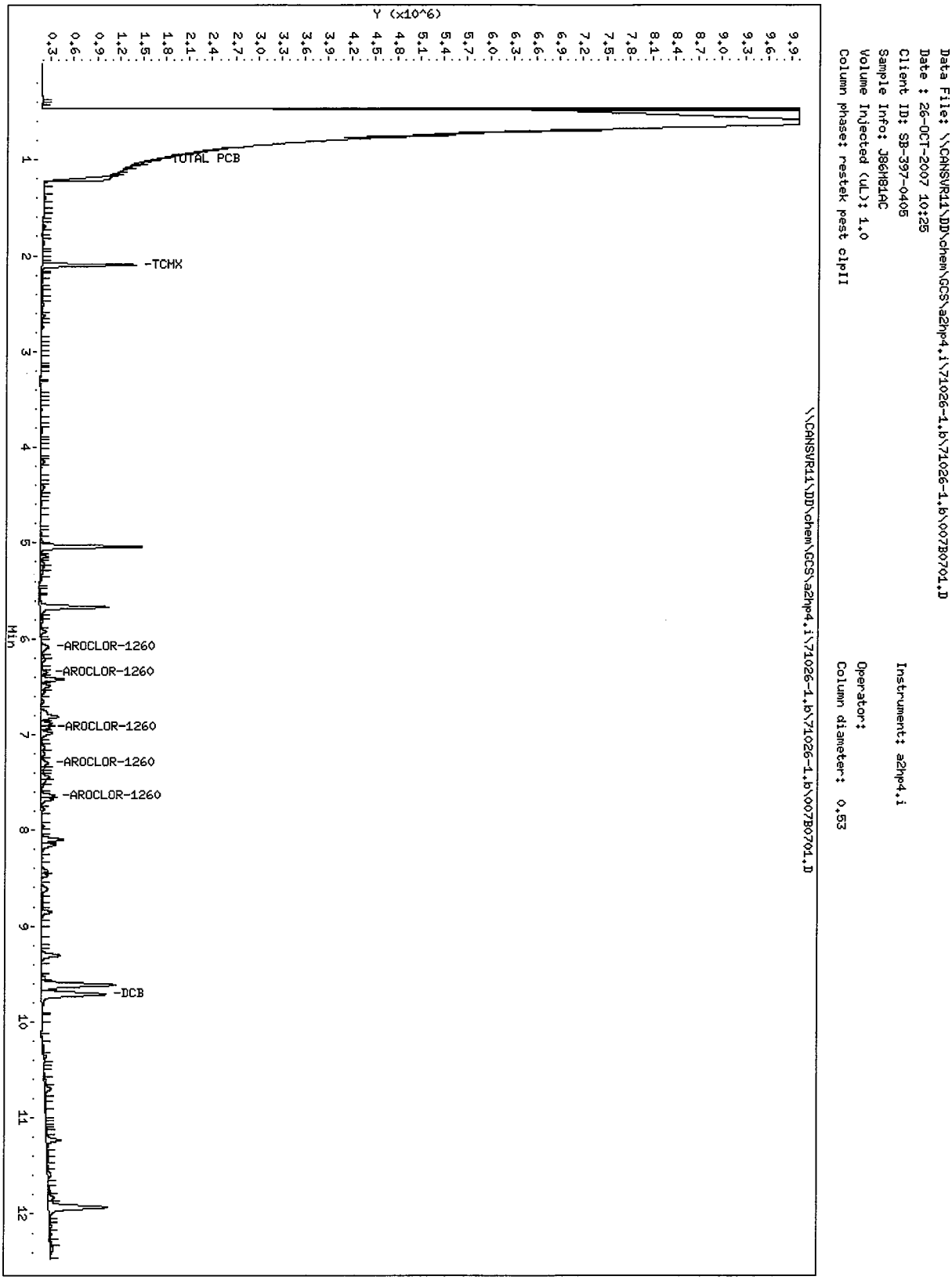
STL North Canton

CONTINUING CALIBRATION COMPOUNDS

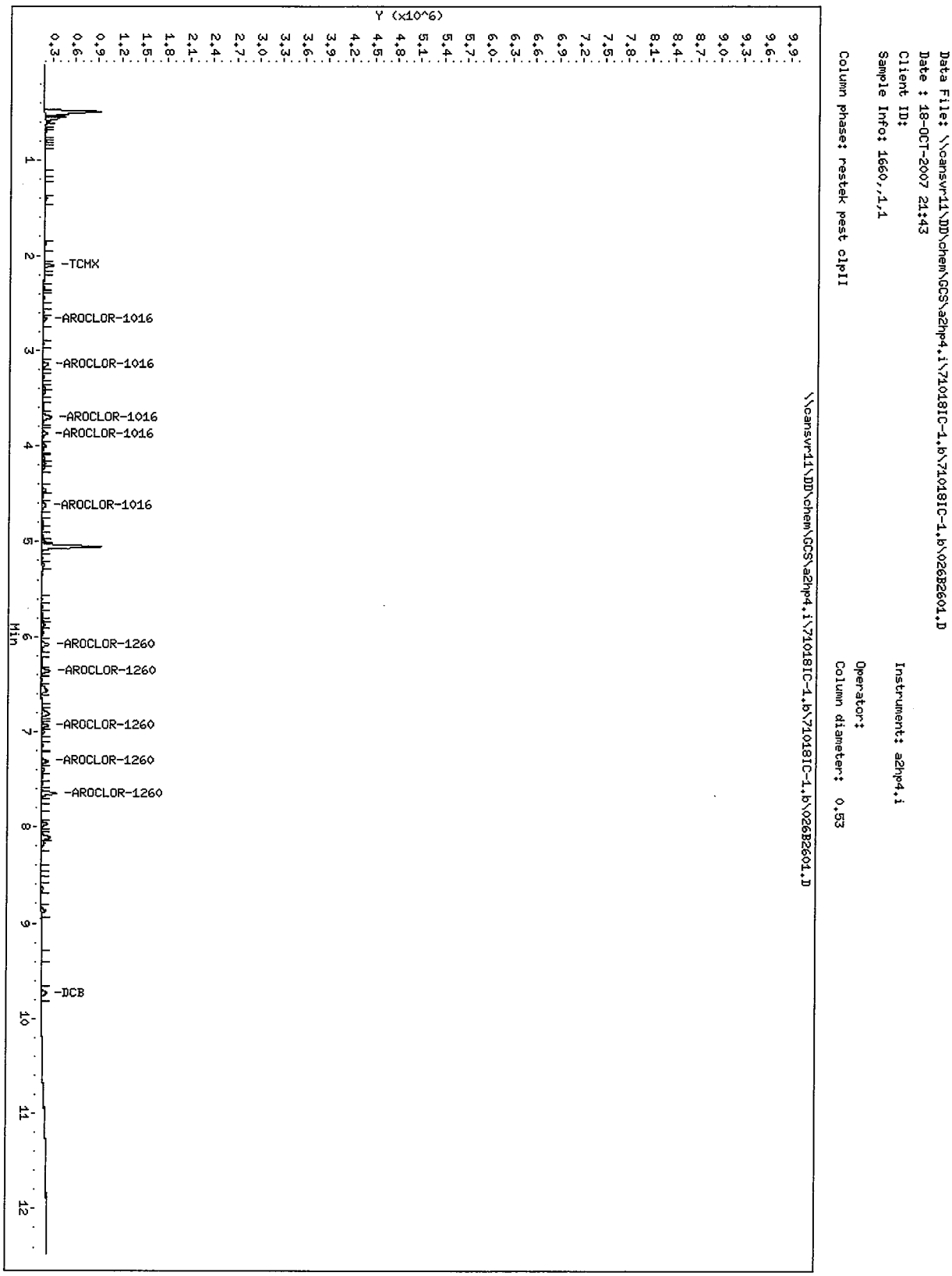
Instrument ID: a2hp4.i Injection Date: 26-OCT-2007 08:59
Lab File ID: 002B0201.D Init. Cal. Date(s): 27-JUN-2007 19-OCT-2007
Analysis Type: Init. Cal. Times: 15:36 02:34
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\cansvr11\dd\chem\GCS\a2hp4.i\71026-1.b\HP4PCBF.m\HP4PCBR.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	102659388	143758500	0.010	-40.03444	15.00000	Averaged	<-
3 AROCLOR-1016(1)	1766935	2058960	0.010	-16.52721	15.00000	Averaged	<-
(2)	3351808	3986648	0.010	-18.94024	15.00000	Averaged	<-
(3)	7131990	8223756	0.010	-15.30801	15.00000	Averaged	<-
(4)	3193722	3612922	0.010	-13.12575	15.00000	Averaged	
(5)	3254612	3336260	0.010	-2.60869	15.00000	Averaged	
8 AROCLOR-1260(1)	4675454	5452922	0.010	-16.62871	15.00000	Averaged	<-
(2)	5377152	6155860	0.010	-14.48180	15.00000	Averaged	
(3)	4329403	5066062	0.010	-17.01526	15.00000	Averaged	<-
(4)	4865735	5581620	0.010	-14.71278	15.00000	Averaged	
(5)	10051689	11790748	0.010	-17.30117	15.00000	Averaged	<-
$ 12 DCB	94531163	123575850	0.010	-30.72499	15.00000	Averaged	<-

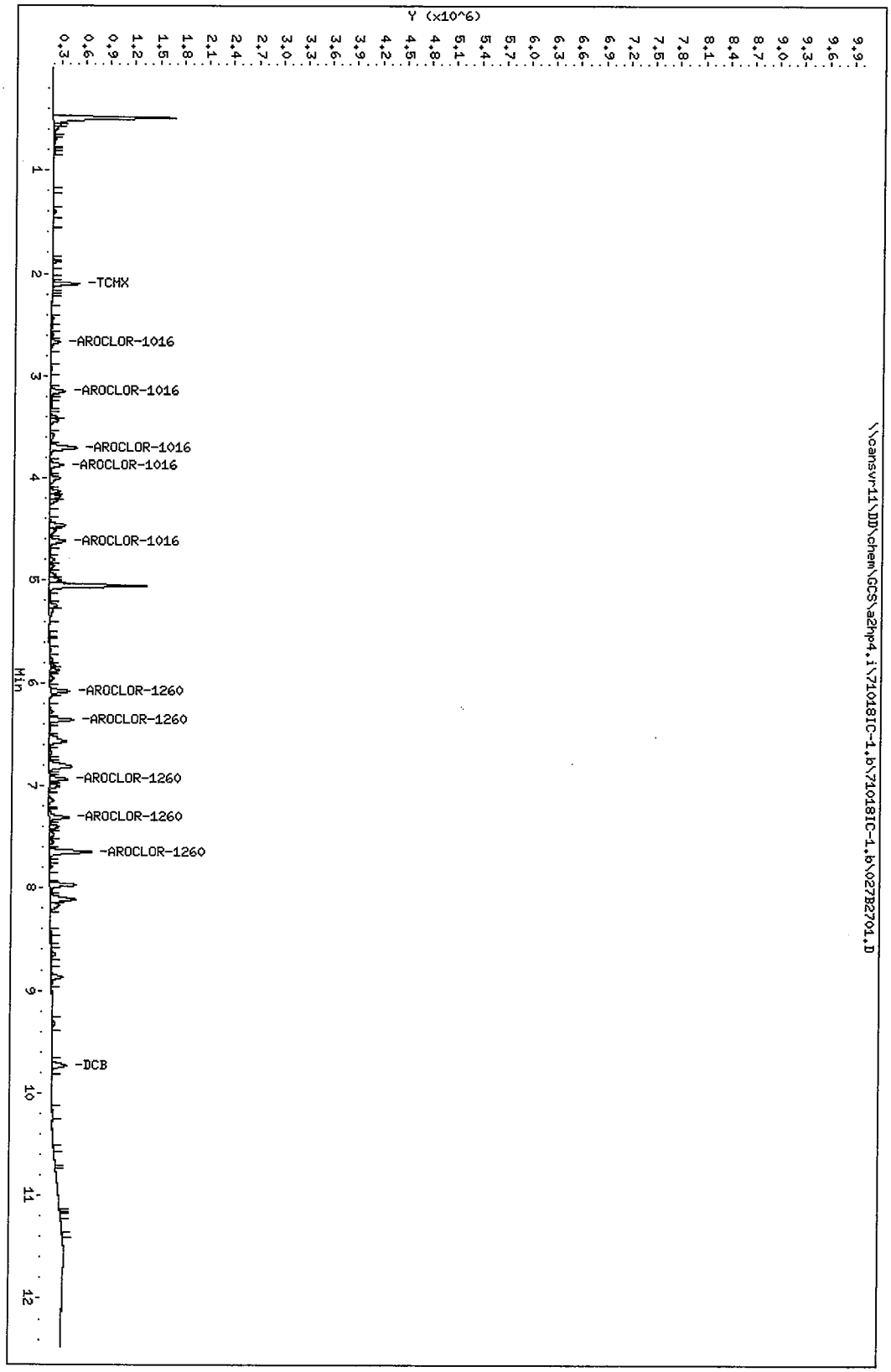
Sample


Data File: \\CANSVR11\DD\chem\GCS\a2hp4.i\71026-1.b\71026-1.b\007B0701.D
Date : 26-OCT-2007 10:25
Client ID: SB-397-0405
Sample Info: J86M81AC
Volume Injected (uL): 1.0
Column phase: restek pest clpII
Instrument: a2hp4.i
Operator:
Column diameter: 0.53
Y (x10^6)
TOTAL PCB
-TCMX
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB
Min
\\CANSVR11\DD\chem\GCS\a2hp4.i\71026-1.b\71026-1.b\007B0701.D

STANDARD


Data File: \\cansvr11\DD\chem\GCS\a2hp4.i\71018IC-1.b\71018IC-1.b\026B2604.D
Date : 18-OCT-2007 21:43
Client ID:
Sample Info: 1660,1,1
Column phase: restek pest clpII
Instrument: a2hp4.i
Operator:
Column diameter: 0.53
\\cansvr11\DD\chem\GCS\a2hp4.i\71018IC-1.b\71018IC-1.b\026B2604.D
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB

STANDARD


Data File: \\canswr11\DD\chem\GCS\a2hp4.i\71018IC-4.b\71018IC-4.b\027B2701.D
Date : 18-OCT-2007 22:00
Client ID:
Sample Info: 1660,,1,2
Column phase: restek pest clpII
Instrument: a2hp4.i
Operator:
Column diameter: 0.53
\\canswr11\DD\chem\GCS\a2hp4.i\71018IC-4.b\71018IC-4.b\027B2701.D
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB

CALCULATION WORKSHEET

CLIENT: LOCKHEED MIDDLE RIVER	**SDG No.** 7J17258
SUBJECT: EXAMPLE CALCULATION - BENZO(A)PYRENE - SOIL	
BY: T. JACKMAN	**DATE:** **11/30/07**

Sample ID = SB-397-0405
Concentration = 850 ug/kg

Benzo(a)pyrene

EQUATION:

$$C_s = \frac{A_x \times Is \times Vt \times Df}{Ais \times RRF \times V_i \times W_s \times D}$$

Where:

C_s	=	analyte concentration in soil		ug/kg
A_x	=	analyte response	=	1127459
Is	=	amount of internal standard	=	2 ng
V_t	=	volume of final extract	=	2000 uL
Df	=	dilution factor	=	1
Ais	=	response of internal standard	=	325294
RRF	=	response factor of compound	=	1.1349
V_i	=	volume injected	=	0.5 uL
Ws	=	sample weight	=	30.13 g
D	=	percent solids	=	0.951

Therefore: benzo(a)pyrene concentration in soil =

$$\frac{1127459 \times 2ng \times 2000uL \times 1}{325294 \times 1.1349 \times 0.5uL \times 30.13g \times 0.951}$$

C_s = 853 ug/kg

Tetra Tech NUS, Inc

Client Sample ID: SB-397-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170258-003 Work Order #...: J86M81AD Matrix.....: SO
Date Sampled...: 10/16/07 10:22 Date Received..: 10/17/07
Prep Date.....: 10/22/07 Analysis Date..: 10/25/07
Prep Batch #...: 7295325
Dilution Factor: 1 Initial Wgt/Vol: 30.13 g Final Wgt/Vol..: 2 mL
% Moisture.....: 4.9 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzo(a)pyrene	850	350	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	42	(24 - 112)
2-Fluorobiphenyl	59	(34 - 110)
Terphenyl-d14	87	(41 - 119)
Phenol-d5	60	(28 - 110)
2-Fluorophenol	47	(26 - 110)
2,4,6-Tribromophenol	62	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

STL North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp7.i\71025a.b\J86M81AD.D
Lab Smp Id: j86m81ad Client Smp ID: SB-397-0405
Inj Date : 25-OCT-2007 21:18
Operator : 001710 Inst ID: a4hp7.i
Smp Info : j86m81ad,71025a.b,8270p,bap.sub
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp7.i\71025a.b\8270P.m
Meth Date : 26-Oct-2007 13:15 gruberj Quant Type: ISTD
Cal Date : 23-OCT-2007 15:59 Cal File: 7SMH1023.D
Als bottle: 36
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: bap.sub
Target Version: 4.14
Processing Host: CANPMSSV01

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws *) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)(1000 low, 2
Vi	0.50000	Volume injected (uL)
Ws	30.130	Weight of sample extracted (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/kg)	
* 1 1,4-Dichlorobenzene-d4	152	3.315	3.311	(1.000)	114555	2.00000		(QM)
* 2 Naphthalene-d8	136	4.203	4.205	(1.000)	501270	2.00000		
* 3 Acenaphthene-d10	164	5.465	5.462	(1.000)	276278	2.00000		
* 4 Phenanthrene-d10	188	6.546	6.542	(1.000)	459027	2.00000		
* 5 Chrysene-d12	240	8.487	8.505	(1.000)	382370	2.00000		(H)
* 6 Perylene-d12	264	9.782	9.799	(1.000)	325294	2.00000		
146 Benzo(a)pyrene	252	9.723	9.741	(0.994)	1127459	6.10799	810.88	
$ 154 Nitrobenzene-d5	82	3.689	3.691	(0.878)	319330	2.08935	277.38	
$ 155 2-Fluorobiphenyl	172	4.962	4.959	(0.908)	483193	2.92630	388.49	
$ 156 Terphenyl-d14	244	7.680	7.681	(0.905)	727370	4.33318	575.26	
$ 157 Phenol-d5	99	3.042	3.033	(0.918)	617134	4.52943	601.32	
$ 158 2-Fluorophenol	112	2.475	2.450	(0.747)	287694	3.50674	465.55	
$ 159 2,4,6-Tribromophenol	330	6.037	6.034	(1.105)	82009	4.66020	618.68	
$ 186 2-Chlorophenol-d4	132	3.165	3.162	(0.955)	271440	3.76785	500.21	
$ 187 1,2-Dichlorobenzene-d4	152	3.422	3.424	(1.032)	59024	1.27284	168.98	(Q)

QC Flag Legend

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2007 13:20
End Cal Date : 23-OCT-2007 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp7.i\71023a.b\8270P.m
Last Edit : 23-Oct-2007 16:14 gruberj
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
144 Hexachlorophene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
145 Hexachlorophene product	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
146 Benzo(a)pyrene	1.25425	1.02756	1.05502	1.08595	1.08027	1.13511			
	1.13630	1.16137	1.27824				1.13490	7.553	
148 3-Methylcholanthrene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
149 Indeno(1,2,3-cd)pyrene	1.33079	1.12538	1.09238	1.18024	1.14554	1.20245			
	1.21438	1.24271	1.33338				1.20747	6.987	
150 Dibenz(a,h)anthracene	1.12388	0.95426	0.93565	0.95239	0.98735	1.02564			
	1.03664	1.06750	1.16029				1.02707	7.671	
151 Benzo(g,h,i)perylene	1.20041	0.90775	0.93379	0.95488	0.97160	0.99480			
	1.00267	1.04274	1.11850				1.01413	9.224	
230 2-Chloroacetophenone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
199 3-Picoline	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
200 N,N-Dimethylacetamide	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
201 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

CALCULATION WORKSHEET **Page 1 of 1**

CLIENT: LOCKHEED MIDDLE RIVER	**SDG No.** 7J17258
SUBJECT: EXAMPLE CALCULATION - AROCLOR-1260 - SOIL	
BY: T. JACKMAN	**DATE:** **11/30/07**

Sample ID = SB-397-0405
Concentration = 19 ug/kg

Aroclor-1260

EQUATION:

$$C_w = \frac{A_x \times V_t \times Df}{CF \times V_i \times W_s \times D}$$

Where:

C_s	=	analyte concentration in soil		ug/kg
A_x	=	analyte response	=	297379.8
V_t	=	volume of final extract	=	10000 uL
Df	=	dilution factor	=	1
CF	=	calibration factor	=	5859887
V_i	=	volume injected	=	1 uL
Ws	=	sample weight	=	30.05 g
D	=	percent solids	=	0.951

Therefore: Aroclor-1260 concentration in soil =

$$\frac{297379.8 \times 10000uL \times 1}{5859886.6 \times 1uL \times 30.05g \times 0.951}$$

C_s = 17.8 ug/kg

Tetra Tech NUS, Inc

Client Sample ID: SB-397-0405

GC Semivolatiles

Lot-Sample #...:	A7J170258-003	Work Order #...:	J86M81AC	Matrix.....:	SO
Date Sampled...:	10/16/07 10:22	Date Received..:	10/17/07		
Prep Date.....:	10/22/07	Analysis Date..:	10/26/07		
Prep Batch #...:	7295324				
Dilution Factor:	1	Initial Wgt/Vol:	30.05 g	Final Wgt/Vol..:	10 mL
% Moisture.....:	4.9	Method.....:	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	**19 J**	**35**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	103	(10 - 196)
Decachlorobiphenyl	136	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Data File: 007B0701.D
Report Date: 29-Oct-2007 10:12

STL North Canton

Data file : \\CANSVR11\DD\chem\GCS\a2hp4.i\71026-1.b\71026-1.b\007B0701.D
Lab Smp Id: J86M81AC Client Smp ID: SB-397-0405
Inj Date : 26-OCT-2007 10:25
Operator : Inst ID: a2hp4.i
Smp Info : J86M81AC
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\GCS\a2hp4.i\71026-1.b\HP4PCBF.m\HP4PCBR.m
Meth Date : 26-Oct-2007 12:04 Quant Type: ESTD
Cal Date : 19-OCT-2007 01:08 Cal File: 038B3801.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.050	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.095	2.094	0.001	2107312	0.02053	6.831		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

Data File: 007B0701.D
Report Date: 29-Oct-2007 10:12

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
6.083	6.070	0.013	396272	0.08476	28.20	80.00- 120.00	100.00(M)
6.351	6.348	0.003	185281	0.03446	11.47	85.40- 142.33	46.76
6.922	6.921	0.001	240807	0.05562	18.51	71.21- 118.69	60.77
7.295	7.296	-0.001	287573	0.05910	19.67	78.04- 130.07	72.57
7.632	7.631	0.001	376966	0.03750	12.48	168.62- 281.04	95.13
Average of Peak Concentrations =					18.06		
$ 12 DCB					CAS #: 2051-24-3		
9.711	9.709	0.002	2577708	0.02727	9.074		
M 11 TOTAL PCB					CAS #: 1336-36-3		
			297380	0.05429	18.06		

QC Flag Legend

M - Compound response manually integrated.

Report Date : 06-Nov-2007 10:39

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2007 15:36
End Cal Date : 19-OCT-2007 02:34
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\CANSVR11\DD\chem\GCS\a2hp4.i\71018IC-1.b\HP4PCBF.m\HP4PC
Last Edit : 21-Oct-2007 15:48 serraa
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.000 Level 6	____ RRF	% RSD	
8 AROCLOR-1260(1)	4329700	4552910	5378315	4783232	4665790	4342780	4675454	8.289	
(2)	4797540	6203710	5966640	5332322	5112956	4849743	5377152	10.897	
(3)	3496740	4948940	4918175	4393384	4222864	3996315	4329403	12.861	
(4)	4215300	5496840	5452090	4888414	4675030	4466737	4865735	10.723	
(5)	8447960	11359640	11312840	10200374	9607243	9382074	10051689	11.379	
9 AROCLOR-1262(1)	5846040	4773780	4027065	4154068	3935838	3671210	4401334	18.111	
(2)	8902340	7474280	6370720	6914330	6521168	6118206	7050174	14.519	
(3)	8614360	7204290	6071470	6419510	6059167	5713237	6680339	16.087	
(4)	16686600	14182190	11946965	12743810	12100616	11463127	13187218	14.830	
(5)	12540200	10446350	8817785	9317142	8826884	8365044	9718901	16.000	
10 AROCLOR-1268(1)	3397040	2818070	2855035	2820440	2852430	2490264	2872213	10.182	
(2)	5177600	4862930	4186915	4059544	4103814	3550863	4323611	13.699	
(3)	18481040	17728990	15621710	15442430	15629551	13999912	16150606	10.212	
(4)	17352020	16923110	15068205	15081040	15514614	13955108	15649016	8.119	
(5)	42197740	41905830	38036925	37453458	38248248	34967037	38801540	7.159	
M 11 TOTAL PCB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 1 TCMX	79285200	109076400	112736600	125365450	98500440	90992240	102659388	16.054	
$ 12 DCB	75138800	100446800	103649900	115933800	85204600	86813080	94531163	15.682	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO :	**MIKE MARTIN**	**DATE:**	**JANUARY 7, 2008**
FROM:	**THOMAS JACKMAN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – BENZO(A)PYRENE/PCBS**
LOCKHEED MIDDLE RIVER FACILITY
SAMPLE DELIVERY GROUP (SDG) – 7J17283

SAMPLES: 20/Solid

SB-402-0102	SB-402-0203	SB-402-0405	SB-402-0708
SB-403-0102	SB-403-0203	SB-403-0405	SB-403-0708
SB-404-0102	SB-404-0203	SB-404-0405	SB-404-0708
SB-405-0102	SB-405-0203	SB-405-0405	SB-405-0708
SB-406-0102	SB-406-0203	SB-406-0405	SB-406-0708

Overview

This sample set for the Lockheed Middle River, SDG 7J17283, consists of 20 environmental soil samples. The samples were analyzed for benzo(a)pyrene and polychlorinated biphenyls(PCBs). No field duplicates were included in this data set.

The samples were collected by Tetra Tech NUS, Inc. on October 16, 2007 and analyzed by Test America. The samples were analyzed by SW-846 Method 8270C for benzo(a)pyrene and Method 8082 for PCBs.

Summary

The findings in this report are based upon a general review of all available data including: data completeness, system performance, holding times, initial/continuing calibrations, laboratory method blank contamination, surrogate spike, matrix spike/matrix spike duplicate (MS/MSD) results, Laboratory Control Sample (LCS) results, compound identification, compound quantitation, and detection limits. Areas of concern are listed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Major Problems

- None.

Minor Problems

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, "J".

In the analysis of benzo(a)pyrene, matrix spike/matrix spike duplicate RPDs were outside quality criteria for sample SB-406-0405MS/MSD. No data were qualified on the basis of the MS/MSD results because benzo(a)pyrene was not one of the spiked compounds.

In the analysis of benzo(a)pyrene, matrix spike/matrix spike duplicate recoveries and RPDs were outside quality criteria for the batch MS/MSD used by the laboratory. No data were qualified on the basis of the MS/MSD results because benzo(a)pyrene was not one of the spiked compounds.

In the PCB analysis, the surrogate recovery for one surrogate (decachlorobiphenyl) in sample SB-405-0203 was high. No data were qualified on the basis on the surrogate recovery because no PCBs were positively detected in this sample.

Aroclor-1260 was reported as positively detected in one sample (SB-406-0203) on column CLPII. The laboratory did not confirm this result on a second column as specified by Method 8082. The lack of second column confirmation should not affect the identification of Aroclor-1260 in this sample because PCBs are identified by pattern recognition rather than by retention times. The chromatograms of this sample and associated standards are provided in Appendix C.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "Region III Modifications to the National Functional Guidelines for Organic Data Review" (9/94). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Thomas Jackman
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

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

Data Qualifier Key:

J - Positive result is considered estimated, "J", as a result of technical noncompliances.

U - Nondetected result.

UJ - Nondetected result is considered estimated, "UJ", as a result of technical noncompliances.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-402-0102	nsample	SB-402-0203	nsample	SB-402-0405
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283001	lab_id	A7J170283002	lab_id	A7J170283003
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	80.0	Pct_Solids	85.0	Pct_Solids	84.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	37	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-402-0708	nsample	SB-403-0102	nsample	SB-403-0203
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283004	lab_id	A7J170283005	lab_id	A7J170283006
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	84.0	Pct_Solids	89.0	Pct_Solids	88.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-403-0405	nsample	SB-403-0708	nsample	SB-404-0102
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283007	lab_id	A7J170283008	lab_id	A7J170283009
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	85.0	Pct_Solids	84.0	Pct_Solids	87.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.5	U	

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-404-0203	nsample	SB-404-0405	nsample	SB-404-0708
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283010	lab_id	A7J170283011	lab_id	A7J170283012
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	81.0	Pct_Solids	78.0	Pct_Solids	77.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	18	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	72	J	P

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-405-0102	nsample	SB-405-0203RE	nsample	SB-405-0405
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283013	lab_id	A7J170283014	lab_id	A7J170283015
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	91.3	Pct_Solids	90.3	Pct_Solids	83.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	36	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.4	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	330	J	P

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-405-0708	nsample	SB-406-0102	nsample	SB-406-0203
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283016	lab_id	A7J170283017	lab_id	A7J170283018
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	77.0	Pct_Solids	87.0	Pct_Solids	87.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	230	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	510		

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	320	J	P

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-406-0405	nsample	SB-406-0708
samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283019	lab_id	A7J170283020
qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG
Pct_Solids	80.0	Pct_Solids	78.0
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	62	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	85	J	P

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-402-0102	nsample	SB-402-0203	nsample	SB-402-0405
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283001	lab_id	A7J170283002	lab_id	A7J170283003
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	80.0	Pct_Solids	85.0	Pct_Solids	84.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	41	U	
AROCLOR-1221	41	U	
AROCLOR-1232	41	U	
AROCLOR-1242	41	U	
AROCLOR-1248	41	U	
AROCLOR-1254	41	U	
AROCLOR-1260	41	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-402-0708	nsample	SB-403-0102	nsample	SB-403-0203
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283004	lab_id	A7J170283005	lab_id	A7J170283006
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	84.0	Pct_Solids	89.0	Pct_Solids	88.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-403-0405	nsample	SB-403-0708	nsample	SB-404-0102
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283007	lab_id	A7J170283008	lab_id	A7J170283009
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	85.0	Pct_Solids	84.0	Pct_Solids	87.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	40	U	
AROCLOR-1221	40	U	
AROCLOR-1232	40	U	
AROCLOR-1242	40	U	
AROCLOR-1248	40	U	
AROCLOR-1254	40	U	
AROCLOR-1260	40	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-404-0203	nsample	SB-404-0405	nsample	SB-404-0708
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283010	lab_id	A7J170283011	lab_id	A7J170283012
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	81.0	Pct_Solids	78.0	Pct_Solids	77.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	41	U	
AROCLOR-1221	41	U	
AROCLOR-1232	41	U	
AROCLOR-1242	41	U	
AROCLOR-1248	41	U	
AROCLOR-1254	41	U	
AROCLOR-1260	41	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	42	U	
AROCLOR-1221	42	U	
AROCLOR-1232	42	U	
AROCLOR-1242	42	U	
AROCLOR-1248	42	U	
AROCLOR-1254	42	U	
AROCLOR-1260	42	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	43	U	
AROCLOR-1221	43	U	
AROCLOR-1232	43	U	
AROCLOR-1242	43	U	
AROCLOR-1248	43	U	
AROCLOR-1254	43	U	
AROCLOR-1260	43	U	

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-405-0102	nsample	SB-405-0203	nsample	SB-405-0405
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283013	lab_id	A7J170283014	lab_id	A7J170283015
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	91.3	Pct_Solids	90.3	Pct_Solids	83.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	36	U	
AROCLOR-1221	36	U	
AROCLOR-1232	36	U	
AROCLOR-1242	36	U	
AROCLOR-1248	36	U	
AROCLOR-1254	36	U	
AROCLOR-1260	36	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	37	U	
AROCLOR-1221	37	U	
AROCLOR-1232	37	U	
AROCLOR-1242	37	U	
AROCLOR-1248	37	U	
AROCLOR-1254	37	U	
AROCLOR-1260	37	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	40	U	
AROCLOR-1221	40	U	
AROCLOR-1232	40	U	
AROCLOR-1242	40	U	
AROCLOR-1248	40	U	
AROCLOR-1254	40	U	
AROCLOR-1260	40	U	

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-405-0708	nsample	SB-406-0102	nsample	SB-406-0203
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J170283016	lab_id	A7J170283017	lab_id	A7J170283018
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	77.0	Pct_Solids	87.0	Pct_Solids	87.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	43	U	
AROCLOR-1221	43	U	
AROCLOR-1232	43	U	
AROCLOR-1242	43	U	
AROCLOR-1248	43	U	
AROCLOR-1254	43	U	
AROCLOR-1260	43	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	21	J	P

PROJ_NO: 00885

SDG: 7J17283 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-406-0405
samp_date	10/16/2007
lab_id	A7J170283019
qc_type	NM
units	UG/KG
Pct_Solids	80.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	41	U	
AROCLOR-1221	41	U	
AROCLOR-1232	41	U	
AROCLOR-1242	41	U	
AROCLOR-1248	41	U	
AROCLOR-1254	41	U	
AROCLOR-1260	41	U	

nsample	SB-406-0708
samp_date	10/16/2007
lab_id	A7J170283020
qc_type	NM
units	UG/KG
Pct_Solids	78.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	42	U	
AROCLOR-1221	42	U	
AROCLOR-1232	42	U	
AROCLOR-1242	42	U	
AROCLOR-1248	42	U	
AROCLOR-1254	42	U	
AROCLOR-1260	42	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Tetra Tech NUS, Inc

Client Sample ID: SB-402-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-001 **Work Order #...:** J86WR1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:31 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 20 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**37 J**	**410**	**ug/kg**	**1.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(24 - 112)
2-Fluorobiphenyl	64	(34 - 110)
Terphenyl-d14	74	(41 - 119)
Phenol-d5	62	(28 - 110)
2-Fluorophenol	65	(26 - 110)
2,4,6-Tribromophenol	77	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-402-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-002 **Work Order #...:** J86WX1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:33 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 15 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(24 - 112)
2-Fluorobiphenyl	63	(34 - 110)
Terphenyl-d14	77	(41 - 119)
Phenol-d5	67	(28 - 110)
2-Fluorophenol	64	(26 - 110)
2,4,6-Tribromophenol	77	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-402-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-003 **Work Order #...:** J86W01AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:35 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 16 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	55	(24 - 112)
2-Fluorobiphenyl	61	(34 - 110)
Terphenyl-d14	73	(41 - 119)
Phenol-d5	64	(28 - 110)
2-Fluorophenol	60	(26 - 110)
2,4,6-Tribromophenol	74	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-402-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-004 **Work Order #...:** J86W11AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:37 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 16 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	55	(24 - 112)
2-Fluorobiphenyl	60	(34 - 110)
Terphenyl-d14	71	(41 - 119)
Phenol-d5	62	(28 - 110)
2-Fluorophenol	59	(26 - 110)
2,4,6-Tribromophenol	76	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-403-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-005 **Work Order #...:** J86W21AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:45 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 11 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	53	(24 - 112)
2-Fluorobiphenyl	60	(34 - 110)
Terphenyl-d14	69	(41 - 119)
Phenol-d5	60	(28 - 110)
2-Fluorophenol	54	(26 - 110)
2,4,6-Tribromophenol	78	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-403-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-006 **Work Order #...:** J86W31AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:47 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 12 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	37	(24 - 112)
2-Fluorobiphenyl	40	(34 - 110)
Terphenyl-d14	66	(41 - 119)
Phenol-d5	45	(28 - 110)
2-Fluorophenol	41	(26 - 110)
2,4,6-Tribromophenol	70	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-403-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-007 **Work Order #...:** J86W41AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:49 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 15 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	390	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	59	(24 - 112)
2-Fluorobiphenyl	60	(34 - 110)
Terphenyl-d14	76	(41 - 119)
Phenol-d5	62	(28 - 110)
2-Fluorophenol	62	(26 - 110)
2,4,6-Tribromophenol	76	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-403-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-008 **Work Order #...:** J86W51AD **Matrix.....:** SO
Date Sampled...: 10/16/07 11:51 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 16 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	400	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	54	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	72	(41 - 119)
Phenol-d5	57	(28 - 110)
2-Fluorophenol	58	(26 - 110)
2,4,6-Tribromophenol	69	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-404-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-009 **Work Order #...:** J86W71AD **Matrix.....:** SO
Date Sampled...: 10/16/07 14:19 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	53	(24 - 112)
2-Fluorobiphenyl	58	(34 - 110)
Terphenyl-d14	70	(41 - 119)
Phenol-d5	58	(28 - 110)
2-Fluorophenol	57	(26 - 110)
2,4,6-Tribromophenol	68	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-404-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-010 **Work Order #...:** J86W81AD **Matrix.....:** SO
Date Sampled...: 10/16/07 14:21 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 19 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	410	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	37	(24 - 112)
2-Fluorobiphenyl	46	(34 - 110)
Terphenyl-d14	62	(41 - 119)
Phenol-d5	47	(28 - 110)
2-Fluorophenol	42	(26 - 110)
2,4,6-Tribromophenol	65	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-404-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-011 **Work Order #...:** J86W91AD **Matrix.....:** SO
Date Sampled...: 10/16/07 14:23 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 22 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**18 J**	**420**	**ug/kg**	**1.7**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	54	(24 - 112)
2-Fluorobiphenyl	60	(34 - 110)
Terphenyl-d14	68	(41 - 119)
Phenol-d5	61	(28 - 110)
2-Fluorophenol	59	(26 - 110)
2,4,6-Tribromophenol	76	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-404-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-012 **Work Order #...:** J86XA1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 14:25 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 23 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**72 J**	**430**	**ug/kg**	**1.7**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(24 - 112)
2-Fluorobiphenyl	62	(34 - 110)
Terphenyl-d14	71	(41 - 119)
Phenol-d5	60	(28 - 110)
2-Fluorophenol	58	(26 - 110)
2,4,6-Tribromophenol	74	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-405-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-013 **Work Order #...:** J86XC1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 14:49 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 8.7 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**36 J**	**360**	**ug/kg**	**1.4**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	52	(24 - 112)
2-Fluorobiphenyl	54	(34 - 110)
Terphenyl-d14	62	(41 - 119)
Phenol-d5	56	(28 - 110)
2-Fluorophenol	52	(26 - 110)
2,4,6-Tribromophenol	65	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-405-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-014 **Work Order #...:** J86XD2AD **Matrix.....:** SO
Date Sampled...: 10/16/07 14:51 **Date Received..:** 10/17/07
Prep Date.....: 10/29/07 **Analysis Date..:** 11/01/07
Prep Batch #...: 7302363
Dilution Factor: 1
% Moisture.....: 9.7 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	370	ug/kg	1.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	68	(24 - 112)
2-Fluorobiphenyl	68	(34 - 110)
Terphenyl-d14	98	(41 - 119)
Phenol-d5	71	(28 - 110)
2-Fluorophenol	70	(26 - 110)
2,4,6-Tribromophenol	76	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-405-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-015 **Work Order #...:** J86XE1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 14:53 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 17 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**330 J**	**400**	**ug/kg**	**1.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	52	(24 - 112)
2-Fluorobiphenyl	59	(34 - 110)
Terphenyl-d14	66	(41 - 119)
Phenol-d5	63	(28 - 110)
2-Fluorophenol	61	(26 - 110)
2,4,6-Tribromophenol	71	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-405-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-016 **Work Order #...:** J86XF1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 14:55 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 23 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**230 J**	**430**	**ug/kg**	**1.7**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	54	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	66	(41 - 119)
Phenol-d5	62	(28 - 110)
2-Fluorophenol	63	(26 - 110)
2,4,6-Tribromophenol	68	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-406-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-017 **Work Order #...:** J86XG1AF **Matrix.....:** SO
Date Sampled...: 10/16/07 15:16 **Date Received..:** 10/17/07
Prep Date.....: 10/20/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7292538
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**510**	**380**	**ug/kg**	**1.5**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	48	(24 - 112)
2-Fluorobiphenyl	59	(34 - 110)
Terphenyl-d14	83	(41 - 119)
Phenol-d5	53	(28 - 110)
2-Fluorophenol	53	(26 - 110)
2,4,6-Tribromophenol	53	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-406-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-018 **Work Order #...:** J86XH1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 15:18 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**320 J**	**380**	**ug/kg**	**1.5**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(24 - 112)
2-Fluorobiphenyl	60	(34 - 110)
Terphenyl-d14	65	(41 - 119)
Phenol-d5	58	(28 - 110)
2-Fluorophenol	54	(26 - 110)
2,4,6-Tribromophenol	72	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-406-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-019 **Work Order #...:** J86XJ1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 15:20 **Date Received..:** 10/17/07
Prep Date.....: 10/20/07 **Analysis Date..:** 10/23/07
Prep Batch #...: 7292538
Dilution Factor: 1
% Moisture.....: 20 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**62 J**	**410**	**ug/kg**	**1.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	43	(24 - 112)
2-Fluorobiphenyl	55	(34 - 110)
Terphenyl-d14	76	(41 - 119)
Phenol-d5	53	(28 - 110)
2-Fluorophenol	56	(26 - 110)
2,4,6-Tribromophenol	49	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-406-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J170283-020 **Work Order #...:** J86XK1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 15:22 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/31/07
Prep Batch #...: 7295396
Dilution Factor: 1
% Moisture.....: 22 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**85 J**	**420**	**ug/kg**	**1.7**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	57	(24 - 112)
2-Fluorobiphenyl	61	(34 - 110)
Terphenyl-d14	73	(41 - 119)
Phenol-d5	63	(28 - 110)
2-Fluorophenol	63	(26 - 110)
2,4,6-Tribromophenol	81	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-402-0102

GC Semivolatiles

Lot-Sample #...:	A7J170283-001	**Work Order #...:**	J86WR1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:31	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	12.21 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	20	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	41	ug/kg
Aroclor 1221	ND	41	ug/kg
Aroclor 1232	ND	41	ug/kg
Aroclor 1242	ND	41	ug/kg
Aroclor 1248	ND	41	ug/kg
Aroclor 1254	ND	41	ug/kg
Aroclor 1260	ND	41	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	73	(10 - 196)
Decachlorobiphenyl	66	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-402-0203

GC Semivolatiles

Lot-Sample #...:	A7J170283-002	**Work Order #...:**	J86WX1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:33	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	15	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	125	(10 - 196)
Decachlorobiphenyl	109	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-402-0405

GC Semivolatiles

Lot-Sample #...:	A7J170283-003	**Work Order #...:**	J86W01AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:35	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.19 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	16	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	53	(10 - 196)
Decachlorobiphenyl	35	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-402-0708

GC Semivolatiles

Lot-Sample #...: A7J170283-004	**Work Order #...:** J86W11AC	**Matrix.....:** SO
Date Sampled...: 10/16/07 11:37	**Date Received..:** 10/17/07	
Prep Date.....: 10/23/07	**Analysis Date..:** 10/25/07	
Prep Batch #...: 7295395		
Dilution Factor: 1	**Initial Wgt/Vol:** 30 g	**Final Wgt/Vol..:** 10 mL
% Moisture.....: 16	**Method.....:** SW846 8082	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(10 - 196)
Decachlorobiphenyl	106	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-403-0102

GC Semivolatiles

Lot-Sample #...:	A7J170283-005	**Work Order #...:**	J86W21AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:45	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	113	(10 - 196)
Decachlorobiphenyl	97	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-403-0203

GC Semivolatiles

Lot-Sample #...:	A7J170283-006	**Work Order #...:**	J86W31AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:47	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.04 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	33	(10 - 196)
Decachlorobiphenyl	34	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-403-0405

GC Semivolatiles

Lot-Sample #...:	A7J170283-007	**Work Order #...:**	J86W41AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:49	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	15	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(10 - 196)
Decachlorobiphenyl	95	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-403-0708

GC Semivolatiles

Lot-Sample #...:	A7J170283-008	**Work Order #...:**	J86W51AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 11:51	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.16 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	16	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(10 - 196)
Decachlorobiphenyl	108	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-404-0102

GC Semivolatiles

Lot-Sample #...:	A7J170283-009	**Work Order #...:**	J86W71AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 14:19	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.08 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	102	(10 - 196)
Decachlorobiphenyl	104	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-404-0203

GC Semivolatiles

Lot-Sample #...:	A7J170283-010	**Work Order #...:**	J86W81AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 14:21	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	19	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	41	ug/kg
Aroclor 1221	ND	41	ug/kg
Aroclor 1232	ND	41	ug/kg
Aroclor 1242	ND	41	ug/kg
Aroclor 1248	ND	41	ug/kg
Aroclor 1254	ND	41	ug/kg
Aroclor 1260	ND	41	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	96	(10 - 196)
Decachlorobiphenyl	106	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-404-0405

GC Semivolatiles

Lot-Sample #...:	A7J170283-011	**Work Order #...:**	J86W91AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 14:23	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.1 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	22	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	42	ug/kg
Aroclor 1221	ND	42	ug/kg
Aroclor 1232	ND	42	ug/kg
Aroclor 1242	ND	42	ug/kg
Aroclor 1248	ND	42	ug/kg
Aroclor 1254	ND	42	ug/kg
Aroclor 1260	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	111	(10 - 196)
Decachlorobiphenyl	86	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-404-0708

GC Semivolatiles

Lot-Sample #...:	A7J170283-012	**Work Order #...:**	J86XA1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 14:25	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	23	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	43	ug/kg
Aroclor 1221	ND	43	ug/kg
Aroclor 1232	ND	43	ug/kg
Aroclor 1242	ND	43	ug/kg
Aroclor 1248	ND	43	ug/kg
Aroclor 1254	ND	43	ug/kg
Aroclor 1260	ND	43	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 196)
Decachlorobiphenyl	53	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-405-0102

GC Semivolatiles

Lot-Sample #...:	A7J170283-013	**Work Order #...:**	J86XC1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 14:49	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.11 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	8.7	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	105	(10 - 196)
Decachlorobiphenyl	113	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-405-0203

GC Semivolatiles

Lot-Sample #...:	A7J170283-014	**Work Order #...:**	J86XD1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 14:51	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.08 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.7	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	96	(10 - 196)
Decachlorobiphenyl	207 *	(10 - 199)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-405-0405

GC Semivolatiles

Lot-Sample #...:	A7J170283-015	**Work Order #...:**	J86XE1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 14:53	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.14 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	17	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	81	(10 - 196)
Decachlorobiphenyl	151	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-405-0708

GC Semivolatiles

Lot-Sample #...:	A7J170283-016	**Work Order #...:**	J86XF1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 14:55	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.12 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	23	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	43	ug/kg
Aroclor 1221	ND	43	ug/kg
Aroclor 1232	ND	43	ug/kg
Aroclor 1242	ND	43	ug/kg
Aroclor 1248	ND	43	ug/kg
Aroclor 1254	ND	43	ug/kg
Aroclor 1260	ND	43	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(10 - 196)
Decachlorobiphenyl	82	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-406-0102

GC Semivolatiles

Lot-Sample #...: A7J170283-017 **Work Order #...:** J86XG1AC **Matrix.....:** SO
Date Sampled...: 10/16/07 15:16 **Date Received..:** 10/17/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/26/07
Prep Batch #...: 7295392
Dilution Factor: 1 **Initial Wgt/Vol:** 30.03 g **Final Wgt/Vol..:** 10 mL
% Moisture.....: 13 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	40	(10 - 196)
Decachlorobiphenyl	61	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-406-0203

GC Semivolatiles

Lot-Sample #...:	A7J170283-018	**Work Order #...:**	J86XH1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 15:18	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.02 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	**21 J**	**38**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	101	(10 - 196)
Decachlorobiphenyl	106	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-406-0405

GC Semivolatiles

Lot-Sample #...:	A7J170283-019	**Work Order #...:**	J86XJ1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 15:20	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	20	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	41	ug/kg
Aroclor 1221	ND	41	ug/kg
Aroclor 1232	ND	41	ug/kg
Aroclor 1242	ND	41	ug/kg
Aroclor 1248	ND	41	ug/kg
Aroclor 1254	ND	41	ug/kg
Aroclor 1260	ND	41	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	82	(10 - 196)
Decachlorobiphenyl	104	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-406-0708

GC Semivolatiles

Lot-Sample #...:	A7J170283-020	**Work Order #...:**	J86XK1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 15:22	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.05 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	22	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	42	ug/kg
Aroclor 1221	ND	42	ug/kg
Aroclor 1232	ND	42	ug/kg
Aroclor 1242	ND	42	ug/kg
Aroclor 1248	ND	42	ug/kg
Aroclor 1254	ND	42	ug/kg
Aroclor 1260	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	67	(10 - 196)
Decachlorobiphenyl	70	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

7J17283

The following report contains the analytical results for twenty solid samples submitted to TestAmerica North Canton by Tetra Tech NUS Inc from the LMC MR Site, project number 112IC00885. The samples were received October 17, 2007, according to documented sample acceptance procedures.

This SDG consists of (1) laboratory ID's: A7J170283.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Dev Murali, John Poremba, and Michael Martin on November 07, 2007. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Patrick J. O'Meara, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 3.6, 3.8, and 4.9°C.

GC/MS SEMIVOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for SB-406-0405 had RPD's outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

The matrix spike/matrix spike duplicate(s) for batch(es) 7302363 had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

The internal standard areas were outside acceptance limits for sample(s) SB-402-0102 (MS/MSD), SB-405-0405, and SB-406-0708 due to matrix effects. (Refer to IS report following this Case Narrative for additional detail.)

POLYCHLORINATED BIPHENYLS-8082

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

For sample(s) SB-405-0203, the recovery for one surrogate compound is outside acceptance criteria. Since the method criterion is that one of two surrogate compounds must meet acceptance criteria, no corrective action was required.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

1554

STL-4124 (0901)

Client: Tetra Tech	Project Manager: Mike Martin	Date: 10/16/07	Chain of Custody Number: 322970
Address: 20251 Century Blvd #200	Telephone Number (Area Code)/Fax Number: 301-528-3022	Lab Number:	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Shawn Hadley	Lab Contact: Ken Ives	
Project Name and Location (State): LMC MA	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 112 IC 00885			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: 8270 *	8082 PCB	Special Instructions/ Conditions of Receipt
SB-400-0102	10/16	1059				X	X						X	X	* benzo (a) pyrene
-0203		1101													
-0405		1103													
400-0708		1105													
401-0102		1122													
-0203		1124													
-0405		1126													
401-0708		1128													
402-0102		1131													
-0203		1133													
-0405		1135													
SB 402-0708	10/16	1137				X	X						X	X	* benzo (a) pyrene

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other SNA

QC Requirements (Specify)

1. Relinquished By	Date: 10/16/07	Time: 1420	1. Received By
2. Relinquished By	Date	Time	2. Received By
3. Relinquished By	Date	Time	3. Received By

1. Received By	Date: 10-16-07	Time: 1430
2. Received By	Date: 10/17/07	Time: 0940
3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

1555

STL-4124 (0901)

Client: Tetra Tech	Project Manager: Mike Martin	Date: 10/16/07 (10/15/07 1514)	Chain of Custody Number: 322971
Address: 20251 Century Blvd #200	Telephone Number (Area Code)/Fax Number: 301-528-3022	Lab Number	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Shawn Hadley	Lab Contact: Ken Ives	
Project Name and Location (State): LMC MR	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.: 112 IC 00885			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: LL 8270 *	8082 PCB	Special Instructions/ Conditions of Receipt
SB-403-0102	10/16	1145				X	X						X	X	*benzo(a)pyrene
0203		1147													
0405		1149													
403-0708		1151													
404-0102		1419													
0203		1421													
0405		1423													
404-0708		1425													
405-0102		1449													
-0203		1451													
-0405		1453													
SB-405-0708	10/16	1455				X	X						X	X	* benzo(a)pyrene

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other SOM

QC Requirements (Specify)

1. Relinquished By	Date: 10/16/07	Time: 1420	1. Received By	Date: 10-16-07	Time: 1430
2. Relinquished By	Date	Time	2. Received By: LSTL	Date: 10.17.07	Time: 0940
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

1556

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
Tetra Tech	Mike Martin	10/16/07	322975
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
20251 Century Blvd #200	301-528-3022		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Germantown / MD / 20874	Shawn Hadley	Ken Ives	
Project Name and Location (State)	**Carrier/Waybill Number**		
LMC MR			
Contract/Purchase Order/Quote No.			
112IC00885			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: 8270	8082 PCB	Special Instructions/ Conditions of Receipt
SB-406-0102	10/16	1516				X	2						X	X	*benzo (a) pyrene
-0102 MS/SD		1516				X	1						X	X	MS/SD
-0203		~~1510~~	1518				2								
-0405		1520					2								
-0405 MS/SD		1520				X	1						X	X	MS/SD
SB-406-0708	10/16	1522				X	2						X	X	
															*benzo (a) pyrene

EDW 10/16/07

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other SEND

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	10/16/07	1420	1. Received By	10-16-07	1430
2. Relinquished By			2. Received By	10-17-07	0940
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

HOLDTIME

SDG 7J17283

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	SB-403-0203	A7J170283006	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-406-0708	A7J170283020	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-402-0102	A7J170283001	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-402-0203	A7J170283002	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-402-0405	A7J170283003	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-403-0102	A7J170283005	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-403-0405	A7J170283007	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-403-0708	A7J170283008	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-404-0102	A7J170283009	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-404-0203	A7J170283010	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-406-0203	A7J170283018	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-402-0708	A7J170283004	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-406-0405	A7J170283019	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-404-0405	A7J170283011	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-406-0102	A7J170283017	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	SB-405-0708	A7J170283016	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-405-0405	A7J170283015	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-405-0203	A7J170283014	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-405-0102	A7J170283013	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
PCS	%	SB-404-0708	A7J170283012	NM	10/16/2007	10/23/2007	10/24/2007	7	1	8
OS	%	SB-404-0708	A7J170283012	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-404-0405	A7J170283011	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-406-0708	A7J170283020	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-406-0405	A7J170283019	NM	10/16/2007	10/20/2007	10/23/2007	4	3	7
OS	%	SB-406-0203	A7J170283018	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-406-0102	A7J170283017	NM	10/16/2007	10/20/2007	10/23/2007	4	3	7
OS	%	SB-405-0708	A7J170283016	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-405-0405	A7J170283015	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-405-0203RE	A7J170283014	NM	10/16/2007	10/29/2007	11/1/2007	13	3	16
OS	%	SB-402-0102	A7J170283001	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-404-0203	A7J170283010	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-404-0102	A7J170283009	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-403-0708	A7J170283008	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	%	SB-403-0405	A7J170283007	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-403-0203	A7J170283006	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-403-0102	A7J170283005	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-402-0708	A7J170283004	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-402-0203	A7J170283002	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-405-0102	A7J170283013	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	%	SB-402-0405	A7J170283003	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-406-0203	A7J170283018	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-404-0405	A7J170283011	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-404-0708	A7J170283012	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-405-0102	A7J170283013	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-405-0203RE	A7J170283014	NM	10/16/2007	10/29/2007	11/1/2007	13	3	16
OS	UG/KG	SB-405-0405	A7J170283015	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-406-0102	A7J170283017	NM	10/16/2007	10/20/2007	10/23/2007	4	3	7
OS	UG/KG	SB-403-0203	A7J170283006	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-406-0405	A7J170283019	NM	10/16/2007	10/20/2007	10/23/2007	4	3	7
OS	UG/KG	SB-405-0708	A7J170283016	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-404-0203	A7J170283010	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/KG	SB-404-0102	A7J170283009	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-403-0405	A7J170283007	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-403-0102	A7J170283005	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-402-0708	A7J170283004	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-402-0405	A7J170283003	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-402-0203	A7J170283002	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-402-0102	A7J170283001	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-406-0708	A7J170283020	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
OS	UG/KG	SB-403-0708	A7J170283008	NM	10/16/2007	10/23/2007	10/31/2007	7	8	15
PCB	%	SB-404-0405	A7J170283011	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-405-0708	A7J170283016	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-404-0102	A7J170283009	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	%	SB-402-0102	A7J170283001	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-406-0708	A7J170283020	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-406-0405	A7J170283019	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	%	SB-406-0102	A7J170283017	NM	10/16/2007	10/23/2007	10/26/2007	7	3	10
PCB	%	SB-405-0405	A7J170283015	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	%	SB-405-0203	A7J170283014	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	%	SB-405-0102	A7J170283013	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	%	SB-402-0405	A7J170283003	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-406-0203	A7J170283018	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	%	SB-402-0203	A7J170283002	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-404-0708	A7J170283012	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-402-0708	A7J170283004	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	%	SB-403-0102	A7J170283005	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-403-0203	A7J170283006	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	%	SB-403-0405	A7J170283007	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	%	SB-403-0708	A7J170283008	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	%	SB-404-0203	A7J170283010	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	UG/KG	SB-404-0708	A7J170283012	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-402-0102	A7J170283001	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-406-0405	A7J170283019	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	UG/KG	SB-406-0203	A7J170283018	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	UG/KG	SB-406-0102	A7J170283017	NM	10/16/2007	10/23/2007	10/26/2007	7	3	10
PCB	UG/KG	SB-405-0708	A7J170283016	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-405-0405	A7J170283015	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	UG/KG	SB-405-0203	A7J170283014	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	UG/KG	SB-405-0102	A7J170283013	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	UG/KG	SB-406-0708	A7J170283020	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-404-0405	A7J170283011	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-404-0203	A7J170283010	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	UG/KG	SB-404-0102	A7J170283009	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	UG/KG	SB-403-0708	A7J170283008	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	UG/KG	SB-403-0405	A7J170283007	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	UG/KG	SB-403-0203	A7J170283006	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	UG/KG	SB-403-0102	A7J170283005	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-402-0708	A7J170283004	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	UG/KG	SB-402-0203	A7J170283002	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-402-0405	A7J170283003	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17283

Matrix Spike ID: SB-406-0405

Lot #: A7J170283 WO #: J86XJ1AM
BATCH: 7292538

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD		QC LIMITS RPD	QC LIMITS REC	QUAL
1,2,4-Trichlorobenzene	830	490	59	1.4		30	33 - 110	
Acenaphthene	830	1000	103	0.50		30	10 - 200	
2,4-Dinitrotoluene	830	520	63	18		30	42 - 118	
Pyrene	830	1100	100	0.42		30	10 - 200	
N-Nitrosodi-n-propylamine	830	550	66	44	*	30	30 - 121	p
1,4-Dichlorobenzene	830	390	48	3.9		30	26 - 110	
Pentachlorophenol	830	280	34	41	*	30	10 - 182	p
Phenol	830	540	65	24		30	10 - 144	
2-Chlorophenol	830	520	63	19		30	32 - 110	
4-Chloro-3-methylphenol	830	540	65	11		30	32 - 117	
4-Nitrophenol	830	550	67	11		30	10 - 125	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

p Relative percent difference (RPD) is outside stated control limits.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 2 out of 11 outside limits
Spike Recovery: 0 out of 11 outside limits

COMMENTS:

FORM III

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17283

Matrix Spike ID: LAB MS/MSD Level: (low/med) LOW

Lot #: A7J250272 WO #: J9VG91A0
BATCH: 7302363

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
1,2,4-Trichlorobenzene	740	ND	560	75	33 - 110	DIL
Acenaphthene	740	530	1200	91	10 - 200	DIL
2,4-Dinitrotoluene	740	ND	730	98	42 - 118	DIL
Pyrene	740	8200	13000	646*	10 - 200	DIL a
N-Nitrosodi-n-propylamine	740	ND	540	73	30 - 121	DIL
1,4-Dichlorobenzene	740	ND	510	69	26 - 110	DIL
Pentachlorophenol	740	ND	1000	142	10 - 182	DIL
Phenol	740	ND	570	78	10 - 144	DIL
2-Chlorophenol	740	ND	530	72	32 - 110	DIL
4-Chloro-3-methylphenol	740	ND	520	70	32 - 117	DIL
4-Nitrophenol	740	ND	0.0	0*	10 - 125	DIL a

NOTES(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

a Spiked analyte recovery is outside stated control limits.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 2 out of 11 outside limits

COMMENTS:

FORM III

SW846 8270C MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17283

Matrix Spike ID: LAB MS/MSD Level: (low/med) LOW

Lot #: A7J250272 WO #: J9VG91A1
BATCH: 7302363

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
1,2,4-Trichlorobenzene	740	460	62	18	30	33- 110	DIL
Acenaphthene	740	1400	122	18	30	10- 200	DIL
2,4-Dinitrotoluene	740	680	92	6.8	30	42- 118	DIL
Pyrene	740	15000	974*	17	30	10- 200	DIL a
N-Nitrosodi-n-propylamine	740	440	60	19	30	30- 121	DIL
1,4-Dichlorobenzene	740	430	59	17	30	26- 110	DIL
Pentachlorophenol	740	970	130	8.1	30	10- 182	DIL
Phenol	740	510	69	12	30	10- 144	DIL
2-Chlorophenol	740	460	61	15	30	32- 110	DIL
4-Chloro-3-methylphenol	740	430	58	18	30	32- 117	DIL
4-Nitrophenol	740	0.0	0*	0.0	30	10- 125	DIL a

NOTES(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

a Spiked analyte recovery is outside stated control limits.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 11 outside limits
Spike Recovery: 2 out of 11 outside limits

COMMENTS:

FORM III

SW846 8082 SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J17283

Lot #: A7J170283

Extraction: XXA63QH01

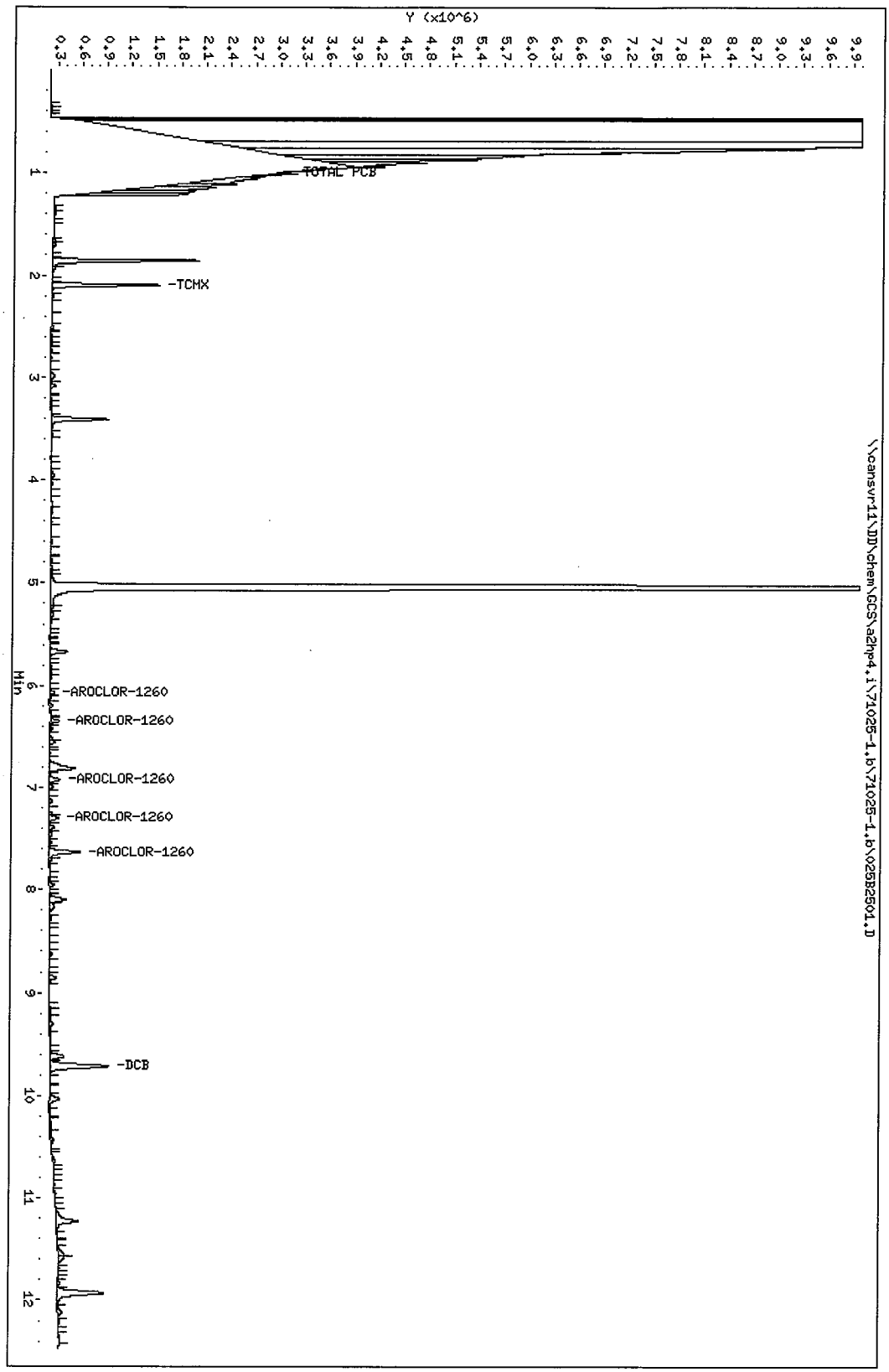
	CLIENT ID.	SRG01	SRG02	TOT OUT
01	SB-402-0102	73	66	00
02	SB-402-0203	125	109	00
03	SB-402-0405	53	35	00
04	SB-402-0708	93	106	00
05	SB-403-0102	113	97	00
06	SB-403-0203	33	34	00
07	SB-403-0405	93	95	00
08	SB-403-0708	98	108	00
09	SB-404-0102	102	104	00
10	SB-404-0203	96	106	00
11	SB-404-0405	111	86	00
12	SB-404-0708	89	53	00
13	SB-405-0102	105	113	00
14	SB-405-0203	96	207*	01
15	SB-405-0405	81	151	00
16	SB-405-0708	97	82	00
17	SB-406-0102	40	61	00
18	SB-406-0203	101	106	00
19	SB-406-0405	82	104	00
20	SB-406-0708	67	70	00
21	METHOD BLK. J9KCL1AA	33	32	00
22	METHOD BLK. J9KCT1AA	44	48	00
23	LCS J9KCL1AC	137	138	00
24	LCS J9KCT1AC	115	135	00
25	SB-406-0405 D	79	104	00
26	SB-406-0405 S	86	107	00

SURROGATES		QC LIMITS
SRG01	= Tetrachloro-m-xylene	(10-196)
SRG02	= Decachlorobiphenyl	(10-199)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SAMPLE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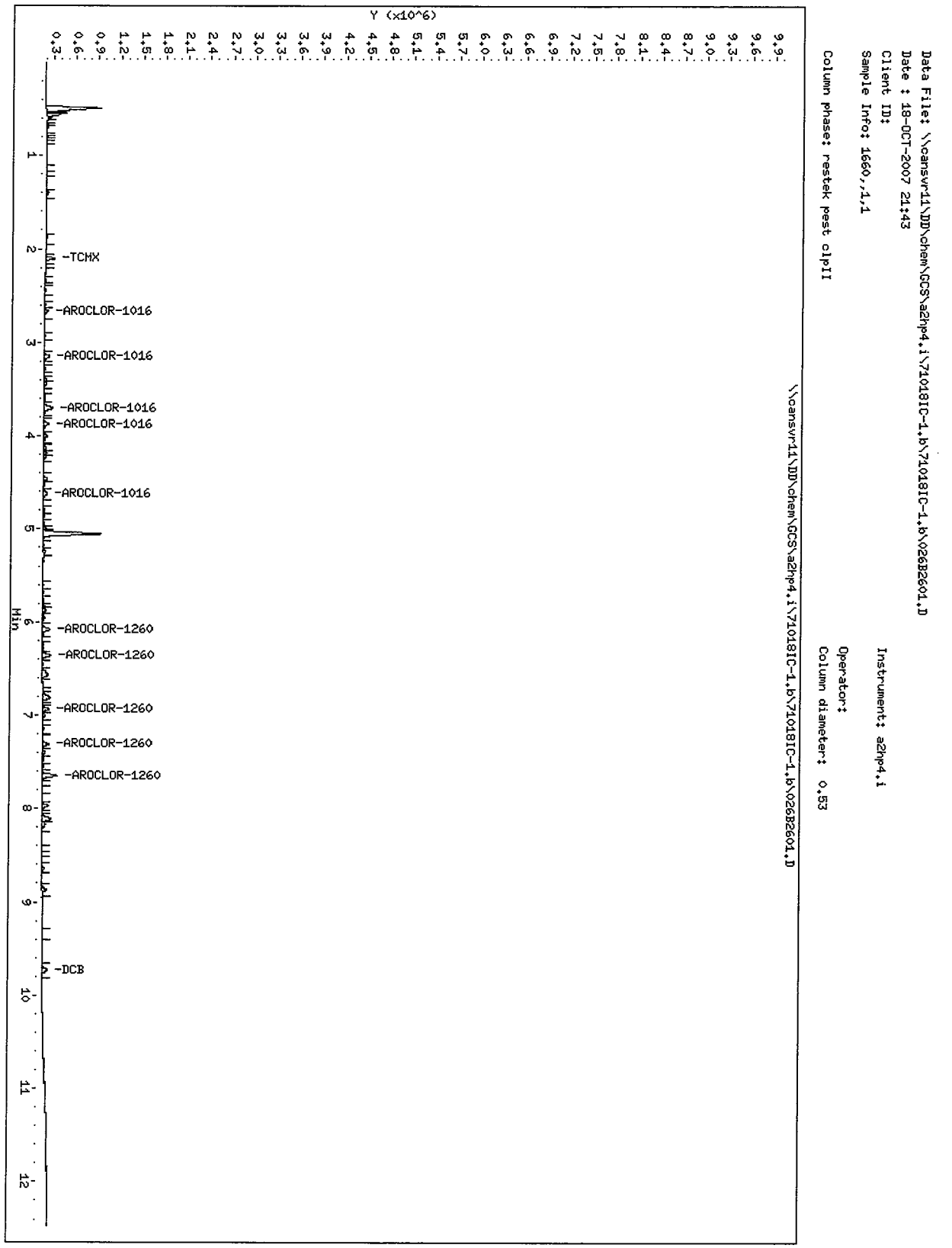
Date : 25-OCT-2007 17:54
Client ID: SB-406-0203
Sample Info: J86XH1AC
Volume Injected (uL): 1.0
Column phase: restek pest clpII
Instrument: a2hp4.i
Operator:
Column diameter: 0.53
Y (x10^6)
TOTAL PCB
-TCMX
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB
Min
\\cansvr11\DD\chem\GCS\a2hp4.i\71025-1.b\71025-1.b\025B2501.D

STANDARD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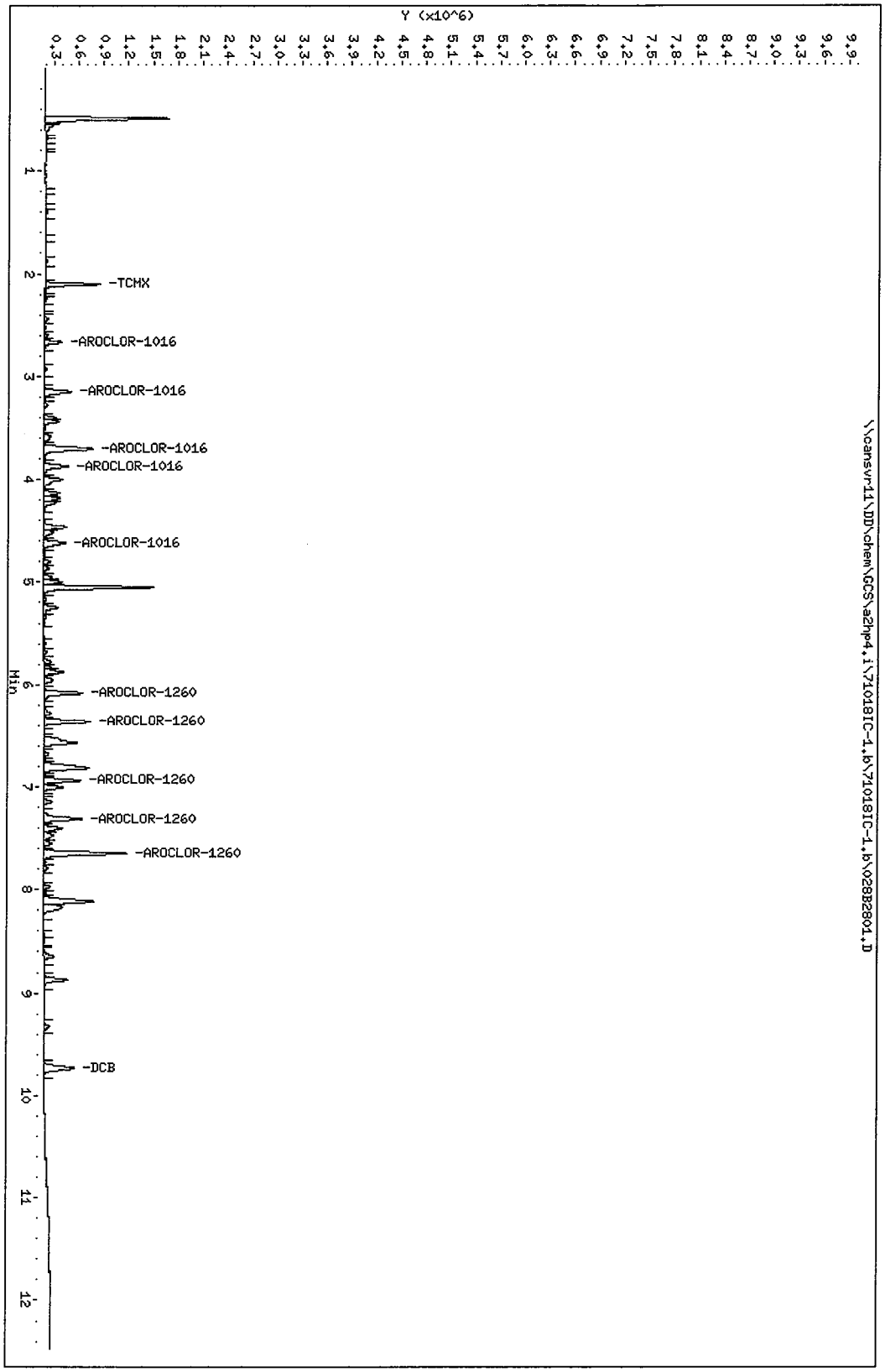
Date : 18-OCT-2007 21:43
Client ID:
Sample Info: 1660,1,1
Instrument: a2hp4.i
Operator:
Column phase: restek pest clpII
Column diameter: 0.53
\\canswr11\DD\chem\GCS\a2hp4.i\71018IC-1.b\71018IC-1.b\026B2604.D
Y (x10^6)
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB
Min

STANDARD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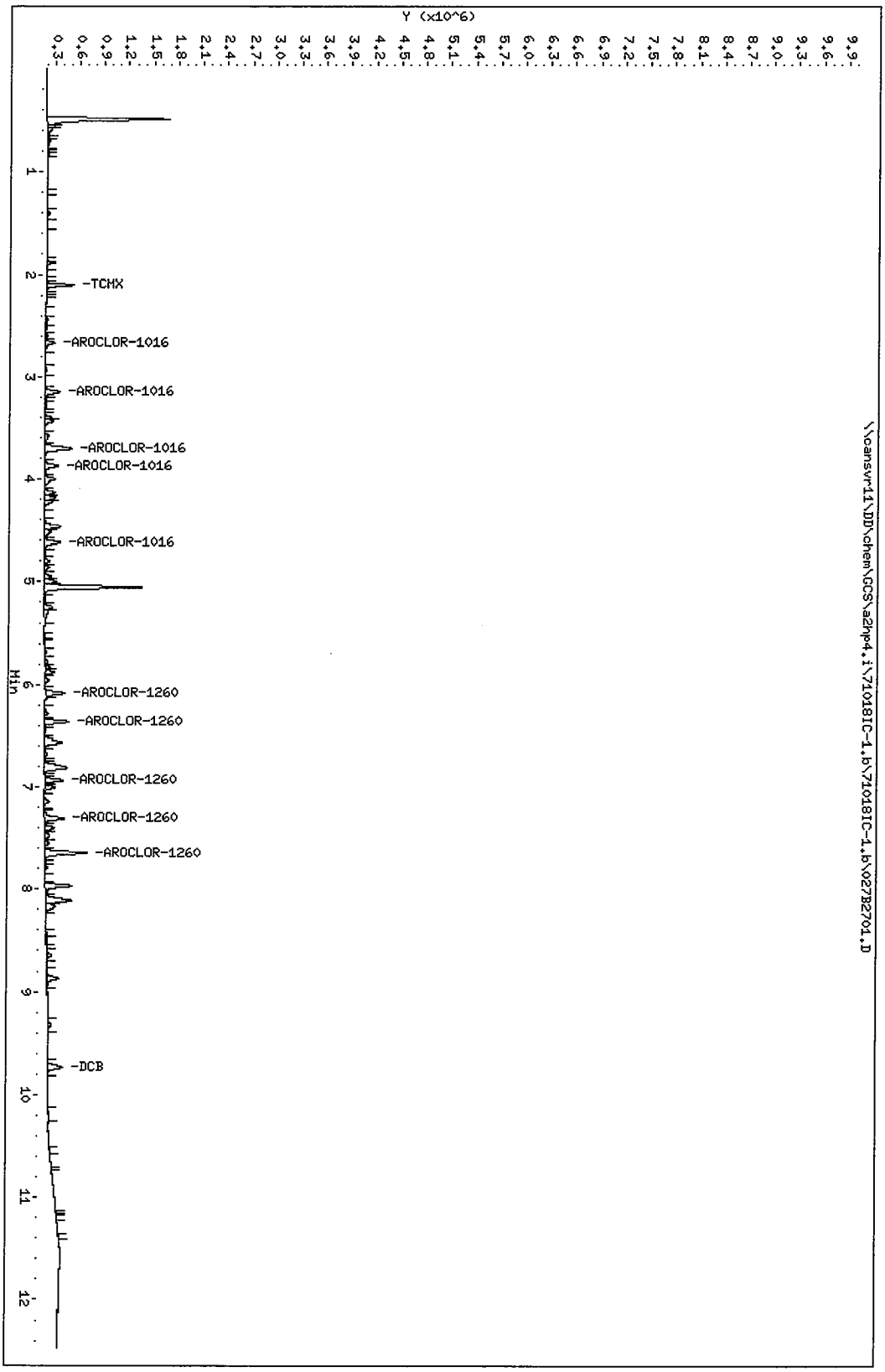
Date : 18-OCT-2007 22:17
Client ID:
Sample Info: 1660,1,3
Instrument: a2hp4.i
Operator:
Column diameter: 0.53
Column phase: restek pest clpII
\\cansvr11\DD\chem\GCS\a2hp4.i\71018IC-1.b\71018IC-1.b\028B2801.D
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB

STANDARD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Date : 18-OCT-2007 22:00
Client ID:
Sample Info: 1660,,1,2
Column phase: restek pest clpII
Instrument: a2hp4.i
Operator:
Column diameter: 0.53
\\cansvr11\DD\chem\GCS\a2hp4.i\71018IC-1.b\71018IC-1.b\027B2701.D
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB

CALCULATION WORKSHEET

CLIENT: LOCKHEED MIDDLE RIVER	**SDG No.** 7J17283
SUBJECT: EXAMPLE CALCULATION - BENZO(A)PYRENE - SOIL	
BY: T. JACKMAN	**DATE:** **12/01/07**

Sample ID = SB-406-0102 **Benzo(a)pyrene**
Concentration = 510 ug/kg

EQUATION:

$$C_s = \frac{A_x \times Is \times Vt \times Df}{Ais \times RRF \times V_i \times W_s \times D}$$

Where:

C_s	=	analyte concentration in soil		ug/kg
A_x	=	analyte response	= 1122720	
Is	=	amount of internal standard	= 2	ng
V_t	=	volume of final extract	= 2000	uL
Df	=	dilution factor	= 1	
Ais	=	response of internal standard	= 642344	
RRF	=	response factor of compound	= 1.04094	
V_i	=	volume injected	= 0.5	uL
Ws	=	sample weight	= 30.13	g
D	=	percent solids	= 0.87	

Therefore: benzo(a)pyrene concentration in soil =

$$\frac{1122720 \times 2ng \times 2000uL \times 1}{642344 \times 1.04094 \times 0.5uL \times 30.13g \times 0.87}$$

C_s = 512 ug/kg

Tetra Tech NUS, Inc

Client Sample ID: SB-406-0102

GC/MS Semivolatiles

Lot-Sample #...:	A7J170283-017	Work Order #...:	J86XG1AF	Matrix.....:	SO
Date Sampled...:	10/16/07 15:16	Date Received..:	10/17/07		
Prep Date.....:	10/20/07	Analysis Date..:	10/23/07		
Prep Batch #...:	7292538				
Dilution Factor:	1	Initial Wgt/Vol:	30.13 g	Final Wgt/Vol..:	2 mL
% Moisture.....:	13	Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzo(a)pyrene	510	380	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	48	(24 - 112)
2-Fluorobiphenyl	59	(34 - 110)
Terphenyl-d14	83	(41 - 119)
Phenol-d5	53	(28 - 110)
2-Fluorophenol	53	(26 - 110)
2,4,6-Tribromophenol	53	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/kg)
136	Benzo(a)Anthracene	228	8.698	8.686	(0.999)	484706	1.21898	161.83(QM)
137	Chrysene	228	8.727	8.715	(1.002)	811710	2.25198	298.97
139	bis(2-ethylhexyl)Phthalate	149	8.627	8.615	(0.991)	53532	0.22972	30.497(Q)
140	Di-n-octylphthalate	149	Compound Not Detected.					
141	Benzo(b)fluoranthene	252	9.692	9.662	(0.956)	2060434	5.46313	725.27(M)
142	Benzo(k)fluoranthene	252	9.715	9.692	(0.959)	689910	1.79019	237.66(QM)
146	Benzo(a)pyrene	252	10.074	10.039	(0.994)	1122720	3.35820	445.83(H)
149	Indeno(1,2,3-cd)pyrene	276	11.709	11.645	(1.156)	1354977	3.54169	470.19
150	Dibenz(a,h)anthracene	278	11.703	11.650	(1.155)	358626	1.08639	144.23(H)
151	Benzo(g,h,i)perylene	276	12.203	12.115	(1.204)	1547827	4.81972	639.86
198	1,4-Dioxane	88	Compound Not Detected.					
232	2-Methylcyclohexanone	68	Compound Not Detected.					
233	3-Methylcyclohexanone	69	Compound Not Detected.					
$ 154	Nitrobenzene-d5	82	3.869	3.863	(0.883)	213029	2.41172	320.18
$ 155	2-Fluorobiphenyl	172	5.139	5.139	(0.909)	623967	2.92618	388.47
$ 156	Terphenyl-d14	244	7.892	7.880	(0.906)	1132428	4.14462	550.23
$ 157	Phenol-d5	99	3.210	3.192	(0.921)	450762	3.97443	527.64
$ 158	2-Fluorophenol	112	2.651	2.610	(0.760)	334136	3.96263	526.07
$ 159	2,4,6-Tribromophenol	330	6.227	6.221	(1.102)	128346	3.94317	523.49
$ 186	2-Chlorophenol-d4	132	3.339	3.333	(0.958)	361306	3.91643	519.94
$ 187	1,2-Dichlorobenzene-d4	152	3.598	3.592	(1.032)	115760	1.88452	250.18
M 195	Cresols, total	100	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

STL North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4ag2.i\71023A.b\J86XG1AF.D
Lab Smp Id: J86FG1AF Client Smp ID: SB-406-0102
Inj Date : 23-OCT-2007 18:20
Operator : 046900 Inst ID: a4ag2.i
Smp Info : J86FG1AF,71023A.b,8270P,TCLLCSD.SUB
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4ag2.i\71023A.b\8270p.m
Meth Date : 24-Oct-2007 09:46 hulat Quant Type: ISTD
Cal Date : 20-OCT-2007 11:28 Cal File: 2AL1020.D
Als bottle: 38
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TCLLCSD.SUB
Target Version: 4.14
Processing Host: CANPMSSV04

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)(1000 low, 2
Vi	0.50000	Volume injected (uL)
Ws	30.130	Weight of sample extracted (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/kg)	
* 1 1,4-Dichlorobenzene-d4	152	3.486	3.486	(1.000)	147913	2.00000		(Q)
* 2 Naphthalene-d8	136	4.380	4.380	(1.000)	502809	2.00000		
* 3 Acenaphthene-d10	164	5.651	5.651	(1.000)	338621	2.00000		
* 4 Phenanthrene-d10	188	6.745	6.739	(1.000)	591403	2.00000		
* 5 Chrysene-d12	240	8.709	8.692	(1.000)	667273	2.00000		
* 6 Perylene-d12	264	10.133	10.098	(1.000)	642344	2.00000		(H)
9 Pyridine	79	Compound Not Detected.						
10 N-Nitrosodimethylamine	74	Compound Not Detected.						
209 Benzaldehyde	77	Compound Not Detected.						
21 Aniline	93	Compound Not Detected.						
22 Phenol	94	Compound Not Detected.						
23 bis(2-Chloroethyl)ether	93	Compound Not Detected.						
24 2-Chlorophenol	128	Compound Not Detected.						
26 1,3-Dichlorobenzene	146	Compound Not Detected.						
27 1,4-Dichlorobenzene	146	Compound Not Detected.						
28 1,2-Dichlorobenzene	146	Compound Not Detected.						
29 Benzyl Alcohol	108	Compound Not Detected.						
30 2-Methylphenol	108	Compound Not Detected.						

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-OCT-2007 15:56
End Cal Date : 17-OCT-2007 18:14
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\71017A.b\8270p.m
Last Edit : 17-Oct-2007 19:56 a4ag2.i
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
144 Hexachlorophene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
145 Hexachlorophene product	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
146 Benzo(a)pyrene	1.00424	0.88190	0.91626	0.97379	1.00679	1.05025			
	1.10613	1.14826	1.28087				1.04094	11.828	
148 3-Methylcholanthrene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
149 Indeno(1,2,3-cd)pyrene	1.13657	1.02575	1.06722	1.11865	1.16012	1.19746			
	1.25757	1.30840	1.44904				1.19120	10.971	
150 Dibenz(a,h)anthracene	0.99470	0.87348	0.91515	0.95809	0.98795	1.03019			
	1.09278	1.13512	1.26297				1.02783	11.670	
151 Benzo(g,h,i)perylene	1.03594	0.85698	0.89845	0.93815	0.95740	0.99340			
	1.03681	1.08103	1.20106				0.99991	10.375	
199 3-Picoline	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
200 N,N-Dimethylacetamide	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
201 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
202 Diphenyl	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

CALCULATION WORKSHEET **Page 1 of 1**

CLIENT: LOCKHEED MIDDLE RIVER	**SDG No.** 7J17283
SUBJECT: EXAMPLE CALCULATION - AROCLOR-1260 - SOIL	
BY: T. JACKMAN	**DATE:** **12/01/07**

Sample ID = SB-406-0203
Concentration = 21 ug/kg

Aroclor-1260

EQUATION:

$$C_w = \frac{A_x \times V_t \times Df}{CF \times V_i \times W_s \times D}$$

Where:

C_s	=	analyte concentration in soil		ug/kg
A_x	=	analyte response	=	354576.6
V_t	=	volume of final extract	=	10000 uL
Df	=	dilution factor	=	1
CF	=	calibration factor	=	5859887
V_i	=	volume injected	=	1 uL
Ws	=	sample weight	=	30.02 g
D	=	percent solids	=	0.87

Therefore: Aroclor-1260 concentration in soil =

$$\frac{354576.6 \times 10000uL \times 1}{5859886.6 \times 1uL \times 30.02g \times 0.87}$$

C_s = 23.2 ug/kg

Tetra Tech NUS, Inc

Client Sample ID: SB-406-0203

GC Semivolatiles

Lot-Sample #...:	A7J170283-018	**Work Order #...:**	J86XH1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 15:18	**Date Received..:**	10/17/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7295395				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.02 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	**21 J**	**38**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	101	(10 - 196)
Decachlorobiphenyl	106	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Data File: 025B2501.D
Report Date: 26-Oct-2007 08:50

STL North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp4.i\71025-1.b\71025-1.b\025B2501.D
Lab Smp Id: J86XH1AC Client Smp ID: SB-406-0203
Inj Date : 25-OCT-2007 17:54
Operator : Inst ID: a2hp4.i
Smp Info : J86XH1AC
Misc Info :
Comment   :
Method   : \\cansvr11\dd\chem\GCS\a2hp4.i\71025-1.b\HP4PCBF.m\HP4PCBR.m
Meth Date : 25-Oct-2007 19:50 Quant Type: ESTD
Cal Date : 19-OCT-2007 01:08 Cal File: 038B3801.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: CANSVR10

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.020	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.094	2.094	0.000	2070120	0.02016	6.717		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Peaks not detected for Quant. or Qual. signal(s).							
4 AROCLOR-1232					CAS #: 11141-16-5		
Peaks not detected for Quant. or Qual. signal(s).							

Data File: 025B2501.D
Report Date: 26-Oct-2007 08:50

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Peaks not detected for Quant. or Qual. signal(s).							
6 AROCLOR-1248					CAS #: 12672-29-6		
Peaks not detected for Quant. or Qual. signal(s).							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
6.071	6.072	-0.001	109753	0.02347	7.820	80.00- 120.00	100.00(M)
6.347	6.349	-0.002	227814	0.04237	14.11	86.81- 144.68	207.57
6.922	6.923	-0.001	312284	0.07213	24.03	69.90- 116.51	284.53
7.298	7.298	0.000	259950	0.05342	17.80	77.56- 129.26	236.85
7.632	7.632	0.000	863082	0.08586	28.60	169.21- 282.02	786.38
Average of Peak Concentrations =					18.47		
$ 12 DCB					CAS #: 2051-24-3		
9.712	9.712	0.000	1999100	0.02115	7.044		
M 11 TOTAL PCB					CAS #: 1336-36-3		
			354577	0.05545	18.47		

QC Flag Legend

M - Compound response manually integrated.

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J17283

GC Column: RESTEK PEST CLPII ID: 0.53 (mm) Init. Calib. Date(s): 06/27/07 10/19/

Instrument ID: A2HP4

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.09 S2 : 9.71

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660	10/25/07	1051	2.09	9.71
02	SB-402-0708	J86W11AC	10/25/07	1337	2.09	9.71
03	SB-403-0203	J86W31AC	10/25/07	1411	2.09	9.71
04	SB-403-0405	J86W41AC	10/25/07	1428	2.09	9.72
05	SB-403-0708	J86W51AC	10/25/07	1445	2.09	9.71
06	SB-404-0102	J86W71AC	10/25/07	1502	2.09	9.71
07	SB-404-0203	J86W81AC	10/25/07	1520	2.09	9.71
08	J9KCTBLK	J9KCT1AA	10/25/07	1554	2.10	9.71
09		E178	10/25/07	1611	2.09	9.71
10	SB-405-0102	J86XC1AC	10/25/07	1645	2.09	9.71
11	SB-405-0203	J86XD1AC	10/25/07	1702	2.09	9.71
12	SB-405-0405	J86XE1AC	10/25/07	1720	2.10	9.71
13	SB-406-0203	J86XH1AC	10/25/07	1754	2.09	9.71
14	SB-406-0405	J86XJ1AC	10/25/07	1811	2.09	9.71
15	SB-406-0405	J86XJ1AN	10/25/07	1828	2.10	9.71
16	SB-406-0405	J86XJ1AP	10/25/07	1845	2.09	9.71
17	J9KCTCHK	J9KCT1AC	10/25/07	1919	2.09	9.71
18		E178	10/25/07	1936	2.09	9.71
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = TCMX (+/- 0.10 MINUTES)
S2 = DCB (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Report Date : 06-Nov-2007 10:39

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2007 15:36
End Cal Date : 19-OCT-2007 02:34
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\CANSVR11\DD\chem\GCS\a2hp4.i\71018IC-1.b\HP4PCBF.m\HP4PC
Last Edit : 21-Oct-2007 15:48 serraa
Curve Type : Average

	Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.000 Level 6	___ RRF	% RSD	
	8 AROCLOR-1260(1)	4329700	4552910	5378315	4783232	4665790	4342780	4675454	8.289	
	(2)	4797540	6203710	5966640	5332322	5112956	4849743	5377152	10.897	
	(3)	3496740	4948940	4918175	4393384	4222864	3996315	4329403	12.861	
	(4)	4215300	5496840	5452090	4888414	4675030	4466737	4865735	10.723	
	(5)	8447960	11359640	11312840	10200374	9607243	9382074	10051689	11.379	
	9 AROCLOR-1262(1)	5846040	4773780	4027065	4154068	3935838	3671210	4401334	18.111	
	(2)	8902340	7474280	6370720	6914330	6521168	6118206	7050174	14.519	
	(3)	8614360	7204290	6071470	6419510	6059167	5713237	6680339	16.087	
	(4)	16686600	14182190	11946965	12743810	12100616	11463127	13187218	14.830	
	(5)	12540200	10446350	8817785	9317142	8826884	8365044	9718901	16.000	
	10 AROCLOR-1268(1)	3397040	2818070	2855035	2820440	2852430	2490264	2872213	10.182	
	(2)	5177600	4862930	4186915	4059544	4103814	3550863	4323611	13.699	
	(3)	18481040	17728990	15621710	15442430	15629551	13999912	16150606	10.212	
	(4)	17352020	16923110	15068205	15081040	15514614	13955108	15649016	8.119	
	(5)	42197740	41905830	38036925	37453458	38248248	34967037	38801540	7.159	
M	11 TOTAL PCB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$	1 TCMX	79285200	109076400	112736600	125365450	98500440	90992240	102659388	16.054	
$	12 DCB	75138800	100446800	103649900	115933800	85204600	86813080	94531163	15.682	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO :	**MIKE MARTIN**	**DATE:**	**JANUARY 8, 2008**
FROM:	**THOMAS JACKMAN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – BENZO(A)PYRENE/PCBS**
LOCKHEED MIDDLE RIVER FACILITY
SAMPLE DELIVERY GROUP (SDG) – 7J18324

SAMPLES: 18/Solid

SB-407-0102	SB-407-0203	SB-407-0405	SB-407-0708
SB-408-0102	SB-408-0203	SB-408-0405	SB-408-0708
SB-409-0102	SB-409-0203	SB-409-0405	SB-409-0708
SB-489-0102	SB-489-0203	SB-489-0405	SB-489-0708
SB-490-0405	SB-490-0708		

Overview

This sample set for the Lockheed Middle River, SDG 7J18324, consists of 18 environmental soil samples. The samples were analyzed for benzo(a)pyrene and polychlorinated biphenyls(PCBs). No field duplicates were included in this data set.

The samples were collected by Tetra Tech NUS, Inc. on October 16 and 17, 2007 and analyzed by Test America. The samples were analyzed by SW-846 Method 8270C for benzo(a)pyrene and Method 8082 for PCBs.

Summary

The findings in this report are based upon a general review of all available data including: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank contamination, surrogate spike, matrix spike/matrix spike duplicate (MS/MSD) results, Laboratory Control Sample (LCS) results, compound identification, compound quantitation, and detection limits. Areas of concern are listed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Major Problems

- None.

Minor Problems

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, "J".

In the analysis of benzo(a)pyrene, matrix spike/matrix spike duplicate RPDs were outside quality criteria for samples SB-407-0102 MS/MSD and SB-407-0708 MS/MSD. No data were qualified on the basis of the MS/MSD results because benzo(a)pyrene was not one of the spiked compounds.

Aroclor-1260 was reported as positively detected in one sample (SB-408-0405) on column CLPII. The laboratory did not confirm this result on a second column as specified by Method 8082. The lack of second column confirmation should not affect the identification of Aroclor-1260 in this sample because PCBs are identified by pattern recognition rather than by retention times. The chromatograms of this sample and associated standards are provided in Appendix C.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the "Region III Modifications to the National Functional Guidelines for Organic Data Review" (9/94). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Thomas Jackman
Environmental Scientist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

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

Data Qualifier Key:

J - Positive result is considered estimated, "J", as a result of technical noncompliances.

U - Nondetected result.

UJ - Nondetected result is considered estimated, "UJ", as a result of technical noncompliances.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00885

SDG: 7J18324 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-407-0102	nsample	SB-407-0203	nsample	SB-407-0405
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J180324001	lab_id	A7J180324002	lab_id	A7J180324003
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	79.0	Pct_Solids	78.0	Pct_Solids	74.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	130	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	190	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	110	J	P

PROJ_NO: 00885

SDG: 7J18324 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-407-0708	nsample	SB-408-0102	nsample	SB-408-0203
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J180324004	lab_id	A7J180324005	lab_id	A7J180324006
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	73.0	Pct_Solids	82.0	Pct_Solids	84.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	30	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	87	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	50	J	P

PROJ_NO: 00885

SDG: 7J18324 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-408-0405	nsample	SB-408-0708	nsample	SB-409-0102
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J180324007	lab_id	A7J180324008	lab_id	A7J180324011
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	86.0	Pct_Solids	81.0	Pct_Solids	78.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	12	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	39	J	P

PROJ_NO: 00885

SDG: 7J18324 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-409-0203	nsample	SB-409-0405	nsample	SB-409-0708
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J180324012	lab_id	A7J180324013	lab_id	A7J180324014
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	82.0	Pct_Solids	78.0	Pct_Solids	73.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.6	U	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	67	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	1.8	U	

PROJ_NO: 00885

SDG: 7J18324 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-489-0102	nsample	SB-489-0203	nsample	SB-489-0405
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J180324015	lab_id	A7J180324016	lab_id	A7J180324017
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	80.0	Pct_Solids	76.0	Pct_Solids	79.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	9.6	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	260	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	9.8	J	P

PROJ_NO: 00885

SDG: 7J18324 MEDIA: SOIL DATA FRACTION: OS

nsample	SB-489-0708	nsample	SB-490-0405	nsample	SB-490-0708
samp_date	10/16/2007	samp_date	10/17/2007	samp_date	10/17/2007
lab_id	A7J180324018	lab_id	A7J180324009	lab_id	A7J180324010
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	73.0	Pct_Solids	79.0	Pct_Solids	87.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	21	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	110	J	P

Parameter	Result	Val Qual	Qual Code
BENZO(A)PYRENE	31	J	P

PROJ_NO: 00885

SDG: 7J18324 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-407-0102	nsample	SB-407-0203	nsample	SB-407-0405
samp_date	10/16/2007	samp_date	10/16/2007	samp_date	10/16/2007
lab_id	A7J180324001	lab_id	A7J180324002	lab_id	A7J180324003
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/KG	units	UG/KG	units	UG/KG
Pct_Solids	79.0	Pct_Solids	78.0	Pct_Solids	74.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	42	U	
AROCLOR-1221	42	U	
AROCLOR-1232	42	U	
AROCLOR-1242	42	U	
AROCLOR-1248	42	U	
AROCLOR-1254	42	U	
AROCLOR-1260	42	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	42	U	
AROCLOR-1221	42	U	
AROCLOR-1232	42	U	
AROCLOR-1242	42	U	
AROCLOR-1248	42	U	
AROCLOR-1254	42	U	
AROCLOR-1260	42	U	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	45	U	
AROCLOR-1221	45	U	
AROCLOR-1232	45	U	
AROCLOR-1242	45	U	
AROCLOR-1248	45	U	
AROCLOR-1254	45	U	
AROCLOR-1260	45	U	

PROJ_NO: 00885

SDG: 7J18324 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-407-0708
samp_date	10/16/2007
lab_id	A7J180324004
qc_type	NM
units	UG/KG
Pct_Solids	73.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	45	U	
AROCLOR-1221	45	U	
AROCLOR-1232	45	U	
AROCLOR-1242	45	U	
AROCLOR-1248	45	U	
AROCLOR-1254	45	U	
AROCLOR-1260	45	U	

nsample	SB-408-0102
samp_date	10/16/2007
lab_id	A7J180324005
qc_type	NM
units	UG/KG
Pct_Solids	82.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	40	U	
AROCLOR-1221	40	U	
AROCLOR-1232	40	U	
AROCLOR-1242	40	U	
AROCLOR-1248	40	U	
AROCLOR-1254	40	U	
AROCLOR-1260	40	U	

nsample	SB-408-0203
samp_date	10/16/2007
lab_id	A7J180324006
qc_type	NM
units	UG/KG
Pct_Solids	84.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	39	U	
AROCLOR-1221	39	U	
AROCLOR-1232	39	U	
AROCLOR-1242	39	U	
AROCLOR-1248	39	U	
AROCLOR-1254	39	U	
AROCLOR-1260	39	U	

PROJ_NO: 00885

SDG: 7J18324 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-408-0405
samp_date	10/16/2007
lab_id	A7J180324007
qc_type	NM
units	UG/KG
Pct_Solids	86.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	15	J	P

nsample	SB-408-0708
samp_date	10/16/2007
lab_id	A7J180324008
qc_type	NM
units	UG/KG
Pct_Solids	81.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	41	U	
AROCLOR-1221	41	U	
AROCLOR-1232	41	U	
AROCLOR-1242	41	U	
AROCLOR-1248	41	U	
AROCLOR-1254	41	U	
AROCLOR-1260	41	U	

nsample	SB-409-0102
samp_date	10/16/2007
lab_id	A7J180324011
qc_type	NM
units	UG/KG
Pct_Solids	78.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	43	U	
AROCLOR-1221	43	U	
AROCLOR-1232	43	U	
AROCLOR-1242	43	U	
AROCLOR-1248	43	U	
AROCLOR-1254	43	U	
AROCLOR-1260	43	U	

PROJ_NO: 00885

SDG: 7J18324 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-409-0203
samp_date	10/16/2007
lab_id	A7J180324012
qc_type	NM
units	UG/KG
Pct_Solids	82.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	40	U	
AROCLOR-1221	40	U	
AROCLOR-1232	40	U	
AROCLOR-1242	40	U	
AROCLOR-1248	40	U	
AROCLOR-1254	40	U	
AROCLOR-1260	40	U	

nsample	SB-409-0405
samp_date	10/16/2007
lab_id	A7J180324013
qc_type	NM
units	UG/KG
Pct_Solids	78.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	42	U	
AROCLOR-1221	42	U	
AROCLOR-1232	42	U	
AROCLOR-1242	42	U	
AROCLOR-1248	42	U	
AROCLOR-1254	42	U	
AROCLOR-1260	42	U	

nsample	SB-409-0708
samp_date	10/16/2007
lab_id	A7J180324014
qc_type	NM
units	UG/KG
Pct_Solids	73.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	45	U	
AROCLOR-1221	45	U	
AROCLOR-1232	45	U	
AROCLOR-1242	45	U	
AROCLOR-1248	45	U	
AROCLOR-1254	45	U	
AROCLOR-1260	45	U	

PROJ_NO: 00885

SDG: 7J18324 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-489-0102
samp_date	10/16/2007
lab_id	A7J180324015
qc_type	NM
units	UG/KG
Pct_Solids	80.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	41	U	
AROCLOR-1221	41	U	
AROCLOR-1232	41	U	
AROCLOR-1242	41	U	
AROCLOR-1248	41	U	
AROCLOR-1254	41	U	
AROCLOR-1260	41	U	

nsample	SB-489-0203
samp_date	10/16/2007
lab_id	A7J180324016
qc_type	NM
units	UG/KG
Pct_Solids	76.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	43	U	
AROCLOR-1221	43	U	
AROCLOR-1232	43	U	
AROCLOR-1242	43	U	
AROCLOR-1248	43	U	
AROCLOR-1254	43	U	
AROCLOR-1260	43	U	

nsample	SB-489-0405
samp_date	10/16/2007
lab_id	A7J180324017
qc_type	NM
units	UG/KG
Pct_Solids	79.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	42	U	
AROCLOR-1221	42	U	
AROCLOR-1232	42	U	
AROCLOR-1242	42	U	
AROCLOR-1248	42	U	
AROCLOR-1254	42	U	
AROCLOR-1260	42	U	

PROJ_NO: 00885

SDG: 7J18324 MEDIA: SOIL DATA FRACTION: PEST/PCB

nsample	SB-489-0708
samp_date	10/16/2007
lab_id	A7J180324018
qc_type	NM
units	UG/KG
Pct_Solids	73.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	45	U	
AROCLOR-1221	45	U	
AROCLOR-1232	45	U	
AROCLOR-1242	45	U	
AROCLOR-1248	45	U	
AROCLOR-1254	45	U	
AROCLOR-1260	45	U	

nsample	SB-490-0405
samp_date	10/17/2007
lab_id	A7J180324009
qc_type	NM
units	UG/KG
Pct_Solids	79.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	42	U	
AROCLOR-1221	42	U	
AROCLOR-1232	42	U	
AROCLOR-1242	42	U	
AROCLOR-1248	42	U	
AROCLOR-1254	42	U	
AROCLOR-1260	42	U	

nsample	SB-490-0708
samp_date	10/17/2007
lab_id	A7J180324010
qc_type	NM
units	UG/KG
Pct_Solids	87.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
AROCLOR-1016	38	U	
AROCLOR-1221	38	U	
AROCLOR-1232	38	U	
AROCLOR-1242	38	U	
AROCLOR-1248	38	U	
AROCLOR-1254	38	U	
AROCLOR-1260	38	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Tetra Tech NUS, Inc

Client Sample ID: SB-407-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-001 **Work Order #...:** J9AN91AD **Matrix.....:** SO
Date Sampled...: 10/16/07 16:00 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/28/07
Prep Batch #...: 7296354
Dilution Factor: 1
% Moisture.....: 21 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**130 J**	**420**	**ug/kg**	**1.7**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(24 - 112)
2-Fluorobiphenyl	64	(34 - 110)
Terphenyl-d14	93	(41 - 119)
Phenol-d5	71	(28 - 110)
2-Fluorophenol	67	(26 - 110)
2,4,6-Tribromophenol	80	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-407-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-002 **Work Order #...:** J9APC1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 16:02 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 22 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**190 J**	**420**	**ug/kg**	**1.7**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	45	(24 - 112)
2-Fluorobiphenyl	58	(34 - 110)
Terphenyl-d14	104	(41 - 119)
Phenol-d5	70	(28 - 110)
2-Fluorophenol	57	(26 - 110)
2,4,6-Tribromophenol	89	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-407-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-003 **Work Order #...:** J9APD1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 16:04 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 26 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**110 J**	**450**	**ug/kg**	**1.8**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(24 - 112)
2-Fluorobiphenyl	73	(34 - 110)
Terphenyl-d14	90	(41 - 119)
Phenol-d5	79	(28 - 110)
2-Fluorophenol	72	(26 - 110)
2,4,6-Tribromophenol	83	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-407-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-004 **Work Order #...:** J9APF1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 16:06 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 27 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**30 J**	**450**	**ug/kg**	**1.8**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	60	(24 - 112)
2-Fluorobiphenyl	65	(34 - 110)
Terphenyl-d14	92	(41 - 119)
Phenol-d5	70	(28 - 110)
2-Fluorophenol	65	(26 - 110)
2,4,6-Tribromophenol	78	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-408-0102

GC/MS Semivolatiles

Lot-Sample #...:	A7J180324-005	**Work Order #...:**	J9APX1AD	**Matrix.....:**	SO
Date Sampled...:	10/16/07 16:47	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/25/07		
Prep Batch #...:	7296339				
Dilution Factor:	1				
% Moisture.....:	18	**Method.....:**	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**87 J**	**400**	**ug/kg**	**1.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	60	(24 - 112)
2-Fluorobiphenyl	63	(34 - 110)
Terphenyl-d14	88	(41 - 119)
Phenol-d5	70	(28 - 110)
2-Fluorophenol	65	(26 - 110)
2,4,6-Tribromophenol	77	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-408-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-006 **Work Order #...:** J9AP51AD **Matrix.....:** SO
Date Sampled...: 10/16/07 16:49 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 16 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**50 J**	**390**	**ug/kg**	**1.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	46	(24 - 112)
2-Fluorobiphenyl	64	(34 - 110)
Terphenyl-d14	106	(41 - 119)
Phenol-d5	66	(28 - 110)
2-Fluorophenol	55	(26 - 110)
2,4,6-Tribromophenol	91	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-408-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-007 **Work Order #...:** J9ATD1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 16:51 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 14 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	12 J	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	57	(24 - 112)
2-Fluorobiphenyl	66	(34 - 110)
Terphenyl-d14	100	(41 - 119)
Phenol-d5	68	(28 - 110)
2-Fluorophenol	64	(26 - 110)
2,4,6-Tribromophenol	84	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-408-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-008 **Work Order #...:** J9ATF1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 16:53 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 19 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	410	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	43	(24 - 112)
2-Fluorobiphenyl	49	(34 - 110)
Terphenyl-d14	109	(41 - 119)
Phenol-d5	55	(28 - 110)
2-Fluorophenol	50	(26 - 110)
2,4,6-Tribromophenol	91	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-409-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-011 **Work Order #...:** J9ATL1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 17:00 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 22 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**39 J**	**430**	**ug/kg**	**1.7**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	31	(24 - 112)
2-Fluorobiphenyl	48	(34 - 110)
Terphenyl-d14	92	(41 - 119)
Phenol-d5	51	(28 - 110)
2-Fluorophenol	36	(26 - 110)
2,4,6-Tribromophenol	78	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-409-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-012 **Work Order #...:** J9ATM1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 17:02 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 18 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	400	ug/kg	1.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	32	(24 - 112)
2-Fluorobiphenyl	45	(34 - 110)
Terphenyl-d14	89	(41 - 119)
Phenol-d5	50	(28 - 110)
2-Fluorophenol	40	(26 - 110)
2,4,6-Tribromophenol	69	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-409-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-013 **Work Order #...:** J9ATN1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 17:04 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 22 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**67 J**	**420**	**ug/kg**	**1.7**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	67	(24 - 112)
2-Fluorobiphenyl	74	(34 - 110)
Terphenyl-d14	102	(41 - 119)
Phenol-d5	77	(28 - 110)
2-Fluorophenol	73	(26 - 110)
2,4,6-Tribromophenol	91	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-409-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-014 **Work Order #...:** J9ATP1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 17:06 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 27 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	ND	450	ug/kg	1.8

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	53	(24 - 112)
2-Fluorobiphenyl	53	(34 - 110)
Terphenyl-d14	101	(41 - 119)
Phenol-d5	68	(28 - 110)
2-Fluorophenol	64	(26 - 110)
2,4,6-Tribromophenol	79	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-489-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-015 **Work Order #...:** J9ATR1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 17:17 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 20 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**9.6 J**	**410**	**ug/kg**	**1.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	44	(24 - 112)
2-Fluorobiphenyl	47	(34 - 110)
Terphenyl-d14	98	(41 - 119)
Phenol-d5	66	(28 - 110)
2-Fluorophenol	59	(26 - 110)
2,4,6-Tribromophenol	79	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-489-0203

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-016 **Work Order #...:** J9ATT1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 17:19 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 24 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**260 J**	**430**	**ug/kg**	**1.7**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	65	(24 - 112)
2-Fluorobiphenyl	69	(34 - 110)
Terphenyl-d14	104	(41 - 119)
Phenol-d5	75	(28 - 110)
2-Fluorophenol	73	(26 - 110)
2,4,6-Tribromophenol	90	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-489-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-017 **Work Order #...:** J9ATV1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 17:21 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 21 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**9.8 J**	**420**	**ug/kg**	**1.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	43	(24 - 112)
2-Fluorobiphenyl	66	(34 - 110)
Terphenyl-d14	107	(41 - 119)
Phenol-d5	62	(28 - 110)
2-Fluorophenol	50	(26 - 110)
2,4,6-Tribromophenol	86	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-489-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-018 **Work Order #...:** J9ATW1AD **Matrix.....:** SO
Date Sampled...: 10/16/07 17:23 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 27 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**21 J**	**450**	**ug/kg**	**1.8**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	57	(24 - 112)
2-Fluorobiphenyl	57	(34 - 110)
Terphenyl-d14	86	(41 - 119)
Phenol-d5	66	(28 - 110)
2-Fluorophenol	64	(26 - 110)
2,4,6-Tribromophenol	73	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-490-0405

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-009 **Work Order #...:** J9ATH1AD **Matrix.....:** SO
Date Sampled...: 10/17/07 08:13 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 21 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	**110 J**	**420**	**ug/kg**	**1.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	63	(24 - 112)
2-Fluorobiphenyl	70	(34 - 110)
Terphenyl-d14	87	(41 - 119)
Phenol-d5	72	(28 - 110)
2-Fluorophenol	66	(26 - 110)
2,4,6-Tribromophenol	80	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-490-0708

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-010 **Work Order #...:** J9ATK1AD **Matrix.....:** SO
Date Sampled...: 10/17/07 08:15 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/25/07
Prep Batch #...: 7296339
Dilution Factor: 1
% Moisture.....: 13 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzo(a)pyrene	31 J	380	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	67	(24 - 112)
2-Fluorobiphenyl	77	(34 - 110)
Terphenyl-d14	105	(41 - 119)
Phenol-d5	76	(28 - 110)
2-Fluorophenol	72	(26 - 110)
2,4,6-Tribromophenol	97	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-407-0102

GC Semivolatiles

Lot-Sample #...:	A7J180324-001	**Work Order #...:**	J9AN91AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 16:00	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296359				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.15 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	21	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	42	ug/kg
Aroclor 1221	ND	42	ug/kg
Aroclor 1232	ND	42	ug/kg
Aroclor 1242	ND	42	ug/kg
Aroclor 1248	ND	42	ug/kg
Aroclor 1254	ND	42	ug/kg
Aroclor 1260	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(10 - 196)
Decachlorobiphenyl	110	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-407-0203

GC Semivolatiles

Lot-Sample #...:	A7J180324-002	**Work Order #...:**	J9APC1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 16:02	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296360				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.17 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	22	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	42	ug/kg
Aroclor 1221	ND	42	ug/kg
Aroclor 1232	ND	42	ug/kg
Aroclor 1242	ND	42	ug/kg
Aroclor 1248	ND	42	ug/kg
Aroclor 1254	ND	42	ug/kg
Aroclor 1260	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	82	(10 - 196)
Decachlorobiphenyl	100	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-407-0405

GC Semivolatiles

Lot-Sample #...:	A7J180324-003	**Work Order #...:**	J9APD1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 16:04	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296360				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.11 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	26	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	45	ug/kg
Aroclor 1221	ND	45	ug/kg
Aroclor 1232	ND	45	ug/kg
Aroclor 1242	ND	45	ug/kg
Aroclor 1248	ND	45	ug/kg
Aroclor 1254	ND	45	ug/kg
Aroclor 1260	ND	45	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	68	(10 - 196)
Decachlorobiphenyl	84	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-407-0708

GC Semivolatiles

Lot-Sample #...:	A7J180324-004	**Work Order #...:**	J9APF1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 16:06	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296360				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	27	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	45	ug/kg
Aroclor 1221	ND	45	ug/kg
Aroclor 1232	ND	45	ug/kg
Aroclor 1242	ND	45	ug/kg
Aroclor 1248	ND	45	ug/kg
Aroclor 1254	ND	45	ug/kg
Aroclor 1260	ND	45	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(10 - 196)
Decachlorobiphenyl	91	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-408-0102

GC Semivolatiles

Lot-Sample #...:	A7J180324-005	**Work Order #...:**	J9APX1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 16:47	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296360				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	18	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90	(10 - 196)
Decachlorobiphenyl	98	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-408-0203

GC Semivolatiles

Lot-Sample #...:	A7J180324-006	**Work Order #...:**	J9AP51AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 16:49	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296360				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	16	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	73	(10 - 196)
Decachlorobiphenyl	130	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-408-0405

GC Semivolatiles

Lot-Sample #...:	A7J180324-007	**Work Order #...:**	J9ATD1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 16:51	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7296360				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	14	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	**15 J**	**38**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	82	(10 - 196)
Decachlorobiphenyl	84	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: SB-408-0708

GC Semivolatiles

Lot-Sample #...:	A7J180324-008	**Work Order #...:**	J9ATF1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 16:53	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7296360				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.13 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	19	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	41	ug/kg
Aroclor 1221	ND	41	ug/kg
Aroclor 1232	ND	41	ug/kg
Aroclor 1242	ND	41	ug/kg
Aroclor 1248	ND	41	ug/kg
Aroclor 1254	ND	41	ug/kg
Aroclor 1260	ND	41	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	68	(10 - 196)
Decachlorobiphenyl	71	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-409-0102

GC Semivolatiles

Lot-Sample #...:	A7J180324-011	**Work Order #...:**	J9ATL1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 17:00	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296359				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.17 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	22	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	43	ug/kg
Aroclor 1221	ND	43	ug/kg
Aroclor 1232	ND	43	ug/kg
Aroclor 1242	ND	43	ug/kg
Aroclor 1248	ND	43	ug/kg
Aroclor 1254	ND	43	ug/kg
Aroclor 1260	ND	43	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	101	(10 - 196)
Decachlorobiphenyl	107	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-409-0203

GC Semivolatiles

Lot-Sample #...:	A7J180324-012	**Work Order #...:**	J9ATM1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 17:02	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296359				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	18	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(10 - 196)
Decachlorobiphenyl	101	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-409-0405

GC Semivolatiles

Lot-Sample #...:	A7J180324-013	**Work Order #...:**	J9ATN1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 17:04	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296359				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	22	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	42	ug/kg
Aroclor 1221	ND	42	ug/kg
Aroclor 1232	ND	42	ug/kg
Aroclor 1242	ND	42	ug/kg
Aroclor 1248	ND	42	ug/kg
Aroclor 1254	ND	42	ug/kg
Aroclor 1260	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85	(10 - 196)
Decachlorobiphenyl	102	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-409-0708

GC Semivolatiles

Lot-Sample #...:	A7J180324-014	**Work Order #...:**	J9ATP1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 17:06	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296359				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	27	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	45	ug/kg
Aroclor 1221	ND	45	ug/kg
Aroclor 1232	ND	45	ug/kg
Aroclor 1242	ND	45	ug/kg
Aroclor 1248	ND	45	ug/kg
Aroclor 1254	ND	45	ug/kg
Aroclor 1260	ND	45	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	81	(10 - 196)
Decachlorobiphenyl	107	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-489-0102

GC Semivolatiles

Lot-Sample #...:	A7J180324-015	**Work Order #...:**	J9ATR1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 17:17	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296359				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	20	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	41	ug/kg
Aroclor 1221	ND	41	ug/kg
Aroclor 1232	ND	41	ug/kg
Aroclor 1242	ND	41	ug/kg
Aroclor 1248	ND	41	ug/kg
Aroclor 1254	ND	41	ug/kg
Aroclor 1260	ND	41	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 196)
Decachlorobiphenyl	105	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-489-0203

GC Semivolatiles

Lot-Sample #...: A7J180324-016	**Work Order #...:** J9ATT1AC	**Matrix.....:** SO	
Date Sampled...: 10/16/07 17:19	**Date Received..:** 10/18/07		
Prep Date.....: 10/23/07	**Analysis Date..:** 10/28/07		
Prep Batch #...: 7296359			
Dilution Factor: 1	**Initial Wgt/Vol:** 30.12 g	**Final Wgt/Vol..:** 10 mL	
% Moisture.....: 24	**Method.....:** SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	43	ug/kg
Aroclor 1221	ND	43	ug/kg
Aroclor 1232	ND	43	ug/kg
Aroclor 1242	ND	43	ug/kg
Aroclor 1248	ND	43	ug/kg
Aroclor 1254	ND	43	ug/kg
Aroclor 1260	ND	43	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	102	(10 - 196)
Decachlorobiphenyl	112	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-489-0405

GC Semivolatiles

Lot-Sample #...:	A7J180324-017	**Work Order #...:**	J9ATV1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 17:21	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296359				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	21	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	42	ug/kg
Aroclor 1221	ND	42	ug/kg
Aroclor 1232	ND	42	ug/kg
Aroclor 1242	ND	42	ug/kg
Aroclor 1248	ND	42	ug/kg
Aroclor 1254	ND	42	ug/kg
Aroclor 1260	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(10 - 196)
Decachlorobiphenyl	100	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-489-0708

GC Semivolatiles

Lot-Sample #...:	A7J180324-018	**Work Order #...:**	J9ATW1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 17:23	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/28/07		
Prep Batch #...:	7296359				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.08 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	27	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	45	ug/kg
Aroclor 1221	ND	45	ug/kg
Aroclor 1232	ND	45	ug/kg
Aroclor 1242	ND	45	ug/kg
Aroclor 1248	ND	45	ug/kg
Aroclor 1254	ND	45	ug/kg
Aroclor 1260	ND	45	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	83	(10 - 196)
Decachlorobiphenyl	104	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-490-0405

GC Semivolatiles

Lot-Sample #...:	A7J180324-009	**Work Order #...:**	J9ATH1AC	**Matrix.....:**	SO
Date Sampled...:	10/17/07 08:13	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7296360				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.02 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	21	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	42	ug/kg
Aroclor 1221	ND	42	ug/kg
Aroclor 1232	ND	42	ug/kg
Aroclor 1242	ND	42	ug/kg
Aroclor 1248	ND	42	ug/kg
Aroclor 1254	ND	42	ug/kg
Aroclor 1260	ND	42	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	77	(10 - 196)
Decachlorobiphenyl	167	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Tetra Tech NUS, Inc

Client Sample ID: SB-490-0708

GC Semivolatiles

Lot-Sample #...:	A7J180324-010	**Work Order #...:**	J9ATK1AC	**Matrix.....:**	SO
Date Sampled...:	10/17/07 08:15	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7296360				
Dilution Factor:	1	**Initial Wgt/Vol:**	30 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	73	(10 - 196)
Decachlorobiphenyl	73	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

7J18324

The following report contains the analytical results for eighteen solid samples submitted to TestAmerica North Canton by Tetra Tech NUS Inc. from the LMC MR Site, project number 112IC00885. The samples were received October 18, 2007, according to documented sample acceptance procedures.

This SDG consists of (1) laboratory ID's: A7J180324.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Dev Murali, John Poremba, and Michael Martin on October 31, 2007. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Patrick J. O'Meara, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 4.1 and 5.3°C.

See TestAmerica's Cooler Receipt Form for additional information.

GC/MS SEMIVOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

POLYCHLORINATED BIPHENYLS-8082

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

The matrix spike/matrix spike duplicate(s) for SB-407-0102 and SB-407-0708 had RPD's outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: Tetra Tech	Project Manager: Mike Martin	Date: 10/17/07	Chain of Custody Number: 322981
Address: 20251 Century Blvd #200	Telephone Number (Area Code)/Fax Number: 301-528-3022	Lab Number:	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Shawn Hadley	Lab Contact: Ken Ives	
Project Name and Location (State): LMC MD	Carrier/Waybill Number: STL Courier		
Contract/Purchase Order/Quote No.: 112IC00885			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: 8270 PAH	8082 PCB
SB-407-0102	10/16	1600				X	2						X	X
-0203		1602												
-0405		1604												
407-0708		1606					2							
407-0102 MS/SD		1600					1							
407-0708 MS/SD		1606					1							
408-0102		1647					2							
-0102 MS/SD		1647					1							
-0203		1649					2							
-0405		1651					2							
SB-408-0708	10/16	1653				X	2						X	X

Special Instructions/ Conditions of Receipt

Block F

#benzo(a)pyrene

#benzo(a)pyrene

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STND

QC Requirements (Specify)

1. Relinquished By	Date: 10/17/07	Time: 1615	1. Received By	Date: 10/17/07	Time: 1615
2. Relinquished By	Date:	Time:	2. Received By	Date: 10-18-07	Time: 9:10
3. Relinquished By	Date:	Time:	3. Received By	Date:	Time:

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica North Canton

15

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: Tetra Tech	Project Manager: Mike Mahn	Date: 10/17/07	Chain of Custody Number: 322977
Address: 20251 Century Blvd #200	Telephone Number (Area Code)/Fax Number: 301 528 3022	Lab Number:	Page 1 of 2
City: Germantown / State: MD / Zip Code: 20874	Site Contact: S. Hadley	Lab Contact: K. Ives	
Project Name and Location (State): LMC MD	Carrier/Waybill Number: STL Courier		
Contract/Purchase Order/Quote No.: 112#C00885			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: 8270	8082 PCB	Special Instructions/ Conditions of Receipt
~~SB 490 0708~~															Block F
SB-490-0405	10/17	0813				X	2						X	X	# benzo(a)pyrene
490-0708	10/17	0815													
409-0102	10/16	1700													
-0203		1702													
-0405		1704													
409-0708		1706													
489-0102		1717													
-0203		1719													
-0405		1721													
SB-489-0708	10/16	1723				X	2						X	X	# benzo(g)pyrene

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☒ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STND

QC Requirements (Specify)

1. Relinquished By	Date: 10/17/07	Time: 1615	1. Received By	Date: 10/17/07	Time: 1615
2. Relinquished By	Date:	Time:	2. Received By	Date: 10-18-07	Time: 9:10
3. Relinquished By	Date:	Time:	3. Received By	Date:	Time:

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

HOLDTIME

SDG 7J18324

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	SB-408-0203	A7J180324006	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
PCS	%	SB-490-0708	A7J180324010	NM	10/17/2007	10/24/2007	10/25/2007	7	1	8
PCS	%	SB-407-0102	A7J180324001	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
PCS	%	SB-407-0203	A7J180324002	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
PCS	%	SB-407-0405	A7J180324003	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
PCS	%	SB-408-0102	A7J180324005	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
PCS	%	SB-408-0405	A7J180324007	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
PCS	%	SB-408-0708	A7J180324008	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
PCS	%	SB-409-0102	A7J180324011	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
PCS	%	SB-489-0708	A7J180324018	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
PCS	%	SB-407-0708	A7J180324004	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
PCS	%	SB-490-0405	A7J180324009	NM	10/17/2007	10/24/2007	10/25/2007	7	1	8
PCS	%	SB-409-0203	A7J180324012	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
PCS	%	SB-489-0405	A7J180324017	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
PCS	%	SB-489-0203	A7J180324016	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	SB-489-0102	A7J180324015	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
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PCS	%	SB-409-0405	A7J180324013	NM	10/16/2007	10/24/2007	10/25/2007	8	1	9
OS	%	SB-409-0405	A7J180324013	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	%	SB-409-0203	A7J180324012	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	%	SB-490-0708	A7J180324010	NM	10/17/2007	10/23/2007	10/25/2007	6	2	8
OS	%	SB-490-0405	A7J180324009	NM	10/17/2007	10/23/2007	10/25/2007	6	2	8
OS	%	SB-489-0708	A7J180324018	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	%	SB-489-0405	A7J180324017	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	%	SB-489-0203	A7J180324016	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	%	SB-489-0102	A7J180324015	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	%	SB-407-0102	A7J180324001	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12
OS	%	SB-409-0102	A7J180324011	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	%	SB-408-0708	A7J180324008	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	%	SB-408-0405	A7J180324007	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	%	SB-408-0203	A7J180324006	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
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SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
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OS	UG/KG	SB-489-0708	A7J180324018	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	UG/KG	SB-409-0203	A7J180324012	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	UG/KG	SB-409-0405	A7J180324013	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	UG/KG	SB-409-0708	A7J180324014	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	UG/KG	SB-489-0102	A7J180324015	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	UG/KG	SB-489-0405	A7J180324017	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	UG/KG	SB-408-0203	A7J180324006	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	UG/KG	SB-490-0405	A7J180324009	NM	10/17/2007	10/23/2007	10/25/2007	6	2	8
OS	UG/KG	SB-489-0203	A7J180324016	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	UG/KG	SB-409-0102	A7J180324011	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	UG/KG	SB-408-0405	A7J180324007	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
OS	UG/KG	SB-408-0102	A7J180324005	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
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SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
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OS	UG/KG	SB-490-0708	A7J180324010	NM	10/17/2007	10/23/2007	10/25/2007	6	2	8
OS	UG/KG	SB-408-0708	A7J180324008	NM	10/16/2007	10/23/2007	10/25/2007	7	2	9
PCB	%	SB-409-0203	A7J180324012	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12
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PCB	%	SB-408-0708	A7J180324008	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
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PCB	%	SB-490-0708	A7J180324010	NM	10/17/2007	10/23/2007	10/29/2007	6	6	12
PCB	%	SB-489-0708	A7J180324018	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12
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PCB	%	SB-407-0405	A7J180324003	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12
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PCB	%	SB-408-0405	A7J180324007	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	%	SB-409-0102	A7J180324011	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12
PCB	UG/KG	SB-409-0405	A7J180324013	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12
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PCB	UG/KG	SB-489-0405	A7J180324017	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12
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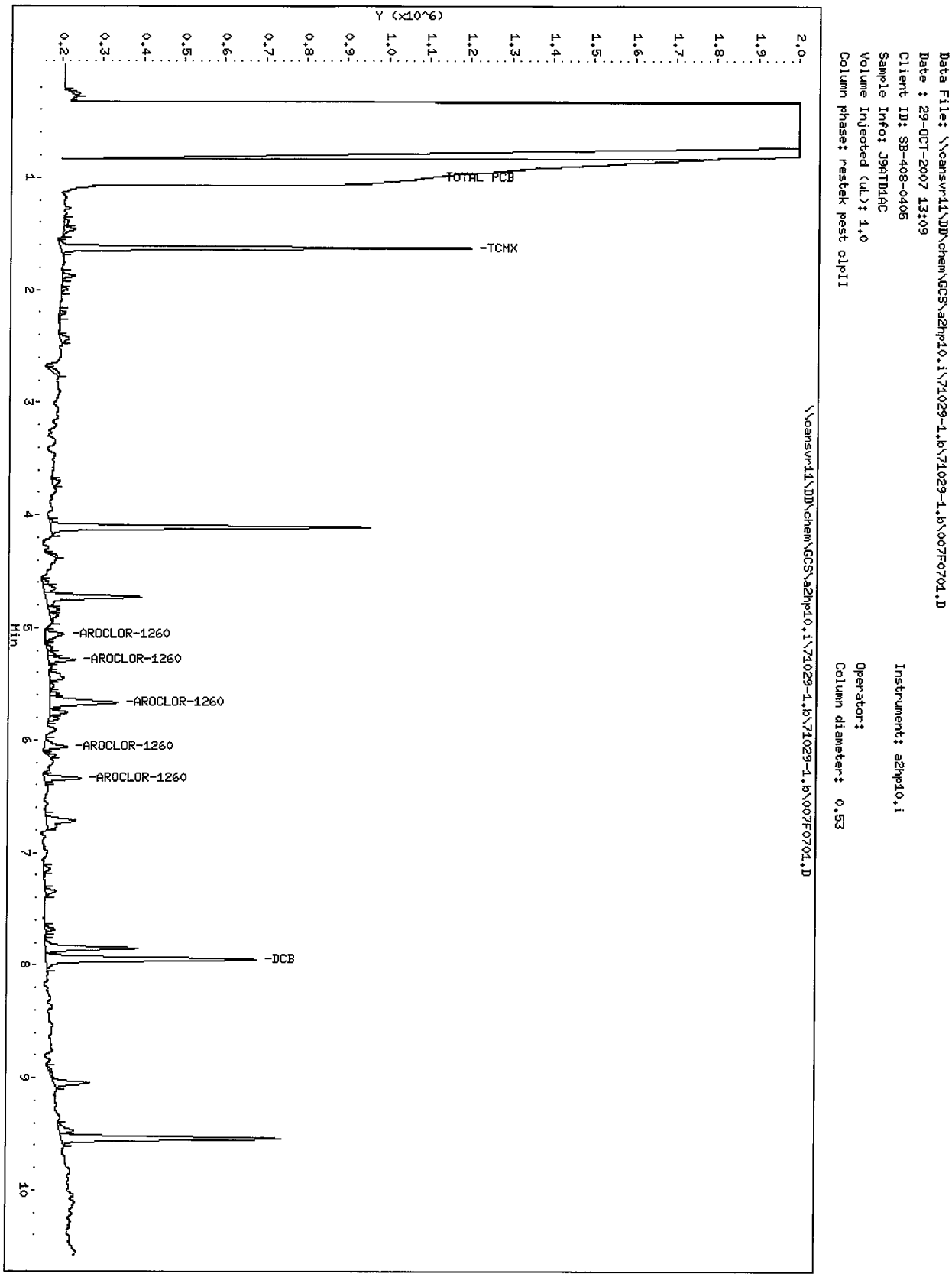
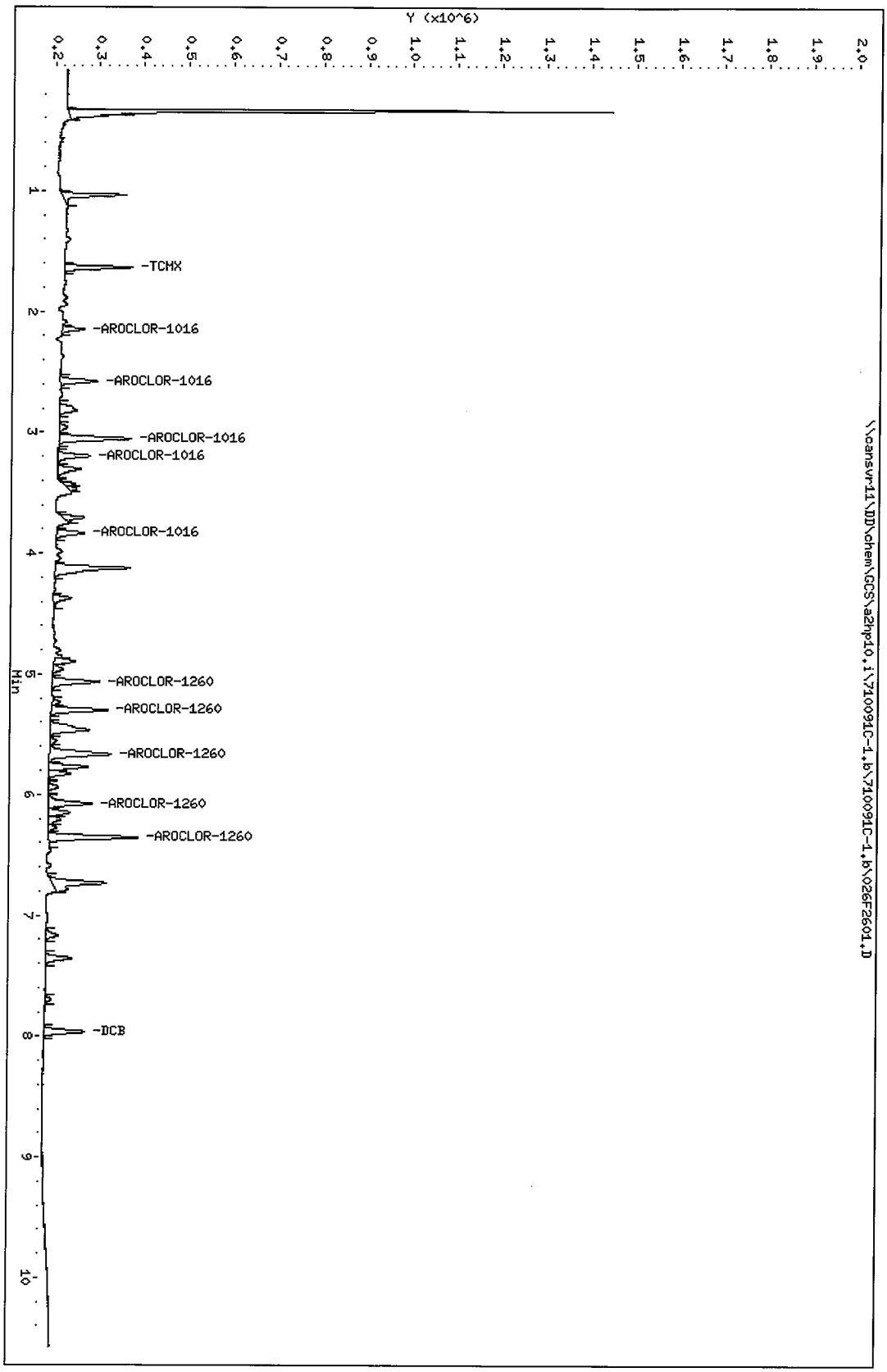
PCB	UG/KG	SB-409-0102	A7J180324011	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12
PCB	UG/KG	SB-408-0708	A7J180324008	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-408-0405	A7J180324007	NM	10/16/2007	10/23/2007	10/29/2007	7	6	13
PCB	UG/KG	SB-408-0203	A7J180324006	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12
PCB	UG/KG	SB-408-0102	A7J180324005	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCB	UG/KG	SB-407-0708	A7J180324004	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12
PCB	UG/KG	SB-407-0203	A7J180324002	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12
PCB	UG/KG	SB-407-0405	A7J180324003	NM	10/16/2007	10/23/2007	10/28/2007	7	5	12

SAMPLE


Data File: \\cansvr41\DD\chem\GCS\a2hp10.i\71029-1.b\71029-1.b\007F0704.D
Date : 29-OCT-2007 13:09
Client ID: SB-408-0405
Sample Info: J9ATD1AC
Volume Injected (uL): 1.0
Column phase: restek pest clpII
Instrument: a2hp10.i
Operator:
Column diameter: 0.53
\\cansvr41\DD\chem\GCS\a2hp10.i\71029-1.b\71029-1.b\007F0704.D
Y (x10^6)
TOTAL PCB
-TCMX
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB
Min

STANDARD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Date : 09-OCT-2007 21:16
Client ID:
Sample Info: 1660,,1,1
Instrument: a2hp10,i
Operator:
Column diameter: 0.53
Column phase: restek pest clpII
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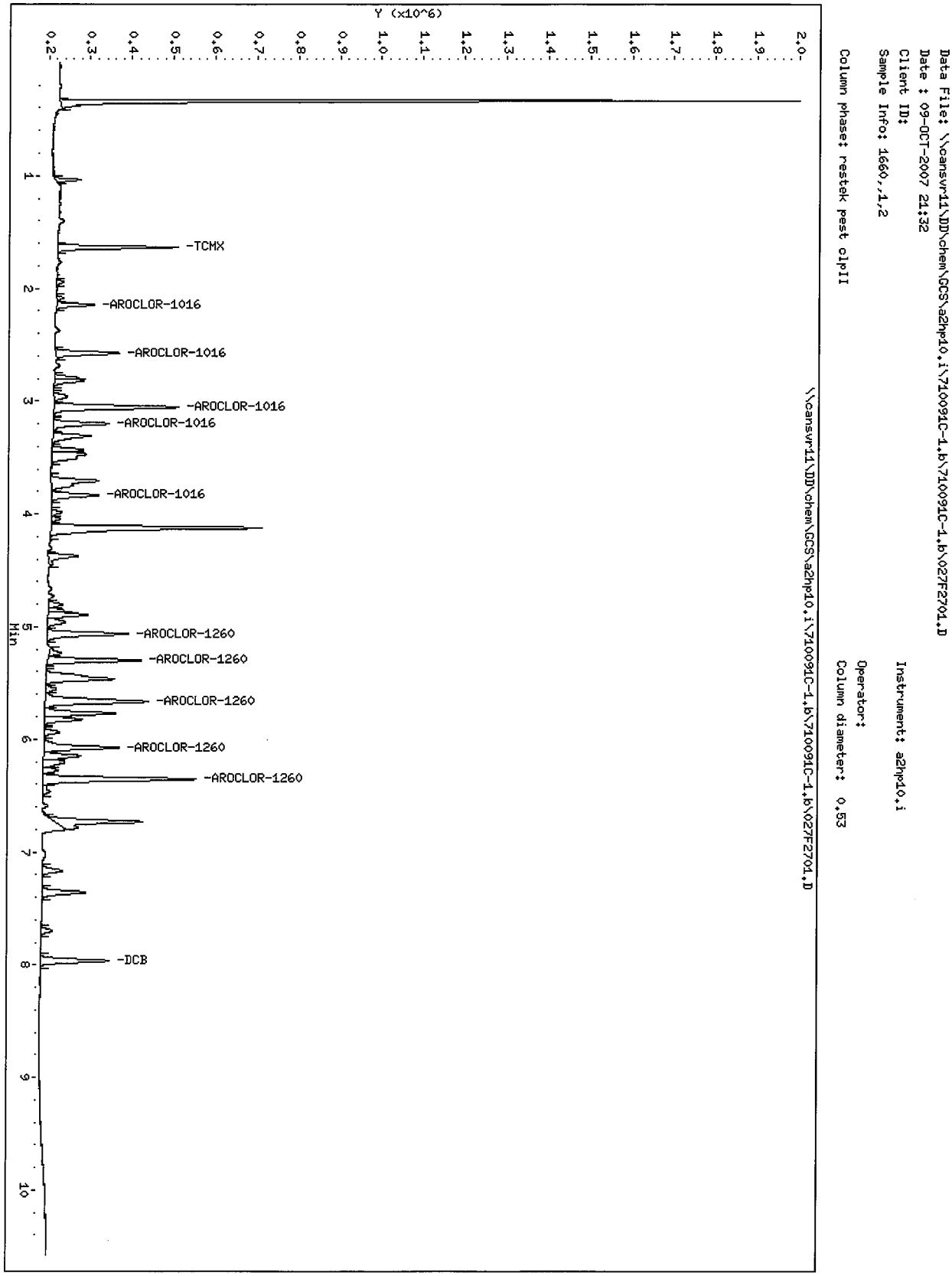
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB

STANDARD


Data File: \\cansvr11\DD\chem\GCS\a2hp10.i\710091C-1.b\710091C-1.b\027F2701.D
Date : 09-OCT-2007 21:32
Client ID:
Sample Info: 1660,,1,2
Column phase: restek pest clpII
Instrument: a2hp10.i
Operator:
Column diameter: 0.53
\\cansvr11\DD\chem\GCS\a2hp10.i\710091C-1.b\710091C-1.b\027F2701.D
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J18324

Matrix Spike ID: SB-407-0708

Lot #: A7J180324 WO #: J9APF1AH
BATCH: 7296360

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD		QC LIMITS RPD	QC LIMITS REC	QUAL
Aroclor 1016	460	400	88	32	*	30	10- 199	p
Aroclor 1260	460	390	85	32	*	30	10- 199	p

NOTES (S) :

p Relative percent difference (RPD) is outside stated control limits.
Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 2 out of 2 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No: 7J18324

Matrix Spike ID: SB-407-0102

Lot #: A7J180324 WO #: J9AN91AH
BATCH: 7296359

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD		QC LIMITS RPD	QC LIMITS REC	QUAL
Aroclor 1016	420	290	69	36	*	30	10- 199	p
Aroclor 1260	420	280	65	34	*	30	10- 199	p

NOTES(S):

p Relative percent difference (RPD) is outside stated control limits.
Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 2 out of 2 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

CALCULATION WORKSHEET

CLIENT: LOCKHEED MIDDLE RIVER	**SDG No.** 7J18324
SUBJECT: EXAMPLE CALCULATION - BENZO(A)PYRENE - SOIL	
BY: T. JACKMAN	**DATE:** **12/01/07**

Sample ID = SB-407-0102
Concentration = 130 ug/kg

Benzo(a)pyrene

EQUATION:

$$C_s = \frac{A_x \times Is \times Vt \times Df}{Ais \times RRF \times V_i \times W_s \times D}$$

Where:

C_s	=	analyte concentration in soil		ug/kg
A_x	=	analyte response	=	294180
Is	=	amount of internal standard	=	2 ng
V_t	=	volume of final extract	=	2000 uL
Df	=	dilution factor	=	1
Ais	=	response of internal standard	=	729976
RRF	=	response factor of compound	=	1.01996
V_i	=	volume injected	=	0.5 uL
Ws	=	sample weight	=	30.04 g
D	=	percent solids	=	0.79

Therefore: benzo(a)pyrene concentration in soil =

$$\frac{294180 \times 2ng \times 2000uL \times 1}{729976 \times 1.01996 \times 0.5uL \times 30.04g \times 0.79}$$

C_s = 133 ug/kg

Tetra Tech NUS, Inc

Client Sample ID: SB-407-0102

GC/MS Semivolatiles

Lot-Sample #...: A7J180324-001 **Work Order #...:** J9AN91AD **Matrix.....:** SO
Date Sampled...: 10/16/07 16:00 **Date Received..:** 10/18/07
Prep Date.....: 10/23/07 **Analysis Date..:** 10/28/07
Prep Batch #...: 7296354
Dilution Factor: 1 **Initial Wgt/Vol:** 30.04 g **Final Wgt/Vol..:** 2 mL
% Moisture.....: 21 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzo(a)pyrene	130 J	**420**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(24 - 112)
2-Fluorobiphenyl	64	(34 - 110)
Terphenyl-d14	93	(41 - 119)
Phenol-d5	71	(28 - 110)
2-Fluorophenol	67	(26 - 110)
2,4,6-Tribromophenol	80	(10 - 118)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

STL North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4hp9.i\71028a.b\J9AN91AD.D
Lab Smp Id: j9an91ad Client Smp ID: SB-407-0102
Inj Date : 28-OCT-2007 16:25
Operator : 001574 Inst ID: a4hp9.i
Smp Info : j9an91ad,71028a.b,8270p,1-827042d.sub
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4hp9.i\71028a.b\8270p.m
Meth Date : 29-Oct-2007 17:55 ulmanm Quant Type: ISTD
Cal Date : 26-OCT-2007 23:02 Cal File: 9AHHH026.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-827042d.sub
Target Version: 4.14
Processing Host: CANSVR11

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws *) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)(1000 low, 2
Vi	0.50000	Volume injected (uL)
Ws	30.040	Weight of sample extracted (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/kg)	
* 1 1,4-Dichlorobenzene-d4	152	3.916	3.919	(1.000)	152943	2.00000		(Q)
* 2 Naphthalene-d8	136	4.878	4.880	(1.000)	641085	2.00000		
* 3 Acenaphthene-d10	164	6.176	6.178	(1.000)	364801	2.00000		
* 4 Phenanthrene-d10	188	7.271	7.268	(1.000)	672683	2.00000		
* 5 Chrysene-d12	240	9.248	9.261	(1.000)	747825	2.00000		
* 6 Perylene-d12	264	10.743	10.757	(1.000)	729976	2.00000		
9 Pyridine	79	Compound Not Detected.						
10 N-Nitrosodimethylamine	74	Compound Not Detected.						
11 Ethyl methacrylate	69	Compound Not Detected.						
12 3-Chloropropionitrile	54	Compound Not Detected.						
13 Malononitrile	66	Compound Not Detected.						
209 Benzaldehyde	77	Compound Not Detected.						
21 Aniline	93	Compound Not Detected.						
22 Phenol	94	Compound Not Detected.						
23 bis(2-Chloroethyl)ether	93	Compound Not Detected.						
24 2-Chlorophenol	128	Compound Not Detected.						
26 1,3-Dichlorobenzene	146	Compound Not Detected.						
27 1,4-Dichlorobenzene	146	Compound Not Detected.						

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/kg)
115 Phenanthrene	178	7.287	7.290	(1.002)	133246	0.36591	48.723
116 Anthracene	178	7.325	7.327	(1.007)	31894	0.08983	11.961
119 Carbazole	167	Compound Not Detected.					
120 Di-n-Butylphthalate	149	Compound Not Detected.					
123 Fluoranthene	202	8.158	8.166	(1.122)	304284	0.78534	104.57
124 Benzidine	184	Compound Not Detected.					
125 Pyrene	202	8.334	8.342	(0.901)	304928	0.74885	99.714
131 Butylbenzylphthalate	149	Compound Not Detected.					
133 3,3'-Dimethoxybenzidine	244	Compound Not Detected.					
135 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
136 Benzo(a)Anthracene	228	9.237	9.250	(0.999)	216764	0.48664	64.799
137 Chrysene	228	9.269	9.282	(1.002)	389143	0.93831	124.94
138 4,4'-Methylene bis(o-chloroan	231	Compound Not Detected.					
139 bis(2-ethylhexyl)Phthalate	149	9.162	9.175	(0.991)	23992	0.10267	13.671
140 Di-n-octylphthalate	149	Compound Not Detected.					
141 Benzo(b)fluoranthene	252	10.273	10.292	(0.956)	562393	1.29666	172.66
142 Benzo(k)fluoranthene	252	10.300	10.324	(0.959)	194591	0.44246	58.916(M)
146 Benzo(a)pyrene	252	10.674	10.693	(0.994)	294180	0.79023	105.22
149 Indeno(1,2,3-cd)pyrene	276	12.384	12.413	(1.153)	332347	0.83663	111.40
150 Dibenz(a,h)anthracene	278	12.389	12.429	(1.153)	69931	0.24016	31.979
151 Benzo(g,h,i)perylene	276	12.896	12.926	(1.200)	355506	0.99932	133.06
198 1,4-Dioxane	88	Compound Not Detected.					
$ 154 Nitrobenzene-d5	82	4.328	4.330	(0.887)	532530	3.06300	407.86
$ 155 2-Fluorobiphenyl	172	5.658	5.660	(0.916)	728801	3.20940	427.35
$ 156 Terphenyl-d14	244	8.414	8.417	(0.910)	1394013	4.66235	620.82
$ 157 Phenol-d5	99	3.596	3.588	(0.918)	839072	5.31614	707.88
$ 158 2-Fluorophenol	112	2.976	2.909	(0.760)	535702	5.00986	667.09
$ 159 2,4,6-Tribromophenol	330	6.753	6.755	(1.093)	202308	5.96616	794.43
$ 186 2-Chlorophenol-d4	132	3.745	3.742	(0.956)	492654	5.13576	683.86
$ 187 1,2-Dichlorobenzene-d4	152	4.034	4.036	(1.030)	160576	2.47668	329.78
M 195 Cresols, total	100	Compound Not Detected.					
101 Diphenylamine	169	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 26-OCT-2007 17:21
End Cal Date : 26-OCT-2007 23:02
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4hp9.i\71026a.b\8270p.m
Last Edit : 28-Oct-2007 11:22 ulmanm
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
144 Hexachlorophene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
145 Hexachlorophene product	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
146 Benzo(a)pyrene	0.82242	0.86812	0.88042	0.99971	1.06496	1.08195			
	1.08269	1.12415	1.25518				1.01996	13.776	
148 3-Methylcholanthrene	+++++	0.34532	0.39283	0.39596	0.43177	0.46357			
	0.49893	0.50350	0.54719				0.44738	15.186	<-
149 Indeno(1,2,3-cd)pyrene	0.88033	0.90525	0.99128	1.01115	1.20656	1.19263			
	1.20634	1.27469	1.39702				1.11836	15.896	
150 Dibenz(a,h)anthracene	0.72403	0.73304	0.77054	0.82641	0.93302	0.93574			
	0.99202	1.03801	1.14672				0.89995	16.282	
151 Benzo(g,h,i)perylene	0.93708	0.82003	0.86849	0.92502	1.02023	1.00865			
	1.00411	1.04139	1.14717				0.97469	10.090	
230 2-Chloroacetophenone	+++++	0.55040	0.63824	0.67093	0.66163	0.71387			
	0.73812	0.75027	0.81188				0.69192	11.546	<-
199 3-Picoline	+++++	1.57245	1.79989	1.79874	1.76363	1.91933			
	1.96657	1.97569	2.24643				1.88034	10.514	<-
200 N,N-Dimethylacetamide	+++++	0.76103	0.86033	0.91015	0.88009	0.94499			
	0.96407	0.96819	1.09307				0.92274	10.467	<-
201 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

CALCULATION WORKSHEET **Page 1 of 1**

CLIENT: LOCKHEED MIDDLE RIVER	**SDG No.** 7J18324
SUBJECT: EXAMPLE CALCULATION - AROCLOR-1260 - SOIL	
BY: T. JACKMAN	**DATE:** 12/01/07

Sample ID = SB-408-0405
Concentration = 15 ug/kg

Aroclor-1260

EQUATION:

$$C_w = \frac{A_x \times V_t \times Df}{CF \times V_i \times W_s \times D}$$

Where:

C_s	=	analyte concentration in soil		ug/kg
A_x	=	analyte response	=	231619.2
V_t	=	volume of final extract	=	10000 uL
Df	=	dilution factor	=	1
CF	=	calibration factor	=	5732459
V_i	=	volume injected	=	1 uL
Ws	=	sample weight	=	30.07 g
D	=	percent solids	=	0.86

Therefore: Aroclor-1260 concentration in soil =

$$\frac{231619.2 \times 10000uL \times 1}{5732459 \times 1uL \times 30.07g \times 0.86}$$

C_s = 15.6 ug/kg

Tetra Tech NUS, Inc

Client Sample ID: SB-408-0405

GC Semivolatiles

Lot-Sample #...:	A7J180324-007	**Work Order #...:**	J9ATD1AC	**Matrix.....:**	SO
Date Sampled...:	10/16/07 16:51	**Date Received..:**	10/18/07		
Prep Date.....:	10/23/07	**Analysis Date..:**	10/29/07		
Prep Batch #...:	7296360				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	14	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	15 J	**38**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	82	(10 - 196)
Decachlorobiphenyl	84	(10 - 199)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Data File: 007F0701.D
Report Date: 30-Oct-2007 07:38

STL North Canton

Data file : \\cansvr11\DD\chem\GCS\a2hp10.i\71029-1.b\71029-1.b\007F0701.D
Lab Smp Id: J9ATD1AC Client Smp ID: SB-408-0405
Inj Date : 29-OCT-2007 13:09
Operator : Inst ID: a2hp10.i
Smp Info : J9ATD1AC
Misc Info :
Comment   :
Method   : \\CANSVR11\dd\chem\GCS\a2hp10.i\71029-1.b\PCB10.m\PCB10R.m
Meth Date : 30-Oct-2007 00:15 Quant Type: ESTD
Cal Date : 10-OCT-2007 01:35 Cal File: 043F4301.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: CANPGCSV30

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.070	initial volume
Cpnd Variable		Local Compound Variable

				CONCENTRATIONS ON-COL	FINAL		
RT	EXP RT	DLT RT	RESPONSE	(ng)	(ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.628	1.628	0.000	1684610	0.01632	5.428		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Peaks not detected for Quant. or Qual. signal(s).							
4 AROCLOR-1232					CAS #: 11141-16-5		
Peaks not detected for Quant. or Qual. signal(s).							

Data File: 007F0701.D
Report Date: 30-Oct-2007 07:38

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Peaks not detected for Quant. or Qual. signal(s).							
6 AROCLOR-1248					CAS #: 12672-29-6		
Peaks not detected for Quant. or Qual. signal(s).							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
5.053	5.052	0.001	142646	0.03263	10.85	80.00- 120.00	100.00(M)
5.285	5.288	-0.003	148537	0.03108	10.33	83.56- 139.27	104.13
5.667	5.653	0.014	511395	0.07320	24.34	118.31- 197.19	358.51
6.062	6.063	-0.001	155749	0.03646	12.12	70.86- 118.10	67.38
6.341	6.343	-0.002	199769	0.02421	8.050	147.98- 246.63	140.05
Average of Peak Concentrations =					13.14		
$ 12 DCB					CAS #: 2051-24-3		
7.948	7.948	0.000	1254290	0.01680	5.588		
M 11 TOTAL PCB					CAS #: 1336-36-3		
			0	0.03951	13.14		

QC Flag Legend

M - Compound response manually integrated.

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA-NORTH CANTON Contract:

Lab Code: TALCAN Case No.: SAS No.: SDG No.: 7J18324

GC Column: RESTEK PEST CLPII ID: 0.53 (mm) Init. Calib. Date(s): 09/14/07 10/10/07

Instrument ID: A2HP10

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	MEAN SURROGATE RT FROM INITIAL CALIBRATION S1 : 1.63 S2 : 7.95					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		E142	10/29/07	1153	1.63	7.95
02	SB-408-0405	J9ATD1AC	10/29/07	1309	1.63	7.95
03		E178	10/29/07	1511	1.63	7.95
04						
05						
06						
07						
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09						
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32						

	QC LIMITS
S1 = TCMX	(+/- 0.10 MINUTES)
S2 = DCB	(+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Report Date : 10-Oct-2007 14:28

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 14-SEP-2007 15:17
End Cal Date : 10-OCT-2007 01:35
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\cansvr11\DD\chem\GCS\a2hp10.i\710091C-1.b\PCB10.m\PCB10R
Last Edit : 10-Oct-2007 14:28 serraa
Curve Type : Average

	Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.000 Level 6	___ RRF	% RSD	
	8 AROCLOR-1260 (1)	5027920	4623400	4437980	4272906	4029296	3837015	4371420	9.766	
	(2)	5432560	4944740	4921635	4743170	4406696	4230553	4779892	8.953	
	(3)	8052660	7269660	7074815	6858120	6465863	6199190	6986718	9.346	
	(4)	4831640	4542140	4313965	4225558	3944907	3773494	4271951	9.039	
	(5)	9052760	8567530	8010535	8292570	7935642	7654845	8252314	6.077	
	9 AROCLOR-1262 (1)	1653800	1663830	1467575	1443636	1338960	1352173	1486662	9.581	
	(2)	2631740	2594410	2319490	2315338	2167916	2196971	2370977	8.333	
	(3)	2484000	2454140	2192045	2207158	2091605	2104722	2255612	7.618	
	(4)	4442400	4471350	4014370	4252102	3978083	4100241	4209758	5.075	
	(5)	2953340	3056560	2706215	2812478	2607532	2661742	2799644	6.278	
	10 AROCLOR-1268 (1)	1129160	1015340	920815	927020	899012	837041	954731	10.781	
	(2)	5361480	5230190	4731135	5067826	4832178	4581272	4967347	6.091	
	(3)	4656740	4545960	4129805	4439632	4318850	4072240	4360538	5.294	
	(4)	4312200	4147740	3756600	4014430	3920629	3667368	3969828	6.069	
	(5)	12217060	12359620	11120805	12179740	11703023	10993278	11762254	5.021	
M	11 TOTAL PCB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$	1 TCMX	104204800	99770000	101095400	125844650	95717980	92637310	103211690	11.444	
$	12 DCB	84602000	76189400	74746000	85629350	64738700	62010080	74652588	13.124	

APPENDIX E - ADMINISTRATIVE REQUIREMENTS

Written Agreement
Block F
Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland

WRITTEN AGREEMENT

If the Response Action Plan is approved by the Maryland Department of the Environment, Lockheed Martin Corporation agrees, subject to the withdrawal provisions of Section 7-512 of the Environment Article, to comply with the provisions of the Response Action Plan. Lockheed Martin Corporation understands that if Lockheed Martin Corporation fails to implement and complete the requirements of the approved plan and schedule, the Maryland Department of the Environment may reach an agreement with Lockheed Martin Corporation to revise the schedule of completion in the approved Response Action Plan or, if an agreement cannot be reached, the Department may withdraw approval of the plan.

Brad W. Owens
Printed Name

Director, Environmental Remediation
Title

Signature

4/14/08
Date

Zoning Certification
Block F
Soil Response Action Plan
Lockheed Martin Middle River Complex, Middle River, Maryland

ZONING CERTIFICATION

Lockheed Martin Corporation hereby certifies that the property meets all applicable county and municipal zoning requirements.

Lockheed Martin Corporation acknowledges that there are significant penalties for falsifying any information required by the Maryland Department of the Environment under Title 7, Subtitle 5 of the Environment Article, Annotated Code of Maryland, and that certification is required to be included in a response action plan for the Voluntary Cleanup Program pursuant to Title 7, Subtitle 5 of the Environment Article, Annotated Code of Maryland.

Brad W. Owens
Printed Name

Director, Environmental Remediation
Title

Brad W.
Signature

4/14/08
Date