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CONSTRUCTION COMPLETION REPORT FOR JP-5 PIPELINE PIGGING NAS CECIL FIELD FL

6/1/2004

CH2MHILL CONSTRUCTORS INC

Construction Completion Report
JP-5 Pipeline Pigging

Former Naval Air Station Cecil Field
Jacksonville, Florida

Revision No. 00

Contract No. N62467-98-D-0995
Contract Task Order No. 0021

Prepared by:

115 Perimeter Center Place, N.E.
Suite 700
Atlanta, GA 30346

Submitted to
Department of the Navy, Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406

June 2004

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Prepared/Approved By:

Michael D Halil, Project Manager — *June 28, 2004* Date

Approved By:

Scott Smith, Senior Project Manager — *June 28, 2004* Date

Client Acceptance:

U.S. Navy Responsible Authority — Date

CERTIFICATE OF COMPLETION

CH2M HILL Constructors, Inc., attests that, to the best of its knowledge and belief, the JP-5 Pipeline Pigging at Former Naval Air Station Cecil Field, Jacksonville, Florida, delivered under Contract No. N62467-98-D-0995, Contract Task Order No. 0021, has been completed, inspected, and tested, and is in compliance with the contract.

Scott Sloan	
Project Quality Control Manager	Date

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Acronyms

ASTM	American Society of Testing and Materials
CH2M HILL	CH2M HILL Constructors, Inc.
CTO	Contract Task Order
EPA	U.S. Environmental Protection Agency
ERS	Environmental Remediation Services
MPC	Murphy Pipeline Company
NAS	Naval Air Station
NAVFAC EFD SOUTH	Naval Facilities Engineering Command Southern Division
PCW	petroleum-contact water
PCBs	polychlorinated biphenlys
psi	pounds per square inch
PWC	Public Works Center
QC	Quality Control
SVOCs	semi-volatile organic compounds
TBE	TBE Group, Inc.
TRPH	total recoverable petroleum hydrocarbons
TCLP	toxicity characteristic leaching procedure
VOCs	volatile organic compounds

1.0 Introduction

CH2M HILL Constructors, Inc. (CH2M HILL) was contracted by the Department of the Navy, Naval Facilities Engineering Command Southern Division (NAVFAC EFD SOUTH), to prepare this Construction Completion Report for work performed at the JP-5 Pipeline located at Former Naval Air Station (NAS) Cecil Field, Jacksonville, Florida. This work was performed under Contract No. N62467-98-D-0995, Contract Task Order (CTO) No. 0021 and in accordance with the management approach outlined in the CH2M HILL Contract Management Plan (CH2M HILL, 1998a), the NAS Cecil Field Basewide Work Plan, Revision No. 1 (CH2M HILL, 1998b), and the CTO No. 0021 Work Plan Addendum No. 16, Revision No. 00 (CH2M HILL, 2003). The objective of this report is to provide documentation of the construction activities associated with JP-5 pipeline pigging at Former NAS Cecil Field, Jacksonville, Florida.

1.1 Site History

The underground JP-5 pipeline runs parallel and along the eastern side of the former "A" Avenue (now Aviation Avenue). The main pipeline was installed during the 1950s and was used to convey fuel from the North Tank Fuel Farm to the South Tank Fuel Farm, the Jet Engine Test Cell, and Day Tanks 1 and 2 at NAS Cecil Field. Additional pipelines were later installed to transport fuel from the Day Tanks to the high-speed refuelers (Aircraft Fueling Stations) located on both the east/west and north/south runways. Various sections of the pipeline were removed during the North Tank Fuel Farm, Day Tank 1, and Day Tank 2 removals leaving gaps in the pipeline system. The remainder of the pipeline, including the North/South and East/West High Speed Refuelers, has been left in place.

1.2 Project Scope and Construction Objectives

CH2M HILL was authorized by NAVFAC EFD SOUTH on February 27, 2003 to complete the scope of work associated with JP-5 Pipeline Pigging at the Former NAS Cecil Field. The scope of work and project objectives outlined in the CTO No. 0021 Work Plan Addendum No. 16, Revision No. 00 (CH2M HILL, 2003) included the following:

- Mobilization and site preparation
- Identification and avoidance of all aboveground and underground utilities or other manmade structures
- Pigging and gas freeing the fuel lines, to include
  - Excavating and uncovering the pipeline to install the pig launchers
  - Pigging approximately 1 mile of 10-inch pipeline, 0.5 mile of 14-inch pipeline, 0.3 mile of 6-inch pipeline, and 0.2 mile of 4-inch pipeline
  - Removing all residual fuel from the pipeline
  - Ensuring the pipeline is gas free

  - Removing the pig launchers and mechanically capping each section of pipeline once made gas free

- Backfilling to grade all excavated areas with clean granular fill
- Site restoration
- Containerizing, characterizing, transporting, and disposing of all accumulated or generated wastes, to include residual fuel
- Preparing and submitting a Construction Completion Report

Pipeline pigging was to be completed for the following six separate sections:

1. Section of the main fuel pipeline that starts from the former North Tank Fuel Farm and ends at the valve box located at the corner of Aviation Avenue and Technology Street.
2. Section of pipeline that starts from the "Tee" in the main fuel pipeline where the pipeline crosses through the wooded area near the intersection of Aviation Avenue and Cecil Pines Street and ends at Buildings 339 and 334 (Jet Engine Test Cells).
3. Section of the main fuel pipeline that continues from the valve box at the corner of Aviation Avenue and Technology Street and ends at the former Day Tank 2.
4. Section of pipeline that starts at the "Tee" in the main fuel pipeline (the valve box at the corner of Aviation Avenue and Technology Street) and ends at the North/South High Speed Refuelers.
5. Section of pipeline that starts at the former Day Tank 2 and ends at the East/West High Speed Refuelers.
6. Section of the fuel lines located under the concrete apron south of Hangar 14. This section was to be vacuumed out only.

2.0 Chronology of Events and Problems Encountered

2.1 Chronology of Events

The chronology of events is listed below in Table 2-1. Specific details describing the construction activities are found in Section 3.0 of this report.

TABLE 2-1
Construction Sequence Summary

Event	Date
Pipeline Locates	July 15, 2002-August 6, 2002
Work Plan Addendum No. 16, Revision No. 00 Submitted	January 30, 2003
Work Plan Addendum No. 16, Revision No. 00 Approved	February 14, 2003
Mobilization	February 28, 2003
Pipeline Pigging Activities	March 3-14, 2003
High Speed Refueler Concrete Restoration	March 17, 2003-May 6, 2003
Day Tank 1 Asphalt Restoration	March 19-21, 2003
Waste Characterization Sampling	March 24, 2003
Transportation and Disposal of Residual Fuel and Petroleum Contact Water (PCW)	March 27-28, 2003, April 17, 2003, and April 24, 2003
Transportation and Disposal of Petroleum-contaminated Soil	May 21, 2003

2.2 Problems Encountered

No significant problems were encountered during the completion of the scope of work.

3.0 Construction Activities and Quality Control

3.1 Project Participants

The primary construction participants are shown below in Table 3-1.

TABLE 3-1
Organization of Construction Participants

Company	Role	Name
NAVFAC EFD SOUTH	Remedial Project Manager	Mr. Mark Davidson
CH2M HILL	Project Manager	Mr. Michael Halil
		Mr. Paul Malewicki
	Project Superintendent	Mr. Roger Deisler
	Project Quality Control (QC) Manager	Mr. Scott Sloan
	Site Health and Safety Specialist	Mr. Bruce Johnson
TBE Group, Inc. (TBE)	Pipeline Location Subcontractor	
Murphy Pipeline Contractors (MPC)	Pipeline Pigging Subcontractor	
Gulf Coast Analytical Laboratories	Offsite Laboratory Services Subcontractor	
Ellis and Associates	Geotechnical Subcontractor	
Environmental Remediation Services (ERS)	Transportation and Disposal Subcontractor-Residual Fuel and PCW	
Southland Waste Systems	Transportation and Disposal Subcontractor- Petroleum-contaminated Soil	

3.2 Summary of Construction Activities

The following sections describe the construction activities, schedule, and QC related to JP-5 pipeline pigging at the Former NAS Cecil Field. Construction activities for the project included:

- Mobilization and Site Preparation
- JP-5 Pipeline Pigging
- Site Restoration
- Waste Disposal Characterization Sampling and Analysis
- Transportation and Disposal of Accumulated or Generated Wastes

CH2M HILL provided oversight of all field operations throughout the course of the project. CH2M HILL field oversight staff included Mr. Roger Deisler, Project Superintendent; Mr. Scott Sloan, Project QC Manager; and Mr. Bruce Johnson, Site Health and Safety Specialist. Details of daily construction activities were maintained in the daily Contractor Production/QC Reports, field logbooks, and site field records. Photographs of construction

activities were taken throughout the project and representative photographs are provided in Appendix A.

3.3 Mobilization and Site Preparation

3.3.1 Pipeline Location

CH2M HILL conducted research for as-built drawings of the fuel distribution system, however, complete as-built drawings were unavailable. Due to this fact, field pipeline location was required prior to pigging. The available as-built drawings were provided to TBE and TBE completed the location of the fuel pipelines from July 15, 2002, to August 6, 2002. TBE utilized electronic devices (e.g., ground penetrating radar), as well as vacuum excavation test holes to locate the fuel pipelines. The fuel pipelines were marked at ±100-foot intervals with survey stakes, pin flags, and/or paint, as appropriate.

TBE located the following sections of the fuel pipeline:

- The 10-inch diameter main fuel pipeline that starts from the former North Tank Fuel Farm and ends at the valve box located at the corner of Aviation Avenue and Technology Street.
- The 10-inch diameter main fuel pipeline that continues from the valve box at the corner of Aviation Avenue and Technology Street and ends at the former Day Tank 2.
- The 4-inch diameter fuel pipeline that starts from the "Tee" in the main fuel pipeline where the pipeline crosses through the wooded area near the intersection of Aviation Avenue and Cecil Pines Street and ends at Buildings 339 and 334 (Jet Engine Test Cells).
- The 8-inch diameter fuel pipeline that starts at the "Tee" in the main fuel pipeline (the valve box at the corner of Aviation Avenue and Technology Street) and ends at the former Day Tank 1.
- The 14-inch and 4-inch diameter fuel pipelines that start at the former Day Tank 1 and end at the North/South High Speed Refuelers.
- The 14-inch and 4-inch diameter fuel pipelines that start at the former Day Tank 2 and end at the East/West High Speed Refuelers.

Several fuel lines suspected to be present were not located. These included:

- A 4-inch diameter fuel pipeline supposedly located at Building 339 (Jet Engine Test Cell) along Flightline Avenue. This line was not present.
- A 4-inch diameter fuel pipeline supposedly located near the former Day Tank 1 was verified to be a 4-inch diameter communications duct.
- A 4-inch diameter fuel pipeline supposedly fed Building 11 from the former Day Tank 2. Only a 2.5-inch diameter pipe that led to an electrical substation and a control cable duct were present. In addition, at attempt to locate this pipeline at the former Day Tank 2 was unsuccessful.

Figure 3-1 shows the sections of the fuel pipelines that were located.

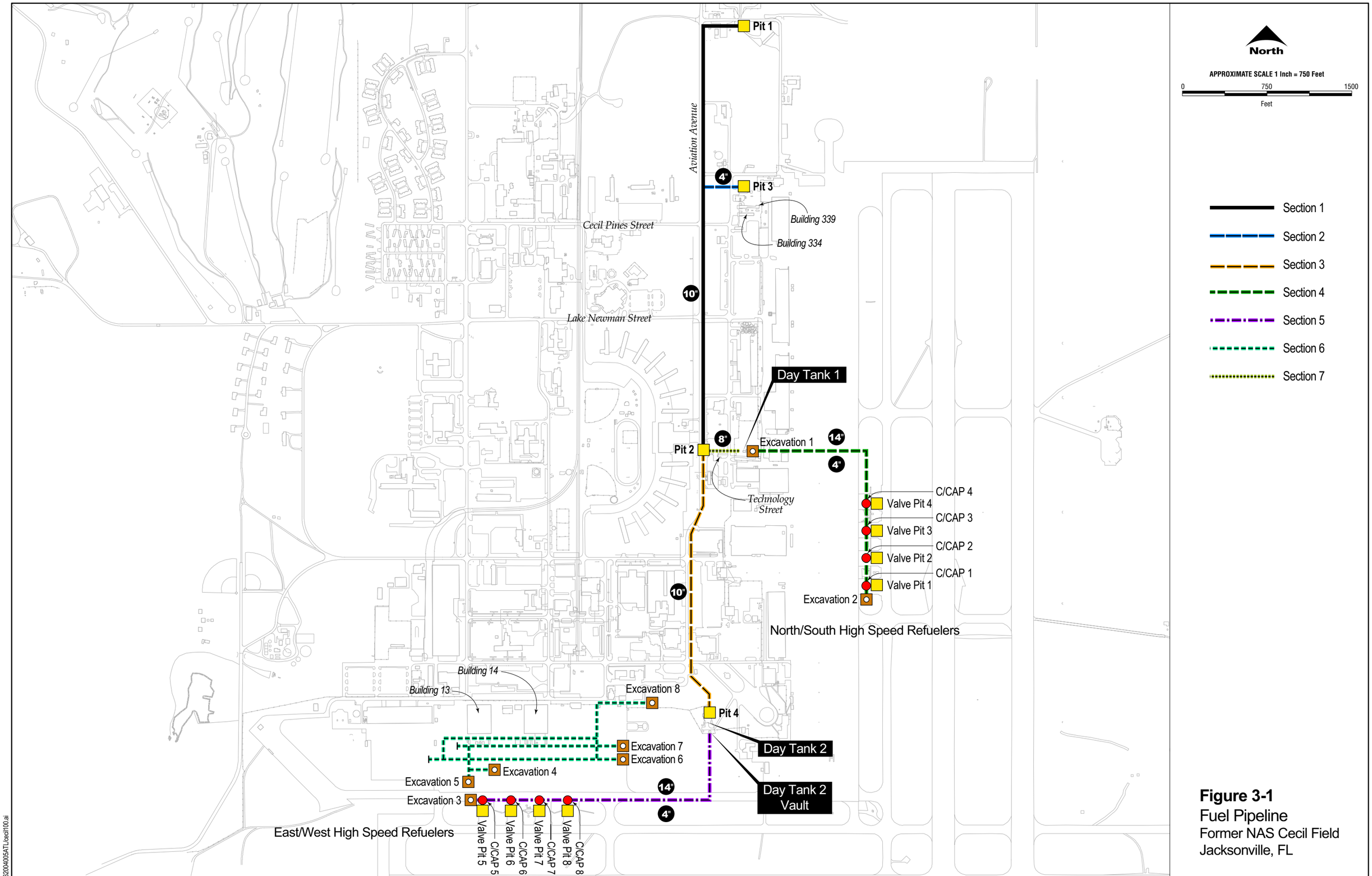

Figure 3-1
Fuel Pipeline
Former NAS Cecil Field
Jacksonville, FL

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3.3.2 JP-5 Pipeline Pigging Mobilization and Site Preparation

Mobilization and site preparation activities for JP-5 pipeline pigging included mobilizing personnel and equipment to the work site, establishing site controls, conducting utility clearances, and placing two 20,000-gallon frac tanks and associated spill containment. Utility clearances were obtained through coordination with Sunshine State One Call of Florida, the Jacksonville Airport Authority, the Jacksonville Electric Authority, the City of Jacksonville, and J.A. Jones Global Services Company. Two 20,000-gallon frac tanks and associated spill containment were provided by Baker Tanks and placed on February 28, 2003 for containing residual fuel and PCW recovered during JP-5 pipeline pigging activities. The frac tanks were inspected by for integrity and cleanliness on receipt. MPC mobilized personnel and equipment on March 3, 2003. Equipment included a vacuum truck, backhoe, storage trailer, support trucks, and health and safety equipment.

3.4 JP-5 Pipeline Pigging

MPC completed JP-5 pipeline pigging activities from March 3 to 14, 2003. Figure 3-1 provides JP-5 pipeline pigging locations and details. All the locations selected to access the piping for pigging operations were at joints and/or valves; therefore, no pipe cutting was required. The following general site activities were completed by MPC:

- Excavated, where necessary, and entered existing/excavated pits to uncover the pipeline and install the pig launchers. Where necessary, the soil was excavated by backhoe to accommodate pipeline pigging. The soil was placed on 10-mil plastic sheeting, bermed, and covered for use as backfill.
- Purged of JP-5 and freed from contaminated air the following sections of pipeline:
    1. The 10-inch diameter main fuel pipeline that starts from the former North Tank Fuel Farm (Pit #1) and ends at the valve box located at the corner of Aviation Avenue and Technology Street (Pit #2).
    2. The 4-inch diameter fuel pipeline that starts from the "Tee" in the main fuel pipeline where the pipeline crosses through the wooded area near the intersection of Aviation Avenue and Cecil Pines Street and ends at Pit #3 near Buildings 339 and 334 (Jet Engine Test Cells).
    3. The 10-inch diameter main fuel pipeline from the valve box at the corner of Aviation Avenue and Technology Street (Pit #2) to the former Day Tank 2 (Pit #4).
    4. The aboveground section of 8-inch, 6-inch, and 4-inch diameter fuel pipelines on the North/South High Speed Refuelers and the 14-inch and 4-inch diameter fuel pipelines that start at the former Day Tank 1 vault (Excavation #1) and end at the North/South High Speed Refuelers (Excavation #2).
    5. The aboveground section of 8-inch, 6-inch, and 4-inch diameter fuel pipelines on the East/West High Speed Refuelers and the 14-inch and 4-inch diameter fuel pipelines

that start at the former Day Tank 2 vault and end at the East/West High Speed Refuelers (Excavation #3).

6. The section of the fuel pipelines located under the concrete apron south of Hangar 14 (Excavations #4, #5, #6, #7, and #8). This section was evacuated by vacuum truck only.

7. The 8-inch diameter fuel pipeline that starts at the "Tee" in the main fuel pipeline (Pit #2; the valve box at the corner of Aviation Avenue and Technology Street) towards the former Day Tank 1.

   For each pipeline section, except Section Six and the aboveground piping which was vacuumed only, a new foam pig was supplied and marked for identification. The pig was placed into the pipeline and pushed through with compressed nitrogen gas and retrieved from the opposite end of pipe. Each section of pipeline had nitrogen introduced to gas free the cavity with air tests performed to ensure the pipeline was gas free. Pipeline decommissioning certifications prepared by MPC for each pipeline section are provided in Appendix B. The air testing/monitoring logs are provided in Appendix C.

- Removed and containerized within two 20,000-gallon frac tanks all recovered/ accumulated residual fuel and PCW. To prevent spills, all residual fuel and PCW was captured using a vacuum truck and drip pans placed beneath each uncovered end of the pipeline.
- Removed the pig launchers and mechanically capped each section of pipeline.

Pipeline section-specific procedures/details are described below.

Section One

The Section Two valve at the "Tee" leading to Pit #3 was closed. Blind flanges were removed at Pits #1 and #2. The pig launcher was mounted at Pit #1 and the pig receiver and vacuum truck evacuated the 10-inch diameter pipeline from Pit #2. A 10-inch diameter foam pig was introduced into the line. Nitrogen was introduced into the line to push the pig through and remove all liquid. The nitrogen pressure was increased to advance the pig through the pipeline. After pigging was complete, all pigging attachments were unbolted and the line closed. Approximately 7,200 gallons of residual fuel and PCW were accumulated from Section One.

Section Two

The 4-inch diameter pipeline in Section Two was pigged from Pit #3 into the 10-inch diameter main fuel pipeline. The pig launcher was mounted at Pit #3, a 4-inch foam pig inserted, nitrogen introduced, and the pressure increased until the pig proceeded through the pipeline. The pig launcher was removed and replaced with a 4-inch blind flange at Pit #3.

As a result of pigging the 4-inch diameter pipeline into the 10-inch diameter main fuel pipeline, Section One was required to be re-pigged using the same procedures stated above.

Section Three

The blank flanges at Pits #2 and #4 were removed. The pig launcher was mounted at Pit #2 and the pig receiver and vacuum truck evacuated the 10-inch diameter pipeline from Pit #4. A 10-inch diameter foam pig was inserted and nitrogen introduced into the line to push the pig through and remove all liquid. The nitrogen pressure was increased to advance the pig through the pipeline. After pigging was complete, all pigging attachments were unbolted and the line closed. Approximately 7,000 gallons of residual fuel and PCW were accumulated from Section Three.

Section Four

Initially, a portion of the aboveground piping was dismantled and the concrete pad demolished at the location of the end of the 14-inch diameter pipeline at the North/South High Speed Refuelers (Excavation #2). The aboveground section of 8-inch, 6-inch, and 4-inch diameter fuel pipelines were then evacuated using a vacuum truck and purged with nitrogen.

The 4-inch diameter pipeline that had previously been cut and capped during the removal of Day Tank 1 was located by excavation at Day Tank 1 (Excavation #1). As a result of the excavation (9 feet deep) to locate the 4-inch diameter pipeline, a trench box was required. The trench box was set around the 4-inch diameter pipeline and the area secured until the aboveground end of the 4-inch diameter pipeline was prepared for pigging. During the final location of the 14-inch and 4-inch diameter pipelines at the North/South High Speed Refuelers, the ends of the pipelines were discovered to be cut and filled with fire retardant sand. The pipelines were traced back approximately 160 feet to a "Tee" where it appeared the 14-inch diameter pipeline was reduced to return to the 4-inch diameter pipeline. The location was determined to be suitable for pigging.

The 14-inch diameter pipeline was cut and capped with blind flanges at C/CAP 1, 2, 3, and 4. The valves at Valve Pit #1 on the 4-inch diameter pipeline were removed at C/CAP 1 and a 4-inch diameter foam pig inserted at C/CAP1 and the pig receiver and vacuum truck evacuated the 4-inch diameter pipeline from Excavation #1. Nitrogen was introduced into the line to push the pig through and remove all liquid. The nitrogen pressure was increased to advance the pig through the pipeline. After pigging was complete, the pigging cap was removed and the blind flange replaced. This procedure was repeated at C/CAP 2, 3, and 4.

Next, the pig launcher was mounted at the "Tee" and the pig receiver and vacuum truck evacuated the 14-inch diameter pipeline from the Day Tank 1 vault (near Excavation #1). A 14-inch diameter foam pig was inserted and nitrogen introduced into the line to push the pig through and remove all liquid. The nitrogen pressure was increased to advance the pig through the pipeline. After pigging was complete, all pigging attachments were unbolted and the line closed. Approximately 7,200 gallons of residual fuel and PCW were accumulated.

Section Five

Initially, a portion of the aboveground piping was dismantled and the concrete pad demolished at the location of the end of the 14-inch diameter pipeline at the East/West High Speed Refuelers (Excavation #3). The aboveground section of 8-inch, 6-inch, and 4-inch

diameter fuel pipelines were then evacuated using a vacuum truck and purged with nitrogen.

The blind flange on the end of the 14-inch diameter pipeline was removed at Excavation #3. The 14-inch diameter pipeline was cut and capped with blind flanges at C/CAP 5, 6, 7, and 8. The pig launcher was mounted at Excavation #3 and the pig receiver and vacuum truck evacuated the 14-inch diameter pipeline from the Day Tank 2 vault. A 14-inch diameter foam pig was introduced into the line and nitrogen was introduced into the line to push the pig through and remove all liquid. The nitrogen pressure was increased to advance the pig through the pipeline. After pigging was complete, the pigging cap was removed and the blind flange replaced. Next, the valves at Valve Pit #5 on the 4-inch diameter pipeline were removed at C/CAP 5 and a 4-inch diameter foam pig inserted at the "Tee" from the 14-inch diameter pipeline. Nitrogen was introduced into the line to push the pig through and remove all liquid. The nitrogen pressure was increased to advance the pig through the pipeline. After pigging was complete, the pigging cap was removed and the blind flange replaced. This procedure was repeated at C/CAP 6, 7, and 8.

From Section Five, approximately 2 cubic yards of petroleum-contaminated soil was discovered, removed by vacuum truck, and placed in a 20-cubic yard roll-off container for characterization, transportation, and disposal.

Section Six

To complete Section Six, excavations to locate the pipelines were completed at Excavations #4, #6, #7, and #8. Excavation #5 could not be completed due to electrical hazards and evacuation at Excavation #8 could not be completed because this location had been previously filled be concrete. At Excavation #4, the blind flange was removed and the pipeline was evacuated by vacuum truck for approximately 30 minutes. This was repeated at Excavations #6 and #7. Following evacuation, each blind flange was replaced.

Section Seven

The blank flange was removed at Pit #2, the pig launcher was mounted at Pit #2, and the pig receiver and vacuum truck evacuated the 8-inch diameter pipeline where the 8-inch diameter pipeline had been cut and capped during the Day Tank 1 removal. An 8-inch diameter foam pig was inserted and nitrogen introduced into the line to push the pig through and remove all liquid. The nitrogen pressure was increased to advance the pig through the pipeline. After pigging was complete, all pigging attachments were unbolted and the line closed.

3.5 Site Restoration

Excavations in vegetated areas were backfilled to grade with the excavated soil. Excavation #1 was backfilled to 8 inches below grade with the excavated soil and backfilled to grade with limerock. The area was compacted to above 95% of ASTM D698 and the area paved with asphalt. The compaction test results are provided in Appendix D.

Disturbed areas of concrete at the North/South and East/West High Speed Refuelers (Excavations #2 and #3) were replaced/repaired in accordance with the approved specifications. This concrete replacement/repair was unanticipated therefore specifications

approved for similar construction during the Site 36/37 Air Sparge System Installations were utilized. Ten cubic yards of 5,000 psi concrete was placed and finished. The concrete specifications and test results are provided in Appendix D.

3.6 Waste Disposal Characterization Sampling and Analysis

Waste characterization sampling for disposal of petroleum-contaminated soil and PCW accumulated/generated during JP-5 pipeline pigging activities was performed by CH2M HILL on March 24, 2004. Waste characterization sampling and analysis was completed in accordance with CTO No. 0021 Work Plan Addendum No. 16, Revision No. 00 (CH2M HILL, 2003).

One composite sample of the petroleum-contaminated soil contained in the 20-cubic yard roll-off container was collected and one composite sample of the PCW contained in the 20,000-gallon frac tank was collected and shipped to Gulf Coast Analytical Laboratories for analysis.

The soil was laboratory analyzed for the following parameters:

- Toxicity characteristic leaching procedure (TCLP) volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 1311/8260B
- TCLP semi-volatile organic compounds (SVOCs) by EPA Method 1311/8270C
- TCLP metals by EPA Method 1311/6010B/7470A
- TCLP herbicides by EPA Method 1311/8151
- TCLP pesticides by EPA Method 1311/8081A
- Total Recoverable Petroleum Hydrocarbons (TRPH) by FL-PRO Method
- Polychlorinated biphenyls (PCBs) by EPA Method 8082
- Corrosivity by EPA Method 9045A
- Ignitability by EPA Method 1010/1020
- Reactivity by EPA SW 846 - Chapter 7.3

The water was laboratory analyzed for the following parameters:

- Target Compound List (TCL) VOCs by EPA Method 8260B
- TCL SVOCs by EPA Method 8270C
- TCL pesticides/herbicides by EPA Method 8081A/8151
- TRPH by FL-PRO Method
- Target Analyte List metals by EPA Method 6010B/7471A
- Corrosivity by EPA Method 9045A
- Ignitability by EPA Method 1010/1020
- Reactivity by EPA SW 846 - Chapter 7.3

The waste characterization laboratory analytical reports are provided in Appendix F.

3.7 Transportation and Disposal of Accumulated or Generated Wastes

Prior to offsite disposal, waste profile packages were prepared and provided to Mr. Wayne Hagwood or Mr. Mitch McPherson of the NAS Jacksonville Public Works Center (PWC) for approval and signature. Based on the waste characterization sampling and analysis, wastes were characterized as non-hazardous petroleum contaminated. Once profile approval was received, manifests were generated and provided to PWC for signature

A total of 13,381 gallons of off-spec JP-5 fuel/PCW were transported on March 27 and 28, 2003, by ERS for disposal at Georgia Petroleum, Inc. The waste profile, manifests, and certificates of reclamation are provided in Appendix E. Two manifests per load are provided because of internal waste tracking by Georgia Petroleum, Inc.

A total of 9,122 gallons of PCW were transported on April 17, 2003 and April 24, 2003 by ERS for disposal at Industrial Water Services, Inc. The waste profile, manifests, and certificates of disposal are provided in Appendix E. The frac tanks were decontaminated by pressure washing on April 24, 2003 and the rinsate transported and disposed of with the PCW.

A total of 4.77 tons of petroleum-contaminated soil (contained within a 20-cubic yard roll-off container) was transported on May 21, 2003 by Southland Waste Systems for disposal at Broadhurst Environmental, Inc. The waste profile, manifest, weight ticket, and certificate of disposal are provided in Appendix E.

The Transportation and Disposal Log is provided in Appendix E.

4.0 Final Inspection and Site Status Summary

4.1 Participants

No final inspection was conducted by the Navy, however a final inspection was conducted on March 21, 2003 by CH2M HILL with MPC. The final inspection included the following participants:

- CH2M HILL Project Superintendent Mr. Roger Deisler
- CH2M HILL Project QC Manager Mr. Scott Sloan
- MPC Project Superintendent Mr. John Raulerson

4.2 Deficiencies

No deficiencies were noted during the final inspection, however on May 6, 2003, MPC was required to patch at the request of the Jacksonville Airport Authority a section of the concrete restored at the East/West High Speed Refuelers that was cracking (see Photos 9 and 10 in Appendix A. The patch was completed with an approved patching material, Silspec 950PDX.

4.3 Site Status Summary

As documented in this Construction Completion Report, CH2M HILL completed the following scope of work:

1. Completed mobilization and site preparation, to include field location of the fuel pipelines. The following sections of the fuel pipeline were field located:

    - The 10-inch diameter main fuel pipeline that starts from the former North Tank Fuel Farm and ends at the valve box located at the corner of Aviation Avenue and Technology Street.

    - The 10-inch diameter main fuel pipeline that continues from the valve box at the corner of Aviation Avenue and Technology Street and ends at the former Day Tank 2.

    - The 4-inch diameter fuel pipeline that starts from the "Tee" in the main fuel pipeline where the pipeline crosses through the wooded area near the intersection of Aviation Avenue and Cecil Pines Street and ends at Buildings 339 and 334 (Jet Engine Test Cells).

    - The 8-inch diameter fuel pipeline that starts at the "Tee" in the main fuel pipeline (the valve box at the corner of Aviation Avenue and Technology Street) and ends at the former Day Tank 1.

    - The 14-inch and 4-inch diameter fuel pipelines that start at the former Day Tank 1 and end at the North/South High Speed Refuelers.

- The 14-inch and 4-inch diameter fuel pipelines that start at the former Day Tank 2 and end at the East/West High Speed Refuelers.

2. Completed the following JP-5 pipeline pigging activities:

   - Excavated, where necessary, and entered existing/excavated pits to uncover the pipeline and install the pig launchers.
   - Purged of JP-5 and freed from contaminated air the following sections of pipeline:
     - The 10-inch diameter main fuel pipeline that starts from the former North Tank Fuel Farm (Pit #1) and ends at the valve box located at the corner of Aviation Avenue and Technology Street (Pit #2).
     - The 4-inch diameter fuel pipeline that starts from the "Tee" in the main fuel pipeline where the pipeline crosses through the wooded area near the intersection of Aviation Avenue and Cecil Pines Street and ends at Pit #3 near Buildings 339 and 334 (Jet Engine Test Cells).
     - The 10-inch diameter main fuel pipeline from the valve box at the corner of Aviation Avenue and Technology Street (Pit #2) to the former Day Tank 2 (Pit #4).
     - The aboveground section of 8-inch, 6-inch, and 4-inch diameter fuel pipelines on the North/South High Speed Refuelers and the 14-inch and 4-inch diameter fuel pipelines that start at the former Day Tank 1 vault (Excavation #1)and end at the North/South High Speed Refuelers (Excavation #2).
     - The aboveground section of 8-inch, 6-inch, and 4-inch diameter fuel pipelines on the East/West High Speed Refuelers and the 14-inch and 4-inch diameter fuel pipelines that start at the former Day Tank 2 vault and end at the East/West High Speed Refuelers (Excavation #3).
     - The section of the fuel pipelines located under the concrete apron south of Hangar 14 (Excavations #4, #5, #6, #7, and #8). This section was evacuated by vacuum truck only.
     - The 8-inch diameter fuel pipeline that starts at the "Tee" in the main fuel pipeline (Pit #2; the valve box at the corner of Aviation Avenue and Technology Street) towards the former Day Tank 1.
   - Removed and containerized within two 20,000-gallon frac tanks all recovered/ accumulated residual fuel and PCW.
   - Removed the pig launchers and mechanically capped each section of pipeline.

3. Completed site restoration, to include backfilling to grade, compacting where necessary, and replacement/repair of asphalt and concrete.

4. Containerized, characterized, transported, and disposed of 13,381 gallons of off-spec JP-5 fuel/PCW, 9,122 gallons of PCW, and 4.77 tons of petroleum-contaminated soil.

5.0 References

CH2M HILL Constructors, Inc. 1998. *Contract Management Plan for Response Action Contract No. N62467-98-D-0995*. July.

CH2M HILL Constructors, Inc. 1998. *Basewide Work Plan, Naval Air Station Cecil Field, Jacksonville, Florida. Revision No. 01*. November.

CH2M HILL Constructors, Inc. 2003. *CTO No. 0021 Work Plan Addendum No. 16, Revision No. 00, Pipeline Pigging at the Former Naval Air Station Cecil Field, Jacksonville, Florida.* January.

Appendix A

Site Photographs

Photo 1 – Vault #2 – 8″ Line – Looking North

Photo 2 – Vault #2

Photo 3 – Pigging at Vault #2

Photo 4 – Pigging at Vault #2

Photo 5 – Pigging at Vault #1

Photo 6 – Day Tank 2 Vault

Photo 7 – Pigging at Day Tank 2 Vault

Photo 8 – Damaged Curb on arrival at North Refuelers

Photo 9 – Pre-existing concrete at West Refuelers

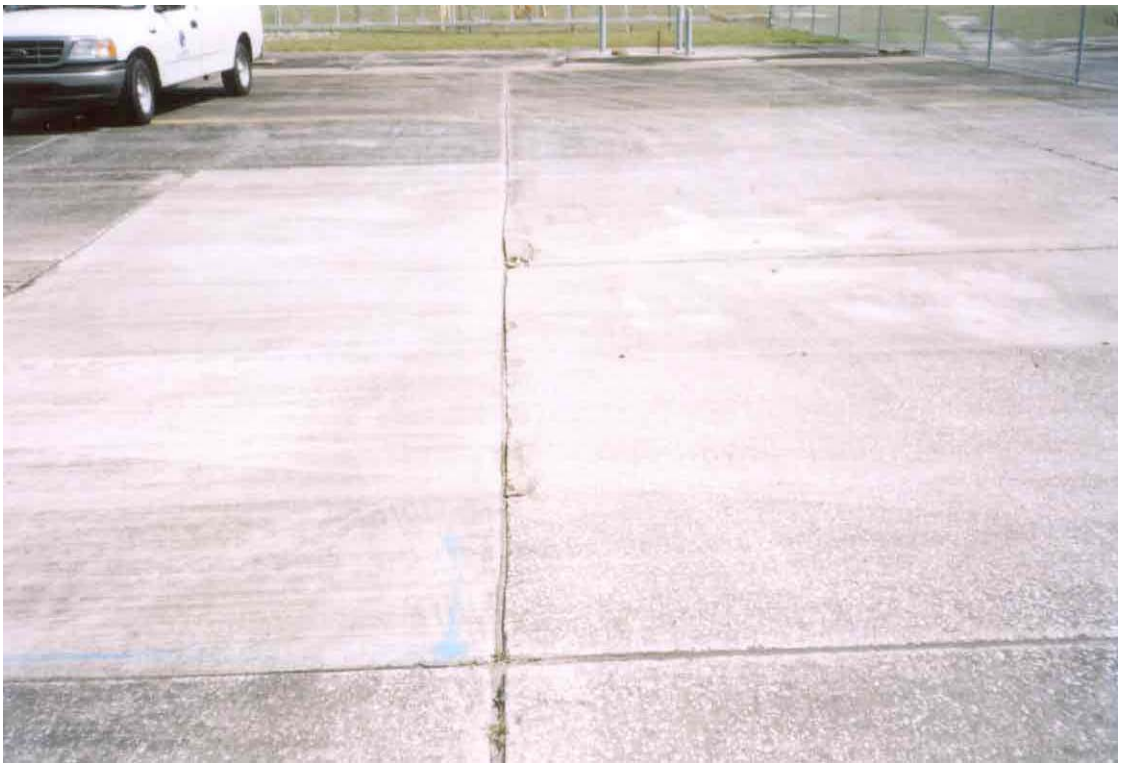

Photo 10 – Pre-existing Concrete at West Refuelers

Photo 11 – Excavation at 4″ Return Line at Day Tank One

Photo 12 – Excavation at 4″ Return Line at Day Tank One

Photo 13 – 14″ and 4″ Lines at North Refuelers Under the Concrete

Photo 14 – 8″ Line Inside Fence at Day Tank One

Photo 15 – 4″ Line at Building 339 Test Cell

Photo 16 – 14″ and 4″ Return at North Refuelers

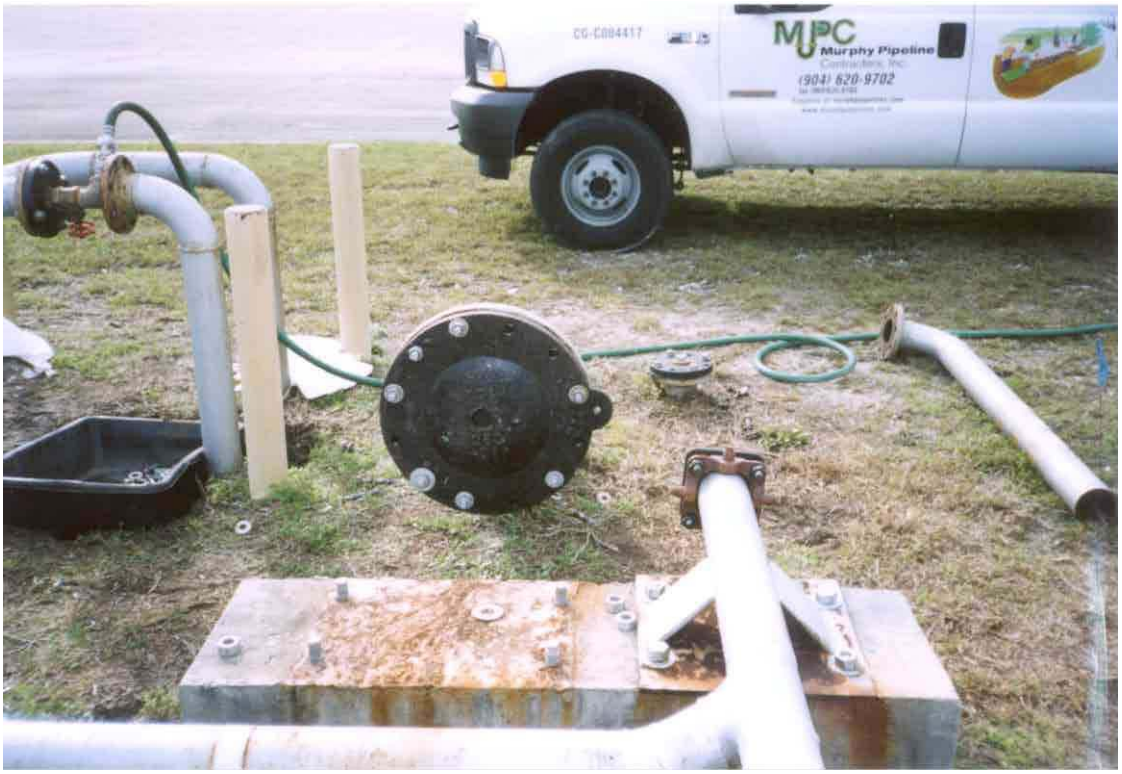

Photo 17 – 14″ Line at North Refuelers

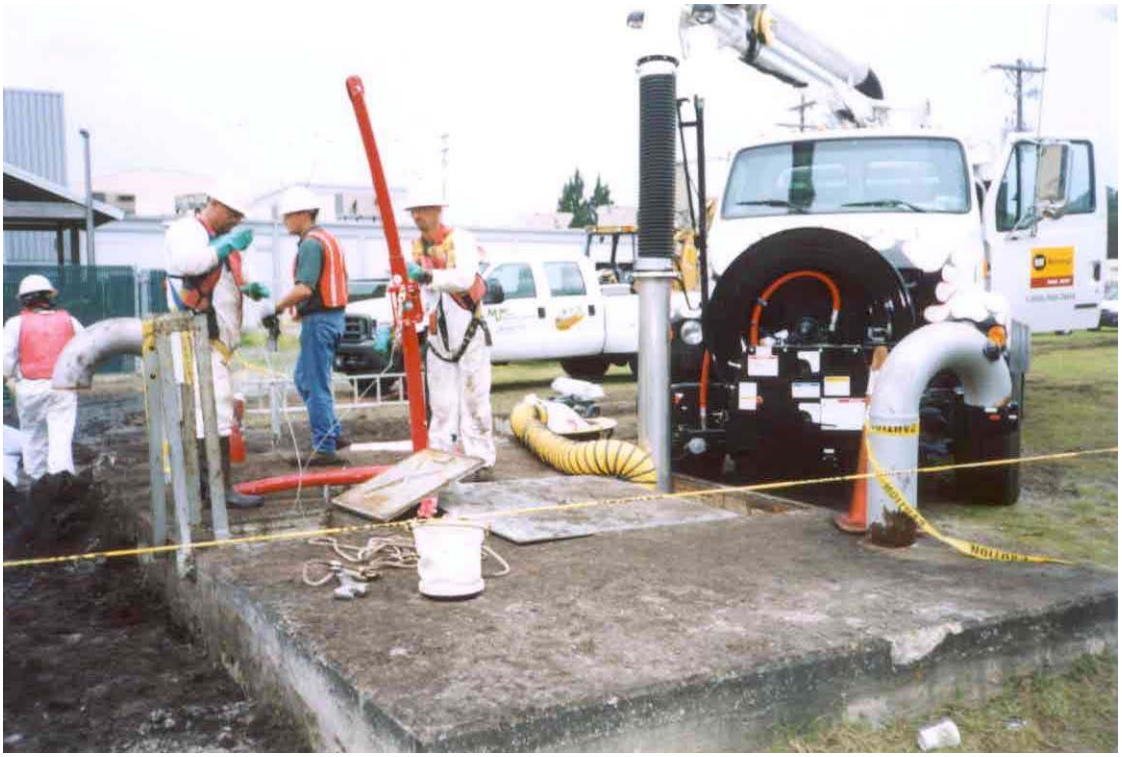

Photo 18 – Pigging at the Day Tank One Vault

Photo 19 – Pigging at Hanger 14 South End 6″ Line

Photo 20 – 6″ Line at North end of Hanger 14 Area

Photo 21 – 14″ and 4″ Lines at North End of West Refuelers

Appendix B

Pipeline Decommissioning Certifications

Murphy Pipeline Contractors

To: CH2M Hill
Colleen Kurtz

CC: JA Jones
Paul Malewicki

03/13/03

RE: CTO 021

This is confirmation that section four of the Murphy Pipeline work plan has been purged of JP5 and freed from contaminated air. Today the fourteen-inch main line at the north refueler, which measured 2000 linear feet, was purged with nitrogen as per our work plan. An air test was performed at both ends of the referenced line, and resulted with 0% LEL's and has been deemed successfully decommissioned.

Sincerely,

John E. Raulerson

Murphy Pipeline Contractors

11243-4 St Johns Industrial Pkwy Jacksonville, Fla. 32246

Murphy Pipeline Contractors

To: CH2M Hill
Colleen Kurtz

CC: JA Jones
Paul Malewicki

03/12/03

RE: CTO 021

This is confirmation that section four of the Murphy Pipeline work plan has been purged of JP5 and freed from contaminated air. Today the four-inch return line at the north refueler, which measured 2000 linear feet, was purged with nitrogen as per our work plan. An air test was performed at both ends of the referenced line, and resulted with 0% LEL's and has been deemed successfully decommissioned.

Sincerely,

John E. Raulerson

Murphy Pipeline Contractors

11243-4 St Johns Industrial Pkwy Jacksonville, Fla. 32246

Murphy Pipeline Contractors

To: CH2M Hill
Colleen Kurtz

CC: JA Jones
Paul Malewicki

03/10/03

RE: CTO 021

This is confirmation that section five of the Murphy Pipeline work plan has been purged of JP5 and freed from contaminated air. Today only the above ground portion of this section was completed. The above ground portion consists of four, six, and eight-inch lines on the south high-speed refueler. The pipelines were purged with nitrogen as per our work plan. An air test was performed at the ends of the referenced lines, and resulted with 0% LEL's and has been deemed successfully decommissioned.

In addition to pigging all above ground lines of the south high-speed refueler; the eight-inch pipe that begins in pit two moving towards day tank one was also pigged. This line ran toward building 846 and had been cut and capped previously ending in the field before day tank one. This eight-inch line was not in the approved Murphy Pipeline work plan, so it was not possible to reference a work plan section. However, the eight-inch pipeline was purged with nitrogen as per our work plan. An air test was performed at both ends of the line, and resulted with 0% LEL's and has been deemed successfully decommissioned.

Sincerely,

John E. Raulerson

Murphy Pipeline Contractors

11243-4 St Johns Industrial Pkwy Jacksonville, Fla. 32246

Murphy Pipeline Contractors

To: CH2M Hill
Colleen Kurtz

CC: JA Jones
Paul Malewicki

03/06/03

RE: CTO 021

This is confirmation that section four of the Murphy Pipeline work plan has been purged of JP5 and freed from contaminated air. Today only the above ground portion of this section was completed. The above ground portion consists of four, six, and eight-inch lines on the north high-speed refueler. The pipelines were purged with nitrogen as per our work plan. An air test was performed at the ends of the referenced lines, and resulted with 0% LEL's and has been deemed successfully decommissioned.

Sincerely,

John E. Raulerson

Murphy Pipeline Contractors

11243-4 St Johns Industrial Pkwy Jacksonville, Fla. 32246

Murphy Pipeline Contractors

To: CH2M Hill
Colleen Kurtz

CC: JA Jones
Paul Malewicki

03/03/03

RE: CTO 021

This is confirmation that section one of the Murphy Pipeline work plan has been completely purged of JP5 and freed from contaminated air. This line consists of 2140 linear feet of 10-inch fuel pipeline. The pipeline was purged with nitrogen as per our work plan. An air test was performed at either end of the pipeline and resulted with 0% LEL's and has been deemed successfully decommissioned.

Sincerely,

John E. Raulerson

Murphy Pipeline Contractors

11243-4 St Johns Industrial Pkwy Jacksonville, Fla. 32246

Murphy Pipeline Contractors

To: CH2M Hill
Colleen Kurtz

CC: JA Jones
Paul Malewicki

03/14/03

RE: CTO 021

This is confirmation that section six of the Murphy Pipeline work plan has been purged of JP5 and freed from contaminated air. Today we decontaminated the lines of this section at excavation numbers four, six, and seven. Please refer to the appropriate production report to find the reason why the lines at excavation five and eight were not purged. The lines were sucked out as per our work plan. An air test was performed at the ends of the referenced lines, and resulted with 0% LEL's and has been deemed successfully decommissioned.

Sincerely,

John E. Raulerson

Murphy Pipeline Contractors

11243-4 St Johns Industrial Pkwy Jacksonville, Fla. 32246

Murphy Pipeline Contractors

To: CH2M Hill
Colleen Kurtz

CC: JA Jones
Paul Malewicki

03/04/03

RE: CTO 021

This is confirmation that section three of the Murphy Pipeline work plan has been completely purged of JP5 and freed from contaminated air. This line consists of 4100 linear feet of 10-inch fuel pipeline. The pipeline was purged with nitrogen as per our work plan. An air test was performed at either end of the pipeline and resulted with 0% LEL's and has been deemed successfully decommissioned.

Sincerely,

John E. Raulerson

Murphy Pipeline Contractors

11243-4 St Johns Industrial Pkwy Jacksonville, Fla. 32246

Murphy Pipeline Contractors

To: CH2M Hill
Colleen Kurtz

CC: JA Jones
Paul Malewicki

03/11/03

RE: CTO 021

This is confirmation that section two of the Murphy Pipeline work plan has been purged of JP5 and freed from contaminated air. The four-inch line that intersects with the main ten-inch line was purged with nitrogen as per our work plan. An air test was performed at the end of the referenced line, and resulted with 0% LEL's and has been deemed successfully decommissioned.

As a result of pigging the four-inch line into the ten-inch line, the ten-inch line was contaminated. The ten-inch line was completely pigged over again. An air test was performed at both ends of the line, and resulted with 0% LEL's and has been deemed successfully decommissioned.

Sincerely,

John E. Raulerson

Murphy Pipeline Contractors

11243-4 St Johns Industrial Pkwy Jacksonville, Fla. 32246

Murphy Pipeline Contractors

To: CH2M Hill
Colleen Kurtz

CC: JA Jones
Paul Malewicki

03/14/03

RE: CTO 021

This is confirmation that section five of the Murphy Pipeline work plan has been purged of JP5 and freed from contaminated air. Today we decontaminated the four-inch return line as well as the fourteen-inch main. An air test was performed at both ends of the referenced lines, and resulted with 0% LEL's and has been deemed successfully decommissioned.

Sincerely,

John E. Raulerson

Murphy Pipeline Contractors

11243-4 St Johns Industrial Pkwy Jacksonville, Fla. 32246

Appendix C

Air Testing/Monitoring Logs

MARCH 03 2003

CTO-021 pipeline Pigging Air Monitorng Log

Date/Time	O2	LEL	H2S	Co	SPACE
3/3/ 1:40	20.8%	0%			Safe
3:40	20.7%	0%			Safe

Calibration Results

Date	O2	LEL	H2S	CO	SIGNATURE
3/3	20.8%	0%			[illegible]

MARCH 04 2003

CTO-021 pipeline Pigging Air Monitorng Log

Date/Time	O2	LEL	H2S	Co	SPACE
3-4 / 8:00	20.8%	0%			
8:15	20.8%	0%			
8:30	20.7%	0%			

Calibration Results

Date	O2	LEL	H2S	CO	SIGNATURE
3-5-03	20.8%	0%			

MARCH 05 2008

CTO-021 pipeline Pigging Air Monitorng Log

Date/Time	O2	LEL	H2S	Co	SPACE

Calibration Results

Date	O2	LEL	H2S	CO	SIGNATURE
3-5	20.8%	0%			[illegible]

MARCH 06 2003

CTO-021 pipeline Pigging Air Monitorng Log

Date/Time	O2	LEL	H2S	Co	SPACE
3-6 / 1:00	20.8%	0%			Safe
Constant					
Monitoring					
3:00 /	20.8%	0%			

Calibration Results

Date	O2	LEL	H2S	CO	SIGNATURE
3-6	20.8%	0%			[illegible]

MARCH 07 2003

CTO-021 pipeline Pigging Air Monitorng Log

Date/Time	O2	LEL	H2S	Co	SPACE
3-7 / 7:30	20.9%	0%			Safe

Calibration Results

Date	O2	LEL	H2S	CO	SIGNATURE
3-7-03	20.8%	0%			John [illegible]

3-11-03

CTO-021 pipeline Pigging Air Monitorng Log

Date/Time	O2	LEL	H2S	Co	SPACE
3/11/03 / 8:00	20.8%	0%			safe
/ 10:30					Dry vault
2:30	20.8%	0%			excavation pit

Calibration Results

Date	O2	LEL	H2S	CO	SIGNATURE
3/11/03	20.9%	0%	0%	0	[signature]

CTO-021 pipeline Pigging Air Monitorng Log 3-12-03

Date/Time	O2	LEL	H2S	Co	SPACE
3/12/03 9:30	20.8%	0%			Excavation

Calibration Results

Date	O2	LEL	H2S	CO	SIGNATURE
3-12-03	20.9%	0%	0	0	John

CTO-021 pipeline Pigging Air Monitorng Log 3-13-03

Date/Time	O2	LEL	H2S	Co	SPACE
11:30 3/13/03	20.8%	0%	0	0	Dry vault North
11:58 3/13/02	20.8%	0%	0	0	Dry Vault North
3:00 3/13	20.8%	0%	0	0	Dry Vault South

Calibration Results

Date	O2	LEL	H2S	CO	SIGNATURE
3/13/03	20.9%	0%	0	0	[signature]

Appendix D

Site Restoration Specifications/Field Test Results

2.1.4 Concrete Replacement

Replacement of the concrete will include replacing the fill, compacting to a minimum of 95% of maximum dry density as determined in accordance with AASTM D1557 for any material disturbed at depth greater than 6 inches and compacted to a minimum of 100% of maximum dry density as determined in accordance with AASTM D1557 for the 6 inch lime-rock stabilized sub base. The replacement will require 3/4 inch diameter by 24 inch long smooth dowels be installed 12 inches into the existing concrete every 18 inches on center. The dowels will be set with epoxy into the existing concrete and the ends will be lubricated. Two layers of number 6 re-enforcement bar will formed at 18 inches on center and one layer will be set 3 inches from the bottom and the other layer will be set 4 inches form the top. Concrete will properties will be as follows:

Max ultimate compressive strength of 5,000 psi at 28 days

Portland Cement ASTM C150 Type I

Aggregate: ASTM C53

Water Potable

Air Content: 2.5% +/- 1%

Slump: Maximum 3 inches

Material shall be mixed, transported, placed, consolidated and finished in accordance with the requirements of the current edition of the Federal Aviation Administration Item, P-501, “Portland Cement Concrete Pavement Description.” Control, contraction, and/or expansion joints will be installed as applicable and shall also comply with FAA item P-105.

Epoxy Requirements: use a Sika epoxy – (Sikadur 35 Hi-Mod LV, Sikadur 32 Hi-Mod, Sikadur Injecttion Gel or Sikadur 31 Hi-Mod Gel.

Joint Sealer Use a Dow Corning 888 Silicon Joint Sealant or equivalent for joint sealent.

Ellis & Associates Inc.
7064 Davis Creek Road
Jacksonville, Florida 32256
Phone: 904/880-0960
Fax: 904/880-0970

CONCRETE

Lab No. 676

Project Information

Project: Cecil Field
Report To: All Pro Asphalt
Location of Pour: North High speed refueler
Location By:

Cylinder Information

Tracking No.: 6281 A
Project No.: 03JX-2325
Report No.: 2
Date Cast: 3-18-03
Date Received: 3-19 By: JJ

Field Measurements (Circle One)

Weather: Clear/Cloudy Lt. Rain Hvy. Rain Dry Inside Windy
Temperatures: Air 81 F Concrete 80 F
Time Sampled: 12:30 Cylinders Molded By: Justin
Entrained Air 3.5 % Method: P - P - C Slump 3 In.
Amount of Water Added on Job to this Truck 0 Gal.
Unit Weight, pcf Wet ____ Dry ____

Ticket Information

Spec. Req.: 5000 PSI
Con. Mix #: EC62Ac
Concrete Supplier: Ft. Rock
Truck No.: 6280
Ticket No.: 1438296
Size of Load on Project: 10 C.Y.
Time Batched: 1145

Specimens Molded in Accordance to ASTM C-31 Yes ✓ No ____ Unknown ____
Specimens Initially Cured in Accordance to ASTM C-31 Yes ✓ No ____ Unknown ____
Specimens Tested in Accordance to ASTM C-39 Yes ✓ No ____
Remarks:

SPECIMEN MARKING	TYPE FRACTURE (1)	DIAMETER (INCHES) (2)	AREA (SQ. IN.) (3)	AGE DAYS	DATE TESTED	TOTAL LOAD (POUNDS)	UNIT LOAD (PSI)	REPORT NO.	TESTED BY
8700	C	6.00	28.27	7	3-25	134320	4750	2	[illegible]
1	C	6.00	28.27	28	4-15	155460	5500		[illegible]
1				Hold	Hold				
1									

UNLESS OTHERWISE NOTED (1) CONE FRACTURE (2) 6.00 (3) 28.27

☒ Cone (a) ◫ Cone and Split (b) ☒ Cone and Shear (c) ◪ Shear (d) ▥ Columnar (e)

SM 4-22

To Be completed In Office

Checked By: ____ Date: ____

To Be Completed In Field

Concrete Information

3 - Cylinders
__ - Beams
__ - Cubes
__ - Prisms
__ - Air Tests
__ - Additional Slumps
__ - Unit Weights
__ - Other ____

Employee Name Justin McElhenny 4-18-03

Billing Comments
__ - FOB Laboratory
__ - Picked Up Client Cylinders, Special Trip (T003) ____ Date
__ - Out of Town Mobilization (T001) ____ City

RECEIVED
APR 18 2003
RECORDS DEPARTMENT

Standby Approval
Superintendent Printed Name
Superintendent Signature

white copy - office use yellow copy - office use pink copy - personal use office use

Ellis & Associates Inc.
7064 Davis Creek Road
Jacksonville, Florida 32256
Phone: 904/880-0960
Fax: 904/880-0970

Page 1 of 1

Tracking No.:
Project No.:
Report No.:
Lab No.:

Report of In-Place Density (Asphalt or Soil) Tests or Coring for Thickness (-- circle one --)

Project: [illegible]
Contractor: C.H.C [illegible]
Reported To:
Location: [illegible]
Material: LR
Date Tested: 3-20-03

Method: Moist
Location by:
Course: Base
Spec. Requirements: 95%

Pass/ Fail/ Retest	Location	Elev/ Depth/ Lift	Base/LR/ Asphalt Thickness	Dry Density	Max. Dry Density*	% of Max Den	Moist %
P	Dry Run #1	0-6"			135	102.0	13.5

*Source of Proctor (Project Number) Same

P - Test Meets Specification Requirements F- Test Fails To Meet Specification Requirements R- Retest

To Be Completed In Field

Employee Name Mike Fick
Billing Comments
__ Trip Charge (Job Canceled)
__ Out of Town Mobilization (T001) _____
City

Standby Approval

Superintendent Printed Name

Superintendent Signature

white copy - office use *yellow copy - personal use* *pink and goldenrod - client use*

(Office use)

Appendix E

Waste Disposal Documentation

Transportation and Disposal Log

CTO No	Project No	Project Name	Site Description	Container Type	Waste Profile Sample No	Contractor	Trans-porter	Date Transported	Transporter EPA ID	Load ID	Disposal Facility	Disp Fac EPA ID	Media	Waste Type (Haz, Nonhaz, TSCA)	Disposal Date	Manifest Number	Disposal Treatment Method (Enter disposal quantity under appropriate method)					Certif of Disp/ Destruc Date	Comments/ Notes
																	Incineration	Recycle	Landfill	Other	Unit		
0021	153141	PipeLine Pigging	JP-5 Pipeline	TT	JP-5	Murphy	ERS	27-Mar-03	FL984261412	1	Georgia Petroleum	GAD981222433	Fuel	Nonhaz	27-Mar-2003	13005		5000			Gallons	27-Mar-04	
0021	153141	PipeLine Pigging	JP-5 Pipeline	TT	JP-5	Murphy	ERS	28-Mar-03	FL984261412	2	Georgia Petroleum	GAD981222433	Fuel	Nonhaz	28-Mar-2003	13006		5000			Gallons	28-Mar-04	
0021	153141	PipeLine Pigging	JP-5 Pipeline	TT	JP-5	Murphy	ERS	28-Mar-03	FL984261412	3	Georgia Petroleum	GAD981222433	Fuel	Nonhaz	31-Mar-2003	13007		3381			Gallons	31-Mar-04	
0021	153141	PipeLine Pigging	JP-5 Pipeline	TT	22574	Murphy	ERS	17-Apr-03	FL984261412	4	IWS	FLD981928484	contact water	Nonhaz	17-Apr-2003	13011		5000			Gallons	19-Dec-03	
0021	153141	PipeLine Pigging	JP-5 Pipeline	TT	22574	Murphy	ERS	17-Apr-03	FL984261412	5	IWS	FLD981928484	contact water	Nonhaz	17-Apr-2003	13012		3503			Gallons	19-Dec-03	
0021	153141	PipeLine Pigging	JP-5 Pipeline	TT	22574	Murphy	ERS	24-Apr-03	FL984261412	6	IWS	FLD981928484	contact water	Nonhaz	24-Apr-03	13014		615			Gallons	19-Dec-03	
0021	153141	PipeLine Pigging	JP-5 Pipeline	roll-off	33367	Murphy	SWS	21-May-03	N/A	7	Broad-hurst	65-0965473	soil	Nonhaz	27-May-03	9655			4.77		Tons	13-Jan-04	

Profile Form Code

[redacted]

Material Profile Form

Mailing Address:
P.O. Box 43369
Jacksonville, FL 32203

Sample Shipping Address:
1705 Danese Street
Jacksonville, FL 32206

(800) 447-3592
(904) 354-0372
Lab Fax (904) 353-4033

[redacted]

CUSTOMER INFORMATION

1. Customer Name Environmental Remediation Services, Inc.
2. Customer Address 760 Talleyrand Avenue
   City Jacksonville State Florida Zip 32202
3. Billing Address (if other than above)
   City State Zip
4. Technical Contact Charlie Owens Phone (904)791-9992

GENERATOR INFORMATION

NAS JACKSONVILLE, JAX, FL

1. Generator Name US NAVY - PWC) Box 30, Code 331 SIC code
2. Name of Material or Waste Petroleum Contact Water (PCW)
3. Estimated Volume 19000 6 4. Unit(s) GAL 5. Per Time One time only X

6. Process Generating Waste or Material (Give a detailed description of the process that generates the waste or material. Include all constituents, all steps in process, approximate age, and suspected or known contaminants).

Clean JP-5 Pipeline

QUESTIONNAIRE

Check one. If more than one is checked, please explain. _____

____ **Used Oil**

Constituent	On-spec level	Actual Level (mg/l)
Arsenic	5 mg/l Maximum	BDL
Cadmium	2 mg/l Maximum	.00031 mg/l
Chromium	10 mg/l Maximum	.0040 mg/l
Lead	100 mg/l Maximum	.021 mg/l
Flash Point	100°F Minimum	72/2
Total Halogens	1000 mg/l Maximum	BDL

Is the used oil paraffin based? No If yes, attach a MSD sheet on the product. PCB Level N/A

Has the used oil been mixed with a hazardous waste? No If yes, fill out the waste section below.

X **Petroleum Contact Water (PCW)**

Is the product leaded? No Lead level .021 mg/l %Sludge 0-5

Has this material been mixed with a hazardous waste? No Waste codes _____

Note: It is the generator's responsibility to determine if PCW management is acceptable in their state. IWS facilities are properly permitted for PCW management.

X **Virgin Product**

Name of Material JP-5

Please attach the MSDS for this product. Has the product been mixed with a hazardous waste? No

Waste Codes _____

____ **Waste**

Is the waste hazardous by:
- Ignitability? (regulated under 40 CFR Part 261.21) ____ Yes X No
- Corrosivity?(regulated under 40 CFR Part 261.22) ____ Yes X No
- Reactivity?(regulated under 40 CFR Part 261.23) ____ Yes X No

Does the waste contain:
- Herbicides or pesticides? ____ Yes X No
- Dioxins? ____ Yes X No
- Radioactive substances? ____ Yes X No
- Domestic wastes? ____ Yes X No
- Biohazardous materials? ____ Yes X No

Is this a hazardous waste (F, K, U, or P listed) as defined under 40 CFR Subpart D ____ Yes X No

If yes to the above, identify listing _____

Is the waste derived from outside an underground storage tank (UST)? ____ Yes X No

If yes to the above, list materials stored _____

If waste is derived from a fuel, is it leaded? Yes -JP-5- Not leaded

CONSTITUENTS (Fill out the sections below if waste was checked above)

. Does the waste contain any constituents listed in the table below? If yes, check the contaminants that pply and the level present in the waste.
low was level determined? ___ Laboratory Analysis ___ Generator Knowledge
aboratory analysis is ___ TCLP ___ Total ___ Generator Knowledge

EPA #	Name	Regulatory Level (mg/l)	Amount Present (mg/l)
004	ARSENIC	5.0	0.01
005	BARIUM	100.0	0.0096
018	BENZENE	0.5	BDL
006	CADMIUM	1.0	0.00031
019	CARBON TETRACHLORIDE	0.5	BDL
020	CHLORDANE	0.03	BDL
021	CHLOROBENZENE	100.0	BDL
022	CHLOROFORM	6.0	BDL
007	CHROMIUM	5.0	0.0040
024	CRESOL (M)	200.0	0.0519
023	CRESOL (O)	200.0	0.182
025	CRESOL (P)	200.0	0.0519
026	CRESOL	200.0	0.234
016	2,4-D	10.0	BDL
027	1,4-DICHLOROBENZENE	7.5	BDL
028	1,2-DICHLOROETHANE	0.5	BDL
029	1,1-DICHLOROETHYLENE	0.7	BDL
030	2,4-DINITROTOLUENE	0.13	BDL
012	ENDRIN	0.02	BDL
031	HEPTACHLOR	0.008	BDL
032	HEXACHLOROBENZENE	0.13	BDL
033	HEXACHLOROBUTADIENE	0.5	BDL
034	HEXACHLOROETHANE	3.0	BDL
008	LEAD	5.0	.021
013	LINDANE	0.4	BDL ~~0.00003~~ Pm
009	MERCURY	0.2	0.00003
014	METHOXYCHLOR	10.0	BDL
035	METHYL ETHYL KETONE	200.0	BDL
036	NITROBENZENE	2.0	BDL
037	PENTACHLOROPHENOL	100.0	BDL
038	PYRIDINE	5.0	BDL
010	SELENIUM	1.0	BDL
011	SILVER	5.0	BDL
039	TETRACHLOROETHYLENE	0.7	BDL
015	TOXAPHENE	0.5	BDL
040	TRICHLOROETHYENE	0.5	BDL
041	2,4,5-TRICHLOROPHENOL	400.0	BDL
042	2,4,6-TRICHLOROPHENOL	2.0	BDL
017	2,4,5-TP (SILVEX)	1.0	BDL
043	VINYL CHLORIDE	0.2	BDL

. Does the waste contain any of the following? (provide concentration if known):

PCBs	NA less than 2 mg/l	___ greater than 2 mg/l	___ Actual mg/l
Cyanides	N less than 250 mg/l	___ greater than 250 mg/l	BDL Actual mg/l
Sulfides	N less than 500 mg/l	___ greater than 500 mg/l	152 Actual mg/l

2. Does the waste contain any of the following? (provide concentration if known):

PCBs	Y less than 2 mg/l	____ greater than 2 mg/l	____ Actual mg/l
Cyanides	Y less than 250 mg/l	____ greater than 250 mg/l	NDC Actual mg/l
Sulfides	Y less than 500 mg/l	____ greater than 500 mg/l	152 Actual mg/l

PHYSICAL CHARACTERISTICS

1. Color Clear
2. Does the waste have a strong incidental odor? X Yes ____ No
   If yes, describe Fuel
3. Physical State @ 70F: ____ Solid X Liquid ____ Semi-solid ____ Powder ____ Other ____
4. Layers: ____ Multi-layered ____ Bi-layered X Single Phased
5. pH 5.71
6. Flash Point 72/2
7. Total Suspended Solids 0-5 %
8. Viscosity ____ Very thin ____ Thin X Moderate ____ Thick ____ Does not pour
9. Total organic halogens X less than 1000 mg/l ____ greater than 1000 mg/l Actual ____ mg/l

SAMPLE SOURCE (Drum, Tank, Lagoon, Etc.) Is this form accompanied by a sample? No

Results ATTACHED

REPRESENTATIVE SAMPLE CERTIFICATION

1. Print sampler's name: RANDY DUMOP / PAUL Malewicke Sample date: 3/24/03
2. Sampler's title: O+M QC MANAGER / P.M.
3. Sampler's Employer (if other than the generator): J.A. JONES

The sampler's signature certifies that any sample submitted is representative of the material described above pursuant to 40 CFR 261.20 (c) or equivalent rules.

4. Sampler's signature [signature]

GENERATOR CERTIFICATION

By Signing this profile, you certify that:

1. You are the generator or the duly authorized representative of the generator.
2. This waste is not a hazardous waste as defined by USEPA Federal regulation, unless noted above.
3. This waste does not contain regulated materials or regulated concentrations of PCBs (polychlorinated biphenyls).
4. This sheet contains true and accurate descriptions of the material and all relevant information in your possession regarding known or suspected hazards have been disclosed.
5. The analytical data presented herein or attached hereto were derived from testing a representative sample taken in accordance with 40 CFR 261.20 (c) or equivalent rules.
6. If any changes occur in the character of the material, you will notify the Contractor prior to the Contractor removing the material.
7. If the material is PCW, there are no hazardous constituents above those found in the source of the PCW.

Signature: [signature] Date: 4-16-03

Print Name: Wayne Hagwood

Title: Eng. Tech

END

Georgia Petroleum, Inc.

This certificate serves as notice of reclamation of the material identified below by manifest number and date.

09790/13005
Manifest Number

3·27·03
Date

The above material was accepted at our facility in Valdosta, GA. Said material was recycled. All waste by-products are handled in accordance with Federal, State and Local Laws. Plant inspection available upon request. For further information, contact our facility at the following address.

THANK YOU

GEORGIA PETROLEUM, INC.
1612-B JAMES P. RODGERS CIRCLE
VALDOSTA, GA 31601
(229) 244-9110

Georgia Petroleum, Inc.

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. FLD 984261412

Manifest Document No.

2. Page 1 of 1

3-27-03

3. Generator's Name and Mailing Address
US Navy Code 331
PWC Box 30 NAS Jacksonville Fl.

09790

4. Generator's Phone ( )

5. Transporter 1 Company Name: Enviro-Remediation

6. US EPA ID No. FLD 984261412

A. Transporter's Phone: 904-791-9992

7. Transporter 2 Company Name

8. US EPA ID No.

B. Transporter's Phone

9. Designated Facility Name and Site Address
Georgia Petroleum, Inc.
1612 James P. Rodgers Circle
Valdosta, Georgia 31601

10. US EPA ID No.
GAD# 981222433

C. Facility's Phone
229-244-9110

GENERATOR

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. OFF Sepe. JP-5 & water		T/F	5000	Gal
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

API _____ **VIS** _____ **BSW** _____

CHLOR _____

E. Handling Codes for Waste Listed Above

15. Special Handling Instructions and Additional Information

In the event of an emergency call 229-244-9110 Mon - Fri 8-5

G. 5000
H2O
N
Prico

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: US Navy | Signature | Month 03 Day 27 Year 03

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: T. McGhee | Signature: T. McGhee | Month 03 Day 27 Year 03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

FACILITY

19. Discrepancy Indication Space
80% water Charge 15¢ Gal.

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted on item 19.

Printed/Typed Name: Gene Goldfuss | Signature: Gene Goldfuss | Month 03 Day 27 Year 03

ORIGINAL RETURN TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: Not Required
Manifest Document No.: 13005
2. Page 1 of 1

3. Generator's Name and Mailing Address
US Navy
(PWC) Box 30, Code 331, NAS Jacksonville, Jacksonville, Florida 32212

4. Generator's Phone (904) 542-5979

5. Transporter 1 Company Name: Environmental Remediation Svc.
6. US EPA ID Number: F L D 9 8 4 2 6 1 4 1 2
A. Transporter's Phone: 904/791-9992

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Georgia Petroleum, Inc.
1612 James P. Rodgers Circle
Valdosta, Georgia 31601
10. US EPA ID Number: G A D 9 8 1 2 2 2 4 3 3
C. Facility's Phone: 229/244-9110

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Off Spec JP-5 Fuel	001	TT	05,000	G
b. N/A				
c. N/A				
d. N/A				

D. Additional Descriptions for Materials Listed Above
API_____ VIS_____ BSW 80%
CHLOR_____

E. Handling Codes for Wastes Listed Above
N/A

15. Special Handling Instructions and Additional Information

Emergency Contact: Environmental Remediation Services, Inc. (904)791-9992

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name: Mitchell B. McPherson
Signature: [signature]
Month Day Year: 03 27 03

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: T. McGhee
Signature: [signature]
Month Day Year: 3 27 03

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Gene Goldfuss
Signature: [signature]
Month Day Year: 03 27 03

GENERATOR
TRANSPORTER
FACILITY

ORIGINAL - RETURN TO GENERATOR

Georgia Petroleum, Inc.

This certificate serves as notice of reclamation of the material identified below by manifest number and date.

09793/13006
Manifest Number

3-28-03
Date

The above material was accepted at our facility in Valdosta, GA. Said material was recycled. All waste by-products are handled in accordance with Federal, State and Local Laws. Plant inspection available upon request. For further information, contact our facility at the following address.

THANK YOU

GEORGIA PETROLEUM, INC.
1612-B JAMES P. RODGERS CIRCLE
VALDOSTA, GA 31601
(229) 244-9110

Georgia Petroleum, Inc.

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. FLD 984 261 412

Manifest Document No.

2. Page 1 of 1 — 3-28-03

3. Generator's Name and Mailing Address
US Navy
PWC Box 30 NAS Jacksonville
09793
4. Generator's Phone (904) 542-5979 Jacksonville Fl 32212

4520

5. Transporter 1 Company Name
Environmental Remediation Svc.

6. US EPA ID No. FLD 984 261 412

A. Transporter's Phone 904-791-9992

7. Transporter 2 Company Name

8. US EPA ID No.

B. Transporter's Phone

9. Designated Facility Name and Site Address
Georgia Petroleum, Inc.
1612 James P. Rodgers Circle
Valdosta, Georgia 31601

10. US EPA ID No.
GAD# 981222433

C. Facility's Phone
229-244-9110

11. Waste Shipping Name and Description

	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. OFF Spec JP-5 Fuel		T/T	5000	Gal
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

API 44.5 VIS <20 BSW <1%
CHLOR <50

E. Handling Codes for Waste Listed Above

15. Special Handling Instructions and Additional Information

In the event of an emergency call 229-244-9110 Mon - Fri 8-5

G 5000
~~HO~~
N 5000
Price .43

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: US Navy — Signature — Month Day Year: 03 28 03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: T. McGee — Signature: T. McGee — Month Day Year: 03 28 03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted on item 19.

Printed/Typed Name: Gene Gobtess — Signature: Gene Gobtess — Month Day Year: 03 28 03

GENERATOR — TRANSPORTER — FACILITY

ORIGINAL RETURN TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: Not Required

Manifest Document No.: 13006

2. Page 1 of 1

3. Generator's Name and Mailing Address
US Navy
(PWC) Box 30, Code 331, NAS Jacksonville, Jacksonville, Florida 32212

4. Generator's Phone (904) 542-5979

5. Transporter 1 Company Name: Environmental Remediation Svc.

6. US EPA ID Number: FLD984261412

A. Transporter's Phone: 904/791-9992

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address
Georgia Petroleum, Inc.
1612 James P. Rodgers Circle
Valdosta, Georgia 31601

10. US EPA ID Number: GAD981222433

C. Facility's Phone: 229/244-9110

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Off Spec JP-5 Fuel	001	TT	5000	G
b. N/A				
c. N/A				
d.				

D. Additional Descriptions for Materials Listed Above
API_____ VIS_____ BSW_____
CHLOR_____

E. Handling Codes for Wastes Listed Above: N/A

15. Special Handling Instructions and Additional Information

Emergency Contact: Environmental Remediation Services, Inc. (904)791-9992

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: Mitchell B McPherson
Signature: [signature]
Month Day Year: 10 31 28 03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Terry McGee
Signature: [signature]
Month Day Year: 3 28 03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Gene Goldfuss
Signature: [signature]
Month Day Year: 03 28 03

GENERATOR
TRANSPORTER
FACILITY

ORIGINAL - RETURN TO GENERATOR

Georgia Petroleum, Inc.

This certificate serves as notice of reclamation of the material identified below by manifest number and date.

09797/13007
Manifest Number

3-31-03
Date

The above material was accepted at our facility in Valdosta, GA. Said material was recycled. All waste by-products are handled in accordance with Federal, State and Local Laws. Plant inspection available upon request. For further information, contact our facility at the following address.

THANK YOU

GEORGIA PETROLEUM, INC.
1612-B JAMES P. RODGERS CIRCLE
VALDOSTA, GA 31601
(229) 244-9110

Georgia Petroleum, Inc.

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. FLD984262412

Manifest Document No.

2. Page 1 of 1 — 3-31-03

3. Generator's Name and Mailing Address
US Navy
PWC Box 30 NAS Jacksonville
09797

4. Generator's Phone (904) 791-9992 Jacksonville FL

5. Transporter 1 Company Name: Enviro Remediation Svc.

6. US EPA ID No. FLD984262412

A. Transporter's Phone: 904-791-9992

7. Transporter 2 Company Name

8. US EPA ID No.

B. Transporter's Phone

9. Designated Facility Name and Site Address
Georgia Petroleum, Inc.
1612 James P. Rodgers Circle
Valdosta, Georgia 31601

10. US EPA ID No.
GAD# 981222433

C. Facility's Phone
229-244-9110

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. JP-5 & Water		T	3381	Gal
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
API 44.5 VIS 420 BSW 45%
CHLOR 450

E. Handling Codes for Waste Listed Above

15. Special Handling Instructions and Additional Information

In the event of an emergency call 229-244-9110 Mon - Fri 8-5

G. 3381
H2O 1521
N 1860

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: US Navy — Signature — Month 03 Day 31 Year 03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: T. McGuire — Signature — Month 03 Day 31 Year 03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted on item 19.

Printed/Typed Name: Gene Gottfuss — Signature — Month 03 Day 31 Year 03

GENERATOR → TRANSPORTER → FACILITY

ORIGINAL RETURN TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. Not Required	Manifest Document No. 1500.7	2. Page 1 of 1

3. Generator's Name and Mailing Address
US Navy
(PWC) Box 30, Code 331, NAS Jacksonville, Jacksonville, Florida 32212

4. Generator's Phone (904) 542-5979

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
Environmental Remediation Svc.	FLD984261412	904/791-9992
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone
9. Designated Facility Name and Site Address	10. US EPA ID Number	C. Facility's Phone
Georgia Petroleum, Inc. 1612 James P. Rodgers Circle Valdosta, Georgia 31601	GAD981222433	229/244-9110

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Off Spec JP-5 Fuel	001	TT	0338.1	G
b. N/A				
c. N/A				
d. N/A				

D. Additional Descriptions for Materials Listed Above
API_____ VIS_____ BSW_____
CHLOR_____

E. Handling Codes for Wastes Listed Above
N/A

15. Special Handling Instructions and Additional Information

Emergency Contact: Environmental Remediation Services, Inc. (904)791-9992

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste..

Printed/Typed Name	Signature	Month	Day	Year
Mitchell B McPherson		03	28	03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
T. McGhee		3	28	03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Gene Goldfuss		03	13	03

GENERATOR
TRANSPORTER
FACILITY

TRANSPORTER # 1

INDUSTRIAL WATER SERVICES

Corporate Office
1010 East Adams St. • Jacksonville, FL 32202
P.O. Box 43369 • Jacksonville, FL 32203
Phone: (904) 354-0372 • (800) 447-3592
Fax: (904) 350-1313 • www.iwsww.com

CERTIFICATE OF COMPLIANCE AND DISPOSAL

Generator: U.S. Navy – NAS Jacksonville
Site Location: Building #80, Jacksonville, FL
ERS project number: 4327

This certifies that on the 17th of April 2003; 5,000 gallons of non-hazardous petroleum contact water, as described on manifest number 13011, was disposed of and/or recycled in compliance with all applicable state, federal and local regulations under Industrial User Permit Number ISN 019.

Facility Name:	Industrial Water Services, Inc.
Facility Address:	1640 Talleyrand Avenue Jacksonville, FL
Facility EPA ID#:	FLD 981 928 484
Certified By:	Leslie Detlefsen
Signature:	Leslie Detlefsen
Date:	December 19, 2003

12123 South Stony Island Avenue
Chicago, IL 60633
(773) 646-9700
Fax: (773) 646-9730

1640 Talleyrand Avenue
Jacksonville, FL 32206
(904) 354-0372
Fax: (904) 353-4033

1980 Avenue "A"
Mobile, AL 36615
(251) 694-7500
Fax: (251) 694-7508

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: Not Required

Manifest Document No.: 2011

2. Page 1 of 1

3. Generator's Name and Mailing Address: US Navy

4. Generator's Phone ( )

Former Cecil Field

5. Transporter 1 Company Name: Environmental Remediation Svc.

6. US EPA ID Number: F L D 9 8 4 2 6 1 4 1 2

A. Transporter's Phone: 904/791-9992

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address: Industrial Water Services, 1640 Talleyrand Ave., Jacksonville, Florida 32206

10. US EPA ID Number: F L D 9 8 1 9 2 8 4 8 4

C. Facility's Phone: 904/354-0372

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Petroleum Contact Water	001	TT	05000	G
b. N/A				
c. N/A				
d. N/A				

D. Additional Descriptions for Materials Listed Above: N/A

E. Handling Codes for Wastes Listed Above: N/A

15. Special Handling Instructions and Additional Information

ERS Project No.4327 Approval#022574 Inv#432702

Emergency Contact: Environmental Remediation Services, Inc. (904)791-9992

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: Mitchell B. McPherson | Signature | Month Day Year: 04 17 03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Jeff Sees | Signature | Month Day Year: 4 17 03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Jeff Bush | Signature | Month Day Year: 4 17 03

GENERATOR

TRANSPORTER

FACILITY

ORIGINAL - RETURN TO GENERATOR

INDUSTRIAL WATER SERVICES

Corporate Office
1010 East Adams St. • Jacksonville, FL 32202
P.O. Box 43369 • Jacksonville, FL 32203
Phone: (904) 354-0372 • (800) 447-3592
Fax: (904) 350-1313 • www.iwsww.com

CERTIFICATE OF COMPLIANCE AND DISPOSAL

Generator: U.S. Navy – NAS Jacksonville
Site Location: Building #80, Jacksonville, FL
ERS project number: 4327

This certifies that on the 17th of April 2003; 3,507 gallons of non-hazardous petroleum contact water, as described on manifest number 13012, was disposed of and/or recycled in compliance with all applicable state, federal and local regulations under Industrial User Permit Number ISN 019.

Facility Name:	Industrial Water Services, Inc.
Facility Address:	1640 Talleyrand Avenue Jacksonville, FL
Facility EPA ID#:	FLD 981 928 484
Certified By:	Leslie Detlefsen
Signature:	Leslie Detlefsen
Date:	December 19, 2003

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: Not Required
Manifest Document No.: 12012
2. Page 1 of 1

3. Generator's Name and Mailing Address
US Navy
(PWC) Box 30, Code 331, NAS Jacksonville, Jacksonville, FL 32212

4. Generator's Phone (904) 542-5979

5. Transporter 1 Company Name: Environmental Remediation Svc.
6. US EPA ID Number: F L D 9 8 4 2 6 1 4 1 2
A. Transporter's Phone: 904/791-9992

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Industrial Water Services
1640 Talleyrand Ave.
Jacksonville, ~~Florida 32206~~
10. US EPA ID Number: F L D 9 8 1 9 2 8 4 8 4
C. Facility's Phone: 904/354-0372

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. ~~Non-Hazardous Oily Waste Water~~ WRONG	001	TT	035.07	G
b. N/A				
c. N/A PETROLEUM CONTACT WATER				
d. N/A This row does not ~~have~~ contain levels of hazardous constituents above those found in the source of the PCW				

D. Additional Descriptions for Materials Listed Above
N/A

E. Handling Codes for Wastes Listed Above
N/A

15. Special Handling Instructions and Additional Information Former NAS Cecil Field CTO-021 Pipeline Pigging

ERS Project No. 4327
ERS Manifest No: 12012
Approval# 022574
INV# 432702

Emergency Contact: Environmental Remediation Services, Inc. (904)791-9992

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name: Mitchell B. McPherson
Signature:
Month Day Year: 04 7 03

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: T. McGhee
Signature:
Month Day Year: 4 7 03

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Jeff Bu
Signature:
Month Day Year: 4 12 03

GENERATOR
TRANSPORTER
FACILITY

ORIGINAL - RETURN TO GENERATOR

INDUSTRIAL WATER SERVICES

Corporate Office
1010 East Adams St. • Jacksonville, FL 32202
P.O. Box 43369 • Jacksonville, FL 32203
Phone: (904) 354-0372 • (800) 447-3592
Fax: (904) 350-1313 • www.iwsww.com

CERTIFICATE OF COMPLIANCE AND DISPOSAL

Generator: U.S. Navy – NAS Jacksonville
Site Location: Building #80, Jacksonville, FL
ERS project number: 4327

This certifies that on the 24th of April 2003; 615 gallons of non-hazardous oily wastewater, as described on manifest number 13014, was disposed of and/or recycled in compliance with all applicable state, federal and local regulations under Industrial User Permit Number ISN 019.

Facility Name:	Industrial Water Services, Inc.
Facility Address:	1640 Talleyrand Avenue Jacksonville, FL
Facility EPA ID#:	FLD 981 928 484
Certified By:	Leslie Detlefsen
Signature:	Leslie Detlefsen
Date:	December 19, 2003

12123 South Stony Island Avenue
Chicago, IL 60633
(773) 646-9700
Fax: (773) 646-9730

1640 Talleyrand Avenue
Jacksonville, FL 32206
(904) 354-0372
Fax: (904) 353-4033

1980 Avenue "A"
Mobile, AL 36615
(251) 694-7500
Fax: (251) 694-7508

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: Not Required
Manifest Document No.: 13014
2. Page 1 of 1

3. Generator's Name and Mailing Address
US Navy
(PWC) Box 30, Code 331, NAS Jacksonville, Jacksonville, FL 32212

4. Generator's Phone (904) 542-5979

5. Transporter 1 Company Name: Environmental Remediation Svc.
6. US EPA ID Number: F L D 9 8 4 2 6 1 4 1 2
A. Transporter's Phone: 904/791-9992

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Industrial Water Services
1640 Talleyrand Ave.
Jacksonville, Florida 32206
10. US EPA ID Number: F L D 9 8 1 9 2 8 4 8 4
C. Facility's Phone: 904/354-0372

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Non-Hazardous Oily Waste Water	001	TT	0.6.1.5	G
b. N/A				
c. N/A				
d. N/A				

D. Additional Descriptions for Materials Listed Above: N/A

E. Handling Codes for Wastes Listed Above: N/A

15. Special Handling Instructions and Additional Information Former NAS Cecil Field CTO-021- Pipeline Pigging

ERS Project No. 4327
ERS Manifest No: 13014
Approval# 022574
INV# 432702

Emergency Contact: Environmental Remediation Services, Inc. (904)791-9992

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name: Mitchell B. McPherson
Signature: [signature]
Month 04 Day 24 Year 03

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: JACOB SWEAT
Signature: [signature]
Month 04 Day 24 Year 03

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Jeff Bush
Signature: [signature]
Month 4 Day 24 Year 03

GENERATOR
TRANSPORTER
FACILITY

ORIGINAL - RETURN TO GENERATOR

REPUBLIC
SERVICES, INC.

SPECIAL WASTE ACCEPTANCE APPLICATION

A. GENERATOR INFORMATION

1. Generator Name U.S. Navy
2. Site Location Cecil Field
3. City Jacksonville, State FL Zip Code 32221
4. Phone (904) 542-5979
5. Fax (904)
6. Contact Mitchell McPhearson
7. Title Env. Prof Specialist

B. CUSTOMER INFORMATION

1. Customer Name CH2M Hill Constructors, Inc/JAJES
2. Address 6219 Authority Ave
3. City Jacksonville State FL Zip Code 32221
4. Phone(904) 777-4812
5. Fax (904) 777-4262
6. Contact Colleen Kurtz
7. Title Contracts Admn

C. WASTE STREAM INFORMATION

1. Common Name of Waste Petroleum Contaminated Soil
2. Detailed description of process generating waste and material Cleaning of JP-5 Pipeline
3. Industrial Generator: Yes____ No x If yes please list the SIC Code
4. Municipal Generator: Yes____ No x
5. Physical State at 70 degrees: Solid x Semisolid____ Liquid____ Powder____ Combination____
6. Odor: None____ Mild (describe) Slight fuel
7. Color: Brown 8. Flash Point NA 9. Viscosity solid
10. Reactive: Yes____ No x With:____ 11.pH Range 6.15-7.95
12. Free Liquid: Yes x No____ 13: Water Content 0% to 14 % % Water
14. Is the analytical attached derived from testing a representative sample in accordance with USEPA SW-846?
    Yes x No____ N/A____
15. Does the waste contain radioactive of U.S. D.O.T. hazardous materials? Yes____ No x

D. SUPPLEMENTAL INFORMATION

None____ MSDS____ Analytical Data x Memo/Letter____ Process Knowledge____ No. of Pages____

E. SHIPPING INFORMATION

1. Packaging: Bulk Solid____ Bulk Liq.____ Drum____ Rolloff 20 yd Dump Truck____ Tank Truck____
2. Estimated Volume 5 Tons____ Cubic Yards____ Gallons____ Other____
3. Shipping Frequency: one time Designated Landfill:____

F. GENERATOR / CUSTOMER CERTIFICATION

I hereby certify that all information submitted and all attached documents contain true and accurate descriptions of this waste. No deliberate or willful omissions of composition or properties exist, and all known or suspected hazards have been disclosed. I further certify that the waste is not designated a Hazardous Waste defined by the USEPA in 40 CFR 261, nor does it contain PCB's regulated under TSCA 40 CFR 761.

I, MITCH McPherson, am employed by U.S. NAVY and am authorized to sign this request for:
NAVY Public Works Cnt., [signature], 5-7-03
(company name) (signature) (date)

REPUBLIC
Waste Services Division

Manifest Number: 9655

NON-HAZARDOUS WASTE MANIFEST 13017

GENERATOR

Generator Name: U.S. NAVY US EPA ID#: NOT REQUIRED

Billing Address: CH2M HILL 6219 AUTHORITY AVE JACKSONVILLE, FL 32211

Site Address: WARTH TANK FUEL FARM ; CECIL COMMERCE CENTER; JACKSONVILL, FL 32211

County of Origin: DUVAL Phone: 904.542.5979

Description of Waste	Total Quantity	Profile Number	Unit of Measure	Container Type
PETROLEUM-CONTAMINATED		33367		20yd³ Roll-off
SOIL				
			4.77	Tons

Special Handling Instructions

EMERG CONTACT: 904.237.3037

CTO-0021
PROJECT #: 153141

I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged and are in proper condition for transportation according to applicable regulations.

Wayne C. HAGWOOD — Generator Authorized Agent Name
Wayne C Hagwood — Signature
5-21-03 — Date Shipped

TRANSPORTER

Transporter Name: SOUTHLAND WASTE SYSTEM DOT#:

Address: 8619 WESTERN WAY Truck Number: 314/327

LYNWOOD ALLEN (JAE) — Name of Authorized Agent
Lynwood Allen JAE — Signature
5/21/03 — Date Delivered

DISPOSAL FACILITY

EPA 65-0965473

Site Name: Broadhurst Environmental, Inc. Phone Number: 912-530-7050

Address 4800 Broadhurst Rd. W., Jesup, Georgia 31545

I hereby acknowledge receipt of the above described materials.

B Broadhurst — Name of Authorized Agent
Earlene — Signature
5/27/03 — Date Received

White - Original Yellow - Transporter Pink - Disposal Facility Gold - Customer

Broadhurst Environmental
4800 Broadhurst Rd W
Screven GA 31560
Phone (912) 530-7050

Ticket: 220740
Date/Time In: 27 May 2003 5:59 am
Vehicle: CCI
Origin: Duval Co., FL
Reference: 314/SWS
Contract: 33367

000128
CCI /CH2M HILL CONSTRUCTORS, INC.
115 PERIMETER CENTER PLACE NE, SUITE 700 Inbound
ATLANTA, GA 30346

00 Gross Weight 41,560.00 LB
Stored Tare Weight 32,020.00 LB
Net Weight 9,540.00 LB 4.77 TN

Quantity	Unit	Description	Rate	Total
4.77	TN	Contaminated Soil	$16.00	$76.32

Net Amount: $76.32
Tendered: $0.00
Change:

I certify that I have not disposed of any liquid or hazardous waste. I will not exceed the posted speed limit of 15 mph.

Weighmaster: Earlene

Driver

6.42

Broadhurst
Environmental, Inc.

CERTIFICATE OF DISPOSAL

This letter is to certify that all wastes received from Ch2MHill on behalf of the U.S. Navy from Cecil Field on the following dates were landfilled in accordance with all state and federal regulations.

Manifest Number	Tonnage	Dates
9655	4.77	05/27/03

Disposal Method was D-81 (Subtitle D Landfill)

BROADHURST ENVIRONMENTAL

Butch Pustay 1/13/04
Date

Appendix F

Waste Characterization Laboratory Analytical Reports

GULF COAST
ANALYTICAL LABORATORIES, INC.

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

Report Date: 4/4/03

GCAL REPORT NO.: 203032506

Deliver To:	CH2M HILL Constructors Inc. 115 Perimeter Center Place Suite 700 Atlanta, GA 30346 770-604-9182 Ext. 614
Attn:	Melissa Aycock

CUSTOMER NAME: CH2M HILL Constructors Inc.

PROJECT NAME: N.A.S. Cecil Field

7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402 • Phone 225.769.4900 • Fax 225.767.5717

CASE NARRATIVE

Client: CH2M HILL Constructors Inc. **Report:** 203032506

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

Sample 20303250601 (021-PL-WW-0324-03) had to be diluted due to compounds that were detected above the linear range of the calibration.

In the SW-846 8260B analysis of sample 90374 (021-PL-WW-0324-03 (90228MS)), the recovery for the surrogate Toluene d8 was outside of the established control limits. This is attributed to matrix interference.

In QC batch 255086, the MS/MSD exhibited sporadic recovery and RPD failures. These recoveries were within limits in the LCS with the exception of Dichlorodifluoromethane. This is attributed to matrix interference. Dichlorodifluoromethane and Trichlorofluoromethane were outside of the established control limits for the LCS. These compounds are defined as poor performers by the method (8260B). The LCS exhibited marginal sporadic recovery failures for the extended list of spike compounds.

SEMI-VOLATILES MASS SPECTROMETRY

In preparation batch 255263, no MS/MSD was performed due to insufficient sample volume.

Sample 20303250601 (021-PL-WW-0324-03) had to be diluted due to compounds that were detected above the linear range of the calibration.

In prep batch 255263, Hexachlorobutadiene and Atrazine (Aatrex) were recovered outside of the established control limits for the LCS and/or LCSD.

SEMI-VOLATILES GAS CHROMATOGRAPHY

Samples 20303250601 (021-PL-WW-0324-03) and 20303250603 (021-PL-WW-0324-03-RE) had to be diluted due to compounds that were detected above the linear range of the calibration.

In the analysis of samples 20303250601 (021-PL-WW-0324-03) and 20303250603 (021-PL-WW-0324-03-RE), the surrogate recoveries o-Terphenyl and Nonatriacontane are reported as DO (diluted out), due to the dilution performed on the sample.

In prep batch 255179, the surrogate recovery for o-Terphenyl was above QC limits in the Method Blank (90611) and Matrix Spike (20303260205) and the recovery for the LCS was above QC limits. This sample was re-extracted two days outside the holding time.

In the Florida Pro prep batch 255179, the MS/MSD was not spiked. These samples were re-extracted outside the holding time and both sets of data are reported.

METALS

The MS/MSD recoveries and RPD are not applicable for Calcium for prep batch 255159 because the sample concentration is greater than four times the spike concentration. The Sample/Duplicate RPD for Aluminum, Arsenic, Silver, and Zinc is not applicable because the sample and/or duplicate concentration are less than five times the reporting limit.

LABORATORY ENDORSEMENT

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 Days unless otherwise arranged. Following this retention period the samples will be disposed of in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND-Indicates that the parameter was not detected at the specified detection limit
DO-Indicates that the result was diluted out
MI-Indicates that the result was subject to Matrix Interference
TNTC-Indicates that the result was Too Numerous to Count
SUBC-Indicates that the analysis was subcontracted
FLD-Indicates that the parameter was performed in the field
PQL-Practical Quantitation Limit
MDL-Method Detection Limit
RDL-Reporting Detection Limit

Reporting Flags Utilized in this Report

J-Indicates that the result was detected between the PQL and MDL
U-Indicates that the result was not detected at the referenced detection limit
B-Organics Indicates that the compound was detected in the associated Method Blank
B-Inorganics Indicates that the compound was detected between the PQL and MDL

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with ISO Guide 25 and NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This Report pertains only to the samples listed in the Sample Cross-Reference and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the Client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the condition detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Scott Bailey

SCOTT A. BAILEY
OPERATIONS MANAGER
GCAL REPORT NO.: 203032506

SAMPLE CROSS-REFERENCE

GCAL ID	CLIENT ID	MATRIX	SAMPLE DATE/TIME	RECEIVE DATE/TIME
20303250601	021-PL-WW-0324-03	Water	3/24/03 11:10	3/25/03 9:45
20303250602	021-PLTB1-W-0324-03	Water	3/24/03 0:00	3/25/03 9:45
20303250603	021-PL-WW-0324-03-RE	Water	3/24/03 11:10	3/25/03 9:45

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20303250601	021-PL-WW-0324-03	Water	3/24/03 11:10	3/25/03 09:45	

1010 Flashpoint

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	3/25/03 11:30	HLO	255369

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
000000-01-3	FlashPoint	>212	50	50	Deg F

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20303250601	021-PL-WW-0324-03	Water	3/24/03 11:10	3/25/03 09:45	

9012A Reactivity Cyanide

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
3/27/03 07:00	255174	7.3.3.2	1	3/27/03 9:22	BMC	255181

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
57-12-5R	Reactivity Cyanide	250 U	250	250	mg/L

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20303250601	021-PL-WW-0324-03	Water	3/24/03 11:10	3/25/03 09:45	

Reactivity Sulfide - 9034

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
3/27/03 07:00	255175	7.3.4.2	1	3/27/03 11:30	HLO	255200

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
18496-25-8R	Reactivity Sulfide	152	80	80	mg/L

RESULTS REPORTED ON A WET WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20303250601	021-PL-WW-0324-03	Water	3/24/03 11:10	3/25/03 09:45	

4500 H+B Water - pH

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	3/25/03 10:45	OLT	255081

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
pH	pH	5.71	1.00	1.00	pH unit

RESULTS REPORTED ON A WET WEIGHT BASIS

QUALITY CONTROL RESULTS

LAB ID	SAMPLE ID	MATRIX	REPORTED
90594	Method Blank	Water	

9012A

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
3/27/03 07:00	255174	7.3.3.2	1	3/27/03 9:22	BMC	255181

CAS #	PARAMETER	RESULT	RDL	UNITS
57-12-5R	Reactivity Cyanide	250 U	250	mg/L

QUALITY CONTROL RESULTS

LAB ID	SAMPLE ID	MATRIX	REPORTED
90597	Method Blank	Water	

9034

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
3/27/03 07:00	255175	7.3.4.2	1	3/27/03 11:30	HLO	255200

CAS #	PARAMETER	RESULT	RDL	UNITS
18496-25-	Reactivity Sulfide	80 U	80	mg/L

QUALITY CONTROL SUMMARY

DUPLICATE SAMPLE ID: 90231 | ORIGINAL LAB ID: 20303250601 | PREP BATCH:
MATRIX Water | ANALYTICAL BATCH: 255081

4500 H+B

CAS #	PARAMETER	Original Result	Result	RPD	RPD LIMITS
pH	pH	5.71	5.74	0.5	- 6

LCS ID: 90595 | ORIGINAL LAB ID: | PREP BATCH: 255174
MATRIX Water | ANALYTICAL BATCH: 255181

9012A

CAS #	PARAMETER	SPIKE ADDED	Result	% RECOVERY	REC-LIMITS
57-12-5R	Reactivity Cyanide	250 mg/L	34.5	14	1 - 20

DUPLICATE SAMPLE ID: 90596 | ORIGINAL LAB ID: 20303250601 | PREP BATCH: 255174
MATRIX Water | ANALYTICAL BATCH: 255181

9012A

CAS #	PARAMETER	Original Result	Result	RPD	RPD LIMITS
57-12-5R	Reactivity Cyanide	0	0	0	0 - 25

LCS ID: 90598 | ORIGINAL LAB ID: | PREP BATCH: 255175
MATRIX Water | ANALYTICAL BATCH: 255200

9034

CAS #	PARAMETER	SPIKE ADDED	Result	% RECOVERY	REC-LIMITS
18496-25-8R	Reactivity Sulfide	1000 mg/L	681	68.1	26 - 114

DUPLICATE SAMPLE ID: 90599 | ORIGINAL LAB ID: 20303250601 | PREP BATCH: 255175
MATRIX Water | ANALYTICAL BATCH: 255200

9034

CAS #	PARAMETER	Original Result	Result	RPD	RPD LIMITS
18496-25-8R	Reactivity Sulfide	152	152	0	0 - 25

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

021-PL-WW-0324-03

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20303250601

Level: (low/med) LOW Lab File ID: 2030325/S8023

% Moisture: not dec. Date Collected: 03/24/03 Time: 1110

GC Column: DB-624-30M ID: .53 (mm) Date Received: 03/25/03

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1402

Soil Extract Volume: (µL) Dilution Factor: 10 Analyst: KRV

Soil Aliquot Volume: (µL)

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	50.0	U	2.04	50.0
79-34-5	1,1,2,2-Tetrachloroethane	2.00	U	2.00	2.00
79-00-5	1,1,2-Trichloroethane	50.0	U	3.33	50.0
75-34-3	1,1-Dichloroethane	50.0	U	1.22	50.0
75-35-4	1,1-Dichloroethene	50.0	U	3.57	50.0
120-82-1	1,2,4-Trichlorobenzene	50.0	U	4.05	50.0
96-12-8	1,2-Dibromo-3-chloropropane	2.00	U	2.00	2.00
106-93-4	1,2-Dibromoethane	2.00	U	1.16	2.00
95-50-1	1,2-Dichlorobenzene	50.0	U	2.21	50.0
107-06-2	1,2-Dichloroethane	30.0	U	2.77	30.0
78-87-5	1,2-Dichloropropane	50.0	U	3.41	50.0
541-73-1	1,3-Dichlorobenzene	50.0	U	3.20	50.0
106-46-7	1,4-Dichlorobenzene	50.0	U	2.95	50.0
78-93-3	2-Butanone	100	U	6.41	100
591-78-6	2-Hexanone	100	U	4.43	100
108-10-1	4-Methyl-2-pentanone	228		2.52	100
67-64-1	Acetone	100	U	23.6	100
71-43-2	Benzene	10.0	U	1.00	10.0
75-27-4	Bromodichloromethane	6.00	U	1.02	6.00
75-25-2	Bromoform	40.0	U	1.40	40.0
74-83-9	Bromomethane	50.0	U	3.30	50.0
75-15-0	Carbon disulfide	50.0	U	1.80	50.0
56-23-5	Carbon tetrachloride	30.0	U	1.61	30.0
108-90-7	Chlorobenzene	50.0	U	1.57	50.0
75-00-3	Chloroethane	50.0	U	2.37	50.0
67-66-3	Chloroform	50.0	U	1.40	50.0
74-87-3	Chloromethane	27.0	U	3.93	27.0
110-82-7	Cyclohexane	1000	U	10.0	1000
124-48-1	Dibromochloromethane	4.00	U	1.05	4.00
75-71-8	Dichlorodifluoromethane	50.0	U	2.28	50.0
10061-01-5	cis-1,3-Dichloropropene	50.0	U	1.28	50.0
10061-02-6	trans-1,3-Dichloropropene	50.0	U	3.29	50.0
100-41-4	Ethylbenzene	116		3.12	50.0

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

021-PL-WW-0324-03

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL

Lab Sample ID: 20303250601

Level: (low/med) LOW

Lab File ID: 2030325/S8023

% Moisture: not dec.

Date Collected: 03/24/03 Time: 1110

GC Column: DB-624-30M ID: .53 (mm)

Date Received: 03/25/03

Instrument ID: MSV1

Date Analyzed: 03/25/03 Time: 1402

Soil Extract Volume: (µL)

Dilution Factor: 10 Analyst: KRV

Soil Aliquot Volume: (µL)

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
98-82-8	Isopropylbenzene (Cumene)	79.6		2.46	50.0
79-20-9	Methyl Acetate	50.0	U	50.0	50.0
108-87-2	Methylcyclohexane	50.0	U	50.0	50.0
75-09-2	Methylene chloride	50.0	U	6.13	50.0
100-42-5	Styrene	50.0	U	1.73	50.0
127-18-4	Tetrachloroethene	30.0	U	2.69	30.0
108-88-3	Toluene	92.3		1.52	50.0
79-01-6	Trichloroethene	30.0	U	3.23	30.0
75-69-4	Trichlorofluoromethane	50.0	U	1.92	50.0
76-13-1	Trichlorotrifluoroethane	50.0	U	1.93	50.0
75-01-4	Vinyl chloride	10.0	U	1.77	10.0
1330-20-7	Xylene (total)	806		5.07	50.0
156-59-2	cis-1,2-Dichloroethene	50.0	U	1.51	50.0
1634-04-4	tert-Butyl methyl ether (MTBE)	50.0	U	1.22	50.0
156-60-5	trans-1,2-Dichloroethene	50.0	U	1.92	50.0

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
021-PL-WW-0324-03

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: Water Lab Sample ID: 20303250601

Sample wt/vol: Units: Lab File ID: 2030325/S8023

Level: (low/med) Date Collected: 03/24/03 Time: 1110

% Moisture: not dec. Date Received: 03/25/03

GC Column: DB-624-30M ID: .53 (mm Date Analyzed: 03/25/03 Time: 1402

Instrument ID: MSV1 Dilution Factor: 10 Analyst: KRV

Soil Extract Volume: (µL

Soil Aliquot Volume: (µL

Number TICs Found: *10*

CONCENTRATION UNITS:

	CAS NO.	COMPOUND	RT	EST. CONC.	
1 .	124-18-5	Decane	10.047	1160	
2 .	294-62-2	Cyclododecane	12.753	173	
3 .	7098-22-8	Tetratetracontane	10.733	308	
4 .	2432-89-5	Decanedioic acid, didecyl este	10.911	500	
5 .	1120-21-4	Undecane	11.18	1710	
6 .	934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	11.775	385	
7 .	2870-04-4	Benzene, 2-ethyl-1,3-dimethyl-	12.141	578	
8 .			12.141	578	
9 .			12.141	578	
10 .	934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	12.284	328	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

021-PLTB1-W-0324-03

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL

Lab Sample ID: 20303250602

Level: (low/med) LOW

Lab File ID: 2030325/S8024

% Moisture: not dec.

Date Collected: 03/24/03 Time: 0000

GC Column: DB-624-30M ID: .53 (mm)

Date Received: 03/25/03

Instrument ID: MSV1

Date Analyzed: 03/25/03 Time: 1427

Soil Extract Volume: (µL)

Dilution Factor: 1 Analyst: RSP

Soil Aliquot Volume: (µL)

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.204	5.00
79-34-5	1,1,2,2-Tetrachloroethane	0.200	U	0.200	0.200
79-00-5	1,1,2-Trichloroethane	5.00	U	0.333	5.00
75-34-3	1,1-Dichloroethane	5.00	U	0.122	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.357	5.00
120-82-1	1,2,4-Trichlorobenzene	5.00	U	0.405	5.00
96-12-8	1,2-Dibromo-3-chloropropane	0.200	U	0.200	0.200
106-93-4	1,2-Dibromoethane	0.200	U	0.116	0.200
95-50-1	1,2-Dichlorobenzene	5.00	U	0.221	5.00
107-06-2	1,2-Dichloroethane	3.00	U	0.277	3.00
78-87-5	1,2-Dichloropropane	5.00	U	0.341	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.320	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.295	5.00
78-93-3	2-Butanone	10.0	U	0.641	10.0
591-78-6	2-Hexanone	10.0	U	0.443	10.0
108-10-1	4-Methyl-2-pentanone	10.0	U	0.252	10.0
67-64-1	Acetone	10.0	U	2.36	10.0
71-43-2	Benzene	1.00	U	0.100	1.00
75-27-4	Bromodichloromethane	0.600	U	0.102	0.600
75-25-2	Bromoform	4.00	U	0.140	4.00
74-83-9	Bromomethane	5.00	U	0.330	5.00
75-15-0	Carbon disulfide	5.00	U	0.180	5.00
56-23-5	Carbon tetrachloride	3.00	U	0.161	3.00
108-90-7	Chlorobenzene	5.00	U	0.157	5.00
75-00-3	Chloroethane	5.00	U	0.237	5.00
67-66-3	Chloroform	5.00	U	0.140	5.00
74-87-3	Chloromethane	2.70	U	0.393	2.70
110-82-7	Cyclohexane	100	U	1.00	100
124-48-1	Dibromochloromethane	0.400	U	0.105	0.400
75-71-8	Dichlorodifluoromethane	5.00	U	0.228	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.329	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.128	5.00
100-41-4	Ethylbenzene	5.00	U	0.312	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

021-PLTB1-W-0324-03

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL

Lab Sample ID: 20303250602

Level: (low/med) LOW

Lab File ID: 2030325/S8024

% Moisture: not dec.

Date Collected: 03/24/03 Time: 0000

GC Column: DB-624-30M ID: .53 (mm)

Date Received: 03/25/03

Instrument ID: MSV1

Date Analyzed: 03/25/03 Time: 1427

Soil Extract Volume: (µL)

Dilution Factor: 1 Analyst: RSP

Soil Aliquot Volume: (µL)

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
98-82-8	Isopropylbenzene (Cumene)	5.00	U	0.246	5.00
79-20-9	Methyl Acetate	5.00	U	5.00	5.00
108-87-2	Methylcyclohexane	5.00	U	5.00	5.00
75-09-2	Methylene chloride	1.43	J	0.613	5.00
100-42-5	Styrene	5.00	U	0.173	5.00
127-18-4	Tetrachloroethene	3.00	U	0.269	3.00
108-88-3	Toluene	5.00	U	0.152	5.00
79-01-6	Trichloroethene	3.00	U	0.323	3.00
75-69-4	Trichlorofluoromethane	5.00	U	0.192	5.00
76-13-1	Trichlorotrifluoroethane	5.00	U	0.193	5.00
75-01-4	Vinyl chloride	1.00	U	0.177	1.00
1330-20-7	Xylene (total)	5.00	U	0.507	5.00
156-59-2	cis-1,2-Dichloroethene	5.00	U	0.151	5.00
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00	U	0.122	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.192	5.00

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
021-PLTB1-W-0324-03

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: Water Lab Sample ID: 20303250602

Sample wt/vol: Units: Lab File ID: 2030325/S8024

Level: (low/med) Date Collected: 03/24/03 Time: 0000

% Moisture: not dec. Date Received: 03/25/03

GC Column: DB-624-30M ID: .53 (mm Date Analyzed: 03/25/03 Time: 1427

Instrument ID: MSV1 Dilution Factor: 1 Analyst: RSP

Soil Extract Volume: (µL

Soil Aliquot Volume: (µL

Number TICs Found: 1

CONCENTRATION UNITS:

	CAS NO.	COMPOUND	RT	EST. CONC.	
1 .	7446-09-5	Sulfur dioxide	3.209	151	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MB90245

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90245

Level: (low/med) LOW Lab File ID: 2030325/S8022

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm) Date Received:

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1336

Soil Extract Volume: (µL) Dilution Factor: 1 Analyst: KRV

Soil Aliquot Volume: (µL)

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.204	5.00
79-34-5	1,1,2,2-Tetrachloroethane	0.200	U	0.200	0.200
79-00-5	1,1,2-Trichloroethane	5.00	U	0.333	5.00
75-34-3	1,1-Dichloroethane	5.00	U	0.122	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.357	5.00
120-82-1	1,2,4-Trichlorobenzene	5.00	U	0.405	5.00
96-12-8	1,2-Dibromo-3-chloropropane	0.200	U	0.200	0.200
106-93-4	1,2-Dibromoethane	0.200	U	0.116	0.200
95-50-1	1,2-Dichlorobenzene	5.00	U	0.221	5.00
107-06-2	1,2-Dichloroethane	3.00	U	0.277	3.00
78-87-5	1,2-Dichloropropane	5.00	U	0.341	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.320	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.295	5.00
78-93-3	2-Butanone	10.0	U	0.641	10.0
591-78-6	2-Hexanone	10.0	U	0.443	10.0
108-10-1	4-Methyl-2-pentanone	10.0	U	0.252	10.0
67-64-1	Acetone	10.0	U	2.36	10.0
71-43-2	Benzene	1.00	U	0.100	1.00
75-27-4	Bromodichloromethane	0.600	U	0.102	0.600
75-25-2	Bromoform	4.00	U	0.140	4.00
74-83-9	Bromomethane	5.00	U	0.330	5.00
75-15-0	Carbon disulfide	5.00	U	0.180	5.00
56-23-5	Carbon tetrachloride	3.00	U	0.161	3.00
108-90-7	Chlorobenzene	5.00	U	0.157	5.00
75-00-3	Chloroethane	5.00	U	0.237	5.00
67-66-3	Chloroform	1.01	J	0.140	5.00
74-87-3	Chloromethane	2.70	U	0.393	2.70
110-82-7	Cyclohexane	100	U	1.00	100
124-48-1	Dibromochloromethane	0.400	U	0.105	0.400
75-71-8	Dichlorodifluoromethane	5.00	U	0.228	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.128	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.329	5.00
100-41-4	Ethylbenzene	5.00	U	0.312	5.00

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VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MB90245

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90245

Level: (low/med) LOW Lab File ID: 2030325/S8022

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm) Date Received:

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1336

Soil Extract Volume: (µL) Dilution Factor: 1 Analyst: KRV

Soil Aliquot Volume: (µL)

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
98-82-8	Isopropylbenzene (Cumene)	5.00	U	0.246	5.00
79-20-9	Methyl Acetate	5.00	U	5.00	5.00
108-87-2	Methylcyclohexane	5.00	U	5.00	5.00
75-09-2	Methylene chloride	5.00	U	0.613	5.00
100-42-5	Styrene	5.00	U	0.173	5.00
127-18-4	Tetrachloroethene	3.00	U	0.269	3.00
108-88-3	Toluene	5.00	U	0.152	5.00
79-01-6	Trichloroethene	3.00	U	0.323	3.00
75-69-4	Trichlorofluoromethane	5.00	U	0.192	5.00
76-13-1	Trichlorotrifluoroethane	5.00	U	0.193	5.00
75-01-4	Vinyl chloride	1.00	U	0.177	1.00
1330-20-7	Xylene (total)	5.00	U	0.507	5.00
156-59-2	cis-1,2-Dichloroethene	5.00	U	0.151	5.00
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00	U	0.122	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.192	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCS90244

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90244

Level: (low/med) LOW Lab File ID: 2030325/S8019

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm) Date Received:

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1222

Soil Extract Volume: (µL) Dilution Factor: 1 Analyst: RSP

Soil Aliquot Volume: (µL)

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	22.9		0.204	5.00
79-34-5	1,1,2,2-Tetrachloroethane	28.4		0.200	0.200
79-00-5	1,1,2-Trichloroethane	23.8		0.333	5.00
75-34-3	1,1-Dichloroethane	25.1		0.122	5.00
75-35-4	1,1-Dichloroethene	21.1		0.357	5.00
120-82-1	1,2,4-Trichlorobenzene	15.7		0.405	5.00
96-12-8	1,2-Dibromo-3-chloropropane	19.6		0.200	0.200
106-93-4	1,2-Dibromoethane	22.3		0.116	0.200
95-50-1	1,2-Dichlorobenzene	21.0		0.221	5.00
107-06-2	1,2-Dichloroethane	28.7		0.277	3.00
78-87-5	1,2-Dichloropropane	26.4		0.341	5.00
541-73-1	1,3-Dichlorobenzene	20.9		0.320	5.00
106-46-7	1,4-Dichlorobenzene	21.4		0.295	5.00
78-93-3	2-Butanone	25.8		0.641	10.0
591-78-6	2-Hexanone	24.8		0.443	10.0
108-10-1	4-Methyl-2-pentanone	26.4		0.252	10.0
67-64-1	Acetone	27.1		2.36	10.0
71-43-2	Benzene	23.1		0.100	1.00
75-27-4	Bromodichloromethane	26.2		0.102	0.600
75-25-2	Bromoform	24.9		0.140	4.00
74-83-9	Bromomethane	22.9		0.330	5.00
75-15-0	Carbon disulfide	19.7		0.180	5.00
56-23-5	Carbon tetrachloride	21.7		0.161	3.00
108-90-7	Chlorobenzene	22.6		0.157	5.00
75-00-3	Chloroethane	22.7		0.237	5.00
67-66-3	Chloroform	27.7		0.140	5.00
74-87-3	Chloromethane	21.1		0.393	2.70
110-82-7	Cyclohexane	18.2	J	1.00	100
124-48-1	Dibromochloromethane	24.2		0.105	0.400
75-71-8	Dichlorodifluoromethane	15.6		0.228	5.00
10061-01-5	cis-1,3-Dichloropropene	26.1		0.128	5.00
10061-02-6	trans-1,3-Dichloropropene	24.1		0.329	5.00
100-41-4	Ethylbenzene	19.6		0.312	5.00

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VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCS90244

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90244

Level: (low/med) LOW Lab File ID: 2030325/S8019

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm) Date Received:

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1222

Soil Extract Volume: (µL) Dilution Factor: 1 Analyst: RSP

Soil Aliquot Volume: (µL)

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
98-82-8	Isopropylbenzene (Cumene)	20.8		0.246	5.00
79-20-9	Methyl Acetate	17.9		5.00	5.00
108-87-2	Methylcyclohexane	19.4		5.00	5.00
75-09-2	Methylene chloride	25.0		0.613	5.00
100-42-5	Styrene	22.5		0.173	5.00
127-18-4	Tetrachloroethene	19.4		0.269	3.00
108-88-3	Toluene	22.5		0.152	5.00
79-01-6	Trichloroethene	22.0		0.323	3.00
75-69-4	Trichlorofluoromethane	17.9		0.192	5.00
76-13-1	Trichlorotrifluoroethane	18.4		0.193	5.00
75-01-4	Vinyl chloride	19.7		0.177	1.00
1330-20-7	Xylene (total)	62.2		0.507	5.00
156-59-2	cis-1,2-Dichloroethene	25.9		0.151	5.00
1634-04-4	tert-Butyl methyl ether (MTBE)	26.6		0.122	5.00
156-60-5	trans-1,2-Dichloroethene	24.1		0.192	5.00

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VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

021-PL-WW-0324-03MS

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90374

Level: (low/med) LOW Lab File ID: 2030325/S8026

% Moisture: not dec. Date Collected: 03/24/03 Time: 1110

GC Column: DB-624-30M ID: .53 (mm) Date Received: 03/25/03

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1517

Soil Extract Volume: (µL) Dilution Factor: 10 Analyst: RSP

Soil Aliquot Volume: (µL)

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	280		2.04	50.0
79-34-5	1,1,2,2-Tetrachloroethane	248		2.00	2.00
79-00-5	1,1,2-Trichloroethane	232		3.33	50.0
75-34-3	1,1-Dichloroethane	275		1.22	50.0
75-35-4	1,1-Dichloroethene	312		3.57	50.0
120-82-1	1,2,4-Trichlorobenzene	244		4.05	50.0
96-12-8	1,2-Dibromo-3-chloropropane	167		2.00	2.00
106-93-4	1,2-Dibromoethane	204		1.16	2.00
95-50-1	1,2-Dichlorobenzene	172		2.21	50.0
107-06-2	1,2-Dichloroethane	281		2.77	30.0
78-87-5	1,2-Dichloropropane	283		3.41	50.0
541-73-1	1,3-Dichlorobenzene	189		3.20	50.0
106-46-7	1,4-Dichlorobenzene	185		2.95	50.0
78-93-3	2-Butanone	330		6.41	100
591-78-6	2-Hexanone	230		4.43	100
108-10-1	4-Methyl-2-pentanone	513		2.52	100
67-64-1	Acetone	346		23.6	100
71-43-2	Benzene	266		1.00	10.0
75-27-4	Bromodichloromethane	259		1.02	6.00
75-25-2	Bromoform	209		1.40	40.0
74-83-9	Bromomethane	274		3.30	50.0
75-15-0	Carbon disulfide	300		1.80	50.0
56-23-5	Carbon tetrachloride	280		1.61	30.0
108-90-7	Chlorobenzene	215		1.57	50.0
75-00-3	Chloroethane	279		2.37	50.0
67-66-3	Chloroform	271		1.40	50.0
74-87-3	Chloromethane	286		3.93	27.0
110-82-7	Cyclohexane	296	J	10.0	1000
124-48-1	Dibromochloromethane	226		1.05	4.00
75-71-8	Dichlorodifluoromethane	332		2.28	50.0
10061-01-5	cis-1,3-Dichloropropene	285		1.28	50.0
10061-02-6	trans-1,3-Dichloropropene	237		3.29	50.0
100-41-4	Ethylbenzene	320		3.12	50.0

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VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

021-PL-WW-0324-03MS

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90374

Level: (low/med) LOW Lab File ID: 2030325/S8026

% Moisture: not dec. Date Collected: 03/24/03 Time: 1110

GC Column: DB-624-30M ID: .53 (mm) Date Received: 03/25/03

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1517

Soil Extract Volume: (µL) Dilution Factor: 10 Analyst: RSP

Soil Aliquot Volume: (µL)

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
98-82-8	Isopropylbenzene (Cumene)	292		2.46	50.0
79-20-9	Methyl Acetate	327		50.0	50.0
108-87-2	Methylcyclohexane	321		50.0	50.0
75-09-2	Methylene chloride	253		6.13	50.0
100-42-5	Styrene	215		1.73	50.0
127-18-4	Tetrachloroethene	222		2.69	30.0
108-88-3	Toluene	301		1.52	50.0
79-01-6	Trichloroethene	264		3.23	30.0
75-69-4	Trichlorofluoromethane	310		1.92	50.0
76-13-1	Trichlorotrifluoroethane	281		1.93	50.0
75-01-4	Vinyl chloride	308		1.77	10.0
1330-20-7	Xylene (total)	1310		5.07	50.0
156-59-2	cis-1,2-Dichloroethene	275		1.51	50.0
1634-04-4	tert-Butyl methyl ether (MTBE)	299		1.22	50.0
156-60-5	trans-1,2-Dichloroethene	298		1.92	50.0

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VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

021-PL-WW-0324-03MSD

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90375

Level: (low/med) LOW Lab File ID: 2030325/S8027

% Moisture: not dec. Date Collected: 03/24/03 Time: 1110

GC Column: DB-624-30M ID: .53 (mm) Date Received: 03/25/03

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1542

Soil Extract Volume: (µL) Dilution Factor: 10 Analyst: RSP

Soil Aliquot Volume: (µL)

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
71-55-6	1,1,1-Trichloroethane	239		2.04	50.0
79-34-5	1,1,2,2-Tetrachloroethane	236		2.00	2.00
79-00-5	1,1,2-Trichloroethane	400		3.33	50.0
75-34-3	1,1-Dichloroethane	283		1.22	50.0
75-35-4	1,1-Dichloroethene	305		3.57	50.0
120-82-1	1,2,4-Trichlorobenzene	253		4.05	50.0
96-12-8	1,2-Dibromo-3-chloropropane	212		2.00	2.00
106-93-4	1,2-Dibromoethane	232		1.16	2.00
95-50-1	1,2-Dichlorobenzene	199		2.21	50.0
107-06-2	1,2-Dichloroethane	254		2.77	30.0
78-87-5	1,2-Dichloropropane	320		3.41	50.0
541-73-1	1,3-Dichlorobenzene	194		3.20	50.0
106-46-7	1,4-Dichlorobenzene	207		2.95	50.0
78-93-3	2-Butanone	1120		6.41	100
591-78-6	2-Hexanone	26.8	J	4.43	100
108-10-1	4-Methyl-2-pentanone	345		2.52	100
67-64-1	Acetone	244		23.6	100
71-43-2	Benzene	282		1.00	10.0
75-27-4	Bromodichloromethane	341		1.02	6.00
75-25-2	Bromoform	276		1.40	40.0
74-83-9	Bromomethane	286		3.30	50.0
75-15-0	Carbon disulfide	290		1.80	50.0
56-23-5	Carbon tetrachloride	313		1.61	30.0
108-90-7	Chlorobenzene	251		1.57	50.0
75-00-3	Chloroethane	279		2.37	50.0
67-66-3	Chloroform	256		1.40	50.0
74-87-3	Chloromethane	297		3.93	27.0
110-82-7	Cyclohexane	482	J	10.0	1000
124-48-1	Dibromochloromethane	285		1.05	4.00
75-71-8	Dichlorodifluoromethane	327		2.28	50.0
10061-01-5	cis-1,3-Dichloropropene	293		1.28	50.0
10061-02-6	trans-1,3-Dichloropropene	293		3.29	50.0
100-41-4	Ethylbenzene	371		3.12	50.0

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VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

021-PL-WW-0324-03MSD

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90375

Level: (low/med) LOW Lab File ID: 2030325/S8027

% Moisture: not dec. Date Collected: 03/24/03 Time: 1110

GC Column: DB-624-30M ID: .53 (mm) Date Received: 03/25/03

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1542

Soil Extract Volume: (µL) Dilution Factor: 10 Analyst: RSP

Soil Aliquot Volume: (µL)

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
98-82-8	Isopropylbenzene (Cumene)	349		2.46	50.0
79-20-9	Methyl Acetate	238		50.0	50.0
108-87-2	Methylcyclohexane	311		50.0	50.0
75-09-2	Methylene chloride	255		6.13	50.0
100-42-5	Styrene	264		1.73	50.0
127-18-4	Tetrachloroethene	248		2.69	30.0
108-88-3	Toluene	362		1.52	50.0
79-01-6	Trichloroethene	362		3.23	30.0
75-69-4	Trichlorofluoromethane	305		1.92	50.0
76-13-1	Trichlorotrifluoroethane	282		1.93	50.0
75-01-4	Vinyl chloride	297		1.77	10.0
1330-20-7	Xylene (total)	1580		5.07	50.0
156-59-2	cis-1,2-Dichloroethene	291		1.51	50.0
1634-04-4	tert-Butyl methyl ether (MTBE)	317		1.22	50.0
156-60-5	trans-1,2-Dichloroethene	297		1.92	50.0

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

	SAMPLE NO.	SMC1	#	SMC2	#	SMC3	#	SMC4	#	TOT OUT
1.	021-PL-WW-0324-03	87		95		87		97		0
2.	021-PLTB1-W-0324-03	89		94		88		102		0
3.	021-PL-WW-0324-03MS	80		97		82	*	94		1
4.	021-PL-WW-0324-03MSD	87		94		83		80		0
5.	LCS90244	89		95		85		93		0
6.	MB90245	90		97		88		98		0

		QC LIMITS
SMC 1	4-Bromofluorobenzene	78 - 115
SMC 2	Dibromofluoromethane	70 - 130
SMC 3	Toluene-d8	83 - 112
SMC 4	1,2-Dichloroethane-d4	76 - 128

Column to be used to flag recovery values

* Values outside of contract required QC limits

3A

WATER VOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

SAMPLE NO. : 90244

COMPOUND	UNITS	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS % REC	#	QC. LIMITS
1,1,1-Trichloroethane	ug/L	25	0	22.9	92		45 - 152
1,1,2,2-Tetrachloroethane	ug/L	25	0	28.4	114		55 - 153
1,1,2-Trichloroethane	ug/L	25	0	23.8	95		73 - 144
1,1-Dichloroethane	ug/L	25	0	25.1	100		75 - 127
1,1-Dichloroethene	ug/L	25	0	21.1	84		67 - 140
1,2,4-Trichlorobenzene	ug/L	25	0	15.7	63		60 - 148
1,2-Dibromo-3-chloropropane	ug/L	25	0	19.6	78		58 - 148
1,2-Dibromoethane	ug/L	25	0	22.3	89		74 - 140
1,2-Dichlorobenzene	ug/L	25	0	21	84		67 - 142
1,2-Dichloroethane	ug/L	25	0	28.7	115		79 - 134
1,2-Dichloropropane	ug/L	25	0	26.4	106		77 - 129
1,3-Dichlorobenzene	ug/L	25	0	20.9	84		65 - 143
1,4-Dichlorobenzene	ug/L	25	0	21.4	86		68 - 142
2-Butanone	ug/L	25	0	25.8	103		59 - 157
2-Hexanone	ug/L	25	0	24.8	99		71 - 166
4-Methyl-2-pentanone	ug/L	25	0	26.4	106		65 - 159
Acetone	ug/L	25	0	27.1	108		58 - 165
Benzene	ug/L	25	0	23.1	92		74 - 128
Bromodichloromethane	ug/L	25	0	26.2	105		76 - 128
Bromoform	ug/L	25	0	24.9	100		67 - 145
Bromomethane	ug/L	25	0	22.9	92		73 - 147
Carbon disulfide	ug/L	25	0	19.7	79		37 - 155
Carbon tetrachloride	ug/L	25	0	21.7	87		75 - 128
Chlorobenzene	ug/L	25	0	22.6	90		78 - 125
Chloroethane	ug/L	25	0	22.7	91		46 - 160
Chloroform	ug/L	25	0	27.7	111		80 - 124
Chloromethane	ug/L	25	0	21.1	84		71 - 120
Cyclohexane	ug/L	25	0	18.2	73		70 - 130
Dibromochloromethane	ug/L	25	0	24.2	97		43 - 159
Dichlorodifluoromethane	ug/L	25	0	15.6	62	*	70 - 127
Ethylbenzene	ug/L	25	0	19.6	78		75 - 138
Isopropylbenzene (Cumene)	ug/L	25	0	20.8	83		66 - 151
Methyl Acetate	ug/L	25	0	17.9	72		40 - 170
Methylcyclohexane	ug/L	25	0	19.4	78		40 - 130
Methylene chloride	ug/L	25	0	25	100		74 - 130
Styrene	ug/L	25	0	22.5	90		75 - 139
Tetrachloroethene	ug/L	25	0	19.4	78		75 - 140
Toluene	ug/L	25	0	22.5	90		76 - 125

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 48 outside limits

FORM III VOA-1

3A

WATER VOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Trichloroethene	ug/L	25	0	22	88		63	-	118
Trichlorofluoromethane	ug/L	25	0	17.9	72	*	73	-	131
Trichlorotrifluoroethane	ug/L	25	0	18.4	74		70	-	130
Vinyl chloride	ug/L	25	0	19.7	79		68	-	127
Xylene (total)	ug/L	75	0	62.2	83		60	-	154
cis-1,2-Dichloroethene	ug/L	25	0	25.9	104		78	-	124
cis-1,3-Dichloropropene	ug/L	25	0	26.1	104		73	-	128
tert-Butyl methyl ether (MTBE)	ug/L	25	0	26.6	106		70	-	130
trans-1,2-Dichloroethene	ug/L	25	0	24.1	96		75	-	124
trans-1,3-Dichloropropene	ug/L	25	0	24.1	96		72	-	134

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 48 outside limits

4A

VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

MB90245

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab File ID: 2030325/S8022

Lab Sample ID: 90245 Date Extracted:

GC Column: DB-624-30M ID: .53 (mm)

Date Analyzed: 03/25/03 Time: 1336

Instrument ID: MSV1 Matrix: Water

Heated Purge: N

Level: LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1.	LCS90244	90244	2030325/S8019	03/25/03	1222
2.	021-PL-WW-0324-03	20303250601	2030325/S8023	03/25/03	1402
3.	021-PLTB1-W-0324-03	20303250602	2030325/S8024	03/25/03	1427
4.	021-PL-WW-0324-03MS	90374	2030325/S8026	03/25/03	1517
5.	021-PL-WW-0324-03MSD	90375	2030325/S8027	03/25/03	1542

FORM IV VOA

5A

VOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab File ID: 2030320/S7973

BFB Injection Date: 03/20/03

Instrument ID: MSV1

BFB Injection Time: 0849

GC Column: DB-624-30M ID: .53 (mm)

m / e	ION ABUNDANCE CRITERIA	% Relative Abundance			
50	15.0 - 40.0% of mass 95	18.11	(	)	
75	30.0 - 60.0% of mass 95	46.93	(	)	
95	Base Peak, 100% relative abundance	100	(	)	
96	5.0 -9.0% of mass 95	7.9	(	)	
173	Less than 2.0% of mass 174	0	(0	)	1
174	50.0 - 99.9% of mass 95	68.49	(	)	
175	5.0 - 9.0% of mass 174	5.17	(7.55	)	1
176	95.0 - 101.0% of mass 174	67.24	(98.18	)	1
177	5.0 - 9.0% of mass 176	4.88	(7.26	)	2

1- Value is % mass 174

2- Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1.	V1STD002	1206	2030320/S7975	03/20/03	1036
2.	V1STD005	1201	2030320/S7976	03/20/03	1100
3.	V1STD020	1202	2030320/S7977	03/20/03	1125
4.	V1STD050	1203	2030320/S7978	03/20/03	1150
5.	V1STD100	1204	2030320/S7979	03/20/03	1214
6.	V1STD200	1205	2030320/S7980	03/20/03	1250
7.	V1STD00.2	1207	2030320/S7982	03/20/03	1340
8.	V1STD00.4	1208	2030320/S7983	03/20/03	1405

5A

VOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab File ID: 2030325/S8013

BFB Injection Date: 03/25/03

Instrument ID: MSV1

BFB Injection Time: 0825

GC Column: DB-624-30M ID: .53 (mm)

m / e	ION ABUNDANCE CRITERIA	% Relative Abundance			
50	15.0 - 40.0% of mass 95	17.8	(	)	
75	30.0 - 60.0% of mass 95	47.58	(	)	
95	Base Peak, 100% relative abundance	100	(	)	
96	5.0 -9.0% of mass 95	7.97	(	)	
173	Less than 2.0% of mass 174	0	(0	)	1
174	50.0 - 99.9% of mass 95	69.63	(	)	
175	5.0 - 9.0% of mass 174	5.25	(7.54	)	1
176	95.0 - 101.0% of mass 174	69.45	(99.75	)	1
177	5.0 - 9.0% of mass 176	5	(7.21	)	2

1- Value is % mass 174

2- Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1.	V1STD050	1400	2030325/S8015	03/25/03	0929
2.	LCS90244	90244	2030325/S8019	03/25/03	1222
3.	MB90245	90245	2030325/S8022	03/25/03	1336
4.	021-PL-WW-0324-03	20303250601	2030325/S8023	03/25/03	1402
5.	021-PLTB1-W-0324-03	20303250602	2030325/S8024	03/25/03	1427
6.	021-PL-WW-0324-03MS	90374	2030325/S8026	03/25/03	1517
7.	021-PL-WW-0324-03MSD	90375	2030325/S8027	03/25/03	1542

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL | Contract:

Lab Code: LA024 | Case No.: | SAS No.: | SDG No.: 203032506

Instrument ID: MSV1 | Calibration Date 1: 03/20/03 | Time 1: 1036

GC Column: DB-624-30M | ID: .53 (mm) | Calibration Date 2: 03/20/03 | Time 2: 1405

Heated Purge: (Y/N) N | Method: SW-846 8260

Lab File ID: Level 1: 1201 | Level 2: 1202 | Level 3: 1203

Level 4: 1204 | Level 5: 1205 | Level 6: 1206

Level 7: 1207 | Level 8: 1208 | Level 9:

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	$\overline{RF}$	RSD	#	LIMIT	TYPE
Acetone	0.046	0.035	0.054	0.041	0.044					0.044	16.26		50	Averaged
Acrolein	0.006	0.006	0.008	0.011	0.012					0.009	30.84		50	Averaged
Acrylonitrile	0.052	0.052	0.053	0.056	0.054					0.053	3.195		50	Averaged
Bromochloromethane	0.200	0.209	0.217	0.225	0.230					0.216	5.514		50	Averaged
Bromodichloromethane	0.560	0.600	0.668	0.699	0.694	0.600		0.824		0.664	13.26		50	Averaged
Bromoform	0.602	0.628	0.692	0.713	0.668	0.609				0.652	7.066		50	Averaged
Bromomethane	0.186	0.215	0.235	0.249	0.229	0.243				0.226	10.05		50	Averaged
Carbon disulfide	0.448	0.621	0.691	0.782	0.808					0.670	21.57		50	Averaged
Carbon tetrachloride	0.241	0.384	0.414	0.493	0.499	0.340				0.395	24.70		50	Averaged
Chloroethane	0.124	0.161	0.173	0.183	0.176	0.181				0.166	13.41		50	Averaged
m,p-Xylene	0.838	0.967	1.019	1.047	0.903					0.955	8.937		50	Averaged
Chloroform	0.507	0.658	0.616	0.723	0.703					0.641	13.36		30	Averaged
Chloromethane	0.140	0.202	0.214	0.226	0.214	0.201				0.200	15.36		50	Averaged
Dibromochloromethane	0.820	0.887	0.944	0.985	0.931	0.948	0.764	0.855		0.892	8.381		50	Averaged
Dibromomethane	0.339	0.316	0.335	0.341	0.334					0.333	2.998		50	Averaged
Dichlorodifluoromethane	0.218	0.300	0.312	0.358	0.343					0.306	17.82		50	Averaged
1,1-Dichloroethane	0.451	0.521	0.550	0.591	0.598					0.542	11.04		50	Averaged
1,2-Dichloroethane	0.355	0.385	0.383	0.376	0.370	0.400				0.378	3.978		50	Averaged
cis-1,2-Dichloroethene	0.396	0.461	0.469	0.504	0.498					0.466	9.209		50	Averaged
trans-1,2-Dichloroethene	0.273	0.371	0.384	0.418	0.414					0.372	15.74		50	Averaged
Methylene chloride	0.355	0.339	0.358	0.361	0.383					0.359	4.445		50	Averaged
1,2-Dichloropropane	0.295	0.360	0.376	0.399	0.398					0.366	11.64		30	Averaged
cis-1,3-Dichloropropene	0.445	0.487	0.540	0.575	0.593					0.528	11.67		50	Averaged
trans-1,3-Dichloropropene	0.697	0.722	0.738	0.788	0.731					0.735	4.534		50	Averaged
Ethylbenzene	0.531	0.622	0.641	0.621	0.566					0.596	7.715		30	Averaged
2-Hexanone	0.420	0.324	0.344	0.338	0.303					0.346	12.80		50	Averaged
Isopropylbenzene (Cumene)	2.178	2.537	2.700	2.782	2.442					2.528	9.362		50	Averaged
2-Butanone	0.118	0.082	0.090	0.085	0.081					0.091	16.94		50	Averaged
Methyl iodide	0.423	0.521	0.586	0.625	0.623					0.556	15.36		50	Averaged
4-Methyl-2-pentanone	0.349	0.268	0.293	0.297	0.290					0.300	10.00		50	Averaged
n-Propylbenzene	2.452	2.951	3.149	3.327	2.962					2.968	11.01		50	Averaged
Styrene	1.498	1.598	1.707	1.731	1.553					1.618	6.161		50	Averaged
Tetrachloroethene	0.393	0.528	0.558	0.588	0.510	0.635				0.535	15.41		50	Averaged
1,1,1,2-Tetrachloroethane	0.612	0.716	0.737	0.755	0.667					0.697	8.326		50	Averaged
1,1,2,2-Tetrachloroethane	1.167	1.066	1.099	1.041	0.970	1.324	3.669	1.784		1.515	59.91	*	50	Averaged

FORM V I VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSV1

Calibration Date 1: 03/20/03 Time 1: 1036

GC Column: DB-624-30M ID: .53 (mm)

Calibration Date 2: 03/20/03 Time 2: 1405

Heated Purge: (Y/N) N

Method: SW-846 8260

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	$\overline{RF}$	RSD	#	LIMIT	TYPE
1,2,4-Trichlorobenzene	0.496	0.612	0.531	0.813	0.775					0.645	22.13		50	Averaged
1,1,1-Trichloroethane	0.357	0.499	0.513	0.573	0.558					0.500	17.08		50	Averaged
1,1,2-Trichloroethane	0.619	0.649	0.634	0.649	0.609					0.632	2.835		50	Averaged
Trichlorofluoromethane	0.293	0.408	0.422	0.483	0.495					0.420	19.18		50	Averaged
1,2,3-Trichloropropane	1.121	1.246	1.396	1.428	1.301					1.298	9.469		50	Averaged
1,2,4-Trimethylbenzene	1.808	2.111	2.113	2.430	2.065					2.105	10.51		50	Averaged
1,3,5-Trimethylbenzene	1.872	2.241	2.375	2.497	2.697					2.213	11.11		50	Averaged
Vinyl chloride	0.148	0.209	0.224	0.241	0.238	0.215		0.191		0.210	15.43		30	Averaged
o-Xylene	0.883	0.901	0.982	1.00	0.886					0.930	6.013		50	Averaged
1,2-Dibromo-3-chloropropane	0.231	0.262	0.283	0.307	0.311		0.422	0.415		0.318	23.09		50	Averaged
1,2-Dibromoethane	0.813	0.826	0.854	0.857	0.790	0.925	1.273	1.071		0.926	17.91		50	Averaged
Vinyl acetate	0.204	0.209	0.220	0.233	0.271					0.227	11.87		50	Averaged
tert-Butyl methyl ether (MTBE)	0.538	0.562	0.588	0.652	0.678					0.604	9.847		50	Averaged
1,2-Dichloroethene	0.335	0.416	0.426	0.461	0.456			0.414		0.418	10.85		50	Averaged
4-Isopropyltoluene	1.909	2.362	2.463	2.650	2.343					2.345	11.62		50	Averaged
Xylene (total)	0.884	1.027	1.073	1.139	0.991					1.023	9.330		50	Averaged
Methylcyclohexane	0.243	0.328	0.361	0.400	0.368					0.340	17.57		50	Averaged
n-Hexane	0.146	0.201	0.213	0.241	0.217					0.204	17.35		50	Averaged
trans-1,4-Dichloro-2-butene	0.139	0.165	0.185	0.201	0.198					0.178	14.40		50	Averaged
Cyclohexane	0.249	0.378	0.417	0.494	0.477					0.403	24.31		50	Averaged
2,2-Dichloropropane	0.313	0.430	0.450	0.493	0.497					0.437	17.10		50	Averaged
Methyl Acetate	0.162	0.152	0.161	0.160	0.164					0.160	2.729		50	Averaged
Trichlorotrifluoroethane	0.310	0.444	0.441	0.507	0.501					0.441	17.95		50	Averaged
1,1-Dichloropropene	0.272	0.379	0.416	0.475	0.471					0.403	20.69		50	Averaged
2-Chloroethylvinyl ether	0.182	0.180	0.203	0.207	0.212					0.197	7.642		50	Averaged
1,3-Dichloropropane	0.977	0.976	1.00	1.012	0.929					0.979	3.222		50	Averaged
Bromobenzene	1.976	2.065	2.510	2.588	2.313					2.290	11.70		50	Averaged
2-Chlorotoluene	1.702	2.221	2.208	2.334	2.119					2.117	11.53		50	Averaged
4-Chlorotoluene	1.847	2.243	2.491	2.507	2.410					2.300	11.90		50	Averaged
tert-Butylbenzene	1.155	1.580	1.650	1.823	1.603					1.562	15.80		50	Averaged
sec-Butylbenzene	2.350	3.139	3.254	3.526	3.134					3.080	14.22		50	Averaged
1,3-Dichlorobenzene	1.034	1.054	1.147	1.208	1.028					1.094	7.277		50	Averaged
1,4-Dichlorobenzene	1.618	1.822	1.802	1.821	1.655					1.744	5.682		50	Averaged
n-Butylbenzene	1.577	1.830	1.608	2.219	1.963					1.840	14.44		50	Averaged
1,2-Dichlorobenzene	1.375	1.405	1.506	1.585	1.430					1.460	5.819		50	Averaged

FORM VI VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSV1

Calibration Date 1: 03/20/03 Time 1: 1036

GC Column: DB-624-30M ID: .53 (mm)

Calibration Date 2: 03/20/03 Time 2: 1405

Heated Purge: (Y/N) N

Method: SW-846 8260

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	$\overline{RF}$	RSD	#	LIMIT	TYPE
Hexachlorobutadiene	0.310	0.389	0.415	0.472	0.435	0.411				0.405	13.38		50	Averaged
Naphthalene	0.854	0.924	1.033	1.387	1.487					1.137	24.92		50	Averaged
1,2,3-Trichlorobenzene	0.549	0.612	0.507	0.813	0.719					0.640	19.60		50	Averaged
1,1-Dichloroethene	0.172	0.234	0.238	0.263	0.272					0.236	16.67		30	Averaged
Benzene	0.710	0.854	0.898	0.956	0.937	0.999		1.399		0.965	22.10		50	Averaged
Trichloroethene	0.299	0.397	0.418	0.463	0.459	0.440				0.413	14.83		50	Averaged
Toluene	1.580	1.901	1.956	2.025	1.761					1.844	9.597		30	Averaged
Chlorobenzene	1.403	1.491	1.561	1.572	1.376					1.481	6.026		50	Averaged
4-Bromofluorobenzene	1.045	0.867	1.004	0.852	0.883					0.930	9.456		50	Averaged
Dibromofluoromethane	0.567	0.512	0.580	0.506	0.546					0.542	6.058		50	Averaged
Toluene-d8	1.983	1.782	1.975	1.701	1.641					1.816	8.629		50	Averaged
1,2-Dichloroethane-d4	0.188	0.164	0.188	0.170	0.184					0.179	6.285		50	Averaged

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSV1

Calibration Date: 03/25/03 Time: 0929

Lab File ID: 2030325/S8015

Init. Calib. Date 1: 03/20/03 Time 1: 1036

Heated Purge: (Y/N) N

Init. Calib. Date 2: 03/20/03 Time 2: 1405

GC Column: DB-624-30M ID: .53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	Min RRF	% D	Max %D
Acetone	0.044	0.047	0	6.242	50
Acrolein	0.009	0.000	0	-94.7	50
Acrylonitrile	0.053	0.050	0	-6.66	50
Bromochloromethane	0.216	0.244	0	12.9	50
Bromodichloromethane	0.664	0.770	0	16.0	50
Bromoform	0.652	0.677	.1	3.902	50
Bromomethane	0.226	0.247	0	9.232	50
Carbon disulfide	0.670	0.702	0	4.742	50
Carbon tetrachloride	0.395	0.450	0	13.8	50
Chloroethane	0.166	0.177	0	6.332	50
m,p-Xylene	0.955	1.032	0	8.089	50
Chloroform	0.641	0.703	0	9.548	20
Chloromethane	0.200	0.201	.1	0.723	50
Dibromochloromethane	0.892	0.944	0	5.821	50
Dibromomethane	0.333	0.377	0	13.2	50
Dichlorodifluoromethane	0.306	0.264	0	-13.6	50
1,1-Dichloroethane	0.542	0.627	.1	15.6	50
1,2-Dichloroethane	0.378	0.428	0	13.2	50
cis-1,2-Dichloroethene	0.466	0.535	0	14.9	50
trans-1,2-Dichloroethene	0.372	0.428	0	15.1	50
Methylene chloride	0.359	0.415	0	15.5	50
1,2-Dichloropropane	0.366	0.436	0	19.4	20
cis-1,3-Dichloropropene	0.528	0.625	0	18.3	50
trans-1,3-Dichloropropene	0.735	0.778	0	5.848	50
Ethylbenzene	0.596	0.605	0	1.501	20
2-Hexanone	0.346	0.313	0	-9.52	50
Isopropylbenzene (Cumene)	2.528	2.609	0	3.224	50
2-Butanone	0.091	0.090	0	-1.39	50
Methyl iodide	0.556	0.657	0	18.3	50
4-Methyl-2-pentanone	0.300	0.301	0	0.635	50
n-Propylbenzene	2.968	2.773	0	-6.58	50
Styrene	1.618	1.744	0	7.802	50
Tetrachloroethene	0.535	0.510	0	-4.83	50
1,1,1,2-Tetrachloroethane	0.697	0.736	0	5.613	50
1,1,2,2-Tetrachloroethane	1.515	1.095	.3	-27.7	50
1,2,4-Trichlorobenzene	0.645	0.669	0	3.699	50
1,1,1-Trichloroethane	0.500	0.561	0	12.3	50
1,1,2-Trichloroethane	0.632	0.636	0	0.546	50
Trichlorofluoromethane	0.420	0.406	0	-3.35	50

FORM V II VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSV1

Calibration Date: 03/25/03 Time: 0929

Lab File ID: 2030325/S8015

Init. Calib. Date 1: 03/20/03 Time 1: 1036

Heated Purge: (Y/N) N

Init. Calib. Date 2: 03/20/03 Time 2: 1405

GC Column: DB-624-30M ID: .53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	Min RRF	% D	Max %D
1,2,3-Trichloropropane	1.298	1.226	0	-5.54	50
1,2,4-Trimethylbenzene	2.105	2.101	0	-0.18	50
1,3,5-Trimethylbenzene	2.213	2.088	0	-5.63	50
Vinyl chloride	0.210	0.214	0	2.026	20
o-Xylene	0.930	0.995	0	6.986	50
1,2-Dibromo-3-chloropropane	0.318	0.266	0	-16.5	50
1,2-Dibromoethane	0.926	0.837	0	-9.62	50
Vinyl acetate	0.227	0.223	0	-2.04	50
tert-Butyl methyl ether (MTBE)	0.604	0.643	0	6.504	50
1,2-Dichloroethene	0.418	0.482	0	15.0	50
4-Isopropyltoluene	2.345	2.171	0	-7.44	50
Xylene (total)	1.023	0.970	0	7.721	50
Methylcyclohexane	0.340	0.323	0	-5.08	50
n-Hexane	0.204	0.167	0	-17.8	50
trans-1,4-Dichloro-2-butene	0.178	0.169	0	-5.03	50
Cyclohexane	0.403	0.402	0	-0.22	50
2,2-Dichloropropane	0.437	0.497	0	13.9	50
Methyl Acetate	0.160	0.162	0	1.271	50
Trichlorotrifluoroethane	0.441	0.415	0	-5.70	50
1,1-Dichloropropene	0.403	0.431	0	7.096	50
2-Chloroethylvinyl ether	0.197	0.174	0	-11.6	50
1,3-Dichloropropane	0.979	0.984	0	0.490	50
Bromobenzene	2.290	1.965	0	-14.1	50
2-Chlorotoluene	2.117	1.864	0	-11.9	50
4-Chlorotoluene	2.300	2.205	0	-4.09	50
tert-Butylbenzene	1.562	1.494	0	-4.38	50
sec-Butylbenzene	3.080	2.820	0	-8.46	50
1,3-Dichlorobenzene	1.094	1.055	0	-3.63	50
1,4-Dichlorobenzene	1.744	1.655	0	-5.09	50
n-Butylbenzene	1.840	1.763	0	-4.15	50
1,2-Dichlorobenzene	1.460	1.402	0	-3.97	50
Hexachlorobutadiene	0.405	0.372	0	-8.20	50
Naphthalene	1.137	1.118	0	-1.65	50
1,2,3-Trichlorobenzene	0.640	0.632	0	-1.33	50
1,1-Dichloroethene	0.236	0.239	0	1.349	20
Benzene	0.965	1.015	0	5.215	50
Trichloroethene	0.413	0.445	0	7.815	50
Toluene	1.844	1.924	0	4.316	20
Chlorobenzene	1.481	1.569	.3	5.993	50

FORM V II VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSV1

Calibration Date: 03/25/03 Time: 0929

Lab File ID: 2030325/S8015

Init. Calib. Date 1: 03/20/03 Time 1: 1036

Heated Purge: (Y/N) N

Init. Calib. Date 2: 03/20/03 Time 2: 1405

GC Column: DB-624-30M ID: .53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	Min RRF	% D	Max %D
4-Bromofluorobenzene	0.930	0.866	0	-6.85	50
Dibromofluoromethane	0.542	0.574	0	5.861	50
Toluene-d8	1.816	1.584	0	-12.7	50
1,2-Dichloroethane-d4	0.179	0.181	0	1.140	50

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL | Contract:

Lab Code: LA024 | Case No.: | SAS No.: | SDG No.: 203032506

Lab File ID (Standard): 2030325/S8015 | Date Analyzed: 03/25/03

Instrument ID: MSV1 | Time: 0929

GC Column: DB-624-30M | ID: .53 (mm) | Heated Purge: (Y/N) N

	IS 1 Area	RT	IS 2 Area	RT	IS 3 Area	RT
12 HOUR STD	929690	8.827	1413171	6.779	976963	10.89
UPPER LIMIT	1859380	9.327	2826342	7.279	1953926	11.39
LOWER LIMIT	464845	8.327	706585.5	6.279	488481.5	10.39

EPA Sample		#		#		#		#		#		#
1. LCS90244	1088057		8.82		1647566		6.76		1071365		10.89	
2. MB90245	1074122		8.82		1678665		6.76		1061435		10.89	
3. 021-PL-WW-0324-03	1114073		8.82		1649213		6.76		1093454		10.88	
4. 021-PLTB1-W-0324-03	1100654		8.8		1768688		6.76		1108786		10.89	
5. 021-PL-WW-0324-03MS	1225360		8.8		1761076		6.76		1189718		10.88	
6. 021-PL-WW-0324-03MSD	1069383		8.82		1728420		6.76		1107007		10.89	

IS 1 ID : Chlorobenzene-d5
IS 2 ID : Fluorobenzene
IS 3 ID : 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RTLOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC limits

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: 900 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-WW-0324-03

Contract:

Lab File ID: 2030331/A6098

Lab Sample ID: 20303250601

Date Collected: 03/24/03 Time: 1110

Date Received: 03/25/03

Date Extracted: 03/31/03

Date Analyzed: 03/31/03 Time: 1342

Dilution Factor: 5 Analyst: RLW

Prep Method: 3510

Analytical Method: SW-846 8270

Instrument ID: MSSV1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
95-95-4	2,4,5-Trichlorophenol	22.2	U	0.650	22.2
88-06-2	2,4,6-Trichlorophenol	16.7	U	1.30	16.7
120-83-2	2,4-Dichlorophenol	2.78	U	1.12	2.78
51-28-5	2,4-Dinitrophenol	278	U	3.11	278
121-14-2	2,4-Dinitrotoluene	2.22	U	0.878	2.22
606-20-2	2,6-Dinitrotoluene	2.22	U	1.68	2.22
91-58-7	2-Chloronaphthalene	55.6	U	1.56	55.6
95-57-8	2-Chlorophenol	55.6	U	0.606	55.6
91-57-6	2-Methylnaphthalene	406		1.34	55.6
88-74-4	2-Nitroaniline	278	U	1.12	278
88-75-5	2-Nitrophenol	55.6	U	1.03	55.6
91-94-1	3,3'-Dichlorobenzidine	111	U	0.839	111
99-09-2	3-Nitroaniline	278	U	0.622	278
534-52-1	2-Methyl-4,6-dinitrophenol	278	U	3.18	278
59-50-7	4-Chloro-3-methylphenol	55.6	U	0.950	55.6
106-47-8	4-Chloroaniline	55.6	U	0.900	55.6
7005-72-3	4-Chlorophenyl-phenylether	55.6	U	0.956	55.6
83-32-9	Acenaphthene	55.6	U	1.03	55.6
208-96-8	Acenaphthylene	55.6	U	1.26	55.6
98-86-2	Acetophenone	55.6	U	1.20	55.6
120-12-7	Anthracene	55.6	U	1.52	55.6
1912-24-9	Atrazine (Aatrex)	111	U	1.08	111
100-52-7	Benzaldehyde	111	U	0.611	111
56-55-3	Benzo(a)anthracene	2.22	U	0.972	2.22
50-32-8	Benzo(a)pyrene	2.22	U	1.10	2.22
205-99-2	Benzo(b)fluoranthene	2.22	U	0.894	2.22
191-24-2	Benzo(g,h,i)perylene	55.6	U	0.728	55.6
207-08-9	Benzo(k)fluoranthene	2.78	U	1.11	2.78
92-52-4	Biphenyl	55.6	U	1.07	55.6
111-91-1	Bis(2-Chloroethoxy)methane	55.6	U	1.08	55.6

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: 900 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-WW-0324-03

Contract:

Lab File ID: 2030331/A6098

Lab Sample ID: 20303250601

Date Collected: 03/24/03 Time: 1110

Date Received: 03/25/03

Date Extracted: 03/31/03

Date Analyzed: 03/31/03 Time: 1342

Dilution Factor: 5 Analyst: RLW

Prep Method: 3510

Analytical Method: SW-846 8270

Instrument ID: MSSV1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
111-44-4	Bis(2-Chloroethyl)ether	22.2	U	0.861	22.2
108-60-1	bis(2-Chloroisopropyl)ether	55.6	U	1.50	55.6
117-81-7	bis(2-ethylhexyl)phthalate	5.23	J	3.14	27.8
101-55-3	4-Bromophenyl-phenylether	55.6	U	1.27	55.6
85-68-7	Butylbenzylphthalate	55.6	U	1.11	55.6
105-60-2	Caprolactam	55.6	U	1.72	55.6
86-74-8	Carbazole	22.2	U	0.589	22.2
218-01-9	Chrysene	27.8	U	0.944	27.8
84-74-2	Di-n-butylphthalate	55.6	U	4.97	55.6
117-84-0	Di-n-octylphthalate	55.6	U	1.07	55.6
53-70-3	Dibenz(a,h)anthracene	2.22	U	1.52	2.22
132-64-9	Dibenzofuran	55.6	U	0.944	55.6
84-66-2	Diethylphthalate	55.6	U	0.722	55.6
131-11-3	Dimethyl-phthalate	55.6	U	1.08	55.6
206-44-0	Fluoranthene	55.6	U	0.611	55.6
86-73-7	Fluorene	55.6	U	0.833	55.6
118-74-1	Hexachlorobenzene	5.56	U	1.57	5.56
87-68-3	Hexachlorobutadiene	2.78	U	0.583	2.78
77-47-4	Hexachlorocyclopentadiene	55.6	U	2.00	55.6
67-72-1	Hexachloroethane	11.1	U	0.606	11.1
193-39-5	Indeno(1,2,3-cd)pyrene	2.22	U	0.950	2.22
78-59-1	Isophorone	55.6	U	2.59	55.6
91-20-3	Naphthalene	362		1.66	55.6
100-01-6	4-Nitroaniline	278	U	0.744	278
98-95-3	Nitrobenzene	22.2	U	1.05	22.2
100-02-7	4-Nitrophenol	278	U	2.21	278
87-86-5	Pentachlorophenol	278	U	5.14	278
85-01-8	Phenanthrene	55.6	U	0.661	55.6
108-95-2	Phenol	55.6	U	1.59	55.6
129-00-0	Pyrene	55.6	U	0.733	55.6
1319-77-3M	m,p-Cresol	51.9	J	0.578	55.6

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: 900 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-WW-0324-03

Contract:

Lab File ID: 2030331/A6098

Lab Sample ID: 20303250601

Date Collected: 03/24/03 Time: 1110

Date Received: 03/25/03

Date Extracted: 03/31/03

Date Analyzed: 03/31/03 Time: 1342

Dilution Factor: 5 Analyst: RLW

Prep Method: 3510

Analytical Method: SW-846 8270

Instrument ID: MSSV1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
621-64-7	N-Nitroso-di-n-propylamine	22.2	U	1.76	22.2
86-30-6	N-Nitrosodiphenylamine	38.9	U	0.650	38.9
95-48-7	o-Cresol	182		2.72	55.6

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GCAL

Lab Code: LA024 2 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: Units:

Level: (low/med)

% Moisture: not dec.

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-WW-0324-03

Contract:

Lab File ID: 2030331/A6098

Lab Sample ID: 20303250601

Date Collected: 03/24/03 Time: 1110

Date Received: 03/25/03

Date Extracted:

Date Analyzed: 03/31/03 Time: 1342

Dilution Factor: 5 Analyst: RLW

Prep Method:

Analytical Method: SW-846 8270C

Instrument ID: MSSV1

Number TICs Found : 10

CONCENTRATION UNITS:

	CAS NO.	COMPOUND	RT	EST. CONC.	Q
1.	620-14-4	Benzene, 1-ethyl-3-methyl-	3.735	154	
2.	629-62-9	Pentadecane	6	222	
3.	95-36-3	1,2,4-Trimethylbenzene	3.954	170	
4.	124-18-5	Decane	3.988	422	
5.	1120-21-4	Undecane	4.513	667	
6.	95-93-2	Benzene, 1,2,4,5-tetramethyl-	4.624	197	
7.	112-40-3	Dodecane	4.947	1180	
8.	17301-23-4	Undecane, 2,6-dimethyl-	4.99	222	
9.	629-50-5	Tridecane	5.327	678	
10.	629-59-4	Tetradecane	5.677	727	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: MB90922

Contract:

Lab File ID: 2030331/A6092

Lab Sample ID: 90922

Date Collected: Time:

Date Received:

Date Extracted: 03/29/03

Date Analyzed: 03/31/03 Time: 1014

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: SW-846 8270

Instrument ID: MSSV1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
95-95-4	2,4,5-Trichlorophenol	4.00	U	0.117	4.00
88-06-2	2,4,6-Trichlorophenol	3.00	U	0.234	3.00
120-83-2	2,4-Dichlorophenol	0.500	U	0.201	0.500
51-28-5	2,4-Dinitrophenol	50.0	U	0.559	50.0
121-14-2	2,4-Dinitrotoluene	0.400	U	0.158	0.400
606-20-2	2,6-Dinitrotoluene	0.400	U	0.302	0.400
91-58-7	2-Chloronaphthalene	10.0	U	0.281	10.0
95-57-8	2-Chlorophenol	10.0	U	0.109	10.0
91-57-6	2-Methylnaphthalene	10.0	U	0.241	10.0
88-74-4	2-Nitroaniline	50.0	U	0.201	50.0
88-75-5	2-Nitrophenol	10.0	U	0.186	10.0
91-94-1	3,3'-Dichlorobenzidine	20.0	U	0.151	20.0
99-09-2	3-Nitroaniline	50.0	U	0.112	50.0
534-52-1	2-Methyl-4,6-dinitrophenol	50.0	U	0.573	50.0
59-50-7	4-Chloro-3-methylphenol	10.0	U	0.171	10.0
106-47-8	4-Chloroaniline	10.0	U	0.162	10.0
7005-72-3	4-Chlorophenyl-phenylether	10.0	U	0.172	10.0
83-32-9	Acenaphthene	10.0	U	0.185	10.0
208-96-8	Acenaphthylene	10.0	U	0.226	10.0
98-86-2	Acetophenone	10.0	U	0.216	10.0
120-12-7	Anthracene	10.0	U	0.273	10.0
1912-24-9	Atrazine (Aatrex)	20.0	U	0.195	20.0
100-52-7	Benzaldehyde	20.0	U	0.110	20.0
56-55-3	Benzo(a)anthracene	0.400	U	0.175	0.400
50-32-8	Benzo(a)pyrene	0.400	U	0.198	0.400
205-99-2	Benzo(b)fluoranthene	0.400	U	0.161	0.400
191-24-2	Benzo(g,h,i)perylene	10.0	U	0.131	10.0
207-08-9	Benzo(k)fluoranthene	0.500	U	0.200	0.500
92-52-4	Biphenyl	10.0	U	0.193	10.0
111-91-1	Bis(2-Chloroethoxy)methane	10.0	U	0.195	10.0

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: MB90922

Contract:

Lab File ID: 2030331/A6092

Lab Sample ID: 90922

Date Collected: Time:

Date Received:

Date Extracted: 03/29/03

Date Analyzed: 03/31/03 Time: 1014

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: SW-846 8270

Instrument ID: MSSV1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
111-44-4	Bis(2-Chloroethyl)ether	4.00	U	0.155	4.00
108-60-1	bis(2-Chloroisopropyl)ether	10.0	U	0.270	10.0
117-81-7	bis(2-ethylhexyl)phthalate	1.80	J	0.565	5.00
101-55-3	4-Bromophenyl-phenylether	10.0	U	0.229	10.0
85-68-7	Butylbenzylphthalate	10.0	U	0.200	10.0
105-60-2	Caprolactam	10.0	U	0.309	10.0
86-74-8	Carbazole	4.00	U	0.106	4.00
218-01-9	Chrysene	5.00	U	0.170	5.00
84-74-2	Di-n-butylphthalate	2.10	J	0.894	10.0
117-84-0	Di-n-octylphthalate	10.0	U	0.192	10.0
53-70-3	Dibenz(a,h)anthracene	0.400	U	0.273	0.400
132-64-9	Dibenzofuran	10.0	U	0.170	10.0
84-66-2	Diethylphthalate	10.0	U	0.130	10.0
131-11-3	Dimethyl-phthalate	10.0	U	0.195	10.0
206-44-0	Fluoranthene	10.0	U	0.110	10.0
86-73-7	Fluorene	10.0	U	0.150	10.0
118-74-1	Hexachlorobenzene	1.00	U	0.283	1.00
87-68-3	Hexachlorobutadiene	0.500	U	0.105	0.500
77-47-4	Hexachlorocyclopentadiene	10.0	U	0.360	10.0
67-72-1	Hexachloroethane	2.00	U	0.109	2.00
193-39-5	Indeno(1,2,3-cd)pyrene	0.400	U	0.171	0.400
78-59-1	Isophorone	10.0	U	0.467	10.0
91-20-3	Naphthalene	10.0	U	0.299	10.0
100-01-6	4-Nitroaniline	50.0	U	0.134	50.0
98-95-3	Nitrobenzene	4.00	U	0.189	4.00
100-02-7	4-Nitrophenol	50.0	U	0.397	50.0
87-86-5	Pentachlorophenol	50.0	U	0.926	50.0
85-01-8	Phenanthrene	10.0	U	0.119	10.0
108-95-2	Phenol	10.0	U	0.287	10.0
129-00-0	Pyrene	10.0	U	0.132	10.0
1319-77-3M	m,p-Cresol	10.0	U	0.104	10.0

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: MB90922

Contract:

Lab File ID: 2030331/A6092

Lab Sample ID: 90922

Date Collected: Time:

Date Received:

Date Extracted: 03/29/03

Date Analyzed: 03/31/03 Time: 1014

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: SW-846 8270

Instrument ID: MSSV1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
621-64-7	N-Nitroso-di-n-propylamine	4.00	U	0.317	4.00
86-30-6	N-Nitrosodiphenylamine	7.00	U	0.117	7.00
95-48-7	o-Cresol	10.0	U	0.490	10.0
106-46-7	1,4-Dichlorobenzene	10.0	U	0.915	10.0

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCS90923

Contract:

Lab File ID: 2030331/A6093

Lab Sample ID: 90923

Date Collected: Time:

Date Received:

Date Extracted: 03/31/03

Date Analyzed: 03/31/03 Time: 1035

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: SW-846 8270

Instrument ID: MSSV1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
95-95-4	2,4,5-Trichlorophenol	77.8		0.117	4.00
88-06-2	2,4,6-Trichlorophenol	75.8		0.234	3.00
120-83-2	2,4-Dichlorophenol	79.2		0.201	0.500
51-28-5	2,4-Dinitrophenol	77.0		0.559	50.0
121-14-2	2,4-Dinitrotoluene	80.5		0.158	0.400
606-20-2	2,6-Dinitrotoluene	77.5		0.302	0.400
91-58-7	2-Chloronaphthalene	65.3		0.281	10.0
95-57-8	2-Chlorophenol	75.0		0.109	10.0
91-57-6	2-Methylnaphthalene	65.7		0.241	10.0
88-74-4	2-Nitroaniline	61.4		0.201	50.0
88-75-5	2-Nitrophenol	75.7		0.186	10.0
91-94-1	3,3'-Dichlorobenzidine	88.6		0.151	20.0
99-09-2	3-Nitroaniline	61.4		0.112	50.0
534-52-1	2-Methyl-4,6-dinitrophenol	76.5		0.573	50.0
59-50-7	4-Chloro-3-methylphenol	73.7		0.171	10.0
106-47-8	4-Chloroaniline	69.2		0.162	10.0
7005-72-3	4-Chlorophenyl-phenylether	73.1		0.172	10.0
83-32-9	Acenaphthene	70.2		0.185	10.0
208-96-8	Acenaphthylene	68.8		0.226	10.0
98-86-2	Acetophenone	81.4		0.216	10.0
120-12-7	Anthracene	79.0		0.273	10.0
1912-24-9	Atrazine (Aatrex)	135		0.195	20.0
100-52-7	Benzaldehyde	75.1		0.110	20.0
56-55-3	Benzo(a)anthracene	76.5		0.175	0.400
50-32-8	Benzo(a)pyrene	87.6		0.198	0.400
205-99-2	Benzo(b)fluoranthene	81.6		0.161	0.400
191-24-2	Benzo(g,h,i)perylene	83.4		0.131	10.0
207-08-9	Benzo(k)fluoranthene	84.4		0.200	0.500
92-52-4	Biphenyl	71.0		0.193	10.0
111-91-1	Bis(2-Chloroethoxy)methane	73.7		0.195	10.0

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCS90923

Contract:

Lab File ID: 2030331/A6093

Lab Sample ID: 90923

Date Collected: Time:

Date Received:

Date Extracted: 03/31/03

Date Analyzed: 03/31/03 Time: 1035

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: SW-846 8270

Instrument ID: MSSV1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
111-44-4	Bis(2-Chloroethyl)ether	69.2		0.155	4.00
108-60-1	bis(2-Chloroisopropyl)ether	71.6		0.270	10.0
117-81-7	bis(2-ethylhexyl)phthalate	83.9		0.565	5.00
101-55-3	4-Bromophenyl-phenylether	81.0		0.229	10.0
85-68-7	Butylbenzylphthalate	80.9		0.200	10.0
105-60-2	Caprolactam	24.4		0.309	10.0
86-74-8	Carbazole	64.9		0.106	4.00
218-01-9	Chrysene	78.2		0.170	5.00
84-74-2	Di-n-butylphthalate	79.3		0.894	10.0
117-84-0	Di-n-octylphthalate	83.7		0.192	10.0
53-70-3	Dibenz(a,h)anthracene	83.9		0.273	0.400
132-64-9	Dibenzofuran	69.4		0.170	10.0
84-66-2	Diethylphthalate	72.5		0.130	10.0
131-11-3	Dimethyl-phthalate	72.3		0.195	10.0
206-44-0	Fluoranthene	75.8		0.110	10.0
86-73-7	Fluorene	72.9		0.150	10.0
118-74-1	Hexachlorobenzene	77.3		0.283	1.00
87-68-3	Hexachlorobutadiene	52.0		0.105	0.500
77-47-4	Hexachlorocyclopentadiene	46.0		0.360	10.0
67-72-1	Hexachloroethane	49.1		0.109	2.00
193-39-5	Indeno(1,2,3-cd)pyrene	89.2		0.171	0.400
78-59-1	Isophorone	72.6		0.467	10.0
91-20-3	Naphthalene	68.0		0.299	10.0
100-01-6	4-Nitroaniline	49.5	J	0.134	50.0
98-95-3	Nitrobenzene	72.3		0.189	4.00
100-02-7	4-Nitrophenol	32.9	J	0.397	50.0
87-86-5	Pentachlorophenol	71.2		0.926	50.0
85-01-8	Phenanthrene	78.5		0.119	10.0
108-95-2	Phenol	36.7		0.287	10.0
129-00-0	Pyrene	80.9		0.132	10.0
1319-77-3M	m,p-Cresol	61.2		0.104	10.0

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCS90923

Contract:

Lab File ID: 2030331/A6093

Lab Sample ID: 90923

Date Collected: Time:

Date Received:

Date Extracted: 03/31/03

Date Analyzed: 03/31/03 Time: 1035

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: SW-846 8270

Instrument ID: MSSV1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
621-64-7	N-Nitroso-di-n-propylamine	73.8		0.317	4.00
86-30-6	N-Nitrosodiphenylamine	78.6		0.117	7.00
95-48-7	o-Cresol	66.0		0.490	10.0
106-46-7	1,4-Dichlorobenzene	54.6		0.915	10.0

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCSD90924

Contract:

Lab File ID: 2030331/A6094

Lab Sample ID: 90924

Date Collected: Time:

Date Received:

Date Extracted: 03/31/03

Date Analyzed: 03/31/03 Time: 1056

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: SW-846 8270

Instrument ID: MSSV1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
95-95-4	2,4,5-Trichlorophenol	82.8		0.117	4.00
88-06-2	2,4,6-Trichlorophenol	79.7		0.234	3.00
120-83-2	2,4-Dichlorophenol	83.4		0.201	0.500
51-28-5	2,4-Dinitrophenol	83.6		0.559	50.0
121-14-2	2,4-Dinitrotoluene	86.3		0.158	0.400
606-20-2	2,6-Dinitrotoluene	81.1		0.302	0.400
91-58-7	2-Chloronaphthalene	69.2		0.281	10.0
95-57-8	2-Chlorophenol	78.3		0.109	10.0
91-57-6	2-Methylnaphthalene	70.5		0.241	10.0
88-74-4	2-Nitroaniline	63.8		0.201	50.0
88-75-5	2-Nitrophenol	80.0		0.186	10.0
91-94-1	3,3'-Dichlorobenzidine	89.8		0.151	20.0
99-09-2	3-Nitroaniline	63.8		0.112	50.0
534-52-1	2-Methyl-4,6-dinitrophenol	80.3		0.573	50.0
59-50-7	4-Chloro-3-methylphenol	79.6		0.171	10.0
106-47-8	4-Chloroaniline	73.1		0.162	10.0
7005-72-3	4-Chlorophenyl-phenylether	75.8		0.172	10.0
83-32-9	Acenaphthene	75.3		0.185	10.0
208-96-8	Acenaphthylene	74.0		0.226	10.0
98-86-2	Acetophenone	86.5		0.216	10.0
120-12-7	Anthracene	84.3		0.273	10.0
1912-24-9	Atrazine (Aatrex)	142		0.195	20.0
100-52-7	Benzaldehyde	78.9		0.110	20.0
56-55-3	Benzo(a)anthracene	80.1		0.175	0.400
50-32-8	Benzo(a)pyrene	91.4		0.198	0.400
205-99-2	Benzo(b)fluoranthene	87.8		0.161	0.400
191-24-2	Benzo(g,h,i)perylene	87.3		0.131	10.0
207-08-9	Benzo(k)fluoranthene	86.0		0.200	0.500
92-52-4	Biphenyl	79.8		0.193	10.0
111-91-1	Bis(2-Chloroethoxy)methane	79.0		0.195	10.0

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCSD90924

Contract:

Lab File ID: 2030331/A6094

Lab Sample ID: 90924

Date Collected: Time:

Date Received:

Date Extracted: 03/31/03

Date Analyzed: 03/31/03 Time: 1056

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: SW-846 8270

Instrument ID: MSSV1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
111-44-4	Bis(2-Chloroethyl)ether	71.9		0.155	4.00
108-60-1	bis(2-Chloroisopropyl)ether	75.0		0.270	10.0
117-81-7	bis(2-ethylhexyl)phthalate	86.6		0.565	5.00
101-55-3	4-Bromophenyl-phenylether	84.6		0.229	10.0
85-68-7	Butylbenzylphthalate	84.0		0.200	10.0
105-60-2	Caprolactam	25.6		0.309	10.0
86-74-8	Carbazole	69.8		0.106	4.00
218-01-9	Chrysene	81.1		0.170	5.00
84-74-2	Di-n-butylphthalate	83.3		0.894	10.0
117-84-0	Di-n-octylphthalate	86.0		0.192	10.0
53-70-3	Dibenz(a,h)anthracene	88.0		0.273	0.400
132-64-9	Dibenzofuran	74.2		0.170	10.0
84-66-2	Diethylphthalate	76.5		0.130	10.0
131-11-3	Dimethyl-phthalate	75.4		0.195	10.0
206-44-0	Fluoranthene	80.5		0.110	10.0
86-73-7	Fluorene	76.9		0.150	10.0
118-74-1	Hexachlorobenzene	82.5		0.283	1.00
87-68-3	Hexachlorobutadiene	53.3		0.105	0.500
77-47-4	Hexachlorocyclopentadiene	53.6		0.360	10.0
67-72-1	Hexachloroethane	50.6		0.109	2.00
193-39-5	Indeno(1,2,3-cd)pyrene	93.1		0.171	0.400
78-59-1	Isophorone	75.7		0.467	10.0
91-20-3	Naphthalene	72.1		0.299	10.0
100-01-6	4-Nitroaniline	51.4		0.134	50.0
98-95-3	Nitrobenzene	75.7		0.189	4.00
100-02-7	4-Nitrophenol	33.7	J	0.397	50.0
87-86-5	Pentachlorophenol	73.9		0.926	50.0
85-01-8	Phenanthrene	82.6		0.119	10.0
108-95-2	Phenol	36.9		0.287	10.0
129-00-0	Pyrene	86.8		0.132	10.0
1319-77-3M	m,p-Cresol	62.4		0.104	10.0

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCSD90924

Contract:

Lab File ID: 2030331/A6094

Lab Sample ID: 90924

Date Collected: Time:

Date Received:

Date Extracted: 03/31/03

Date Analyzed: 03/31/03 Time: 1056

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: SW-846 8270

Instrument ID: MSSV1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
621-64-7	N-Nitroso-di-n-propylamine	77.5		0.317	4.00
86-30-6	N-Nitrosodiphenylamine	82.8		0.117	7.00
95-48-7	o-Cresol	67.9		0.490	10.0
106-46-7	1,4-Dichlorobenzene	55.8		0.915	10.0

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 2 Case No.: SAS No.: SDG No.: 203032506

Method: SW-846 8270 Level: (low/med) LOW

	EPA SAMPLE NO.	SMC1	#	SMC2	#	SMC3	#	SMC4	#	SMC5	#	SMC6	#	TOT OUT
1.	021-PL-WW-0324-03	80		73		87		44		61		71		0
2.	LCS90923	71		68		78		34		52		70		0
3.	LCSD90924	75		73		83		35		53		74		0
4.	MB90922	81		76		97		38		49		68		0

CONTROL LIMITS

SMC 1	Nitrobenzene-d5	43	110
SMC 2	2-Fluorobiphenyl	16	128
SMC 3	Terphenyl-d14	47	121
SMC 4	Phenol-d5	10	76
SMC 5	2-Fluorophenol	24	96
SMC 6	2,4,6-Tribromophenol	19	133

Column to be used to flag recovery limits

* Value outside of contract required limits

D Surrogate diluted out

3C

WATER SEMIVOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Contract: Method: SW-846 8270

Spike HSN : 90923

COMPOUND	UNITS	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS % REC	LCS % REC FLAG	QC. LIMITS
1,4-Dichlorobenzene	ug/L	100	0	54.6	55		46 - 93
2,4,5-Trichlorophenol	ug/L	100	0	77.8	78		45 - 135
2,4,6-Trichlorophenol	ug/L	100	0	75.8	76		45 - 135
2,4-Dichlorophenol	ug/L	100	0	79.2	79		30 - 150
2,4-Dinitrophenol	ug/L	100	0	77	77		30 - 150
2,4-Dinitrotoluene	ug/L	100	0	80.5	81		67 - 123
2,6-Dinitrotoluene	ug/L	100	0	77.5	78		60 - 120
2-Chloronaphthalene	ug/L	100	0	65.3	65		45 - 135
2-Chlorophenol	ug/L	100	0	75	75		38 - 90
2-Methyl-4,6-dinitrophenol	ug/L	100	0	76.5	77		60 - 120
2-Methylnaphthalene	ug/L	100	0	65.7	66		60 - 120
2-Nitroaniline	ug/L	100	0	61.4	61		30 - 150
2-Nitrophenol	ug/L	100	0	75.7	76		65 - 100
3,3'-Dichlorobenzidine	ug/L	100	0	88.6	89		60 - 120
3-Nitroaniline	ug/L	100	0	61.4	61		30 - 150
4-Bromophenyl-phenylether	ug/L	100	0	81	81		60 - 120
4-Chloro-3-methylphenol	ug/L	100	0	73.7	74		45 - 98
4-Chloroaniline	ug/L	100	0	69.2	69		30 - 150
4-Chlorophenyl-phenylether	ug/L	100	0	73.1	73		45 - 135
4-Nitroaniline	ug/L	101	0	49.5	49		30 - 150
4-Nitrophenol	ug/L	100	0	32.9	33		8 - 62
Acenaphthene	ug/L	100	0	70.2	70		58 - 98
Acenaphthylene	ug/L	100	0	68.8	69		60 - 120
Acetophenone	ug/L	100	0	81.4	81		60 - 120
Anthracene	ug/L	100	0	79	79		60 - 120
Atrazine (Aatrex)	ug/L	100	0	135	135	*	60 - 120
Benzaldehyde	ug/L	100	0	75.1	75		60 - 120
Benzo(a)anthracene	ug/L	100	0	76.5	77		60 - 120
Benzo(a)pyrene	ug/L	100	0	87.6	88		60 - 120
Benzo(b)fluoranthene	ug/L	100	0	81.6	82		60 - 120
Benzo(g,h,i)perylene	ug/L	100	0	83.4	83		60 - 120
Benzo(k)fluoranthene	ug/L	100	0	84.4	84		60 - 120
Biphenyl	ug/L	100	0	71	71		60 - 120
Bis(2-Chloroethoxy)methane	ug/L	100	0	73.7	74		60 - 120
Bis(2-Chloroethyl)ether	ug/L	100	0	69.2	69		45 - 135
Butylbenzylphthalate	ug/L	100	0	80.9	81		60 - 120
Caprolactam	ug/L	100	0	24.4	24		10 - 120

RPD : 0 out of 65 outside limits

Spike Recovery: 4 out of 130 outside limits

3C

WATER SEMIVOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Contract: Method: SW-846 8270

Carbazole	ug/L	100	0	64.9	65		60 - 120
Chrysene	ug/L	98	0	78.2	80		60 - 120
Di-n-butylphthalate	ug/L	100	0	79.3	79		60 - 120
Di-n-octylphthalate	ug/L	100	0	83.7	84		60 - 120
Dibenz(a,h)anthracene	ug/L	100	0	83.9	84		60 - 120
Dibenzofuran	ug/L	100	0	69.4	69		45 - 135
Diethylphthalate	ug/L	100	0	72.5	73		60 - 120
Dimethyl-phthalate	ug/L	100	0	72.3	72		60 - 120
Fluoranthene	ug/L	100	0	75.8	76		60 - 120
Fluorene	ug/L	100	0	72.9	73		60 - 120
Hexachlorobenzene	ug/L	100	0	77.3	77		60 - 120
Hexachlorobutadiene	ug/L	100	0	52	52	*	60 - 120
Hexachlorocyclopentadiene	ug/L	100	0	46	46		45 - 135
Hexachloroethane	ug/L	100	0	49.1	49		45 - 135
Indeno(1,2,3-cd)pyrene	ug/L	100	0	89.2	89		60 - 120
Isophorone	ug/L	100	0	72.6	73		45 - 135
N-Nitroso-di-n-propylamine	ug/L	100	0	73.8	74		55 - 102
N-Nitrosodiphenylamine	ug/L	98	0	78.6	80		60 - 120
Naphthalene	ug/L	100	0	68	68		45 - 135
Nitrobenzene	ug/L	100	0	72.3	72		60 - 120
Pentachlorophenol	ug/L	100	0	71.2	71		32 - 132
Phenanthrene	ug/L	100	0	78.5	79		60 - 120
Phenol	ug/L	100	0	36.7	37		8 - 53
Pyrene	ug/L	100	0	80.9	81		44 - 114
bis(2-Chloroisopropyl)ether	ug/L	100	0	71.6	72		45 - 135
bis(2-ethylhexyl)phthalate	ug/L	100	0	83.9	84		60 - 120
m,p-Cresol	ug/L	100	0	61.2	61		30 - 150
o-Cresol	ug/L	100	0	66	66		30 - 150

RPD : 0 out of 65 outside limits

Spike Recovery: 4 out of 130 outside limits

3C

WATER SEMIVOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Contract: Method: SW-846 8270

Spike Dupe HSN : 90924

COMPOUND	UNITS	SPIKE ADDED	LCSD CONC.	LCSD % REC	REC FLAG	% RPD	RPD FLAG	QC. LIMITS REC	QC. LIMITS RPD
1,4-Dichlorobenzene	ug/L	100	55.8	56		2		46 - 93	0 - 30
2,4,5-Trichlorophenol	ug/L	100	82.8	83		6		45 - 135	0 - 50
2,4,6-Trichlorophenol	ug/L	100	79.7	80		5		45 - 135	0 - 50
2,4-Dichlorophenol	ug/L	100	83.4	83		5		30 - 150	0 - 50
2,4-Dinitrophenol	ug/L	100	83.6	84		9		30 - 150	0 - 50
2,4-Dinitrotoluene	ug/L	100	86.3	86		6		67 - 123	0 - 33
2,6-Dinitrotoluene	ug/L	100	81.1	81		4		60 - 120	0 - 50
2-Chloronaphthalene	ug/L	100	69.2	69		6		45 - 135	0 - 50
2-Chlorophenol	ug/L	100	78.3	78		4		38 - 90	0 - 24
2-Methyl-4,6-dinitrophenol	ug/L	100	80.3	80		4		60 - 120	0 - 50
2-Methylnaphthalene	ug/L	100	70.5	71		7		60 - 120	0 - 50
2-Nitroaniline	ug/L	100	63.8	64		5		30 - 150	0 - 50
2-Nitrophenol	ug/L	100	80	80		5		65 - 100	0 - 50
3,3'-Dichlorobenzidine	ug/L	100	89.8	90		1		60 - 120	0 - 50
3-Nitroaniline	ug/L	100	63.8	64		5		30 - 150	0 - 50
4-Bromophenyl-phenylether	ug/L	100	84.6	85		5		60 - 120	0 - 50
4-Chloro-3-methylphenol	ug/L	100	79.6	80		8		45 - 98	0 - 26
4-Chloroaniline	ug/L	100	73.1	73		6		30 - 150	0 - 50
4-Chlorophenyl-phenylether	ug/L	100	75.8	76		4		45 - 135	0 - 50
4-Nitroaniline	ug/L	101	51.4	51		4		30 - 150	0 - 50
4-Nitrophenol	ug/L	100	33.7	34		3		8 - 62	0 - 31
Acenaphthene	ug/L	100	75.3	75		7		58 - 98	0 - 32
Acenaphthylene	ug/L	100	74	74		7		60 - 120	0 - 50
Acetophenone	ug/L	100	86.5	87		7		60 - 120	0 - 50
Anthracene	ug/L	100	84.3	84		6		60 - 120	0 - 50
Atrazine (Aatrex)	ug/L	100	142	142	*	5		60 - 120	0 - 50
Benzaldehyde	ug/L	100	78.9	79		5		60 - 120	0 - 50
Benzo(a)anthracene	ug/L	100	80.1	80		4		60 - 120	0 - 50
Benzo(a)pyrene	ug/L	100	91.4	91		3		60 - 120	0 - 50
Benzo(b)fluoranthene	ug/L	100	87.8	88		7		60 - 120	0 - 50
Benzo(g,h,i)perylene	ug/L	100	87.3	87		5		60 - 120	0 - 50
Benzo(k)fluoranthene	ug/L	100	86	86		2		60 - 120	0 - 50
Biphenyl	ug/L	100	79.8	80		12		60 - 120	0 - 50
Bis(2-Chloroethoxy)methane	ug/L	100	79	79		7		60 - 120	0 - 50
Bis(2-Chloroethyl)ether	ug/L	100	71.9	72		4		45 - 135	0 - 50
Butylbenzylphthalate	ug/L	100	84	84		4		60 - 120	0 - 50
Caprolactam	ug/L	100	25.6	26		8		10 - 120	0 - 50

RPD : 0 out of 65 outside limits

Spike Recovery: 4 out of 130 outside limits

3C

WATER SEMIVOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Contract: Method: SW-846 8270

Carbazole	ug/L	100	69.8	70		7		60 - 120	0 - 50
Chrysene	ug/L	98	81.1	83		4		60 - 120	0 - 50
Di-n-butylphthalate	ug/L	100	83.3	83		5		60 - 120	0 - 50
Di-n-octylphthalate	ug/L	100	86	86		2		60 - 120	0 - 50
Dibenz(a,h)anthracene	ug/L	100	88	88		5		60 - 120	0 - 50
Dibenzofuran	ug/L	100	74.2	74		7		45 - 135	0 - 50
Diethylphthalate	ug/L	100	76.5	77		5		60 - 120	0 - 50
Dimethyl-phthalate	ug/L	100	75.4	75		4		60 - 120	0 - 50
Fluoranthene	ug/L	100	80.5	81		6		60 - 120	0 - 50
Fluorene	ug/L	100	76.9	77		5		60 - 120	0 - 50
Hexachlorobenzene	ug/L	100	82.5	83		8		60 - 120	0 - 50
Hexachlorobutadiene	ug/L	100	53.3	53	*	2		60 - 120	0 - 50
Hexachlorocyclopentadiene	ug/L	100	53.6	54		16		45 - 135	0 - 50
Hexachloroethane	ug/L	100	50.6	51		4		45 - 135	0 - 50
Indeno(1,2,3-cd)pyrene	ug/L	100	93.1	93		4		60 - 120	0 - 50
Isophorone	ug/L	100	75.7	76		4		45 - 135	0 - 50
N-Nitroso-di-n-propylamine	ug/L	100	77.5	78		5		55 - 102	0 - 32
N-Nitrosodiphenylamine	ug/L	98	82.8	84		5		60 - 120	0 - 50
Naphthalene	ug/L	100	72.1	72		6		45 - 135	0 - 50
Nitrobenzene	ug/L	100	75.7	76		5		60 - 120	0 - 50
Pentachlorophenol	ug/L	100	73.9	74		4		32 - 132	0 - 32
Phenanthrene	ug/L	100	82.6	83		5		60 - 120	0 - 50
Phenol	ug/L	100	36.9	37		0		8 - 53	0 - 25
Pyrene	ug/L	100	86.8	87		7		44 - 114	0 - 30
bis(2-Chloroisopropyl)ether	ug/L	100	75	75		4		45 - 135	0 - 50
bis(2-ethylhexyl)phthalate	ug/L	100	86.6	87		4		60 - 120	0 - 50
m,p-Cresol	ug/L	100	62.4	62		2		30 - 150	0 - 50
o-Cresol	ug/L	100	67.9	68		3		30 - 150	0 - 50

RPD : 0 out of 65 outside limits

Spike Recovery: 4 out of 130 outside limits

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: GCAL

Lab Code: LA024 Case No.:

Lab File ID: 2030331/A6092

GC Column: DB-5MS-30M ID: .25 (mm)

Instrument ID: MSSV1 Matrix: Water

Level: LOW

Sample ID: MB90922

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 90922 Date Extracted: 03/29/03

Date Analyzed: 03/31/03 Time: 1014

Method: SW-846 8270

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1.	LCS90923	90923	2030331/A6093	03/31/03	1035
2.	LCSD90924	90924	2030331/A6094	03/31/03	1056
3.	021-PL-WW-0324-03	20303250601	2030331/A6098	03/31/03	1342

5B

SEMIVOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab File ID: 2030321/A5980

DFTPP Injection Date 03/21/03 Time: 0945

GC Column: ID: (mm)

Instrument ID: MSSV1

m / e	*ION ABUNDANCE CRITERIA*	*% Relative Abundance*
51	30.0-60.0% of mass 198	35.33 ( ) ( )
68	Less thab 2% of mass 69	0 (0) (1)
69	Mass 69 relative abundance	64.41 ( ) ( )
70	Less than 2.0% of mass 69	.09 (.15) (1)
127	40.0-60.0% of mass 198	47.98 ( ) ( )
197	Less than 1.0% of mass 198	0 ( ) ( )
198	Base Peak, 100% relative abundance	100 ( ) ( )
199	5.0-9.0% of mass 198	7.18 ( ) ( )
275	10.0-30.0% of mass 198	29.52 ( ) ( )
365	Greater than 1.0% of mass 198	3.12 ( ) ( )
441	Present, but less than mass 443	9.09 ( ) ( )
442	40.0-100.0% of mass 198	75.83 ( ) ( )
443	17.0-23.0% of mass 442	15.32 (20.21) (2)

(1)-Value is % mass 69 (2)-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	SAMPLE NO.	*LAB SAMPLE ID*	*LAB FILE ID*	*DATE ANALYZED*	*TIME ANALYZED*
1.	SSTD050	1202	2030321/A5981	03/21/03	1010
2.	SSTD010	1201	2030321/A5982	03/21/03	1035
3.	SSTD080	1203	2030321/A5983	03/21/03	1059
4.	SSTD120	1204	2030321/A5984	03/21/03	1124
5.	SSTD160	1205	2030321/A5985	03/21/03	1148
6.	SSTD200	1206	2030321/A5986	03/21/03	1213
7.	SSTD001	1207	2030321/A5987	03/21/03	1238
8.	SSTD00.2	1208	2030321/A5988	03/21/03	1303

5B

SEMIVOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab File ID: 2030331/A6090

DFTPP Injection Date 03/31/03 Time: 0920

GC Column: ID: (mm)

Instrument ID: MSSV1

m / e	*ION ABUNDANCE CRITERIA*	*% Relative Abundance*
51	30.0-60.0% of mass 198	31.72 ( ) ( )
68	Less thab 2% of mass 69	0 (0) (1)
69	Mass 69 relative abundance	57.98 ( ) ( )
70	Less than 2.0% of mass 69	0 (0) (1)
127	40.0-60.0% of mass 198	46.71 ( ) ( )
197	Less than 1.0% of mass 198	0 ( ) ( )
198	Base Peak, 100% relative abundance	100 ( ) ( )
199	5.0-9.0% of mass 198	7.05 ( ) ( )
441	Present, but less than mass 443	14.47 ( ) ( )
442	40.0-100.0% of mass 198	76.07 ( ) ( )
443	17.0-23.0% of mass 442	15.09 (19.85) (2)
275	10.0-30.0% of mass 198	28.96 ( ) ( )
365	Greater than 1.0% of mass 198	3.4 ( ) ( )

(1)-Value is % mass 69 (2)-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	SAMPLE NO.	*LAB SAMPLE ID*	*LAB FILE ID*	*DATE ANALYZED*	*TIME ANALYZED*
1.	SSTD050	1400	2030331/A6091	03/31/03	0940
2.	MB90922	90922	2030331/A6092	03/31/03	1014
3.	LCS90923	90923	2030331/A6093	03/31/03	1035
4.	LCSD90924	90924	2030331/A6094	03/31/03	1056
5.	021-PL-WW-0324-03	20303250601	2030331/A6098	03/31/03	1342

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSSV1

Calibration Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Calibration Date 2: 03/21/03 Time 2: 1303

Method: SW-846 8270

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF 1	RF 2	RF 3	RF 4	RF 5	RF 6	RF 7	RF 8	RF 9	Avg RRF	% RSD	#	Type
Acenaphthylene	1.961	1.894	1.944	1.963	1.953	1.954				1.945	1.332		A
Anthracene	1.026	1.022	1.034	1.041	1.038	1.059				1.037	1.265		A
Benzo(a)anthracene	1.238	1.217	1.236	1.237	1.232	1.264	1.258	1.755		1.305	13.98		A
Benzidine		0.049	0.039	0.043	0.025	0.022				0.035	32.40		A
Benzo(b)fluoranthene	1.337	1.367	1.413	1.486	1.435	1.455	1.235	1.294		1.378	6.220		A
Benzo(k)fluoranthene	1.605	1.471	1.484	1.459	1.408	1.437	1.241	1.151		1.407	10.26		A
Benzo(g,h,i)perylene	1.778	1.809	1.858	1.844	1.885	1.952				1.854	3.278		A
Benzo(a)pyrene	1.298	1.328	1.380	1.375	1.368	1.398	1.132	1.015		1.287	10.79		A
Benzoic acid		0.194	0.163	0.222	0.173	0.166				0.184	13.50		A
Butylbenzylphthalate	0.403	0.468	0.469	0.489	0.461	0.464				0.459	6.309		A
Bis(2-Chloroethoxy)methane	0.515	0.502	0.515	0.509	0.506	0.513				0.510	1.088		A
Bis(2-Chloroethyl)ether	1.021	0.980	0.998	0.966	0.946	0.984	1.081			0.996	4.413		A
bis(2-Chloroisopropyl)ether	1.157	1.113	1.159	1.162	1.118	1.149				1.143	1.903		A
bis(2-ethylhexyl)phthalate	0.548	0.631	0.633	0.660	0.621	0.628	0.402			0.589	15.18		A
4-Bromophenyl-phenylether	0.224	0.221	0.227	0.225	0.228	0.233				0.226	1.765		A
Carbazole	1.128	1.103	1.140	1.172	1.136	1.137	1.120			1.134	1.875		A
4-Chlorophenyl-phenylether	0.773	0.753	0.770	0.766	0.743	0.750				0.759	1.593		A
Chrysene	1.214	1.163	1.180	1.187	1.166	1.200	1.297			1.201	3.816		A
Dibenz(a,h)anthracene	1.662	1.774	1.798	1.821	1.835	1.893	1.673	1.511		1.746	7.062		A
Dibenzofuran	1.795	1.718	1.755	1.763	1.742	1.768				1.757	1.469		A
1,2-Dichlorobenzene	1.419	1.356	1.379	1.373	1.377	1.418				1.387	1.852		A
1,3-Dichlorobenzene	1.489	1.416	1.429	1.444	1.433	1.507				1.453	2.518		A
3,3'-Dichlorobenzidine	0.437	0.444	0.437	0.415	0.403	0.409				0.424	4.110		A
2,4-Dichlorophenol	0.319	0.296	0.314	0.316	0.311	0.321	0.268	0.224		0.296	11.44		A
Diethylphthalate	1.204	1.190	1.217	1.266	1.207	1.201				1.214	2.199		A
2,4-Dimethylphenol	0.444	0.442	0.462	0.458	0.457	0.464				0.454	2.044		A
Dimethyl-phthalate	1.379	1.308	1.336	1.377	1.354	1.345				1.350	1.979		A
Di-n-octylphthalate	0.840	1.091	1.095	1.108	1.114	1.130				1.063	10.35		A
2,4-Dinitrophenol		0.111	0.154	0.202	0.218	0.228				0.183	26.89		A
2,6-Dinitrotoluene	0.298	0.293	0.319	0.319	0.312	0.313	0.206	0.257		0.290	13.59		A
Fluoranthene	1.196	1.197	1.231	1.269	1.233	1.212				1.223	2.259		A
Fluorene	1.385	1.367	1.419	1.437	1.407	1.406				1.404	1.771		A
Hexachlorobenzene	0.287	0.268	0.271	0.270	0.276	0.280	0.330			0.283	7.641		A
Hexachlorobutadiene	0.294	0.283	0.289	0.283	0.284	0.294	0.312	0.283		0.290	3.443		A

Column used to indicate that the required RRF or %RSD values is outside of QC limits

* Indicates that the compound is outside of the required minimum RRF and maximum %RSD values.

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSSV1

Calibration Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Calibration Date 2: 03/21/03 Time 2: 1303

Method: SW-846 8270

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF 1	RF 2	RF 3	RF 4	RF 5	RF 6	RF 7	RF 8	RF 9	Avg RRF	% RSD	#	Type
Hexachlorocyclopentadiene	0.237	0.385	0.409	0.436	0.447	0.481				0.399	21.51		A
Hexachloroethane	0.622	0.587	0.596	0.585	0.582	0.602	0.585			0.594	2.350		A
Isophorone	0.951	0.926	0.956	0.931	0.898	0.899				0.927	2.670		A
Indeno(1,2,3-cd)pyrene	1.966	2.059	2.100	2.121	2.154	2.222	1.838	0.925		1.923	21.85		A
2-Methylnaphthalene	0.744	0.720	0.758	0.767	0.759	0.767				0.752	2.406		A
o-Cresol	1.292	1.186	1.252	1.216	1.180	1.213				1.223	3.460		A
Naphthalene	1.098	1.051	1.079	1.092	1.086	1.115				1.087	1.961		A
Nitrobenzene	0.535	0.519	0.525	0.513	0.495	0.513	0.530			0.518	2.590		A
2-Nitrophenol	0.188	0.195	0.203	0.208	0.203	0.209				0.201	3.991		A
N-Nitrosodimethylamine	0.312	0.259	0.296	0.296	0.297	0.326				0.298	7.556		A
N-Nitrosodiphenylamine	0.557	0.511	0.524	0.516	0.538	0.536	0.485			0.524	4.385		A
Phenanthrene	1.068	1.035	1.042	1.051	1.064	1.067				1.055	1.346		A
2,4,5-Trichlorophenol	0.445	0.446	0.472	0.471	0.467	0.481	0.356			0.448	9.546		A
2,4,6-Trichlorophenol	0.421	0.418	0.442	0.447	0.445	0.456	0.390			0.431	5.320		A
Benzyl alcohol	0.888	0.859	0.915	0.902	0.870	0.894				0.888	2.323		A
Pentachloroethane	0.580	0.594	0.585	0.582	0.621					0.592	2.853		A
o-Toluidine	2.405	2.397	2.389	2.545	2.596					2.466	3.919		A
Aniline	1.870	1.749	1.862	1.817	1.740	1.768				1.801	3.161		A
Pentachlorobenzene	0.528	0.530	0.557	0.558	0.577					0.550	3.723		A
Pyridine	1.128	1.056	0.968	1.075	1.174	1.190				1.099	7.532		A
Caprolactam	0.093	0.106	0.118	0.118	0.114	0.096				0.107	10.18		A
Acetophenone	0.985	1.957	2.027	1.999	1.916	1.951				1.806	22.36		A
2-Acetylaminofluorene	0.617	0.635	0.641	0.702	0.732					0.665	7.352		A
4-Aminobiphenyl	0.809	0.788	0.791	0.730	0.733					0.770	4.727		A
Aramite	0.072	0.077	0.074	0.076	0.077					0.075	3.016		A
Chlorobenzilate	0.396	0.423	0.395	0.419	0.426					0.412	3.651		A
Diallate (Avadex)	0.491	0.478	0.464	0.414	0.431					0.456	7.135		A
p-Dimethylaminoazobenzene	0.465	0.506	0.474	0.470	0.480					0.479	3.363		A
7,12-Dimethylbenz(a)anthrace	0.587	0.637	0.677	0.694	0.689					0.657	6.891		A
3,3'-Dimethylbenzidine	0.748	0.755	0.713	0.649	0.642					0.701	7.592		A
Acrylamide	0.108	0.196	0.225	0.228	0.232					0.198	26.31		A
3-Nitroaniline	0.326	0.325	0.335	0.344	0.328	0.323				0.330	2.391		A
4-Nitroaniline	0.399	0.393	0.415	0.419	0.414	0.417				0.409	2.625		A
a,a-Dimethylphenethylamine	0.725	0.764	0.822	0.748	0.796					0.771	4.966		A

Column used to indicate that the required RRF or %RSD values is outside of QC limits

* Indicates that the compound is outside of the required minimum RRF and maximum %RSD values.

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSSV1

Calibration Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Calibration Date 2: 03/21/03 Time 2: 1303

Method: SW-846 8270

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF 1	RF 2	RF 3	RF 4	RF 5	RF 6	RF 7	RF 8	RF 9	Avg RRF	% RSD	#	Type
Dimethoate	0.421	0.437	0.439	0.379	0.382					0.412	7.123		A
Disulfoton	0.658	0.624	0.633	0.593	0.598					0.621	4.297		A
1,3-Dinitrobenzene	0.196	0.201	0.212	0.207	0.209					0.205	3.220		A
1,4-Dinitrobenzene	0.354	0.400	0.401	0.389	0.413					0.391	5.808		A
Famphur	0.510	0.440	0.315	0.215	0.210					0.338	39.73		A
Ethyl methanesulfonate	1.451	1.465	1.465	1.474	1.512					1.473	1.548		A
Hexachloropropene	0.301	0.313	0.334	0.339	0.364					0.330	7.487		A
Isodrin	0.148	0.144	0.145	0.134	0.139					0.142	3.794		A
Isosafrole	0.273	0.259	0.280	0.267	0.283					0.272	3.695		A
Kepone	0.044	0.066	0.075	0.085	0.103					0.075	29.57		A
Methyl parathion	0.319	0.332	0.343	0.298	0.293					0.317	6.757		A
Methapyriline	0.551	0.542	0.517	0.420	0.395					0.485	14.93		A
Phorate	0.931	0.909	0.912	0.830	0.896					0.896	4.331		A
3-Methylcholanthrene	0.791	0.799	0.858	0.915	0.938					0.860	7.710		A
Methylmethanesulfonate	1.139	1.316	1.347	1.348	1.421					1.314	8.005		A
Phthalic Acid	0.189	0.159	0.156	0.135	0.151					0.158	12.41		A
1,4-Naphthoquinone	0.415	0.411	0.415	0.399	0.396					0.407	2.243		A
Phthalic anhydride	0.189	0.159	0.156	0.135	0.151					0.158	12.41		A
Tris(2,3-dibromopropyl)	0.116	0.140	0.154	0.167	0.188					0.153	17.79		A
1-Naphthylamine	1.083	1.072	1.033	0.934	0.908					1.006	7.990		A
4,4'-Methylenebis(2-cloroanili	0.217	0.244	0.246	0.255	0.264					0.245	7.277		A
2-Naphthylamine	0.944	0.892	0.881	0.797	0.793					0.862	7.538		A
4-Nitroquinoline-1-oxide	0.043	0.033	0.038	0.028	0.028					0.034	19.45		A
N-Nitrosodibutylamine	0.360	0.361	0.380	0.365	0.371					0.367	2.244		A
N-Nitrosodiethylamine	0.731	0.783	0.779	0.761	0.806					0.772	3.643		A
N-Nitrosomethylethylamine	0.269	0.423	0.443	0.481	0.508					0.425	21.94		A
n-Nitroso morpholine	0.773	0.792	0.819	0.828	0.865					0.815	4.335		A
N-Nitrosopiperidine	0.181	0.191	0.198	0.189	0.199					0.192	3.640		A
N-Nitrosopyrrolidine	0.496	0.475	0.457	0.446	0.441					0.463	4.888		A
1,2,4,5-Tetrachlorobenzene	0.336	0.336	0.358	0.373	0.395					0.360	7.044		A
5-Nitro-o-toluidine	0.314	0.341	0.327	0.308	0.310					0.320	4.357		A
Parathion	0.200	0.220	0.243	0.212	0.218					0.218	7.245		A
Pentachloronitrobenzene(PCN	0.132	0.136	0.138	0.133	0.140					0.136	2.284		A
Phenacetin	0.487	0.536	0.578	0.526	0.529					0.531	6.107		A

Column used to indicate that the required RRF or %RSD values is outside of QC limits

* Indicates that the compound is outside of the required minimum RRF and maximum %RSD values.

FORM VI SV-1

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSSV1

Calibration Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Calibration Date 2: 03/21/03 Time 2: 1303

Method: SW-846 8270

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF 1	RF 2	RF 3	RF 4	RF 5	RF 6	RF 7	RF 8	RF 9	Avg RRF	% RSD	#	Type
p-Phenylenediamine	0.274	0.268	0.273	0.241	0.232					0.257	7.716		A
2-Picoline	1.555	1.842	1.975	1.988	2.096					1.891	11.01		A
Di-n-butylphthalate	1.039	1.107	1.143	1.168	1.154	1.133				1.124	4.119		A
Pronamide	0.366	0.379	0.386	0.368	0.368					0.373	2.390		A
1,2 Diphenylhydrazine	1.111	1.021	1.031	0.991	1.016	1.019				1.032	4.000		A
Safrole	0.451	0.448	0.458	0.433	0.447					0.447	2.009		A
Sulfotep	0.189	0.218	0.248	0.278	0.282					0.243	16.30		A
Thionazine	0.279	0.278	0.292	0.287	0.280					0.283	2.158		A
2-Nitroaniline	0.326	0.325	0.335	0.344	0.328	0.323				0.330	2.391		A
0,0,0-Triethylphosphorothioate	0.180	0.186	0.187	0.191	0.200					0.189	3.766		A
2-Chloronaphthalene	1.257	1.184	1.184	1.195	1.191	1.232				1.207	2.505		A
4-Chloroaniline	0.445	0.417	0.441	0.447	0.426	0.431				0.435	2.635		A
1,3,5-Trinitrobenzene	0.058	0.072	0.078	0.074	0.078					0.072	11.24		A
2,3,4,6-Tetrachlorophenol	0.232	0.257	0.289	0.287	0.299					0.273	10.07		A
2,6-Dichlorophenol	0.219	0.260	0.226	0.214	0.220					0.228	8.077		A
Dinoseb	0.144	0.151	0.178	0.181	0.189					0.169	11.70		A
Atrazine (Aatrex)	0.127	0.077	0.097	0.102	0.097	0.104				0.101	16.00		A
Benzaldehyde	1.920	1.878	1.917	1.889	1.815	1.833				1.875	2.316		A
Biphenyl	0.619	0.575	0.633	0.640	0.618	0.618				0.617	3.629		A
Cresols	2.565	2.425	2.574	2.525	2.442	2.504				2.506	2.473		A
m,p-Cresol	1.273	1.238	1.323	1.309	1.262	1.291				1.283	2.424		A
2-Methyl-4,6-dinitrophenol	0.062	0.164	0.184	0.188	0.190	0.184				0.162	30.69		A
1-Methylnaphthalene	0.659	0.641	0.675	0.677	0.665	0.686				0.667	2.379		A
Phenol	2.047	1.908	1.940	1.923	1.812	1.929				1.926	3.904		A
2-Chlorophenol	1.252	1.183	1.231	1.209	1.184	1.212				1.212	2.226		A
1,4-Dichlorobenzene	1.533	1.434	1.457	1.480	1.453	1.512				1.478	2.555		A
N-Nitroso-di-n-propylamine	1.271	1.162	1.258	1.240	1.186	1.207	1.161			1.212	3.716		A
1,2,4-Trichlorobenzene	0.416	0.400	0.402	0.410	0.406	0.415				0.408	1.608		A
4-Chloro-3-methylphenol	0.365	0.348	0.384	0.374	0.368	0.362				0.367	3.294		A
Acenaphthene	1.199	1.144	1.175	1.190	1.172	1.187				1.178	1.655		A
4-Nitrophenol	0.206	0.208	0.210	0.219	0.201	0.199				0.207	3.445		A
2,4-Dinitrotoluene	0.373	0.417	0.424	0.453	0.429	0.429	0.272	0.175		0.371	26.29		A
Pentachlorophenol	0.151	0.203	0.201	0.198	0.189	0.186				0.188	10.19		A
Pyrene	1.135	1.122	1.153	1.186	1.102	1.130				1.138	2.522		A

Column used to indicate that the required RRF or %RSD values is outside of QC limits

* Indicates that the compound is outside of the required minimum RRF and maximum %RSD values.

FORM VI SV-1

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSSV1

Calibration Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Calibration Date 2: 03/21/03 Time 2: 1303

Method: SW-846 8270

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF 1	RF 2	RF 3	RF 4	RF 5	RF 6	RF 7	RF 8	RF 9	Avg RRF	% RSD	#	Type
Nitrobenzene-d5	0.556	0.539	0.544	0.537	0.534	0.539				0.541	1.450		A
2-Fluorobiphenyl	1.524	1.470	1.479	1.515	1.512	1.547				1.508	1.886		A
Terphenyl-d14	0.910	0.899	0.913	0.943	0.869	0.882				0.903	2.899		A
Phenol-d5	1.895	1.781	1.850	1.828	1.795	1.833				1.830	2.224		A
2-Fluorophenol	1.353	1.336	1.325	1.303	1.279	1.309				1.317	1.993		A
2,4,6-Tribromophenol	0.256	0.234	0.245	0.250	0.237	0.236				0.243	3.629		A

Column used to indicate that the required RRF or %RSD values is outside of QC limits

* Indicates that the compound is outside of the required minimum RRF and maximum %RSD values.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSSV1

Calibration Date: 03/31/03 Time: 0940

Lab File ID: 2030331/A6091

Init. Calib. Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Init. Calib. Date 2: 03/21/03 Time 2: 1303

Method: SW-846 8270

COMPOUND	Avg RF	RRF	Min RRF		% D	Max D	
Acenaphthylene	1.945	1.884	.01		-3.12	50	
Anthracene	1.037	1.022	.01		-1.38	50	
Benzo(a)anthracene	1.305	1.229	.01		-5.81	50	
Benzidine	0.035	0.011	.01		-68.3	50	
Benzo(b)fluoranthene	1.378	1.347	.01		-2.23	50	
Benzo(k)fluoranthene	1.407	1.524	.01		8.346	50	
Benzo(g,h,i)perylene	1.854	1.981	.01		6.834	50	
Benzo(a)pyrene	1.287	1.373	.01		6.694	20	
Benzoic acid	0.184	0.207	.01		12.6	50	
Butylbenzylphthalate	0.459	0.462	.01		0.559	50	
Bis(2-Chloroethoxy)methane	0.510	0.503	.01		-1.34	50	
Bis(2-Chloroethyl)ether	0.996	1.057	.01		6.098	50	
bis(2-Chloroisopropyl)ether	1.143	1.084	.01		-5.15	50	
bis(2-ethylhexyl)phthalate	0.589	0.610	.01		3.586	50	
4-Bromophenyl-phenylether	0.226	0.233	.01		2.783	50	
Carbazole	1.134	1.093	.01		-3.60	50	
4-Chlorophenyl-phenylether	0.759	0.751	.01		-1.01	50	
Chrysene	1.201	1.161	.01		-3.35	50	
Dibenz(a,h)anthracene	1.746	1.823	.01		4.442	50	
Dibenzofuran	1.757	1.713	.01		-2.49	50	
1,2-Dichlorobenzene	1.387	1.368	.01		-1.39	50	
1,3-Dichlorobenzene	1.453	1.436	.01		-1.18	50	
3,3'-Dichlorobenzidine	0.424	0.453	.01		6.839	50	
2,4-Dichlorophenol	0.296	0.305	.01		3.143	20	
Diethylphthalate	1.214	1.127	.01		-7.16	50	
2,4-Dimethylphenol	0.454	0.441	.01		-2.96	50	
Dimethyl-phthalate	1.350	1.284	.01		-4.83	50	
Di-n-octylphthalate	1.063	1.068	.01		0.504	20	
2,4-Dinitrophenol	0.183	0.166	.05		-9.28	50	
2,6-Dinitrotoluene	0.290	0.298	.01		2.949	50	
Fluoranthene	1.223	1.193	.01		-2.45	20	
Fluorene	1.404	1.342	.01		-4.39	50	
Hexachlorobenzene	0.283	0.282	.01		-0.35	50	
Hexachlorobutadiene	0.290	0.298	.01		2.784	20	
Hexachlorocyclopentadiene	0.399	0.420	.05		5.329	50	
Hexachloroethane	0.594	0.584	.01		-1.73	50	
Isophorone	0.927	0.919	.01		-0.88	50	
Indeno(1,2,3-cd)pyrene	1.923	2.156	.01		12.1	50	
2-Methylnaphthalene	0.752	0.732	.01		-2.64	50	

FORM V II VOA

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSSV1

Calibration Date: 03/31/03 Time: 0940

Lab File ID: 2030331/A6091

Init. Calib. Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Init. Calib. Date 2: 03/21/03 Time 2: 1303

Method: SW-846 8270

COMPOUND	Avg RF	RRF	Min RRF		% D	Max D	
o-Cresol	1.223	1.164	.01		-4.84	50	
Naphthalene	1.087	1.062	.01		-2.30	50	
Nitrobenzene	0.518	0.505	.01		-2.55	50	
2-Nitrophenol	0.201	0.202	.01		0.273	20	
N-Nitrosodimethylamine	0.298	0.268	.01		-10.0	50	
N-Nitrosodiphenylamine	0.524	0.527	.01		0.514	20	
Phenanthrene	1.055	1.030	.01		-2.29	50	
2,4,5-Trichlorophenol	0.448	0.469	.01		4.703	50	
2,4,6-Trichlorophenol	0.431	0.448	.01		3.867	20	
Benzyl alcohol	0.888	0.846	.01		-4.74	50	
Aniline	1.801	1.583	.01		-12.1	50	
Pyridine	1.099	0.976	.01		-11.1	50	
Caprolactam	0.107	0.104	.01		-2.84	50	
Acetophenone	1.806	1.912	.01		5.886	50	
3-Nitroaniline	0.330	0.288	.01		-12.8	50	
4-Nitroaniline	0.409	0.288	.01		-29.7	50	
Di-n-butylphthalate	1.124	1.092	.01		-2.85	50	
1,2 Diphenylhydrazine	1.032	1.051	.01		1.847	50	
2-Nitroaniline	0.330	0.288	.01		-12.8	50	
2-Chloronaphthalene	1.207	1.192	.01		-1.23	50	
4-Chloroaniline	0.435	0.402	.01		-7.54	50	
Atrazine (Aatrex)	0.101	0.060	.01		-40.7	50	
Benzaldehyde	1.875	1.819	.01		-2.99	50	
Biphenyl	0.617	0.591	.01		-4.30	50	
Cresols	2.506	2.398	.01		-4.28	50	
m,p-Cresol	1.283	1.234	.01		-3.74	50	
2-Methyl-4,6-dinitrophenol	0.162	0.152	.01		-6.17	50	
1-Methylnaphthalene	0.667	0.648	.01		-2.86	50	
Phenol	1.926	1.878	.01		-2.49	20	
2-Chlorophenol	1.212	1.182	.01		-2.43	50	
1,4-Dichlorobenzene	1.478	1.445	.01		-2.22	20	
N-Nitroso-di-n-propylamine	1.212	1.159	.05		-4.40	50	
1,2,4-Trichlorobenzene	0.408	0.416	.01		1.941	50	
4-Chloro-3-methylphenol	0.367	0.353	.01		-3.84	20	
Acenaphthene	1.178	1.154	.01		-1.97	20	
4-Nitrophenol	0.207	0.189	.05		-8.78	50	
2,4-Dinitrotoluene	0.371	0.396	.01		6.757	50	
Pentachlorophenol	0.188	0.181	.01		-3.89	20	
Pyrene	1.138	1.128	.01		-0.88	50	

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: MSSV1

Calibration Date: 03/31/03 Time: 0940

Lab File ID: 2030331/A6091

Init. Calib. Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Init. Calib. Date 2: 03/21/03 Time 2: 1303

Method: SW-846 8270

COMPOUND	Avg RF	RRF	Min RRF		% D	Max D	
Nitrobenzene-d5	0.541	0.534	.01		-1.51	50	
2-Fluorobiphenyl	1.508	1.516	.01		0.512	50	
Terphenyl-d14	0.903	0.897	.01		-0.69	50	
Phenol-d5	1.830	1.738	.01		-5.02	50	
2-Fluorophenol	1.317	1.305	.01		-0.96	50	
2,4,6-Tribromophenol	0.243	0.225	.01		-7.25	50	

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab File ID (Standard): 2030331/A6091

Date Analyzed: 03/31/03 Time: 0940

Instrument ID: MSSV1

GC Column: DB-5MS-30M ID: .25 (mm)

Method: SW-846 8270

	IS 1 (ACE)			IS 2 (DCB)			IS 3(NPT)		
	Area	#	RT	Area	#	RT	Area	#	RT
12 HOUR STD	566005		6.017	307036		4.073	984138		4.919
UPPER LIMIT	1132010		6.517	614072		4.573	1968276		5.419
LOWER LIMIT	283002.5		5.517	153518		3.573	492069		4.419

EPA Sample No.

1 .	MB90922	498738		6.02		231764		4.07		816862		4.92	
2 .	LCS90923	475217		6.02		239373		4.07		791251		4.92	
3 .	LCSD90924	528357		6.02		255053		4.07		850673		4.92	
4 .	021-PL-WW-0324-03	470148		6.02		214154		4.08		850755		4.92	

IS 1 ID : Acenaphthene-d10

IS 2 ID : 1,4-Dichlorobenzene-d4

IS 3 ID : Naphthalene-d8

AREA UPPER LIMIT = +100% of internal standard area

AREALOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard values with an asterisk.

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID (Standard): 2030331/A6091 Date Analyzed: 03/31/03 Time: 0940

Instrument ID: MSSV1 GC Column: DB-5MS-30M ID: .25 (mm)

Method: SW-846 8270

	IS 4(PHN)			IS 5(CRY)			IS 6(PRY)		
	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
12 HOUR STD	953737		6.937		1030013		8.801		969806		9.948	
UPPER LIMIT	1907474		7.437		2060026		9.301		1939612		10.44	
LOWER LIMIT	476868.5		6.437		515006.5		8.301		484903		9.448	

1.	MB90922	797779		6.94		717984		8.8		651281		9.95	
2.	LCS90923	782716		6.94		803149		8.8		762897		9.95	
3.	LCSD90924	866347		6.93		882646		8.8		838552		9.94	
4.	021-PL-WW-0324-03	757363		6.94		686622		8.8		599851		9.95	

IS 4 ID : Phenanthrene-d10
IS 5 ID : Chrysene-d12
IS 6 ID : Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREALOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard values with an asterisk.
* Values outside of QC limits.

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB1701-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-WW-0324-03

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 20303250601

Date Collected: 03/24/03 Time: 1110

Date Received: 03/25/03

Date Extracted: 03/26/03

Date Analyzed: 03/27/03 Time: 1424

Dilution Factor: 1 Analyst: DLB

Prep Method: 8081W Prep

Analytical Method: SW-846 8081

Sulfur Cleanup: (Y/N) N Instrument ID: GCS3A

Lab File ID: 2030327/SV3007

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
72-54-8	4,4'-DDD	0.100	U	0.057	0.100
72-55-9	4,4'-DDE	0.100	U	0.021	0.100
50-29-3	4,4'-DDT	0.100	U	0.030	0.100
309-00-2	Aldrin	0.050	U	0.010	0.050
60-57-1	Dieldrin	0.100	U	0.026	0.100
959-98-8	Endosulfan I	0.050	U	0.017	0.050
33213-65-9	Endosulfan II	0.100	U	0.022	0.100
1031-07-8	Endosulfan sulfate	0.100	U	0.025	0.100
72-20-8	Endrin	0.100	U	0.032	0.100
7421-93-4	Endrin aldehyde	0.100	U	0.058	0.100
53494-70-5	Endrin ketone	0.100	U	0.030	0.100
76-44-8	Heptachlor	0.050	U	0.020	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.011	0.050
72-43-5	Methoxychlor	0.500	U	0.065	0.500
8001-35-2	Toxaphene	5.00	U	0.050	5.00
319-84-6	alpha-BHC	0.050	U	0.013	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.017	0.050
319-85-7	beta-BHC	0.050	U	0.038	0.050
319-86-8	delta-BHC	0.050	U	0.013	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.016	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.015	0.050

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB1701-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: MB90444

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 90444

Date Collected: Time:

Date Received:

Date Extracted: 03/26/03

Date Analyzed: 03/27/03 Time: 1252

Dilution Factor: 1 Analyst: DLB

Prep Method: 8081W Prep

Analytical Method: SW-846 8081

Sulfur Cleanup: (Y/N) N Instrument ID: GCS3A

Lab File ID: 2030327/SV3004

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
72-54-8	4,4'-DDD	0.100	U	0.057	0.100
72-55-9	4,4'-DDE	0.100	U	0.021	0.100
50-29-3	4,4'-DDT	0.100	U	0.030	0.100
309-00-2	Aldrin	0.050	U	0.010	0.050
60-57-1	Dieldrin	0.100	U	0.026	0.100
959-98-8	Endosulfan I	0.050	U	0.017	0.050
33213-65-9	Endosulfan II	0.100	U	0.022	0.100
1031-07-8	Endosulfan sulfate	0.100	U	0.025	0.100
72-20-8	Endrin	0.100	U	0.032	0.100
7421-93-4	Endrin aldehyde	0.100	U	0.058	0.100
53494-70-5	Endrin ketone	0.100	U	0.030	0.100
76-44-8	Heptachlor	0.050	U	0.020	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.011	0.050
72-43-5	Methoxychlor	0.500	U	0.065	0.500
8001-35-2	Toxaphene	5.00	U	0.050	5.00
319-84-6	alpha-BHC	0.050	U	0.013	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.017	0.050
319-85-7	beta-BHC	0.050	U	0.038	0.050
319-86-8	delta-BHC	0.050	U	0.013	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.016	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.015	0.050

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB1701-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCS90445

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 90445

Date Collected: Time:

Date Received:

Date Extracted: 03/26/03

Date Analyzed: 03/27/03 Time: 1322

Dilution Factor: 1 Analyst: DLB

Prep Method: 8081W Prep

Analytical Method: SW-846 8081

Sulfur Cleanup: (Y/N) N Instrument ID: GCS3A

Lab File ID: 2030327/SV3005

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
72-54-8	4,4'-DDD	0.374		0.057	0.100
72-55-9	4,4'-DDE	0.543		0.021	0.100
50-29-3	4,4'-DDT	0.485		0.030	0.100
309-00-2	Aldrin	0.565		0.010	0.050
60-57-1	Dieldrin	0.497		0.026	0.100
959-98-8	Endosulfan I	0.422		0.017	0.050
33213-65-9	Endosulfan II	0.578		0.022	0.100
1031-07-8	Endosulfan sulfate	0.400		0.025	0.100
72-20-8	Endrin	0.517		0.032	0.100
7421-93-4	Endrin aldehyde	0.405		0.058	0.100
53494-70-5	Endrin ketone	0.453		0.030	0.100
76-44-8	Heptachlor	0.501		0.020	0.050
1024-57-3	Heptachlor epoxide	0.394		0.011	0.050
72-43-5	Methoxychlor	0.508		0.065	0.500
8001-35-2	Toxaphene	5.00	U	0.050	5.00
319-84-6	alpha-BHC	0.448		0.013	0.050
5103-71-9	alpha-Chlordane	0.562		0.017	0.050
319-85-7	beta-BHC	0.525		0.038	0.050
319-86-8	delta-BHC	0.486		0.013	0.050
58-89-9	gamma-BHC (Lindane)	0.478		0.016	0.050
5103-74-2	gamma-Chlordane	0.560		0.015	0.050

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB1701-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCSD90446

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 90446

Date Collected: Time:

Date Received:

Date Extracted: 03/26/03

Date Analyzed: 03/27/03 Time: 1353

Dilution Factor: 1 Analyst: DLB

Prep Method: 8081W Prep

Analytical Method: SW-846 8081

Sulfur Cleanup: (Y/N) N Instrument ID: GCS3A

Lab File ID: 2030327/SV3006

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
72-54-8	4,4'-DDD	0.318		0.057	0.100
72-55-9	4,4'-DDE	0.494		0.021	0.100
50-29-3	4,4'-DDT	0.445		0.030	0.100
309-00-2	Aldrin	0.503		0.010	0.050
60-57-1	Dieldrin	0.432		0.026	0.100
959-98-8	Endosulfan I	0.365		0.017	0.050
33213-65-9	Endosulfan II	0.523		0.022	0.100
1031-07-8	Endosulfan sulfate	0.355		0.025	0.100
72-20-8	Endrin	0.452		0.032	0.100
7421-93-4	Endrin aldehyde	0.360		0.058	0.100
53494-70-5	Endrin ketone	0.400		0.030	0.100
76-44-8	Heptachlor	0.447		0.020	0.050
1024-57-3	Heptachlor epoxide	0.335		0.011	0.050
72-43-5	Methoxychlor	0.458	J	0.065	0.500
8001-35-2	Toxaphene	5.00	U	0.050	5.00
319-84-6	alpha-BHC	0.378		0.013	0.050
5103-71-9	alpha-Chlordane	0.501		0.017	0.050
319-85-7	beta-BHC	0.456		0.038	0.050
319-86-8	delta-BHC	0.404		0.013	0.050
58-89-9	gamma-BHC (Lindane)	0.410		0.016	0.050
5103-74-2	gamma-Chlordane	0.499		0.015	0.050

2E

WATER PESTICIDE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

GC Column (1): DB1701-30M ID: .53 (mm) GC Cloumn (2): ID: (mm)

Method: SW-846 8081

	EPA SAMPLE NO.	SMC1 1-(1)	Lo	Hi	F	SMC1 1-(2)	Lo	Hi	F	SMC2 2-(1)	Lo	Hi	F	SMC2 2-(2)	Lo	Hi	F	TOT OUT
1 .	021-PL-WW-0324-03	133	60	150						60	60	150						0
2 .	MB90444	109	60	150						70	60	150						0
3 .	LCS90445	119	60	150						89	60	150						0
4 .	LCSD90446	114	60	150						75	60	150						0

SMC 1 : Tetrachloro-m-xylene SMC 2 : Decachlorobiphenyl

FORM II PEST-1

3E

WATER PESTICIDE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Contract: Method: SW-846 8081

SAMPLE NO : 90445

COMPOUND	*UNITS*	*SPIKE ADDED*	*SAMPLE CONCENTRATION*	*LCS CONCENTRATION*	*LCS % REC*	*LCS % REC FLAG*	*QC. LIMITS*
4,4'-DDD	ug/L	.5	0	.374	75		31 - 141
4,4'-DDE	ug/L	.5	0	.543	109		30 - 145
4,4'-DDT	ug/L	.5	0	.485	97		25 - 160
Aldrin	ug/L	.5	0	.565	113		42 - 122
Dieldrin	ug/L	.5	0	.497	99		36 - 146
Endosulfan I	ug/L	.5	0	.422	84		45 - 153
Endosulfan II	ug/L	.5	0	.578	116		0 - 202
Endosulfan sulfate	ug/L	.5	0	.4	80		26 - 144
Endrin	ug/L	.5	0	.517	103		30 - 147
Endrin aldehyde	ug/L	.5	0	.405	81		0 - 202
Endrin ketone	ug/L	.5	0	.453	91		26 - 144
Heptachlor	ug/L	.5	0	.501	100		34 - 111
Heptachlor epoxide	ug/L	.5	0	.394	79		37 - 142
Methoxychlor	ug/L	.5	0	.508	102		26 - 144
alpha-BHC	ug/L	.5	0	.448	90		37 - 134
alpha-Chlordane	ug/L	.5	0	.562	112		45 - 119
beta-BHC	ug/L	.5	0	.525	105		17 - 147
delta-BHC	ug/L	.5	0	.486	97		19 - 140
gamma-BHC (Lindane)	ug/L	.5	0	.478	96		32 - 127
gamma-Chlordane	ug/L	.5	0	.56	112		45 - 119

RPD : 0 out of 20 outside limits

Spike Recovery: 0 out of 40 outside limits

3E

WATER PESTICIDE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Contract: Method: SW-846 8081

SAMPLE NO : ***90446***

COMPOUND	UNITS	SPIKE ADDED	LCSD CONC.	LCSD % REC	REC FLAG	% RPD	RPD FLAG	QC. LIMITS REC	QC. LIMITS RPD
4,4'-DDD	ug/L	.5	.318	64		16		31 - 141	0 - 40
4,4'-DDE	ug/L	.5	.494	99		10		30 - 145	0 - 40
4,4'-DDT	ug/L	.5	.445	89		9		25 - 160	0 - 40
Aldrin	ug/L	.5	.503	101		11		42 - 122	0 - 40
Dieldrin	ug/L	.5	.432	86		14		36 - 146	0 - 40
Endosulfan I	ug/L	.5	.365	73		14		45 - 153	0 - 40
Endosulfan II	ug/L	.5	.523	105		10		0 - 202	0 - 40
Endosulfan sulfate	ug/L	.5	.355	71		12		26 - 144	0 - 40
Endrin	ug/L	.5	.452	90		13		30 - 147	0 - 40
Endrin aldehyde	ug/L	.5	.36	72		12		0 - 202	0 - 40
Endrin ketone	ug/L	.5	.4	80		13		26 - 144	0 - 40
Heptachlor	ug/L	.5	.447	89		12		34 - 111	0 - 40
Heptachlor epoxide	ug/L	.5	.335	67		16		37 - 142	0 - 40
Methoxychlor	ug/L	.5	.458	92		10		26 - 144	0 - 40
alpha-BHC	ug/L	.5	.378	76		17		37 - 134	0 - 40
alpha-Chlordane	ug/L	.5	.501	100		11		45 - 119	0 - 40
beta-BHC	ug/L	.5	.456	91		14		17 - 147	0 - 40
delta-BHC	ug/L	.5	.404	81		18		19 - 140	0 - 40
gamma-BHC (Lindane)	ug/L	.5	.41	82		16		32 - 127	0 - 40
gamma-Chlordane	ug/L	.5	.499	100		11		45 - 119	0 - 40

RPD : 0 out of 20 outside limits

Spike Recovery: 0 out of 40 outside limits

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB90444

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 90444

SAS No.: SDG No.: 203032506

Matrix: Water Sulfur Cleanup: (Y/N) N

Date Extracted: 03/26/03

Date Analyzed (1): 03/27/03 Time (1): 1252

Date Analyzed (2): Time (2):

Instrument ID (1): GCS3A

Instrument ID (2):

GC Column (1): DB1701-30M ID: .53 (mm)

GC Column (2): ID: (mm)

Method: SW-846 8081

Lab File ID: 2030327/SV3004

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATE ANALYZED	TIME ANALYZED
1.	LCS90445	90445	03/27/03	1322		
2.	LCSD90446	90446	03/27/03	1353		
3.	021-PL-WW-0324-03	20303250601	03/27/03	1424		

6E

PESTICIDE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: GCS3A

Calibration Date 1: 03/12/03 Time 1: 1740

GC Column: DB1701-30M ID: .53 (mm)

Calibration Date 2: 03/13/03 Time 2: 0423

Method: SW-846 8081

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	$\overline{RF}$	RSD
4,4'-DDD	4168.800	4509.850	4600.492	4383.269	4567.675				4446.017	3.953
4,4'-DDE	4223.500	5585.425	5805.281	5908.750	5664.160				5437.423	12.69
4,4'-DDT	3184.700	3786.325	3801.733	3839.888	4005.475				3723.624	8.422
Aldrin	4506.000	5994.900	6548.633	6638.150	6481.370				6033.811	14.74
Aroclor-1016	1119.275	1228.244	1344.732	1439.745	1485.360				1323.471	11.39
Aroclor-1221	408.682								408.682	0
Aroclor-1232	688.275								688.275	0
Aroclor-1242	1088.235								1088.235	0
Aroclor-1248	1372.648								1372.648	0
Aroclor-1254	993.052								993.052	0
Aroclor-1260	1438.144	1526.901	1608.152	1709.640	1779.910				1612.55	8.503
Chlordane	1983.740								1983.74	0
Decachlorobiphenyl	4172.900	4874.025	4348.942	4259.312	4322.310				4395.498	6.278
Dieldrin	3897.100	5596.525	5873.158	5721.738	6029.395				5423.583	16.01
Endosulfan I	4042.400	5070.800	5480.333	5317.425	5677.040				5117.6	12.52
Endosulfan II	4242.700	5056.050	5069.600	5181.000	4912.450				4892.36	7.675
Endosulfan sulfate	3446.200	4296.525	4472.094	4523.217	4356.325				4218.872	10.45
Endrin	4004.300	5359.275	5466.867	5352.819	5592.225				5155.097	12.62
Endrin aldehyde	3475.000	3978.494	3986.592	3989.700	3910.050				3867.967	5.742
Endrin ketone	4204.400	4817.131	4957.800	5032.758	4704.285				4743.275	6.89
Heptachlor	4591.600	5672.600	5716.183	5488.350	5909.990				5475.745	9.432
Heptachlor epoxide	4804.800	5827.400	6117.175	6143.717	5941.460				5766.91	9.594
Methoxychlor	2178.540	2220.865	1996.990	1992.024	2060.210				2089.726	5.025
Tetrachloro-m-xylene	5246.400	6322.050	6075.050	5665.825	6040.100				5869.885	7.157
Toxaphene	678.982								678.982	0
alpha-BHC	4890.000	7282.800	8129.350	7737.200	8369.540				7281.778	19.21
alpha-Chlordane	5143.000	6109.850	6279.788	6337.017	6097.090				5993.349	8.121
beta-BHC	3363.000	3621.238	3707.433	3797.900	3490.380				3595.99	4.802
delta-BHC	4366.600	6142.250	6842.412	6887.550	6701.280				6188.018	17.14
gamma-BHC (Lindane)	4652.600	6700.850	7234.450	6905.488	7413.920				6581.462	16.91
gamma-Chlordane	4806.800	5852.000	6173.900	6204.467	5980.290				5803.491	9.917

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: GCS3A

Calibration Date: 03/27/03 Time: 1139

Init. Calib. Date 1: 03/12/03

GC Column: DB1701-30M ID: .53 (mm)

Init. Calib. Date 2: 03/13/03

COMPOUND	$\overline{RRF}$	RRF50	% D
alpha-BHC	7281.778	8041.51667	1.512
Endosulfan I	5117.59967	5457.46667	-11.4
4,4'-DDD	4446.01708	4105.975	-5.50
Methoxychlor	2089.72575	1524.105	-17.1
gamma-BHC (Lindane)	6581.4615	7164.35	.6790
Heptachlor	5475.74467	5400.88333	-6.89
Dieldrin	5423.58317	5780.49167	-1.48
Endrin	5155.09708	5035.86667	-5.29
4,4'-DDT	3723.62417	3206.975	-9.90
Tetrachloro-m-xylene	5869.885	6305.7	-4.70
Decachlorobiphenyl	4395.49783	4533.86667	-22.5

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: GCS3A

Calibration Date: 03/27/03 Time: 1210

Init. Calib. Date 1: 03/12/03

GC Column: DB1701-30M ID: .53 (mm)

Init. Calib. Date 2: 03/13/03

COMPOUND	$\overline{RRF}$	RRF50	% D
beta-BHC	3595.99017	3233.18333	-10.0
delta-BHC	6188.0185	5799.28333	-6.28
Heptachlor epoxide	5766.91033	5570.13333	-3.41
4,4'-DDE	5437.42325	4920.85833	-9.50
Endosulfan II	4892.36	4539.65833	-7.20
Endosulfan sulfate	4218.87208	4004.225	-5.08
Endrin ketone	4743.27492	4098.11667	-13.6
Endrin aldehyde	3867.96708	3508.21667	-9.30
alpha-Chlordane	5993.34883	5814.98333	-2.97
gamma-Chlordane	5803.49133	5605.31667	-3.41
Aldrin	6033.81067	5874.08333	-2.64

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: GCS3A

Calibration Date: 03/27/03 Time: 1657

Init. Calib. Date 1: 03/12/03

GC Column: DB1701-30M ID: .53 (mm)

Init. Calib. Date 2: 03/13/03

COMPOUND	$\overline{RRF}$	RRF50	% D
alpha-BHC	7281.778	8140.21667	2.758
Endosulfan I	5117.59967	5733.78333	-6.99
4,4'-DDD	4446.01708	4330.675	-.336
Methoxychlor	2089.72575	1613.62833	-12.2
gamma-BHC (Lindane)	6581.4615	7206.63333	1.273
Heptachlor	5475.74467	5207.08333	-10.2
Dieldrin	5423.58317	5803.15833	-1.10
Endrin	5155.09708	5242.54167	-1.40
4,4'-DDT	3723.62417	3291.69167	-7.52
Tetrachloro-m-xylene	5869.885	6348.8	-4.05
Decachlorobiphenyl	4395.49783	4563.06667	-22.0

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: GCS3A

Calibration Date: 03/27/03 Time: 1728

Init. Calib. Date 1: 03/12/03

GC Column: DB1701-30M ID: .53 (mm)

Init. Calib. Date 2: 03/13/03

COMPOUND	$\overline{RRF}$	RRF50	% D
beta-BHC	3595.99017	3686.28333	2.510
delta-BHC	6188.0185	6708.88333	8.417
Heptachlor epoxide	5766.91033	6219.68333	7.851
4,4'-DDE	5437.42325	5598.9	2.969
Endosulfan II	4892.36	5041.24167	3.043
Endosulfan sulfate	4218.87208	4534.80833	7.488
Endrin ketone	4743.27492	4720.55	-.479
Endrin aldehyde	3867.96708	3951.58333	2.161
alpha-Chlordane	5993.34883	6425.98333	7.218
gamma-Chlordane	5803.49133	6240.96667	7.538
Aldrin	6033.81067	6613.48333	9.607

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-608-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-WW-0324-03

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 20303250601

Date Collected: 03/24/03 Time: 1110

Date Received: 03/25/03

Date Extracted: 03/26/03

Date Analyzed: 03/28/03 Time: 1303

Dilution Factor: 1 Analyst: TLS

Prep Method: SW-846 3510

Analytical Method: SW-846 8151A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS6A

Lab File ID: 2030328/SV6004

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
94-75-7	2,4'-D	10.0	U	0.270	10.0
93-76-5	2,4,5-T	2.00	U	0.270	2.00
93-72-1	2,4,5-TP (SILVEX)	2.00	U	0.320	2.00

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-608-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: MB90576

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 90576

Date Collected: Time:

Date Received:

Date Extracted: 03/26/03

Date Analyzed: 03/28/03 Time: 1213

Dilution Factor: 1 Analyst: TLS

Prep Method: SW-846 3510

Analytical Method: SW-846 8151A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS6A

Lab File ID: 2030328/SV6002

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
94-75-7	2,4'-D	10.0	U	0.270	10.0
93-76-5	2,4,5-T	2.00	U	0.270	2.00
93-72-1	2,4,5-TP (SILVEX)	2.00	U	0.320	2.00

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-608-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCS90577

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 90577

Date Collected: Time:

Date Received:

Date Extracted: 03/26/03

Date Analyzed: 03/28/03 Time: 1238

Dilution Factor: 1 Analyst: TLS

Prep Method: SW-846 3510

Analytical Method: SW-846 8151A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS6A

Lab File ID: 2030328/SV6003

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
94-75-7	2,4'-D	2.10	J	0.270	10.0
93-76-5	2,4,5-T	2.41		0.270	2.00
93-72-1	2,4,5-TP (SILVEX)	2.46		0.320	2.00

2E

WATER PESTICIDE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

GC Column (1): DB-608-30M ID: .53 (mm) GC Cloumn (2): ID: (mm)

Method: SW-846 8151A

	EPA SAMPLE NO.	SMC1 1-(1)	Lo	Hi	F	SMC1 1-(2)	Lo	Hi	F	SMC2 2-(1)	Lo	Hi	F	SMC2 2-(2)	Lo	Hi	F	TOT OUT
1 .	021-PL-WW-0324-03	80	37	140														0
2 .	MB90576	81	37	140														0
3 .	LCS90577	84	37	140														0

SMC 1 : DCAA SMC 2 :

3E

WATER PESTICIDE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Contract: Method: SW-846 8151A

SAMPLE NO : 90577

COMPOUND	*UNITS*	*SPIKE ADDED*	*SAMPLE CONCENTRATION*	*LCS CONCENTRATION*	*LCS % REC*	*LCS % REC FLAG*	*QC. LIMITS*
2,4'-D	ug/L	2	0	2.1	105		10 - 126
2,4,5-T	ug/L	2	0	2.41	121		32 - 130
2,4,5-TP (SILVEX)	ug/L	2	0	2.46	123		34 - 124

RPD : 0 out of 0 outside limits

Spike Recovery: 0 out of 3 outside limits

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB90576

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 90576

SAS No.: SDG No.: 203032506

Matrix: Water Sulfur Cleanup: (Y/N) N

Date Extracted: 03/26/03

Date Analyzed (1): 03/28/03 Time (1): 1213

Date Analyzed (2): Time (2):

Instrument ID (1): GCS6A

Instrument ID (2):

GC Column (1): DB-608-30M ID: .53 (mm)

GC Column (2): ID: (mm)

Method: SW-846 8151A

Lab File ID: 2030328/SV6002

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATE ANALYZED	TIME ANALYZED
1.	LCS90577	90577	03/28/03	1238		
2.	021-PL-WW-0324-03	20303250601	03/28/03	1303		

6E

PESTICIDE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: GCS6A

Calibration Date 1: 03/17/03 Time 1: 0910

GC Column: DB-608-30M ID: .53 (mm)

Calibration Date 2: 03/17/03 Time 2: 1148

Method: SW-846 8151A

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	$\overline{RF}$	RSD
2,4'-D	220898.120	32936.260	214850.710	85299.200	155009.480	95326.080			200719.975	14.09
2,4,5-T	628258.480	84736.360	652399.680	81554.350	483051.652	28883.600			593147.354	12.95
2,4,5-TP (SILVEX)	691793.760	55809.360	721595.420	34468.390	531404.325	49452.160			664087.236	11.89
DCAA	247579.280	49614.500	227547.460	92724.425	154365.745	42541.200			219062.102	17.38

FORM V I PEST-2

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: GCS6A

Calibration Date: 03/26/03 Time: 1539

Init. Calib. Date 1: 03/17/03

GC Column: DB-608-30M ID: .53 (mm)

Init. Calib. Date 2: 03/17/03

COMPOUND	$\overline{RRF}$	RRF50	% D
2,4'-D	200719.975	225069.73	12.13
2,4,5-T	593147.353	667444	12.52
2,4,5-TP (SILVEX)	664087.235	753265.11	13.42
DCAA	219062.101	247962.57	13.19

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Instrument ID: GCS6A

Calibration Date: 03/26/03 Time: 1936

Init. Calib. Date 1: 03/17/03

GC Column: DB-608-30M ID: .53 (mm)

Init. Calib. Date 2: 03/17/03

COMPOUND	$\overline{RRF}$	RRF50	% D
2,4'-D	200719.975	203533.67	1.401
2,4,5-T	593147.353	622788.25	4.997
2,4,5-TP (SILVEX)	664087.235	666998.68	.4384
DCAA	219062.101	209946.27	-4.16

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-WW-0324-03

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 20303250601

Date Collected: 03/24/03 Time: 1110

Date Received: 03/25/03

Date Extracted:

Date Analyzed: 04/01/03 Time: 1154

Dilution Factor: 500 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030329/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	2770000		20400	50000

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 830 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-WW-0324-03-RE

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 20303250603

Date Collected: 03/24/03 Time: 1110

Date Received: 03/25/03

Date Extracted:

Date Analyzed: 04/03/03 Time: 0141

Dilution Factor: 500 Analyst: DLB

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030402/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	867000		24500	60200

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: MB90611

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 90611

Date Collected: Time:

Date Received:

Date Extracted:

Date Analyzed: 03/31/03 Time: 1724

Dilution Factor: 1 Analyst: DLB

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030329/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	100	U	40.7	100

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCS90612

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 90612

Date Collected: Time:

Date Received:

Date Extracted:

Date Analyzed: 03/31/03 Time: 1818

Dilution Factor: 1 Analyst: DLB

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030329/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	2510		40.7	100

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: MB91819

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 91819

Date Collected: Time:

Date Received:

Date Extracted:

Date Analyzed: 04/02/03 Time: 1536

Dilution Factor: 1 Analyst: DLB

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030402/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	100	U	40.7	100

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCS91820

Contract:

SAS No.: SDG No.: 203032506

Lab Sample ID: 91820

Date Collected: Time:

Date Received:

Date Extracted:

Date Analyzed: 04/02/03 Time: 1634

Dilution Factor: 1 Analyst: DLB

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030402/SV2AD0

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	1530		40.7	100

2E

WATER PESTICIDE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

GC Column (1): ID: (mm) GC Cloumn (2): ID: (mm)

Method: FLORIDA PRO

	EPA SAMPLE NO.	SMC1 1-(1)	Lo	Hi	F	SMC1 1-(2)	Lo	Hi	F	SMC2 2-(1)	Lo	Hi	F	SMC2 2-(2)	Lo	Hi	F	TOT OUT
1 .	021-PL-WW-0324-03	0	81	142	D					0	42	193	D					0
2 .	021-PL-WW-0324-03-RE	0	81	142	D					0	42	193	D					0
3 .	MB90611	171	81	142	*					56	42	193						1
4 .	LCS90612	133	81	142						103	42	193						0
5 .	MB91819	106	81	142						127	42	193						0
6 .	LCS91820	82	81	142						121	42	193						0

SMC 1 : O-Terphenyl SMC 2 : Nonatriacontane

3E

WATER PESTICIDE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Contract: Method: FLORIDA PRO

SAMPLE NO : 90612

COMPOUND	*UNITS*	*SPIKE ADDED*	*SAMPLE CONCENTRATION*	*LCS CONCENTRATION*	*LCS % REC*	*LCS % REC FLAG*	*QC. LIMITS*
Petroleum Hydrocarbons	ug/L	1700	0	2510	148	*	55 - 118

RPD : 0 out of 0 outside limits

Spike Recovery: 1 out of 1 outside limits

3E

WATER PESTICIDE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

Contract: Method: FLORIDA PRO

SAMPLE NO : 91820

COMPOUND	*UNITS*	*SPIKE ADDED*	*SAMPLE CONCENTRATION*	*LCS CONCENTRATION*	*LCS % REC*	*LCS % REC FLAG*	*QC. LIMITS*
Petroleum Hydrocarbons	ug/L	1700	0	1530	90		55 - 118

RPD : 0 out of 0 outside limits

Spike Recovery: 0 out of 1 outside limits

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB90611

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 90611

SAS No.: SDG No.: 203032506

Matrix: Water Sulfur Cleanup: (Y/N) N

Date Extracted:

Date Analyzed (1): 03/31/03 Time (1): 1724

Date Analyzed (2): Time (2):

Instrument ID (1): GCS2A

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

Method: FLORIDA PRO

Lab File ID: 2030329/SV2AD0

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATE ANALYZED	TIME ANALYZED
1.	LCS90612	90612	03/31/03	1818		
2.	021-PL-WW-0324-03	20303250601	04/01/03	1154		

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB91819

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 91819

SAS No.: SDG No.: 203032506

Matrix: Water Sulfur Cleanup: (Y/N) N

Date Extracted:

Date Analyzed (1): 04/02/03 Time (1): 1536

Date Analyzed (2): Time (2):

Instrument ID (1): GCS2A

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

Method: FLORIDA PRO

Lab File ID: 2030402/SV2AD0

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATE ANALYZED	TIME ANALYZED
1.	LCS91820	91820	04/02/03	1634		
2.	021-PL-WW-0324-03-RE	20303250603	04/03/03	0141		

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032506 SAS No.: SDG No.: 203032506

Instrument ID: GCSV2AD Calibration Date(s): 03/29/03 03/29/03

Calibration Time(s): 1508 1937

LAB FILE ID: RRF5 =SV2AD002S RRF50 =SV2AD003S
RRF150=SV2AD004S RRF250=SV2AD005S RRF350=SV2AD006S

COMPOUND	RRF5	RRF50	RRF150	RRF250	RRF350	$\overline{RRF}$	% RSD
TOTAL PRO	172611	259089	240193	237108	229558		
O-TERPHENYL	535787	550599	529781	522715	502395		
Nonatriacontane	3415.8	2708.8	3081.2	2909.5	3302.5		

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL Contract:

Lab Code: Case No.: FLPRO SAS No.: SDG No.: 2030402

Instrument ID: GCSV2AD Calibration Date(s): 03/29/03 03/29/03

Calibration Time(s): 1508 1937

LAB FILE ID: RRF500=SV2AD007S

COMPOUND	RRF500					$\overline{RRF}$	% RSD
TOTAL PRO	222144					226784	12.9
O-TERPHENYL	484480					520960	4.6
Nonatriacontane	3517.1					3155.8	9.9

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032506 SAS No.: SDG No.: 203032506

Instrument ID: GCSV2AD Calibration Date: 03/31/03 Time: 1138

Lab File ID: SV2AD011S Init. Calib. Date(s): 03/29/03 03/29/03

Init. Calib. Times: 1508 1937

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
TOTAL PRO	226784	237781		4.8	
O-TERPHENYL	520960	459035		11.9	
Nonatriacontane	3155.8	3393.4		-7.5	

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032506 SAS No.: SDG No.: 203032506

Instrument ID: GCSV2AD Calibration Date: 03/31/03 Time: 1911

Lab File ID: SV2AD019S Init. Calib. Date(s): 03/29/03 03/29/03

Init. Calib. Times: 1508 1937

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
TOTAL PRO	226784	193624		14.6	
O-TERPHENYL	520960	459035		11.9	
Nonatriacontane	3155.8	3393.4		-7.5	

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032506 SAS No.: SDG No.: 203032506

Instrument ID: GCSV2AD Calibration Date: 04/01/03 Time: 0758

Lab File ID: SV2AD030S Init. Calib. Date(s): 03/29/03 03/29/03

Init. Calib. Times: 1508 1937

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
TOTAL PRO	226784	271375		19.7	
O-TERPHENYL	520960	459035		11.9	
Nonatriacontane	3155.8	3393.4		-7.5	

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032506 SAS No.: SDG No.: 203032506

Instrument ID: GCSV2AD Calibration Date: 04/01/03 Time: 1248

Lab File ID: SV2AD035S Init. Calib. Date(s): 03/29/03 03/29/03

Init. Calib. Times: 1508 1937

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
TOTAL PRO	226784	225392		0.6	
O-TERPHENYL	520960	459035		11.9	
Nonatriacontane	3155.8	3393.4		-7.5	

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032506 SAS No.: SDG No.: 203032506

Instrument ID: GCSV2AD Calibration Date: 04/02/03 Time: 1428

Lab File ID: SV2AD002S Init. Calib. Date(s): 03/29/03 03/29/03

Init. Calib. Times: 1508 1937

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
TOTAL PRO	226784	230263		1.5	
O-TERPHENYL	520960	481712		7.5	
Nonatriacontane	3155.8	3528.2		-11.8	

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032506 SAS No.: SDG No.: 203032506

Instrument ID: GCSV2AD Calibration Date: 04/03/03 Time: 0047

Lab File ID: SV2AD013S Init. Calib. Date(s): 03/29/03 03/29/03

Init. Calib. Times: 1508 1937

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
TOTAL PRO	226784	234318		3.3	
O-TERPHENYL	520960	481712		7.5	
Nonatriacontane	3155.8	3528.2		-11.8	

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032506 SAS No.: SDG No.: 203032506

Instrument ID: GCSV2AD Calibration Date: 04/03/03 Time: 0329

Lab File ID: SV2AD016S Init. Calib. Date(s): 03/29/03 03/29/03

Init. Calib. Times: 1508 1937

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
TOTAL PRO	226784	212154		6.5	
O-TERPHENYL	520960	481712		7.5	
Nonatriacontane	3155.8	3528.2		-11.8	

All other compounds must meet a minimum RRF of 0.010.

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: 021-PL-WW-0324-03
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Water
SAS No.:
SDG No.: 203032506
Level: (low / med)
% Solids:
Lab Sample ID: 20303250601
Date Received: 03/25/03
Time: 0945
Date Collected: 03/24/03
Time: 1110

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Aluminum	2.40	mg/L		0.016	0.20	SW-846 6010B	P
Antimony	0.0060	mg/L	U	0.0046	0.0060	SW-846 6010B	P
Arsenic	0.010	mg/L	U	0.0015	0.010	SW-846 6010B	P
Barium	0.0096	mg/L	B	0.00050	0.20	SW-846 6010B	P
Beryllium	0.0040	mg/L	U	0.00020	0.0040	SW-846 6010B	P
Cadmium	0.00031	mg/L	B	0.00020	0.0050	SW-846 6010B	P
Calcium	73.0	mg/L		0.032	5.00	SW-846 6010B	P
Chromium	0.0040	mg/L	B	0.00050	0.0050	SW-846 6010B	P
Cobalt	0.050	mg/L	U	0.00070	0.050	SW-846 6010B	P
Copper	0.0066	mg/L	B	0.0026	0.025	SW-846 6010B	P
Iron	2.19	mg/L		0.011	0.10	SW-846 6010B	P
Lead	0.021	mg/L		0.0016	0.0030	SW-846 6010B	P
Magnesium	3.65	mg/L	B	0.025	5.00	SW-846 6010B	P
Manganese	0.12	mg/L		0.00020	0.015	SW-846 6010B	P
Mercury	0.00003	mg/L	B	0.00003	0.00020	SW-846 7470A	AV
Nickel	0.0029	mg/L	B	0.0025	0.040	SW-846 6010B	P
Potassium	4.32	mg/L	B	0.049	5.00	SW-846 6010B	P
Selenium	0.0050	mg/L	U	0.0047	0.0050	SW-846 6010B	P
Silver	0.0050	mg/L	U	0.00040	0.0050	SW-846 6010B	P
Sodium	20.5	mg/L		0.17	5.00	SW-846 6010B	P
Thallium	0.0020	mg/L	U	0.0012	0.0020	SW-846 6010B	P
Vanadium	0.0021	mg/L	B	0.0011	0.050	SW-846 6010B	P
Zinc	0.052	mg/L		0.0052	0.020	SW-846 6010B	P

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032506
Calibration Source: 106-1-4 CPI/EXAXOL
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 03/28/03 Time: 0935

INITIAL CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Antimony	1.00	1.01	101	mg/L	SW-846 6010B	P
Arsenic	1.00	1.05	105	mg/L	SW-846 6010B	P
Beryllium	1.00	1.01	101	mg/L	SW-846 6010B	P
Cadmium	1.00	1.00	100	mg/L	SW-846 6010B	P
Calcium	1.00	1.00	100	mg/L	SW-846 6010B	P
Chromium	1.00	1.02	102	mg/L	SW-846 6010B	P
Cobalt	1.00	1.03	103	mg/L	SW-846 6010B	P
Copper	1.00	0.970	97	mg/L	SW-846 6010B	P
Iron	1.00	1.03	103	mg/L	SW-846 6010B	P
Lead	1.00	1.04	104	mg/L	SW-846 6010B	P
Magnesium	1.00	1.03	103	mg/L	SW-846 6010B	P
Manganese	1.00	1.02	102	mg/L	SW-846 6010B	P
Molybdenum	1.00	1.04	104	mg/L	SW-846 6010B	P
Nickel	1.00	1.02	102	mg/L	SW-846 6010B	P
Selenium	1.00	1.01	101	mg/L	SW-846 6010B	P
Silver	1.00	1.04	104	mg/L	SW-846 6010B	P
Strontium	1.00	1.00	100	mg/L	SW-846 6010B	P
Thallium	1.00	1.02	102	mg/L	SW-846 6010B	P
Titanium	1.00	0.990	99	mg/L	SW-846 6010B	P
Vanadium	1.00	1.00	100	mg/L	SW-846 6010B	P
Zinc	1.00	0.990	99	mg/L	SW-846 6010B	P

ICV CONTROL LIMITS EPA 6010B = 90-100 EPA 200.7 = 95-105

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032506
Calibration Source: 106-4-1 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 03/28/03 Time: 1033

CONTINUING CALIBRATION VERIFICATION

Analyte	True	Found	CAL %R	Units	Method	Type
Aluminum	5.00	5.03	101	mg/L	SW-846 6010B	P
Arsenic	0.500	0.530	105	mg/L	SW-846 6010B	P
Barium	0.500	0.510	101	mg/L	SW-846 6010B	P
Beryllium	0.500	0.510	101	mg/L	SW-846 6010B	P
Cadmium	0.500	0.510	102	mg/L	SW-846 6010B	P
Calcium	5.00	4.94	99	mg/L	SW-846 6010B	P
Chromium	0.500	0.510	101	mg/L	SW-846 6010B	P
Cobalt	0.500	0.510	102	mg/L	SW-846 6010B	P
Copper	0.500	0.500	101	mg/L	SW-846 6010B	P
Iron	5.00	5.06	101	mg/L	SW-846 6010B	P
Lead	0.500	0.520	104	mg/L	SW-846 6010B	P
Magnesium	5.00	5.21	104	mg/L	SW-846 6010B	P
Manganese	0.500	0.510	102	mg/L	SW-846 6010B	P
Nickel	0.500	0.510	102	mg/L	SW-846 6010B	P
Potassium	10.0	9.92	99	mg/L	SW-846 6010B	P
Selenium	0.500	0.500	101	mg/L	SW-846 6010B	P
Silver	0.500	0.500	100	mg/L	SW-846 6010B	P
Sodium	20.0	19.9	100	mg/L	SW-846 6010B	P
Strontium	0.500	0.510	102	mg/L	SW-846 6010B	P
Thallium	0.500	0.490	98	mg/L	SW-846 6010B	P
Vanadium	0.500	0.500	100	mg/L	SW-846 6010B	P
Zinc	0.500	0.510	102	mg/L	SW-846 6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032506
Calibration Source: 106-1-10
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 03/28/03 Time: 1040

CONTINUING CALIBRATION VERIFICATION

Analyte	True	Found	CAL %R	Units	Method	Type
Antimony	0.500	0.510	103	mg/L	SW-846 6010B	P
Boron	2.50	2.44	97	mg/L	SW-846 6010B	P
Molybdenum	0.500	0.510	103	mg/L	SW-846 6010B	P
Tin	0.500	0.510	102	mg/L	SW-846 6010B	P
Titanium	0.500	0.500	101	mg/L	SW-846 6010B	P
Zirconium	0.500	0.500	100	mg/L	SW-846 6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032506
Calibration Source: 106-4-1 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 03/28/03 Time: 1205

CONTINUING CALIBRATION VERIFICATION

Analyte	True	Found	CAL %R	Units	Method	Type
Aluminum	5.00	4.99	100	mg/L	SW-846 6010B	P
Arsenic	0.500	0.520	104	mg/L	SW-846 6010B	P
Barium	0.500	0.500	101	mg/L	SW-846 6010B	P
Beryllium	0.500	0.500	101	mg/L	SW-846 6010B	P
Cadmium	0.500	0.500	100	mg/L	SW-846 6010B	P
Calcium	5.00	4.93	99	mg/L	SW-846 6010B	P
Chromium	0.500	0.510	101	mg/L	SW-846 6010B	P
Cobalt	0.500	0.510	102	mg/L	SW-846 6010B	P
Copper	0.500	0.510	101	mg/L	SW-846 6010B	P
Iron	5.00	4.96	99	mg/L	SW-846 6010B	P
Lead	0.500	0.520	104	mg/L	SW-846 6010B	P
Magnesium	5.00	5.17	103	mg/L	SW-846 6010B	P
Manganese	0.500	0.510	102	mg/L	SW-846 6010B	P
Nickel	0.500	0.510	102	mg/L	SW-846 6010B	P
Potassium	10.0	9.98	100	mg/L	SW-846 6010B	P
Selenium	0.500	0.500	101	mg/L	SW-846 6010B	P
Silver	0.500	0.500	100	mg/L	SW-846 6010B	P
Sodium	20.0	19.9	99	mg/L	SW-846 6010B	P
Strontium	0.500	0.510	103	mg/L	SW-846 6010B	P
Thallium	0.500	0.490	99	mg/L	SW-846 6010B	P
Vanadium	0.500	0.500	100	mg/L	SW-846 6010B	P
Zinc	0.500	0.500	101	mg/L	SW-846 6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032506
Calibration Source: 106-1-10
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 03/28/03 Time: 1212

CONTINUING CALIBRATION VERIFICATION

Analyte	True	Found	CAL %R	Units	Method	Type
Antimony	0.500	0.520	103	mg/L	SW-846 6010B	P
Boron	2.50	2.50	100	mg/L	SW-846 6010B	P
Molybdenum	0.500	0.520	104	mg/L	SW-846 6010B	P
Tin	0.500	0.510	103	mg/L	SW-846 6010B	P
Titanium	0.500	0.500	101	mg/L	SW-846 6010B	P
Zirconium	0.500	0.500	100	mg/L	SW-846 6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032506
Calibration Source: 106-4-1 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 03/28/03 Time: 1304

CONTINUING CALIBRATION VERIFICATION

Analyte	True	Found	CAL %R	Units	Method	Type
Aluminum	5.00	5.02	100	mg/L	SW-846 6010B	P
Arsenic	0.500	0.510	103	mg/L	SW-846 6010B	P
Barium	0.500	0.490	99	mg/L	SW-846 6010B	P
Beryllium	0.500	0.500	100	mg/L	SW-846 6010B	P
Cadmium	0.500	0.490	98	mg/L	SW-846 6010B	P
Calcium	5.00	4.96	99	mg/L	SW-846 6010B	P
Chromium	0.500	0.500	99	mg/L	SW-846 6010B	P
Cobalt	0.500	0.500	100	mg/L	SW-846 6010B	P
Copper	0.500	0.500	99	mg/L	SW-846 6010B	P
Iron	5.00	5.00	100	mg/L	SW-846 6010B	P
Lead	0.500	0.510	101	mg/L	SW-846 6010B	P
Magnesium	5.00	5.18	104	mg/L	SW-846 6010B	P
Manganese	0.500	0.510	101	mg/L	SW-846 6010B	P
Nickel	0.500	0.500	100	mg/L	SW-846 6010B	P
Potassium	10.0	9.91	99	mg/L	SW-846 6010B	P
Selenium	0.500	0.500	100	mg/L	SW-846 6010B	P
Silver	0.500	0.490	98	mg/L	SW-846 6010B	P
Sodium	20.0	19.8	99	mg/L	SW-846 6010B	P
Strontium	0.500	0.510	101	mg/L	SW-846 6010B	P
Thallium	0.500	0.500	99	mg/L	SW-846 6010B	P
Vanadium	0.500	0.490	98	mg/L	SW-846 6010B	P
Zinc	0.500	0.490	99	mg/L	SW-846 6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032506
Calibration Source: 106-1-10
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 03/28/03 Time: 1311

CONTINUING CALIBRATION VERIFICATION

Analyte	True	Found	CAL %R	Units	Method	Type
Antimony	0.500	0.520	103	mg/L	SW-846 6010B	P
Boron	2.50	2.46	98	mg/L	SW-846 6010B	P
Molybdenum	0.500	0.520	104	mg/L	SW-846 6010B	P
Tin	0.500	0.510	103	mg/L	SW-846 6010B	P
Titanium	0.500	0.510	102	mg/L	SW-846 6010B	P
Zirconium	0.500	0.500	101	mg/L	SW-846 6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Calibration Source: 106-1-2 CPI

Instrument ID: FIMS1 ICAL ID: 1

Date Analyzed: 03/27/03 Time: 1427

INITIAL CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Mercury	0.00500	0.00474	95	mg/L	SW-846 7470A	AV

ICV CONTROL LIMITS EPA 6010B = 90-100 EPA 200.7 = 95-105

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032506
Calibration Source: 106-1-3 EXAXOL
Instrument ID: FIMS1 ICAL ID: 1
Date Analyzed: 03/27/03 Time: 1430

CONTINUING CALIBRATION VERIFICATION

Analyte	True	Found	CAL %R	Units	Method	Type
Mercury	0.00500	0.00493	99	mg/L	SW-846 7470A	AV

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032506
Calibration Source: 106-1-3 EXAXOL
Instrument ID: FIMS1 ICAL ID: 1
Date Analyzed: 03/27/03 Time: 1451

CONTINUING CALIBRATION VERIFICATION

Analyte	True	Found	CAL %R	Units	Method	Type
Mercury	0.00500	0.00486	97	mg/L	SW-846 7470A	AV

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032506
Calibration Source: 106-1-3 EXAXOL
Instrument ID: FIMS1 ICAL ID: 1
Date Analyzed: 03/27/03 Time: 1512

CONTINUING CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Mercury	0.00500	0.00476	95	mg/L	SW-846 7470A	AV

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032506
Calibration Source: 106-1-3 EXAXOL
Instrument ID: FIMS1 ICAL ID: 1
Date Analyzed: 03/27/03 Time: 1532

CONTINUING CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Mercury	0.00500	0.00487	97	mg/L	SW-846 7470A	AV

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab Sample ID: ICB

ICAL ID: 2

Lab Sample DESC: ICB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 03/28/03 Time: 1006

INITIAL CALIBRATION BLANK

Analyte	*Conc.*	*C*	*Units*	*MDL*	*PQL*	*Method*	*Type*
Aluminum	0.20	U	mg/L	0.016	0.20	SW-846 6010B	P
Antimony	0.060	U	mg/L	0.0046	0.060	SW-846 6010B	P
Arsenic	0.040	U	mg/L	0.0015	0.040	SW-846 6010B	P
Barium	0.010	U	mg/L	0.00050	0.010	SW-846 6010B	P
Beryllium	0.0050	U	mg/L	0.00020	0.0050	SW-846 6010B	P
Cadmium	0.00023	B	mg/L	0.00020	0.0050	SW-846 6010B	P
Calcium	0.050	U	mg/L	0.032	0.050	SW-846 6010B	P
Chromium	0.010	U	mg/L	0.00050	0.010	SW-846 6010B	P
Cobalt	0.010	U	mg/L	0.00070	0.010	SW-846 6010B	P
Copper	0.010	U	mg/L	0.0026	0.010	SW-846 6010B	P
Iron	0.050	U	mg/L	0.011	0.050	SW-846 6010B	P
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 6010B	P
Magnesium	0.050	U	mg/L	0.025	0.050	SW-846 6010B	P
Manganese	0.00025	B	mg/L	0.00020	0.015	SW-846 6010B	P
Nickel	0.040	U	mg/L	0.0025	0.040	SW-846 6010B	P
Potassium	0.085	B	mg/L	0.049	0.20	SW-846 6010B	P
Selenium	0.040	U	mg/L	0.0047	0.040	SW-846 6010B	P
Silver	0.0014	B	mg/L	0.00040	0.010	SW-846 6010B	P
Sodium	0.27	B	mg/L	0.17	1.00	SW-846 6010B	P
Thallium	0.020	U	mg/L	0.0012	0.020	SW-846 6010B	P
Vanadium	0.020	U	mg/L	0.0011	0.020	SW-846 6010B	P
Zinc	0.020	U	mg/L	0.0052	0.020	SW-846 6010B	P

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab Sample ID: CCB

ICAL ID: 2

Lab Sample DESC: CCB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 03/28/03 Time: 1048

CONTINUING CALIBRATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Aluminum	0.026	B	mg/L	0.016	0.20	SW-846 6010B	P
Antimony	0.060	U	mg/L	0.0046	0.060	SW-846 6010B	P
Arsenic	0.040	U	mg/L	0.0015	0.040	SW-846 6010B	P
Barium	0.010	U	mg/L	0.00050	0.010	SW-846 6010B	P
Beryllium	0.0050	U	mg/L	0.00020	0.0050	SW-846 6010B	P
Cadmium	0.00023	B	mg/L	0.00020	0.0050	SW-846 6010B	P
Calcium	0.050	U	mg/L	0.032	0.050	SW-846 6010B	P
Chromium	0.010	U	mg/L	0.00050	0.010	SW-846 6010B	P
Cobalt	0.010	U	mg/L	0.00070	0.010	SW-846 6010B	P
Copper	0.010	U	mg/L	0.0026	0.010	SW-846 6010B	P
Iron	0.050	U	mg/L	0.011	0.050	SW-846 6010B	P
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 6010B	P
Magnesium	0.050	U	mg/L	0.025	0.050	SW-846 6010B	P
Manganese	0.015	U	mg/L	0.00020	0.015	SW-846 6010B	P
Nickel	0.040	U	mg/L	0.0025	0.040	SW-846 6010B	P
Potassium	0.20	U	mg/L	0.049	0.20	SW-846 6010B	P
Selenium	0.040	U	mg/L	0.0047	0.040	SW-846 6010B	P
Silver	0.0012	B	mg/L	0.00040	0.010	SW-846 6010B	P
Sodium	0.20	B	mg/L	0.17	1.00	SW-846 6010B	P
Thallium	0.0025	B	mg/L	0.0012	0.020	SW-846 6010B	P
Vanadium	0.020	U	mg/L	0.0011	0.020	SW-846 6010B	P
Zinc	0.020	U	mg/L	0.0052	0.020	SW-846 6010B	P

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab Sample ID: 90549

ICAL ID: 2

Lab Sample DESC: MB90549

Preparation Blank Matrix: (soil / water) Water

Instrument ID: ICP5

Date Analyzed: 03/28/03 Time: 1055

PREPARATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Aluminum	0.14	B	mg/L	0.016	0.20	SW-846 6010B	P
Antimony	0.0060	U	mg/L	0.0046	0.0060	SW-846 6010B	P
Arsenic	0.010	U	mg/L	0.0015	0.010	SW-846 6010B	P
Barium	0.20	U	mg/L	0.00050	0.20	SW-846 6010B	P
Beryllium	0.0040	U	mg/L	0.00020	0.0040	SW-846 6010B	P
Cadmium	0.0050	U	mg/L	0.00020	0.0050	SW-846 6010B	P
Calcium	5.00	U	mg/L	0.032	5.00	SW-846 6010B	P
Chromium	0.0050	U	mg/L	0.00050	0.0050	SW-846 6010B	P
Cobalt	0.050	U	mg/L	0.00070	0.050	SW-846 6010B	P
Copper	0.025	U	mg/L	0.0026	0.025	SW-846 6010B	P
Iron	0.10	U	mg/L	0.011	0.10	SW-846 6010B	P
Lead	0.0030	U	mg/L	0.0016	0.0030	SW-846 6010B	P
Magnesium	5.00	U	mg/L	0.025	5.00	SW-846 6010B	P
Manganese	0.00020	B	mg/L	0.00020	0.015	SW-846 6010B	P
Nickel	0.040	U	mg/L	0.0025	0.040	SW-846 6010B	P
Potassium	5.00	U	mg/L	0.049	5.00	SW-846 6010B	P
Selenium	0.0050	U	mg/L	0.0047	0.0050	SW-846 6010B	P
Silver	0.0012	B	mg/L	0.00040	0.0050	SW-846 6010B	P
Sodium	5.00	U	mg/L	0.17	5.00	SW-846 6010B	P
Thallium	0.0020	U	mg/L	0.0012	0.0020	SW-846 6010B	P
Vanadium	0.050	U	mg/L	0.0011	0.050	SW-846 6010B	P
Zinc	0.020	U	mg/L	0.0052	0.020	SW-846 6010B	P

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab Sample ID: CCB

ICAL ID: 2

Lab Sample DESC: CCB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 03/28/03 Time: 1220

CONTINUING CALIBRATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Aluminum	0.20	U	mg/L	0.016	0.20	SW-846 6010B	P
Antimony	0.060	U	mg/L	0.0046	0.060	SW-846 6010B	P
Arsenic	0.040	U	mg/L	0.0015	0.040	SW-846 6010B	P
Barium	0.010	U	mg/L	0.00050	0.010	SW-846 6010B	P
Beryllium	0.0050	U	mg/L	0.00020	0.0050	SW-846 6010B	P
Cadmium	0.0050	U	mg/L	0.00020	0.0050	SW-846 6010B	P
Calcium	0.050	U	mg/L	0.032	0.050	SW-846 6010B	P
Chromium	0.010	U	mg/L	0.00050	0.010	SW-846 6010B	P
Cobalt	0.010	U	mg/L	0.00070	0.010	SW-846 6010B	P
Copper	0.010	U	mg/L	0.0026	0.010	SW-846 6010B	P
Iron	0.050	U	mg/L	0.011	0.050	SW-846 6010B	P
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 6010B	P
Magnesium	0.050	U	mg/L	0.025	0.050	SW-846 6010B	P
Manganese	0.015	U	mg/L	0.00020	0.015	SW-846 6010B	P
Nickel	0.040	U	mg/L	0.0025	0.040	SW-846 6010B	P
Potassium	0.20	U	mg/L	0.049	0.20	SW-846 6010B	P
Selenium	0.040	U	mg/L	0.0047	0.040	SW-846 6010B	P
Silver	0.00091	B	mg/L	0.00040	0.010	SW-846 6010B	P
Sodium	1.00	U	mg/L	0.17	1.00	SW-846 6010B	P
Thallium	0.020	U	mg/L	0.0012	0.020	SW-846 6010B	P
Vanadium	0.020	U	mg/L	0.0011	0.020	SW-846 6010B	P
Zinc	0.020	U	mg/L	0.0052	0.020	SW-846 6010B	P

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032506
Lab Sample ID: CCB
ICAL ID: 2
Lab Sample DESC: CCB FOR HBN 255160 [LACH/2150]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 03/28/03 Time: 1326

CONTINUING CALIBRATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Aluminum	0.20	U	mg/L	0.016	0.20	SW-846 6010B	P
Antimony	0.060	U	mg/L	0.0046	0.060	SW-846 6010B	P
Arsenic	0.040	U	mg/L	0.0015	0.040	SW-846 6010B	P
Barium	0.010	U	mg/L	0.00050	0.010	SW-846 6010B	P
Beryllium	0.0050	U	mg/L	0.00020	0.0050	SW-846 6010B	P
Cadmium	0.0050	U	mg/L	0.00020	0.0050	SW-846 6010B	P
Calcium	0.050	U	mg/L	0.032	0.050	SW-846 6010B	P
Chromium	0.010	U	mg/L	0.00050	0.010	SW-846 6010B	P
Cobalt	0.010	U	mg/L	0.00070	0.010	SW-846 6010B	P
Copper	0.010	U	mg/L	0.0026	0.010	SW-846 6010B	P
Iron	0.050	U	mg/L	0.011	0.050	SW-846 6010B	P
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 6010B	P
Magnesium	0.050	U	mg/L	0.025	0.050	SW-846 6010B	P
Manganese	0.015	U	mg/L	0.00020	0.015	SW-846 6010B	P
Nickel	0.040	U	mg/L	0.0025	0.040	SW-846 6010B	P
Potassium	0.20	U	mg/L	0.049	0.20	SW-846 6010B	P
Selenium	0.040	U	mg/L	0.0047	0.040	SW-846 6010B	P
Silver	0.00051	B	mg/L	0.00040	0.010	SW-846 6010B	P
Sodium	1.00	U	mg/L	0.17	1.00	SW-846 6010B	P
Thallium	0.020	U	mg/L	0.0012	0.020	SW-846 6010B	P
Vanadium	0.020	U	mg/L	0.0011	0.020	SW-846 6010B	P
Zinc	0.020	U	mg/L	0.0052	0.020	SW-846 6010B	P

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab Sample ID: ICB

ICAL ID: 1

Lab Sample DESC: ICB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: FIMS1

Date Analyzed: 03/27/03 Time: 1429

INITIAL CALIBRATION BLANK

Analyte	*Conc.*	*C*	*Units*	*MDL*	*PQL*	*Method*	*Type*
Mercury	0.00020	U	mg/L	0.00003	0.00020	SW-846 7470A	AV

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab Sample ID: CCB

ICAL ID: 1

Lab Sample DESC: CCB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: FIMS1

Date Analyzed: 03/27/03 Time: 1432

CONTINUING CALIBRATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Mercury	0.00020	U	mg/L	0.00003	0.00020	SW-846 7470A	AV

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab Sample ID: CCB

ICAL ID: 1

Lab Sample DESC: CCB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: FIMS1

Date Analyzed: 03/27/03 Time: 1453

CONTINUING CALIBRATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Mercury	0.00020	U	mg/L	0.00003	0.00020	SW-846 7470A	AV

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab Sample ID: 90553

ICAL ID: 1

Lab Sample DESC: MB90553

Preparation Blank Matrix: (soil / water) Water

Instrument ID: FIMS1

Date Analyzed: 03/27/03 Time: 1508

PREPARATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Mercury	0.00020	U	mg/L	0.00003	0.00020	SW-846 7470A	AV

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab Sample ID: CCB

ICAL ID: 1

Lab Sample DESC: CCB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: FIMS1

Date Analyzed: 03/27/03 Time: 1513

CONTINUING CALIBRATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Mercury	0.00020	U	mg/L	0.00003	0.00020	SW-846 7470A	AV

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032506

Lab Sample ID: CCB

ICAL ID: 1

Lab Sample DESC: CCB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: FIMS1

Date Analyzed: 03/27/03 Time: 1534

CONTINUING CALIBRATION BLANK

Analyte	*Conc.*	*C*	*Units*	*MDL*	*PQL*	*Method*	*Type*
Mercury	0.00020	U	mg/L	0.00003	0.00020	SW-846 7470A	AV

ICP INTERFERENCE CHECK SAMPLE

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032506

ICP ID Number: ICP5 ICS Source: 106-1-5 SPEX~1

Concentration Units: mg/L

Analyte	True		Initial Found			Final Found		
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R
Aluminum	200	200	209	211	106			
Antimony	0	1.00		1.01	101			
Arsenic	0	1.00		1.04	104			
Barium	0	0.50		0.52	104			
Beryllium	0	0.50		0.53	106			
Boron	0	1.00		0.94	94			
Cadmium	0	1.00		0.99	99			
Calcium	200	200	198	200	100			
Chromium	0	0.50		0.50	100			
Cobalt	0	0.50		0.50	100			
Copper	0	0.50		0.52	104			
Iron	80.0	80.0	79.7	80.3	100			
Lead	0	1.00		1.02	102			
Magnesium	200	200	211	213	106			
Manganese	0	0.50		0.52	104			
Molybdenum	0	1.00		1.03	103			
Nickel	0	1.00		0.96	96			
Selenium	0	1.00		1.07	107			
Silver	0	1.00		1.05	105			
Thallium	0	1.00		1.04	104			
Vanadium	0	0.50		0.49	98			
Zinc	0	1.00		1.01	101			

LABORATORY CONTROL SAMPLE

Lab Name: GCAL

Sample ID: LCS90550

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203032506

Lab Sample ID: 90550

LCS Source: 334-13-17 INORGANIC VENTURES

Analyte	True	Found	% R	LL	UL	Units	Method	Type
Aluminum	10.0	10.2	102	80	120	mg/L	SW-846 6010B	P
Antimony	1.00	1.03	103	80	120	mg/L	SW-846 6010B	P
Arsenic	1.00	1.06	106	80	120	mg/L	SW-846 6010B	P
Barium	1.00	1.01	101	80	120	mg/L	SW-846 6010B	P
Beryllium	1.00	1.02	102	80	120	mg/L	SW-846 6010B	P
Cadmium	1.00	0.99	99	80	120	mg/L	SW-846 6010B	P
Calcium	10.0	10.2	102	80	120	mg/L	SW-846 6010B	P
Chromium	1.00	1.01	101	80	120	mg/L	SW-846 6010B	P
Cobalt	1.00	1.02	102	80	120	mg/L	SW-846 6010B	P
Copper	1.00	1.05	105	80	120	mg/L	SW-846 6010B	P
Iron	10.0	10.1	101	80	120	mg/L	SW-846 6010B	P
Lead	1.00	1.00	100	80	120	mg/L	SW-846 6010B	P
Magnesium	10.0	10.4	104	80	120	mg/L	SW-846 6010B	P
Manganese	1.00	1.02	102	80	120	mg/L	SW-846 6010B	P
Nickel	1.00	1.02	102	80	120	mg/L	SW-846 6010B	P
Potassium	20.0	20.5	102	80	120	mg/L	SW-846 6010B	P
Selenium	1.00	1.03	103	80	120	mg/L	SW-846 6010B	P
Silver	1.00	1.02	102	80	120	mg/L	SW-846 6010B	P
Sodium	40.0	40.9	102	80	120	mg/L	SW-846 6010B	P
Thallium	1.00	0.98	98	80	120	mg/L	SW-846 6010B	P
Vanadium	1.00	1.01	101	80	120	mg/L	SW-846 6010B	P
Zinc	1.00	0.99	99	80	120	mg/L	SW-846 6010B	P

LABORATORY CONTROL SAMPLE

Lab Name: GCAL

Sample ID: LCS90554

Lab Code: LA024

Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.:

SDG No.: 203032506

Lab Sample ID: 90554

LCS Source: 106-1-3 EXAXOL

Analyte	True	Found	% R	LL	UL	Units	Method	Type
Mercury	0.00500	0.00492	98	80	120	mg/L	SW-846 7470A	AV

FORM VII - IN

CH2M Hill Constructors / 4580 / 2050325006 / Due 4-1-03

CH2M Hill Constructors, Inc.
115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No (770) 604-9182 ; Fax No (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER

153141-001 Page 1 of 1

PROJECT NAME:	PROJECT NUMBER:	LAB NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 1 (Name and Company)	RECIPIENT 1 (Address, Tel No. , and Fax No.):
Pipeline Pigging	153141	Gulf Coast Labs. Dana Merril	Paul Malewicki J.A. Jones Environmental Services	6219 Authority Ave. Building 1 Jacksonville, FL 32221 Ph:(904) 7774812 Fax: (904) 7774262
PROJECT PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 2 (Name and Company)	RECIPIENT 2 (Address, Tel No. , and Fax No.):
Pipeline Pigging: Waste Water Disposal Characterization	0021	4242	Christelle Newsome / CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30340 Ph:(770)604-9182 Ext.561 Fax:604-9282
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Paul Malewicki J.A. Jones Environmental	Ph:(904)777-4812 Fax:(904) 777-4262	Ph:(225) 769-4900		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on back)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on back)	TAT (calendar days)	TCL Volatiles by 8260 B	TCL Semi-volatiles by 8270C	TCL Pesticides by 8081A	TCL Herbicides by 8151	TPH by FL-PRO	TAL Metals by 6010B/7470A	Reactivity by 1010/1020A, Ignitability 9040B, Corrosivity by Chapter 7.3				SAMPLE TYPE (see codes on back)	COMMENTS/ SCREENING READINGS	LAB ID
1	021-PL-WW-0324-03	Waste Water Characterization	W	03/24/03	11:10	III/B	7 Day	3	2	2	2	2	1	1			-03	Grab	Free Product In Samples	3/25 -01
2	021-PLTB1-W-0324-03	Pipeline Trip Blank #1	W	02/04/03	NA	III/B	7 Day	3											Prepared by Lab	-02
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:	SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT:
Randy Dumaop / Sean Smith J.A. Jones Environmental Services	Federal Express Tracking # 7915 5898 9712, 7915 5898 9789.	Free Product In Samples 3°C Good

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature: R. Dumaop	3/24/03	17:00	Printed Name and Signature: Federal Express	3/24/03	17:00
Printed Name and Signature: Fed. Ex. 7915 5898 9712 7915 5898 9789	3-25-03	0945	Printed Name and Signature: Dana Hupkel	3-25-03	0945
Printed Name and Signature:			Printed Name and Signature:		

Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PMO

Form CCI001, Rev 03/00

PRESERVATION CHECKLIST / COOLER RECEIPT

Gulf Coast Analytical Laboratories, Inc.

WO:	203032506	**Type:**	D
Desc:		**Report:**	REVIEW_RPT
Work ID:	N.A.S. Cecil Field	**Status:**	WP
Project Seq:	11599	**Created:**	3/25/03 10:24
Client:	4380 - CH2M HILL Constructors Inc.	**QA:**	
Profile:	53396 - CTO 0021 - N.A.S. Cecil Field	**PO:**	

WORKORDER SAMPLES

			pH PRESERVATIVE			VOA HEADSPACE			
Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20303250601-1	40	HCL+SS	✓			✓			OK
20303250601-2	LA	NONE			X			X	OK
20303250601-3	OC	HNO3	✓					X	OK
20303250601-4	LA	NONE			X			X	OK
20303250601-5	LA	NONE			X			X	OK
20303250601-6	LA	NONE			X			X	OK
20303250601-7	LA	H2SO4	✓					X	OK

Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20303250602-1	40	HCL+SS	✓			✓			OK

Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20303250603-1	LA	H2SO4	✓					X	OK

A = ACCEPTABLE
U = UNACCEPTABLE
N\A = NOT APPLICABLE

COOLER (S) TEMPERATURE (A) U LIMIT = 4C + \ - 2C

MAXIMUM VOLATILE HEADSPACE BUBBLE 6MM

Custody Seal
used [✓] Yes [ ] No
in tact [✓] Yes [ ] No

CUSTODIAN DLH

GULF COAST
ANALYTICAL LABORATORIES, INC.

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

Report Date: 04/07/2003

GCAL REPORT NO.: 203032507

Deliver To:	CH2M HILL Constructors Inc. 115 Perimeter Center Place Suite 700 Atlanta, GA 30346 770-604-9182 Ext. 614
Attn:	Melissa Aycock

CUSTOMER NAME: CH2M HILL Constructors Inc.

PROJECT NAME: N.A.S. Cecil Field

7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402 • Phone 225.769.4900 • Fax 225.767.5717

CASE NARRATIVE

Client: CH2M HILL Constructors Inc. **Report:** 203032507

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the SW-846 8260B analysis of sample 90374 (021-PL-WW-0324-03 (90228MS)), the recovery for the surrogate Toluene d8 was outside of the established control limits. The sample was reanalyzed and similar results were observed. This is attributed to matrix interference.

In QC batch 255086, the MS/MSD exhibited sporadic recovery and RPD failures. These recoveries were within limits in the LCS with the exception of Dichlorodifluoromethane. This is attributed to matrix interference. Dichlorodifluoromethane and Trichlorofluoromethane were outside of the established control limits for the LCS and/or LCSD. These compounds are defined as poor performers by the method (8260B).

SEMI-VOLATILES MASS SPECTROMETRY

In prep batch 255149, Pyridine is below the control limits in the MS/MSD.

SEMI-VOLATILES GAS CHROMATOGRAPHY

Sample 20303250701 (021-PL-S-0324-03) had to be diluted due to compounds that were detected above the linear range of the calibration.

In the analysis of samples 20303250701 (021-PL-S-0324-03), 90871 (021-PL-S-0324-03 (90230MS)), and 90872 (021-PL-S-0324-03 (90230MSD)), the surrogate recoveries o-Terphenyl and Nonatriacontane are reported as DO (diluted out), due to the dilution performed on the sample.

In prep batch 255246, the MS/MSD exhibited sporadic recovery failures. These recoveries were within limits in the LCS. This is attributed to matrix interference.

METALS

The LCS and MSD were above the upper control limit for TCLP Selenium for prep batch 255138; however, Selenium was not detected above the reporting limit for samples associated with this LCS; therefore, the data is reportable. The Sample/Duplicate RPD for Chromium, Lead, and Silver is not applicable because the sample and/or duplicate concentration is less than five times the reporting limit.

LABORATORY ENDORSEMENT

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 Days unless otherwise arranged. Following this retention period the samples will be disposed of in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND-Indicates that the parameter was not detected at the specified detection limit
DO-Indicates that the result was diluted out
MI-Indicates that the result was subject to Matrix Interference
TNTC-Indicates that the result was Too Numerous to Count
SUBC-Indicates that the analysis was subcontracted
FLD-Indicates that the parameter was performed in the field
PQL-Practical Quantitation Limit
MDL-Method Detection Limit
RDL-Reporting Detection Limit

Reporting Flags Utilized in this Report

J-Indicates that the result was detected between the PQL and MDL
U-Indicates that the result was not detected at the referenced detection limit
B-Organics Indicates that the compound was detected in the associated Method Blank
B-Inorganics Indicates that the compound was detected between the PQL and MDL

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with ISO Guide 25 and NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This Report pertains only to the samples listed in the Sample Cross-Reference and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the Client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the condition detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Scott Bailey

SCOTT A. BAILEY
OPERATIONS MANAGER
GCAL REPORT NO.: 203032507

SAMPLE CROSS-REFERENCE

GCAL ID	CLIENT ID	MATRIX	SAMPLE DATE/TIME	RECEIVE DATE/TIME
20303250701	021-PL-S-0324-03	Solid	03/24/2003 12:00	03/25/2003 09:45
20303250702	021-PLTB2-W-0324-03	Water	03/24/2003 00:00	03/25/2003 09:45

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20303250701	021-PL-S-0324-O3	Solid	03/24/2003 12:00	03/25/2003 09:45	

2540 G Total Moisture - Solid

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	03/27/2003 09:25	MDT	255241

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
WET-037	Total Moisture	14.2	0.010	0.010	%

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20303250701	021-PL-S-0324-03	Solid	03/24/2003 12:00	03/25/2003 09:45	

9045C Solid - pH

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	03/25/2003 14:00	OLT	255082

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
pH	pH	7.95	1.00	1.00	pH unit

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20303250701	021-PL-S-0324-03	Solid	03/24/2003 12:00	03/25/2003 09:45	

9012A Reactivity Cyanide

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
03/27/2003 06:30	255172	7.3.3.2	1	03/27/2003 09:10	BMC	255180

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
57-12-5R	Reactivity Cyanide	291 U	291	291	mg/kg

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20303250701	021-PL-S-0324-O3	Solid	03/24/2003 12:00	03/25/2003 09:45	

Reactivity Sulfide - 9034

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
03/27/2003 06:30	255173	7.3.4.2	1	03/27/2003 11:00	HLO	255199

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
18496-25-8R	Reactivity Sulfide	93 U	93	93	mg/kg

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	CLIENT ID	MATRIX	COLLECTED	RECEIVED	REPORTED
20303250701	021-PL-S-0324-03	Solid	03/24/2003 12:00	03/25/2003 09:45	

1030 Flashpoint

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
			1	03/27/2003 09:00	HLO	255201

CAS #	PARAMETER	RESULT	PQL	MDL	UNITS
000000-01-7	Ignitable	NO			

RESULTS REPORTED ON A DRY WEIGHT BASIS

QUALITY CONTROL RESULTS

LAB ID	SAMPLE ID	MATRIX	REPORTED
90588	Method Blank	Solid	

9012A

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
03/27/2003 06:30	255172	7.3.3.2	1	03/27/2003 09:10	BMC	255180

CAS #	PARAMETER	RESULT	RDL	UNITS
57-12-5R	Reactivity Cyanide	250 U	250	mg/kg

QUALITY CONTROL RESULTS

LAB ID	SAMPLE ID	MATRIX	REPORTED
90591	Method Blank	Solid	

9034

PREP DATE	PREP BATCH	PREP METHOD	DILUTION	ANALYZED	BY	ANALYTICAL BATCH
03/27/2003 06:30	255173	7.3.4.2	1	03/27/2003 11:00	HLO	255199

CAS #	PARAMETER	RESULT	RDL	UNITS
18496-25-8	Reactivity Sulfide	80 U	80	mg/kg

QUALITY CONTROL SUMMARY

DUPLICATE SAMPLE ID: 90232 ORIGINAL LAB ID: 20303211432 PREP BATCH:
MATRIX Solid ANALYTICAL BATCH: 255052

SW-846 9045

CAS #	PARAMETER	Original Result	Result	RPD	RPD LIMITS
pH	pH	10.2	10.2	0	- 6

LCS ID: 90589 ORIGINAL LAB ID: PREP BATCH: 255172
MATRIX Solid ANALYTICAL BATCH: 255180

9012A

CAS #	PARAMETER	SPIKE ADDED	Result	% RECOVERY	REC-LIMITS
57-12-5R	Reactivity Cyanide	250 mg/kg	33.7	13	1 - 25

DUPLICATE SAMPLE ID: 90590 ORIGINAL LAB ID: 20303250701 PREP BATCH: 255172
MATRIX Solid ANALYTICAL BATCH: 255180

9012A

CAS #	PARAMETER	Original Result	Result	RPD	RPD LIMITS
57-12-5R	Reactivity Cyanide	0	0	0	0 - 25

LCS ID: 90592 ORIGINAL LAB ID: PREP BATCH: 255173
MATRIX Solid ANALYTICAL BATCH: 255199

9034

CAS #	PARAMETER	SPIKE ADDED	Result	% RECOVERY	REC-LIMITS
18496-25-8R	Reactivity Sulfide	1000 mg/kg	672	67.2	26 - 114

DUPLICATE SAMPLE ID: 90593 ORIGINAL LAB ID: 20303250701 PREP BATCH: 255173
MATRIX Solid ANALYTICAL BATCH: 255199

9034

CAS #	PARAMETER	Original Result	Result	RPD	RPD LIMITS
18496-25-8R	Reactivity Sulfide	0	0	0	0 - 25

DUPLICATE SAMPLE ID: 90849 ORIGINAL LAB ID: 20303211432 PREP BATCH:
MATRIX Solid ANALYTICAL BATCH: 255241

2540 G (Dry Weight)

CAS #	PARAMETER	Original Result	Result	RPD	RPD LIMITS
WET-037	Total Moisture	26.2	28.3	7.7	0 - 25

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

021-PL-S-0324-03

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Matrix: (soil/water) Soil

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20303250701

Level: (low/med) LOW Lab File ID: 2030328/S8111

% Moisture: not dec. 14 Date Collected: 03/24/03 Time: 1200

GC Column: DB-624-30M ID: .53 (mm Date Received: 03/25/03

Instrument ID: MSV1 Date Analyzed: 03/28/03 Time: 1725

Soil Extract Volume: (µL Dilution Factor: 40 Analyst: KRV

Soil Aliquot Volume: (µL

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT		MDL	RL
75-35-4	1,1-Dichloroethene	0.200	U	0.019	0.200
107-06-2	1,2-Dichloroethane	0.200	U	0.017	0.200
78-93-3	2-Butanone	1.00	U	0.022	1.00
71-43-2	Benzene	0.200	U	0.017	0.200
56-23-5	Carbon tetrachloride	0.200	U	0.014	0.200
108-90-7	Chlorobenzene	0.200	U	0.018	0.200
67-66-3	Chloroform	0.200	U	0.018	0.200
127-18-4	Tetrachloroethene	0.200	U	0.016	0.200
79-01-6	Trichloroethene	0.200	U	0.017	0.200
75-01-4	Vinyl chloride	0.200	U	0.020	0.200

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

021-PLTB2-W-0324-03

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 20303250702

Level: (low/med) LOW Lab File ID: 2030325/S8025

% Moisture: not dec. Date Collected: 03/24/03 Time: 0000

GC Column: DB-624-30M ID: .53 (mm Date Received: 03/25/03

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1452

Soil Extract Volume: (µL Dilution Factor: 1 Analyst: RSP

Soil Aliquot Volume: (µL

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT		MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.204	5.00
79-34-5	1,1,2,2-Tetrachloroethane	0.200	U	0.200	0.200
79-00-5	1,1,2-Trichloroethane	5.00	U	0.333	5.00
75-34-3	1,1-Dichloroethane	5.00	U	0.122	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.357	5.00
120-82-1	1,2,4-Trichlorobenzene	5.00	U	0.405	5.00
96-12-8	1,2-Dibromo-3-chloropropane	0.200	U	0.200	0.200
106-93-4	1,2-Dibromoethane	0.200	U	0.116	0.200
95-50-1	1,2-Dichlorobenzene	5.00	U	0.221	5.00
107-06-2	1,2-Dichloroethane	3.00	U	0.277	3.00
78-87-5	1,2-Dichloropropane	5.00	U	0.341	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.320	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.295	5.00
78-93-3	2-Butanone	10.0	U	0.641	10.0
591-78-6	2-Hexanone	10.0	U	0.443	10.0
108-10-1	4-Methyl-2-pentanone	10.0	U	0.252	10.0
67-64-1	Acetone	10.0	U	2.36	10.0
71-43-2	Benzene	1.00	U	0.100	1.00
75-27-4	Bromodichloromethane	0.600	U	0.102	0.600
75-25-2	Bromoform	4.00	U	0.140	4.00
74-83-9	Bromomethane	5.00	U	0.330	5.00
75-15-0	Carbon disulfide	5.00	U	0.180	5.00
56-23-5	Carbon tetrachloride	3.00	U	0.161	3.00
108-90-7	Chlorobenzene	5.00	U	0.157	5.00
75-00-3	Chloroethane	5.00	U	0.237	5.00
67-66-3	Chloroform	5.00	U	0.140	5.00
74-87-3	Chloromethane	2.70	U	0.393	2.70
110-82-7	Cyclohexane	100	U	1.00	100
124-48-1	Dibromochloromethane	0.400	U	0.105	0.400
75-71-8	Dichlorodifluoromethane	5.00	U	0.228	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.128	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.329	5.00
100-41-4	Ethylbenzene	5.00	U	0.312	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

021-PLTB2-W-0324-03

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL

Lab Sample ID: 20303250702

Level: (low/med) LOW

Lab File ID: 2030325/S8025

% Moisture: not dec.

Date Collected: 03/24/03 Time: 0000

GC Column: DB-624-30M ID: .53 (mm

Date Received: 03/25/03

Instrument ID: MSV1

Date Analyzed: 03/25/03 Time: 1452

Soil Extract Volume: (µL

Dilution Factor: 1 Analyst: RSP

Soil Aliquot Volume: (µL

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT		MDL	RL
98-82-8	Isopropylbenzene (Cumene)	5.00	U	0.246	5.00
79-20-9	Methyl Acetate	5.00	U	5.00	5.00
108-87-2	Methylcyclohexane	5.00	U	5.00	5.00
75-09-2	Methylene chloride	5.00	U	0.613	5.00
100-42-5	Styrene	5.00	U	0.173	5.00
127-18-4	Tetrachloroethene	3.00	U	0.269	3.00
108-88-3	Toluene	5.00	U	0.152	5.00
79-01-6	Trichloroethene	3.00	U	0.323	3.00
75-69-4	Trichlorofluoromethane	5.00	U	0.192	5.00
76-13-1	Trichlorotrifluoroethane	5.00	U	0.193	5.00
75-01-4	Vinyl chloride	1.00	U	0.177	1.00
1330-20-7	Xylene (total)	5.00	U	0.507	5.00
156-59-2	cis-1,2-Dichloroethene	5.00	U	0.151	5.00
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00	U	0.122	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.192	5.00

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
021-PLTB2-W-0324-03

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Matrix: Water Lab Sample ID: 20303250702

Sample wt/vol: Units: Lab File ID: 2030325/S8025

Level: (low/med) Date Collected: 03/24/03 Time: 0000

% Moisture: not dec. Date Received: 03/25/03

GC Column: DB-624-30M ID: .53 (mm Date Analyzed: 03/25/03 Time: 1452

Instrument ID: MSV1 Dilution Factor: 1 Analyst: RSP

Soil Extract Volume: (µL

Soil Aliquot Volume: (µL

Number TICs Found: 0

CONCENTRATION UNITS:

	CAS NO.	COMPOUND	RT	EST. CONC.	
1 .		No tics detected			

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MB90795

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90795

Level: (low/med) LOW Lab File ID: 2030328/S8096

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm Date Received:

Instrument ID: MSV1 Date Analyzed: 03/28/03 Time: 1116

Soil Extract Volume: (µL Dilution Factor: 1 Analyst: KRV

Soil Aliquot Volume: (µL

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT		MDL	RL
75-35-4	1,1-Dichloroethene	0.005	U	0.00	0.005
107-06-2	1,2-Dichloroethane	0.005	U	0.00	0.005
78-93-3	2-Butanone	0.025	U	0.00	0.025
71-43-2	Benzene	0.005	U	0.00	0.005
56-23-5	Carbon tetrachloride	0.005	U	0.00	0.005
108-90-7	Chlorobenzene	0.005	U	0.00	0.005
67-66-3	Chloroform	0.005	U	0.00	0.005
127-18-4	Tetrachloroethene	0.005	U	0.00	0.005
79-01-6	Trichloroethene	0.005	U	0.00	0.005
75-01-4	Vinyl chloride	0.005	U	0.00	0.005

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCS90794

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90794

Level: (low/med) LOW Lab File ID: 2030328/S8093

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm Date Received:

Instrument ID: MSV1 Date Analyzed: 03/28/03 Time: 0959

Soil Extract Volume: (µL Dilution Factor: 1 Analyst: KRV

Soil Aliquot Volume: (µL

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT		MDL	RL
75-35-4	1,1-Dichloroethene	0.023		0.00	0.005
107-06-2	1,2-Dichloroethane	0.025		0.00	0.005
78-93-3	2-Butanone	0.027		0.00	0.025
71-43-2	Benzene	0.021		0.00	0.005
56-23-5	Carbon tetrachloride	0.021		0.00	0.005
108-90-7	Chlorobenzene	0.024		0.00	0.005
67-66-3	Chloroform	0.022		0.00	0.005
127-18-4	Tetrachloroethene	0.023		0.00	0.005
79-01-6	Trichloroethene	0.020		0.00	0.005
75-01-4	Vinyl chloride	0.023		0.00	0.005

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

493602ARQ103MS

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90905

Level: (low/med) LOW Lab File ID: 2030328/S8101M

% Moisture: not dec. Date Collected: 03/25/03 Time: 1530

GC Column: DB-624-30M ID: .53 (mm Date Received: 03/26/03

Instrument ID: MSV1 Date Analyzed: 03/28/03 Time: 1318

Soil Extract Volume: (µL Dilution Factor: 1 Analyst: KRV

Soil Aliquot Volume: (µL

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT		MDL	RL
75-35-4	1,1-Dichloroethene	0.027		0.00	0.005
107-06-2	1,2-Dichloroethane	0.027		0.00	0.005
78-93-3	2-Butanone	0.026		0.00	0.025
71-43-2	Benzene	0.023		0.00	0.005
56-23-5	Carbon tetrachloride	0.024		0.00	0.005
108-90-7	Chlorobenzene	0.026		0.00	0.005
67-66-3	Chloroform	0.024		0.00	0.005
127-18-4	Tetrachloroethene	0.028		0.00	0.005
79-01-6	Trichloroethene	0.022		0.00	0.005
75-01-4	Vinyl chloride	0.029		0.00	0.005

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

493602ARQ103MSD

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90906

Level: (low/med) LOW Lab File ID: 2030328/S8102M

% Moisture: not dec. Date Collected: 03/25/03 Time: 1530

GC Column: DB-624-30M ID: .53 (mm Date Received: 03/26/03

Instrument ID: MSV1 Date Analyzed: 03/28/03 Time: 1342

Soil Extract Volume: (µL Dilution Factor: 1 Analyst: KRV

Soil Aliquot Volume: (µL

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT		MDL	RL
75-35-4	1,1-Dichloroethene	0.028		0.00	0.005
107-06-2	1,2-Dichloroethane	0.026		0.00	0.005
78-93-3	2-Butanone	0.026		0.00	0.025
71-43-2	Benzene	0.023		0.00	0.005
56-23-5	Carbon tetrachloride	0.025		0.00	0.005
108-90-7	Chlorobenzene	0.027		0.00	0.005
67-66-3	Chloroform	0.027		0.00	0.005
127-18-4	Tetrachloroethene	0.029		0.00	0.005
79-01-6	Trichloroethene	0.024		0.00	0.005
75-01-4	Vinyl chloride	0.028		0.00	0.005

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MB90245

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90245

Level: (low/med) LOW Lab File ID: 2030325/S8022

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm Date Received:

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1336

Soil Extract Volume: (µL Dilution Factor: 1 Analyst: KRV

Soil Aliquot Volume: (µL

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT		MDL	RL
71-55-6	1,1,1-Trichloroethane	5.00	U	0.204	5.00
79-34-5	1,1,2,2-Tetrachloroethane	0.200	U	0.200	0.200
79-00-5	1,1,2-Trichloroethane	5.00	U	0.333	5.00
75-34-3	1,1-Dichloroethane	5.00	U	0.122	5.00
75-35-4	1,1-Dichloroethene	5.00	U	0.357	5.00
120-82-1	1,2,4-Trichlorobenzene	5.00	U	0.405	5.00
96-12-8	1,2-Dibromo-3-chloropropane	0.200	U	0.200	0.200
106-93-4	1,2-Dibromoethane	0.200	U	0.116	0.200
95-50-1	1,2-Dichlorobenzene	5.00	U	0.221	5.00
107-06-2	1,2-Dichloroethane	3.00	U	0.277	3.00
78-87-5	1,2-Dichloropropane	5.00	U	0.341	5.00
541-73-1	1,3-Dichlorobenzene	5.00	U	0.320	5.00
106-46-7	1,4-Dichlorobenzene	5.00	U	0.295	5.00
78-93-3	2-Butanone	10.0	U	0.641	10.0
591-78-6	2-Hexanone	10.0	U	0.443	10.0
108-10-1	4-Methyl-2-pentanone	10.0	U	0.252	10.0
67-64-1	Acetone	10.0	U	2.36	10.0
71-43-2	Benzene	1.00	U	0.100	1.00
75-27-4	Bromodichloromethane	0.600	U	0.102	0.600
75-25-2	Bromoform	4.00	U	0.140	4.00
74-83-9	Bromomethane	5.00	U	0.330	5.00
75-15-0	Carbon disulfide	5.00	U	0.180	5.00
56-23-5	Carbon tetrachloride	3.00	U	0.161	3.00
108-90-7	Chlorobenzene	5.00	U	0.157	5.00
75-00-3	Chloroethane	5.00	U	0.237	5.00
67-66-3	Chloroform	1.01	J	0.140	5.00
74-87-3	Chloromethane	2.70	U	0.393	2.70
110-82-7	Cyclohexane	100	U	1.00	100
124-48-1	Dibromochloromethane	0.400	U	0.105	0.400
75-71-8	Dichlorodifluoromethane	5.00	U	0.228	5.00
10061-01-5	cis-1,3-Dichloropropene	5.00	U	0.128	5.00
10061-02-6	trans-1,3-Dichloropropene	5.00	U	0.329	5.00
100-41-4	Ethylbenzene	5.00	U	0.312	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MB90245

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90245

Level: (low/med) LOW Lab File ID: 2030325/S8022

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm Date Received:

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1336

Soil Extract Volume: (µL Dilution Factor: 1 Analyst: KRV

Soil Aliquot Volume: (µL

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT		MDL	RL
98-82-8	Isopropylbenzene (Cumene)	5.00	U	0.246	5.00
79-20-9	Methyl Acetate	5.00	U	5.00	5.00
108-87-2	Methylcyclohexane	5.00	U	5.00	5.00
75-09-2	Methylene chloride	5.00	U	0.613	5.00
100-42-5	Styrene	5.00	U	0.173	5.00
127-18-4	Tetrachloroethene	3.00	U	0.269	3.00
108-88-3	Toluene	5.00	U	0.152	5.00
79-01-6	Trichloroethene	3.00	U	0.323	3.00
75-69-4	Trichlorofluoromethane	5.00	U	0.192	5.00
76-13-1	Trichlorotrifluoroethane	5.00	U	0.193	5.00
75-01-4	Vinyl chloride	1.00	U	0.177	1.00
1330-20-7	Xylene (total)	5.00	U	0.507	5.00
156-59-2	cis-1,2-Dichloroethene	5.00	U	0.151	5.00
1634-04-4	tert-Butyl methyl ether (MTBE)	5.00	U	0.122	5.00
156-60-5	trans-1,2-Dichloroethene	5.00	U	0.192	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCS90244

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90244

Level: (low/med) LOW Lab File ID: 2030325/S8019

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm Date Received:

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1222

Soil Extract Volume: (µL Dilution Factor: 1 Analyst: RSP

Soil Aliquot Volume: (µL

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT		MDL	RL
71-55-6	1,1,1-Trichloroethane	22.9		0.204	5.00
79-34-5	1,1,2,2-Tetrachloroethane	28.4		0.200	0.200
79-00-5	1,1,2-Trichloroethane	23.8		0.333	5.00
75-34-3	1,1-Dichloroethane	25.1		0.122	5.00
75-35-4	1,1-Dichloroethene	21.1		0.357	5.00
120-82-1	1,2,4-Trichlorobenzene	15.7		0.405	5.00
96-12-8	1,2-Dibromo-3-chloropropane	19.6		0.200	0.200
106-93-4	1,2-Dibromoethane	22.3		0.116	0.200
95-50-1	1,2-Dichlorobenzene	21.0		0.221	5.00
107-06-2	1,2-Dichloroethane	28.7		0.277	3.00
78-87-5	1,2-Dichloropropane	26.4		0.341	5.00
541-73-1	1,3-Dichlorobenzene	20.9		0.320	5.00
106-46-7	1,4-Dichlorobenzene	21.4		0.295	5.00
78-93-3	2-Butanone	25.8		0.641	10.0
591-78-6	2-Hexanone	24.8		0.443	10.0
108-10-1	4-Methyl-2-pentanone	26.4		0.252	10.0
67-64-1	Acetone	27.1		2.36	10.0
71-43-2	Benzene	23.1		0.100	1.00
75-27-4	Bromodichloromethane	26.2		0.102	0.600
75-25-2	Bromoform	24.9		0.140	4.00
74-83-9	Bromomethane	22.9		0.330	5.00
75-15-0	Carbon disulfide	19.7		0.180	5.00
56-23-5	Carbon tetrachloride	21.7		0.161	3.00
108-90-7	Chlorobenzene	22.6		0.157	5.00
75-00-3	Chloroethane	22.7		0.237	5.00
67-66-3	Chloroform	27.7		0.140	5.00
74-87-3	Chloromethane	21.1		0.393	2.70
110-82-7	Cyclohexane	18.2	J	1.00	100
124-48-1	Dibromochloromethane	24.2		0.105	0.400
75-71-8	Dichlorodifluoromethane	15.6		0.228	5.00
10061-01-5	cis-1,3-Dichloropropene	26.1		0.128	5.00
10061-02-6	trans-1,3-Dichloropropene	24.1		0.329	5.00
100-41-4	Ethylbenzene	19.6		0.312	5.00

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCS90244

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Matrix: (soil/water) Water

Sample wt/vol: 5 (g/ml) mL Lab Sample ID: 90244

Level: (low/med) LOW Lab File ID: 2030325/S8019

% Moisture: not dec. Date Collected: Time:

GC Column: DB-624-30M ID: .53 (mm Date Received:

Instrument ID: MSV1 Date Analyzed: 03/25/03 Time: 1222

Soil Extract Volume: (µL Dilution Factor: 1 Analyst: RSP

Soil Aliquot Volume: (µL

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	RESULT		MDL	RL
98-82-8	Isopropylbenzene (Cumene)	20.8		0.246	5.00
79-20-9	Methyl Acetate	17.9		5.00	5.00
108-87-2	Methylcyclohexane	19.4		5.00	5.00
75-09-2	Methylene chloride	25.0		0.613	5.00
100-42-5	Styrene	22.5		0.173	5.00
127-18-4	Tetrachloroethene	19.4		0.269	3.00
108-88-3	Toluene	22.5		0.152	5.00
79-01-6	Trichloroethene	22.0		0.323	3.00
75-69-4	Trichlorofluoromethane	17.9		0.192	5.00
76-13-1	Trichlorotrifluoroethane	18.4		0.193	5.00
75-01-4	Vinyl chloride	19.7		0.177	1.00
1330-20-7	Xylene (total)	62.2		0.507	5.00
156-59-2	cis-1,2-Dichloroethene	25.9		0.151	5.00
1634-04-4	tert-Butyl methyl ether (MTBE)	26.6		0.122	5.00
156-60-5	trans-1,2-Dichloroethene	24.1		0.192	5.00

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

	SAMPLE NO.	SMC1	#	SMC2	#	SMC3	#	SMC4	#	TOT OUT
1 .	LCS90794	87		93		95		98		0
2 .	MB90795	85		96		94		100		0

		QC LIMITS
SMC 1	4-Bromofluorobenzene	78 - 115
SMC 2	Dibromofluoromethane	70 - 130
SMC 3	Toluene-d8	83 - 112
SMC 4	1,2-Dichloroethane-d4	76 - 128

Column to be used to flag recovery values

* Values outside of contract required QC limits

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Method: 1311/8260B

	SAMPLE NO.	SMC1	#	SMC2	#	SMC3	#	SMC4	#	TOT OUT
1 .	021-PL-S-0324-03	87		91		98		97		0

		QC LIMITS
SMC 1	4-Bromofluorobenzene	78 - 115
SMC 2	Dibromofluoromethane	70 - 130
SMC 3	Toluene-d8	83 - 112
SMC 4	1,2-Dichloroethane-d4	76 - 128

Column to be used to flag recovery values

* Values outside of contract required QC limits

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

	SAMPLE NO.	SMC1	#	SMC2	#	SMC3	#	SMC4	#	TOT OUT
1.	021-PLTB2-W-0324-03	88		94		87		100		0
2.	LCS90244	89		95		85		93		0
3.	MB90245	90		97		88		98		0

		QC LIMITS
SMC 1	4-Bromofluorobenzene	78 - 115
SMC 2	Dibromofluoromethane	70 - 130
SMC 3	Toluene-d8	83 - 112
SMC 4	1,2-Dichloroethane-d4	76 - 128

Column to be used to flag recovery values

* Values outside of contract required QC limits

3A

WATER VOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

SAMPLE NO. : *90794*

COMPOUND	*UNITS*	*SPIKE ADDED*	*SAMPLE CONCENTRATION*	*LCS CONCENTRATION*	*LCS % REC*	#	*QC. LIMITS*
1,1-Dichloroethene	mg/L	.025	0	.023	92		67 - 140
1,2-Dichloroethane	mg/L	.025	0	.025	98		79 - 134
2-Butanone	mg/L	.025	0	.027	106		59 - 157
Benzene	mg/L	.025	0	.021	82		74 - 128
Carbon tetrachloride	mg/L	.025	0	.021	84		70 - 140
Chlorobenzene	mg/L	.025	0	.024	94		78 - 125
Chloroform	mg/L	.025	0	.022	89		80 - 124
Tetrachloroethene	mg/L	.025	0	.023	91		75 - 140
Trichloroethene	mg/L	.025	0	.02	80		63 - 118
Vinyl chloride	mg/L	.025	0	.023	91		68 - 127

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 10 outside limits

3A

WATER VOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

SAMPLE NO. : 90244

COMPOUND	UNITS	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS % REC	#	QC. LIMITS
1,1,1-Trichloroethane	ug/L	25	0	22.9	92		45 - 152
1,1,2,2-Tetrachloroethane	ug/L	25	0	28.4	114		55 - 153
1,1,2-Trichloroethane	ug/L	25	0	23.8	95		73 - 144
1,1-Dichloroethane	ug/L	25	0	25.1	100		75 - 127
1,1-Dichloroethene	ug/L	25	0	21.1	84		67 - 140
1,2,4-Trichlorobenzene	ug/L	25	0	15.7	63		60 - 148
1,2-Dibromo-3-chloropropane	ug/L	25	0	19.6	78		58 - 148
1,2-Dibromoethane	ug/L	25	0	22.3	89		74 - 140
1,2-Dichlorobenzene	ug/L	25	0	21	84		67 - 142
1,2-Dichloroethane	ug/L	25	0	28.7	115		79 - 134
1,2-Dichloropropane	ug/L	25	0	26.4	106		77 - 129
1,3-Dichlorobenzene	ug/L	25	0	20.9	84		65 - 143
1,4-Dichlorobenzene	ug/L	25	0	21.4	86		68 - 142
2-Butanone	ug/L	25	0	25.8	103		59 - 157
2-Hexanone	ug/L	25	0	24.8	99		71 - 166
4-Methyl-2-pentanone	ug/L	25	0	26.4	106		65 - 159
Acetone	ug/L	25	0	27.1	108		58 - 165
Benzene	ug/L	25	0	23.1	92		74 - 128
Bromodichloromethane	ug/L	25	0	26.2	105		76 - 128
Bromoform	ug/L	25	0	24.9	100		67 - 145
Bromomethane	ug/L	25	0	22.9	92		73 - 147
Carbon disulfide	ug/L	25	0	19.7	79		37 - 155
Carbon tetrachloride	ug/L	25	0	21.7	87		75 - 128
Chlorobenzene	ug/L	25	0	22.6	90		78 - 125
Chloroethane	ug/L	25	0	22.7	91		46 - 160
Chloroform	ug/L	25	0	27.7	111		80 - 124
Chloromethane	ug/L	25	0	21.1	84		71 - 120
Cyclohexane	ug/L	25	0	18.2	73		70 - 130
Dibromochloromethane	ug/L	25	0	24.2	97		43 - 159
Dichlorodifluoromethane	ug/L	25	0	15.6	62	*	70 - 127
Ethylbenzene	ug/L	25	0	19.6	78		75 - 138
Isopropylbenzene (Cumene)	ug/L	25	0	20.8	83		66 - 151
Methyl Acetate	ug/L	25	0	17.9	72		40 - 170
Methylcyclohexane	ug/L	25	0	19.4	78		40 - 130
Methylene chloride	ug/L	25	0	25	100		74 - 130
Styrene	ug/L	25	0	22.5	90		75 - 139
Tetrachloroethene	ug/L	25	0	19.4	78		75 - 140
Toluene	ug/L	25	0	22.5	90		76 - 125

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 48 outside limits

3A

WATER VOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Trichloroethene	ug/L	25	0	22	88		63	-	118
Trichlorofluoromethane	ug/L	25	0	17.9	72	*	73	-	131
Trichlorotrifluoroethane	ug/L	25	0	18.4	74		70	-	130
Vinyl chloride	ug/L	25	0	19.7	79		68	-	127
Xylene (total)	ug/L	75	0	62.2	83		60	-	154
cis-1,2-Dichloroethene	ug/L	25	0	25.9	104		78	-	124
cis-1,3-Dichloropropene	ug/L	25	0	26.1	104		73	-	128
tert-Butyl methyl ether (MTBE)	ug/L	25	0	26.6	106		70	-	130
trans-1,2-Dichloroethene	ug/L	25	0	24.1	96		75	-	124
trans-1,3-Dichloropropene	ug/L	25	0	24.1	96		72	-	134

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 48 outside limits

4A

VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

MB90795

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab File ID: 2030328/S8096

Lab Sample ID: 90795 Date Extracted:

GC Column: DB-624-30M ID: .53 (mm

Date Analyzed: 03/28/03 Time: 1116

Instrument ID: MSV1 Matrix: Water

Heated Purge: N

Level: LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1.	LCS90794	90794	2030328/S8093	03/28/03	0959
2.	021-PL-S-0324-03	20303250701	2030328/S8111	03/28/03	1725

FORM IV VOA

4A

VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

MB90245

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab File ID: 2030325/S8022

Lab Sample ID: 90245 Date Extracted:

GC Column: DB-624-30M ID: .53 (mm

Date Analyzed: 03/25/03 Time: 1336

Instrument ID: MSV1 Matrix: Water

Heated Purge: N

Level: LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1.	LCS90244	90244	2030325/S8019	03/25/03	1222
2.	021-PLTB2-W-0324-03	20303250702	2030325/S8025	03/25/03	1452

5A

VOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab File ID: 2030320/S7973

BFB Injection Date: 03/20/03

Instrument ID: MSV1

BFB Injection Time: 0849

GC Column: DB-624-30M ID: .53 (mm

m / e	ION ABUNDANCE CRITERIA	% Relative Abundance			
50	15.0 - 40.0% of mass 95	18.11	(	)	
75	30.0 - 60.0% of mass 95	46.93	(	)	
95	Base Peak, 100% relative abundance	100	(	)	
96	5.0 -9.0% of mass 95	7.9	(	)	
173	Less than 2.0% of mass 174	0	(0	)	1
174	50.0 - 99.9% of mass 95	68.49	(	)	
175	5.0 - 9.0% of mass 174	5.17	(7.55	)	1
176	95.0 - 101.0% of mass 174	67.24	(98.18	)	1
177	5.0 - 9.0% of mass 176	4.88	(7.26	)	2

1- Value is % mass 174 2- Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1.	V1STD002	1206	2030320/S7975	03/20/03	1036
2.	V1STD005	1201	2030320/S7976	03/20/03	1100
3.	V1STD020	1202	2030320/S7977	03/20/03	1125
4.	V1STD050	1203	2030320/S7978	03/20/03	1150
5.	V1STD100	1204	2030320/S7979	03/20/03	1214
6.	V1STD200	1205	2030320/S7980	03/20/03	1250
7.	V1STD00.2	1207	2030320/S7982	03/20/03	1340
8.	V1STD00.4	1208	2030320/S7983	03/20/03	1405

5A

VOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab File ID: 2030328/S8089

BFB Injection Date: 03/28/03

Instrument ID: MSV1

BFB Injection Time: 0802

GC Column: DB-624-30M ID: .53 (mm

m / e	*ION ABUNDANCE CRITERIA*	*% Relative Abundance*				
50	15.0 - 40.0% of mass 95	17.65	(		)	
75	30.0 - 60.0% of mass 95	49.84	(		)	
95	Base Peak, 100% relative abundance	100	(		)	
96	5.0 -9.0% of mass 95	7.85	(		)	
173	Less than 2.0% of mass 174	0	(	0	)	1
174	50.0 - 99.9% of mass 95	64.31	(		)	
175	5.0 - 9.0% of mass 174	5.6	(	8.71	)	1
176	95.0 - 101.0% of mass 174	62.11	(	96.59	)	1
177	5.0 - 9.0% of mass 176	4.75	(	7.66	)	2

1- Value is % mass 174

2- Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	SAMPLE NO.	*LAB SAMPLE ID*	*LAB FILE ID*	*DATE ANALYZED*	*TIME ANALYZED*
1 .	V1STD050	1400	2030328/S8091	03/28/03	0859
2 .	LCS90794	90794	2030328/S8093	03/28/03	0959
3 .	MB90795	90795	2030328/S8096	03/28/03	1116
4 .	021-PL-S-0324-03	20303250701	2030328/S8111	03/28/03	1725

FORM V VOA

5A

VOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Lab File ID: 2030325/S8013 BFB Injection Date: 03/25/03

Instrument ID: MSV1 BFB Injection Time: 0825

GC Column: DB-624-30M ID: .53 (mm

m / e	ION ABUNDANCE CRITERIA	% Relative Abundance				
50	15.0 - 40.0% of mass 95	17.8	(		)	
75	30.0 - 60.0% of mass 95	47.58	(		)	
95	Base Peak, 100% relative abundance	100	(		)	
96	5.0 -9.0% of mass 95	7.97	(		)	
173	Less than 2.0% of mass 174	0	(	0	)	1
174	50.0 - 99.9% of mass 95	69.63	(		)	
175	5.0 - 9.0% of mass 174	5.25	(	7.54	)	1
176	95.0 - 101.0% of mass 174	69.45	(	99.75	)	1
177	5.0 - 9.0% of mass 176	5	(	7.21	)	2

1- Value is % mass 174 2- Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1 .	V1STD050	1400	2030325/S8015	03/25/03	0929
2 .	LCS90244	90244	2030325/S8019	03/25/03	1222
3 .	MB90245	90245	2030325/S8022	03/25/03	1336
4 .	021-PLTB2-W-0324-03	20303250702	2030325/S8025	03/25/03	1452

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Instrument ID: MSV1 Calibration Date 1 03/20/03 Time 1: 1036

GC Column: DB-624-30M ID: .53 (mm) Calibration Date 2 03/20/03 Time 2: 1405

Heated Purge: (Y/N) N Method: SW-846 8260

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	$\overline{RF}$	RSD	#	LIMIT	TYPE
Acetone	0.046	0.035	0.054	0.041	0.044					0.044	16.26		50	Averaged
Acrolein	0.006	0.006	0.008	0.011	0.012					0.009	30.84		50	Averaged
Acrylonitrile	0.052	0.052	0.053	0.056	0.054					0.053	3.195		50	Averaged
Bromochloromethane	0.200	0.209	0.217	0.225	0.230					0.216	5.514		50	Averaged
Bromodichloromethane	0.560	0.600	0.668	0.699	0.694	0.600		0.824		0.664	13.26		50	Averaged
Bromoform	0.602	0.628	0.692	0.713	0.668	0.609				0.652	7.066		50	Averaged
Bromomethane	0.186	0.215	0.235	0.249	0.229	0.243				0.226	10.05		50	Averaged
Carbon disulfide	0.448	0.621	0.691	0.782	0.808					0.670	21.57		50	Averaged
Carbon tetrachloride	0.241	0.384	0.414	0.493	0.499	0.340				0.395	24.70		50	Averaged
Chloroethane	0.124	0.161	0.173	0.183	0.176	0.181				0.166	13.41		50	Averaged
m,p-Xylene	0.838	0.967	1.019	1.047	0.903					0.955	8.937		50	Averaged
Chloroform	0.507	0.658	0.616	0.723	0.703					0.641	13.36		30	Averaged
Chloromethane	0.140	0.202	0.214	0.226	0.214	0.201				0.200	15.36		50	Averaged
Dibromochloromethane	0.820	0.887	0.944	0.985	0.931	0.948	0.764	0.855		0.892	8.381		50	Averaged
Dibromomethane	0.339	0.316	0.335	0.341	0.334					0.333	2.998		50	Averaged
Dichlorodifluoromethane	0.218	0.300	0.312	0.358	0.343					0.306	17.82		50	Averaged
1,1-Dichloroethane	0.451	0.521	0.550	0.591	0.598					0.542	11.04		50	Averaged
1,2-Dichloroethane	0.355	0.385	0.383	0.376	0.370	0.400				0.378	3.978		50	Averaged
cis-1,2-Dichloroethene	0.396	0.461	0.469	0.504	0.498					0.466	9.209		50	Averaged
trans-1,2-Dichloroethene	0.273	0.371	0.384	0.418	0.414					0.372	15.74		50	Averaged
Methylene chloride	0.355	0.339	0.358	0.361	0.383					0.359	4.445		50	Averaged
1,2-Dichloropropane	0.295	0.360	0.376	0.399	0.398					0.366	11.64		30	Averaged
cis-1,3-Dichloropropene	0.445	0.487	0.540	0.575	0.593					0.528	11.67		50	Averaged
trans-1,3-Dichloropropene	0.697	0.722	0.738	0.788	0.731					0.735	4.534		50	Averaged
Ethylbenzene	0.531	0.622	0.641	0.621	0.566					0.596	7.715		30	Averaged
2-Hexanone	0.420	0.324	0.344	0.338	0.303					0.346	12.80		50	Averaged
Isopropylbenzene (Cumene)	2.178	2.537	2.700	2.782	2.442					2.528	9.362		50	Averaged
2-Butanone	0.118	0.082	0.090	0.085	0.081					0.091	16.94		50	Averaged
Methyl iodide	0.423	0.521	0.586	0.625	0.623					0.556	15.36		50	Averaged
4-Methyl-2-pentanone	0.349	0.268	0.293	0.297	0.290					0.300	10.00		50	Averaged
n-Propylbenzene	2.452	2.951	3.149	3.327	2.962					2.968	11.01		50	Averaged
Styrene	1.498	1.598	1.707	1.731	1.553					1.618	6.161		50	Averaged
Tetrachloroethene	0.393	0.528	0.558	0.588	0.510	0.635				0.535	15.41		50	Averaged
1,1,1,2-Tetrachloroethane	0.612	0.716	0.737	0.755	0.667					0.697	8.326		50	Averaged
1,1,2,2-Tetrachloroethane	1.167	1.066	1.099	1.041	0.970	1.324	3.669	1.784		1.515	59.91	*	50	Averaged

FORM V I VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL | Contract:

Lab Code: LA024 | Case No.: | SAS No.: | SDG No.: 203032507

Instrument ID: MSV1 | Calibration Date 1 03/20/03 | Time 1: 1036

GC Column: DB-624-30M | ID: .53 (mm) | Calibration Date 2 03/20/03 | Time 2: 1405

Heated Purge: (Y/N) N | Method: SW-846 8260

Lab File ID: Level 1: 1201 | Level 2: 1202 | Level 3: 1203

Level 4: 1204 | Level 5: 1205 | Level 6: 1206

Level 7: 1207 | Level 8: 1208 | Level 9:

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	$\overline{RF}$	RSD	#	LIMIT	TYPE
1,2,4-Trichlorobenzene	0.496	0.612	0.531	0.813	0.775					0.645	22.13		50	Averaged
1,1,1-Trichloroethane	0.357	0.499	0.513	0.573	0.558					0.500	17.08		50	Averaged
1,1,2-Trichloroethane	0.619	0.649	0.634	0.649	0.609					0.632	2.835		50	Averaged
Trichlorofluoromethane	0.293	0.408	0.422	0.483	0.495					0.420	19.18		50	Averaged
1,2,3-Trichloropropane	1.121	1.246	1.396	1.428	1.301					1.298	9.469		50	Averaged
1,2,4-Trimethylbenzene	1.808	2.111	2.113	2.430	2.065					2.105	10.51		50	Averaged
1,3,5-Trimethylbenzene	1.872	2.241	2.375	2.497	2.697					2.213	11.11		50	Averaged
Vinyl chloride	0.148	0.209	0.224	0.241	0.238	0.215		0.191		0.210	15.43		30	Averaged
o-Xylene	0.883	0.901	0.982	1.00	0.886					0.930	6.013		50	Averaged
1,2-Dibromo-3-chloropropane	0.231	0.262	0.283	0.307	0.311		0.422	0.415		0.318	23.09		50	Averaged
1,2-Dibromoethane	0.813	0.826	0.854	0.857	0.790	0.925	1.273	1.071		0.926	17.91		50	Averaged
Vinyl acetate	0.204	0.209	0.220	0.233	0.271					0.227	11.87		50	Averaged
tert-Butyl methyl ether (MTBE)	0.538	0.562	0.588	0.652	0.678					0.604	9.847		50	Averaged
1,2-Dichloroethene	0.335	0.416	0.426	0.461	0.456			0.414		0.418	10.85		50	Averaged
4-Isopropyltoluene	1.909	2.362	2.463	2.650	2.343					2.345	11.62		50	Averaged
Xylene (total)	0.884	1.027	1.073	1.139	0.991					1.023	9.330		50	Averaged
Methylcyclohexane	0.243	0.328	0.361	0.400	0.368					0.340	17.57		50	Averaged
n-Hexane	0.146	0.201	0.213	0.241	0.217					0.204	17.35		50	Averaged
trans-1,4-Dichloro-2-butene	0.139	0.165	0.185	0.201	0.198					0.178	14.40		50	Averaged
Cyclohexane	0.249	0.378	0.417	0.494	0.477					0.403	24.31		50	Averaged
2,2-Dichloropropane	0.313	0.430	0.450	0.493	0.497					0.437	17.10		50	Averaged
Methyl Acetate	0.162	0.152	0.161	0.160	0.164					0.160	2.729		50	Averaged
Trichlorotrifluoroethane	0.310	0.444	0.441	0.507	0.501					0.441	17.95		50	Averaged
1,1-Dichloropropene	0.272	0.379	0.416	0.475	0.471					0.403	20.69		50	Averaged
2-Chloroethylvinyl ether	0.182	0.180	0.203	0.207	0.212					0.197	7.642		50	Averaged
1,3-Dichloropropane	0.977	0.976	1.00	1.012	0.929					0.979	3.222		50	Averaged
Bromobenzene	1.976	2.065	2.510	2.588	2.313					2.290	11.70		50	Averaged
2-Chlorotoluene	1.702	2.221	2.208	2.334	2.119					2.117	11.53		50	Averaged
4-Chlorotoluene	1.847	2.243	2.491	2.507	2.410					2.300	11.90		50	Averaged
tert-Butylbenzene	1.155	1.580	1.650	1.823	1.603					1.562	15.80		50	Averaged
sec-Butylbenzene	2.350	3.139	3.254	3.526	3.134					3.080	14.22		50	Averaged
1,3-Dichlorobenzene	1.034	1.054	1.147	1.208	1.028					1.094	7.277		50	Averaged
1,4-Dichlorobenzene	1.618	1.822	1.802	1.821	1.655					1.744	5.682		50	Averaged
n-Butylbenzene	1.577	1.830	1.608	2.219	1.963					1.840	14.44		50	Averaged
1,2-Dichlorobenzene	1.375	1.405	1.506	1.585	1.430					1.460	5.819		50	Averaged

FORM VI VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Instrument ID: MSV1 Calibration Date 1 03/20/03 Time 1: 1036

GC Column: DB-624-30M ID: .53 (mm) Calibration Date 2 03/20/03 Time 2: 1405

Heated Purge: (Y/N) N Method: SW-846 8260

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	$\overline{RF}$	RSD	#	LIMIT	TYPE
Hexachlorobutadiene	0.310	0.389	0.415	0.472	0.435	0.411				0.405	13.38		50	Averaged
Naphthalene	0.854	0.924	1.033	1.387	1.487					1.137	24.92		50	Averaged
1,2,3-Trichlorobenzene	0.549	0.612	0.507	0.813	0.719					0.640	19.60		50	Averaged
1,1-Dichloroethene	0.172	0.234	0.238	0.263	0.272					0.236	16.67		30	Averaged
Benzene	0.710	0.854	0.898	0.956	0.937	0.999		1.399		0.965	22.10		50	Averaged
Trichloroethene	0.299	0.397	0.418	0.463	0.459	0.440				0.413	14.83		50	Averaged
Toluene	1.580	1.901	1.956	2.025	1.761					1.844	9.597		30	Averaged
Chlorobenzene	1.403	1.491	1.561	1.572	1.376					1.481	6.026		50	Averaged
4-Bromofluorobenzene	1.045	0.867	1.004	0.852	0.883					0.930	9.456		50	Averaged
Dibromofluoromethane	0.567	0.512	0.580	0.506	0.546					0.542	6.058		50	Averaged
Toluene-d8	1.983	1.782	1.975	1.701	1.641					1.816	8.629		50	Averaged
1,2-Dichloroethane-d4	0.188	0.164	0.188	0.170	0.184					0.179	6.285		50	Averaged

FORM V I VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSV1

Calibration Date: 03/28/03 Time: 0859

Lab File ID: 2030328/S8091

Init. Calib. Date 1: 03/20/03 Time 1: 1036

Heated Purge: (Y/N) N

Init. Calib. Date 2: 03/20/03 Time 2: 1405

GC Column: DB-624-30M ID: .53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	Min RRF	% D	Max %D
Acetone	0.044	0.044	0	-0.50	50
Acrolein	0.009	0.005	0	-37.1	50
Acrylonitrile	0.053	0.049	0	-7.70	50
Bromochloromethane	0.216	0.233	0	7.899	50
Bromodichloromethane	0.664	0.690	0	3.969	50
Bromoform	0.652	0.719	.1	10.3	50
Bromomethane	0.226	0.253	0	12.0	50
Carbon disulfide	0.670	0.799	0	19.2	50
Carbon tetrachloride	0.395	0.432	0	9.362	50
Chloroethane	0.166	0.178	0	6.791	50
m,p-Xylene	0.955	1.022	0	7.028	50
Chloroform	0.641	0.711	0	10.9	20
Chloromethane	0.200	0.224	.1	12.2	50
Dibromochloromethane	0.892	0.975	0	9.347	50
Dibromomethane	0.333	0.349	0	4.762	50
Dichlorodifluoromethane	0.306	0.342	0	11.8	50
1,1-Dichloroethane	0.542	0.597	.1	10.2	50
1,2-Dichloroethane	0.378	0.391	0	3.381	50
cis-1,2-Dichloroethene	0.466	0.513	0	10.1	50
trans-1,2-Dichloroethene	0.372	0.413	0	11.0	50
Methylene chloride	0.359	0.385	0	7.155	50
1,2-Dichloropropane	0.366	0.390	0	6.715	20
cis-1,3-Dichloropropene	0.528	0.554	0	4.975	50
trans-1,3-Dichloropropene	0.735	0.830	0	12.8	50
Ethylbenzene	0.596	0.627	0	5.138	20
2-Hexanone	0.346	0.364	0	5.198	50
Isopropylbenzene (Cumene)	2.528	2.659	0	5.181	50
2-Butanone	0.091	0.104	0	13.8	50
Methyl iodide	0.556	0.593	0	6.801	50
4-Methyl-2-pentanone	0.300	0.298	0	-0.65	50
n-Propylbenzene	2.968	3.040	0	2.431	50
Styrene	1.618	1.735	0	7.233	50
Tetrachloroethene	0.535	0.554	0	3.446	50
1,1,1,2-Tetrachloroethane	0.697	0.748	0	7.329	50
1,1,2,2-Tetrachloroethane	1.515	1.271	.3	-16.1	50
1,2,4-Trichlorobenzene	0.645	0.730	0	13.1	50
1,1,1-Trichloroethane	0.500	0.530	0	5.979	50
1,1,2-Trichloroethane	0.632	0.684	0	8.189	50
Trichlorofluoromethane	0.420	0.471	0	12.1	50

FORM V II VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSV1

Calibration Date: 03/28/03 Time: 0859

Lab File ID: 2030328/S8091

Init. Calib. Date 1: 03/20/03 Time 1: 1036

Heated Purge: (Y/N) N

Init. Calib. Date 2: 03/20/03 Time 2: 1405

GC Column: DB-624-30M ID: .53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	Min RRF	% D	Max %D
1,2,3-Trichloropropane	1.298	1.398	0	7.657	50
1,2,4-Trimethylbenzene	2.105	2.175	0	3.335	50
1,3,5-Trimethylbenzene	2.213	2.178	0	-1.57	50
Vinyl chloride	0.210	0.247	0	17.8	20
o-Xylene	0.930	0.976	0	4.876	50
1,2-Dibromo-3-chloropropane	0.318	0.297	0	-6.85	50
1,2-Dibromoethane	0.926	0.898	0	-3.02	50
Vinyl acetate	0.227	0.205	0	-9.67	50
tert-Butyl methyl ether (MTBE)	0.604	0.618	0	2.453	50
1,2-Dichloroethene	0.418	0.463	0	10.5	50
4-Isopropyltoluene	2.345	2.297	0	-2.04	50
Xylene (total)	1.023	1.011	0	6.311	50
Methylcyclohexane	0.340	0.365	0	7.253	50
n-Hexane	0.204	0.202	0	-0.96	50
trans-1,4-Dichloro-2-butene	0.178	0.207	0	16.3	50
Cyclohexane	0.403	0.426	0	5.638	50
2,2-Dichloropropane	0.437	0.496	0	13.6	50
Methyl Acetate	0.160	0.113	0	-29.4	50
Trichlorotrifluoroethane	0.441	0.467	0	5.950	50
1,1-Dichloropropene	0.403	0.437	0	8.476	50
2-Chloroethylvinyl ether	0.197	0.169	0	-14.3	50
1,3-Dichloropropane	0.979	1.048	0	7.127	50
Bromobenzene	2.290	2.438	0	6.467	50
2-Chlorotoluene	2.117	2.084	0	-1.57	50
4-Chlorotoluene	2.300	2.233	0	-2.90	50
tert-Butylbenzene	1.562	1.560	0	-0.14	50
sec-Butylbenzene	3.080	3.040	0	-1.29	50
1,3-Dichlorobenzene	1.094	1.107	0	1.158	50
1,4-Dichlorobenzene	1.744	1.604	0	-8.02	50
n-Butylbenzene	1.840	1.943	0	5.642	50
1,2-Dichlorobenzene	1.460	1.386	0	-5.09	50
Hexachlorobutadiene	0.405	0.428	0	5.588	50
Naphthalene	1.137	1.545	0	35.9	50
1,2,3-Trichlorobenzene	0.640	0.692	0	8.149	50
1,1-Dichloroethene	0.236	0.268	0	13.7	20
Benzene	0.965	0.950	0	-1.49	50
Trichloroethene	0.413	0.397	0	-3.84	50
Toluene	1.844	2.013	0	9.148	20
Chlorobenzene	1.481	1.566	.3	5.772	50

FORM V II VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSV1

Calibration Date: 03/28/03 Time: 0859

Lab File ID: 2030328/S8091

Init. Calib. Date 1: 03/20/03 Time 1: 1036

Heated Purge: (Y/N) N

Init. Calib. Date 2: 03/20/03 Time 2: 1405

GC Column: DB-624-30M ID: .53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	Min RRF	% D	Max %D
4-Bromofluorobenzene	0.930	0.828	0	-10.9	50
Dibromofluoromethane	0.542	0.567	0	4.509	50
Toluene-d8	1.816	1.774	0	-2.32	50
1,2-Dichloroethane-d4	0.179	0.180	0	0.277	50

FORM V II VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSV1

Calibration Date: 03/25/03 Time: 0929

Lab File ID: 2030325/S8015

Init. Calib. Date 1: 03/20/03 Time 1: 1036

Heated Purge: (Y/N) N

Init. Calib. Date 2: 03/20/03 Time 2: 1405

GC Column: DB-624-30M ID: .53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	Min RRF	% D	Max %D
Acetone	0.044	0.047	0	6.242	50
Acrolein	0.009	0.000	0	-94.7	50
Acrylonitrile	0.053	0.050	0	-6.66	50
Bromochloromethane	0.216	0.244	0	12.9	50
Bromodichloromethane	0.664	0.770	0	16.0	50
Bromoform	0.652	0.677	.1	3.902	50
Bromomethane	0.226	0.247	0	9.232	50
Carbon disulfide	0.670	0.702	0	4.742	50
Carbon tetrachloride	0.395	0.450	0	13.8	50
Chloroethane	0.166	0.177	0	6.332	50
m,p-Xylene	0.955	1.032	0	8.089	50
Chloroform	0.641	0.703	0	9.548	20
Chloromethane	0.200	0.201	.1	0.723	50
Dibromochloromethane	0.892	0.944	0	5.821	50
Dibromomethane	0.333	0.377	0	13.2	50
Dichlorodifluoromethane	0.306	0.264	0	-13.6	50
1,1-Dichloroethane	0.542	0.627	.1	15.6	50
1,2-Dichloroethane	0.378	0.428	0	13.2	50
cis-1,2-Dichloroethene	0.466	0.535	0	14.9	50
trans-1,2-Dichloroethene	0.372	0.428	0	15.1	50
Methylene chloride	0.359	0.415	0	15.5	50
1,2-Dichloropropane	0.366	0.436	0	19.4	20
cis-1,3-Dichloropropene	0.528	0.625	0	18.3	50
trans-1,3-Dichloropropene	0.735	0.778	0	5.848	50
Ethylbenzene	0.596	0.605	0	1.501	20
2-Hexanone	0.346	0.313	0	-9.52	50
Isopropylbenzene (Cumene)	2.528	2.609	0	3.224	50
2-Butanone	0.091	0.090	0	-1.39	50
Methyl iodide	0.556	0.657	0	18.3	50
4-Methyl-2-pentanone	0.300	0.301	0	0.635	50
n-Propylbenzene	2.968	2.773	0	-6.58	50
Styrene	1.618	1.744	0	7.802	50
Tetrachloroethene	0.535	0.510	0	-4.83	50
1,1,1,2-Tetrachloroethane	0.697	0.736	0	5.613	50
1,1,2,2-Tetrachloroethane	1.515	1.095	.3	-27.7	50
1,2,4-Trichlorobenzene	0.645	0.669	0	3.699	50
1,1,1-Trichloroethane	0.500	0.561	0	12.3	50
1,1,2-Trichloroethane	0.632	0.636	0	0.546	50
Trichlorofluoromethane	0.420	0.406	0	-3.35	50

FORM V II VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL | Contract:

Lab Code: LA024 | Case No.: | SAS No.: | SDG No.: 203032507

Instrument ID: MSV1 | Calibration Date: 03/25/03 | Time: 0929

Lab File ID: 2030325/S8015 | Init. Calib. Date 1: 03/20/03 | Time 1: 1036

Heated Purge: (Y/N) N | Init. Calib. Date 2: 03/20/03 | Time 2: 1405

GC Column: DB-624-30M | ID: .53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	Min RRF	% D	Max %D
1,2,3-Trichloropropane	1.298	1.226	0	-5.54	50
1,2,4-Trimethylbenzene	2.105	2.101	0	-0.18	50
1,3,5-Trimethylbenzene	2.213	2.088	0	-5.63	50
Vinyl chloride	0.210	0.214	0	2.026	20
o-Xylene	0.930	0.995	0	6.986	50
1,2-Dibromo-3-chloropropane	0.318	0.266	0	-16.5	50
1,2-Dibromoethane	0.926	0.837	0	-9.62	50
Vinyl acetate	0.227	0.223	0	-2.04	50
tert-Butyl methyl ether (MTBE)	0.604	0.643	0	6.504	50
1,2-Dichloroethene	0.418	0.482	0	15.0	50
4-Isopropyltoluene	2.345	2.171	0	-7.44	50
Xylene (total)	1.023	0.970	0	7.721	50
Methylcyclohexane	0.340	0.323	0	-5.08	50
n-Hexane	0.204	0.167	0	-17.8	50
trans-1,4-Dichloro-2-butene	0.178	0.169	0	-5.03	50
Cyclohexane	0.403	0.402	0	-0.22	50
2,2-Dichloropropane	0.437	0.497	0	13.9	50
Methyl Acetate	0.160	0.162	0	1.271	50
Trichlorotrifluoroethane	0.441	0.415	0	-5.70	50
1,1-Dichloropropene	0.403	0.431	0	7.096	50
2-Chloroethylvinyl ether	0.197	0.174	0	-11.6	50
1,3-Dichloropropane	0.979	0.984	0	0.490	50
Bromobenzene	2.290	1.965	0	-14.1	50
2-Chlorotoluene	2.117	1.864	0	-11.9	50
4-Chlorotoluene	2.300	2.205	0	-4.09	50
tert-Butylbenzene	1.562	1.494	0	-4.38	50
sec-Butylbenzene	3.080	2.820	0	-8.46	50
1,3-Dichlorobenzene	1.094	1.055	0	-3.63	50
1,4-Dichlorobenzene	1.744	1.655	0	-5.09	50
n-Butylbenzene	1.840	1.763	0	-4.15	50
1,2-Dichlorobenzene	1.460	1.402	0	-3.97	50
Hexachlorobutadiene	0.405	0.372	0	-8.20	50
Naphthalene	1.137	1.118	0	-1.65	50
1,2,3-Trichlorobenzene	0.640	0.632	0	-1.33	50
1,1-Dichloroethene	0.236	0.239	0	1.349	20
Benzene	0.965	1.015	0	5.215	50
Trichloroethene	0.413	0.445	0	7.815	50
Toluene	1.844	1.924	0	4.316	20
Chlorobenzene	1.481	1.569	.3	5.993	50

FORM VII VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSV1

Calibration Date: 03/25/03 Time: 0929

Lab File ID: 2030325/S8015

Init. Calib. Date 1: 03/20/03 Time 1: 1036

Heated Purge: (Y/N) N

Init. Calib. Date 2: 03/20/03 Time 2: 1405

GC Column: DB-624-30M ID: .53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	Min RRF	% D	Max %D
4-Bromofluorobenzene	0.930	0.866	0	-6.85	50
Dibromofluoromethane	0.542	0.574	0	5.861	50
Toluene-d8	1.816	1.584	0	-12.7	50
1,2-Dichloroethane-d4	0.179	0.181	0	1.140	50

FORM V II VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab File ID (Standard): 2030328/S8O91

Date Analyzed: 03/28/03

Instrument ID: MSV1

Time: 0859

GC Column: DB-624-30M ID: .53 (mm)

Heated Purge: (Y/N) N

	IS 1 Area	RT	IS 2 Area	RT	IS 3 Area	RT
12 HOUR STD	1040247	8.806	1826580	6.758	1035363	10.86
UPPER LIMIT	2080494	9.306	3653160	7.258	2070726	11.36
LOWER LIMIT	520123.5	8.306	913290	6.258	517681.5	10.36

EPA Sample		#		#		#		#		#		#
1 . LCS90794	1072083		8.8		2015079		6.75		1043606		10.88	
2 . MB90795	1105893		8.81		1897945		6.75		1037864		10.87	
3 . 021-PL-S-0324-03	1054491		8.8		1963170		6.75		1015897		10.86	

IS 1 ID : Chlorobenzene-d5
IS 2 ID : Fluorobenzene
IS 3 ID : 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RTLOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab File ID (Standard): 2030325/S8015

Date Analyzed: 03/25/03

Instrument ID: MSV1

Time: 0929

GC Column: DB-624-30M ID: .53 (mm)

Heated Purge: (Y/N) N

	IS 1 Area	RT	IS 2 Area	RT	IS 3 Area	RT
12 HOUR STD	929690	8.827	1413171	6.779	976963	10.89
UPPER LIMIT	1859380	9.327	2826342	7.279	1953926	11.39
LOWER LIMIT	464845	8.327	706585.5	6.279	488481.5	10.39

EPA Sample			#		#		#		#		#		#
1 .	LCS90244	1088057		8.82		1647566		6.76		1071365		10.89	
2 .	MB90245	1074122		8.82		1678665		6.76		1061435		10.89	
3 .	021-PLTB2-W-0324-03	1144189		8.82		1763366		6.76		1106683		10.88	

IS 1 ID : Chlorobenzene-d5
IS 2 ID : Fluorobenzene
IS 3 ID : 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RTLOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC limits

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Matrix: Soil

Sample wt/vol: 200 Units: mL

Level: (low/med) LOW

% Moisture: 14 decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03

Contract:

Lab File ID: 2030326/A6061

Lab Sample ID: 20303250701

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted: 03/26/03

Date Analyzed: 03/26/03 Time: 1652

Dilution Factor: 1 Analyst: RLW

Prep Method: 1311/3510

Analytical Method: 1311/8270C

Instrument ID: MSSV1

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
106-46-7	1,4-Dichlorobenzene	0.050	U	0.005	0.050
95-95-4	2,4,5-Trichlorophenol	0.050	U	0.000	0.050
88-06-2	2,4,6-Trichlorophenol	0.050	U	0.001	0.050
121-14-2	2,4-Dinitrotoluene	0.050	U	0.000	0.050
1319-77-3	Cresols	0.100	U	0.003	0.100
118-74-1	Hexachlorobenzene	0.050	U	0.001	0.050
87-68-3	Hexachlorobutadiene	0.050	U	0.000	0.050
67-72-1	Hexachloroethane	0.050	U	0.000	0.050
98-95-3	Nitrobenzene	0.050	U	0.002	0.050
87-86-5	Pentachlorophenol	0.100	U	0.005	0.100
110-86-1	Pyridine	0.050	U	0.001	0.050
1319-77-3M	m,p-Cresol	0.050	U	0.000	0.050
95-48-7	o-Cresol	0.050	U	0.003	0.050

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: MB90510

Contract:

Lab File ID: 2030326/A6052

Lab Sample ID: 90510

Date Collected: Time:

Date Received:

Date Extracted: 03/26/03

Date Analyzed: 03/26/03 Time: 1344

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: 1311/8270C

Instrument ID: MSSV1

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
106-46-7	1,4-Dichlorobenzene	0.050	U	0.005	0.050
95-95-4	2,4,5-Trichlorophenol	0.050	U	0.000	0.050
88-06-2	2,4,6-Trichlorophenol	0.050	U	0.001	0.050
121-14-2	2,4-Dinitrotoluene	0.050	U	0.000	0.050
1319-77-3	Cresols	0.100	U	0.003	0.100
118-74-1	Hexachlorobenzene	0.050	U	0.001	0.050
87-68-3	Hexachlorobutadiene	0.050	U	0.000	0.050
67-72-1	Hexachloroethane	0.050	U	0.000	0.050
98-95-3	Nitrobenzene	0.050	U	0.002	0.050
87-86-5	Pentachlorophenol	0.100	U	0.005	0.100
110-86-1	Pyridine	0.050	U	0.001	0.050
1319-77-3M	m,p-Cresol	0.050	U	0.000	0.050
95-48-7	o-Cresol	0.050	U	0.003	0.050

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCS90511

Contract:

Lab File ID: 2030326/A6053

Lab Sample ID: 90511

Date Collected: Time:

Date Received:

Date Extracted: 03/26/03

Date Analyzed: 03/26/03 Time: 1405

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: 1311/8270C

Instrument ID: MSSV1

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
106-46-7	1,4-Dichlorobenzene	0.079		0.005	0.050
95-95-4	2,4,5-Trichlorophenol	0.091		0.000	0.050
88-06-2	2,4,6-Trichlorophenol	0.091		0.001	0.050
121-14-2	2,4-Dinitrotoluene	0.096		0.000	0.050
1319-77-3	Cresols	0.068	J	0.003	0.100
118-74-1	Hexachlorobenzene	0.089		0.001	0.050
87-68-3	Hexachlorobutadiene	0.082		0.000	0.050
67-72-1	Hexachloroethane	0.078		0.000	0.050
98-95-3	Nitrobenzene	0.088		0.002	0.050
87-86-5	Pentachlorophenol	0.083	J	0.005	0.100
110-86-1	Pyridine	0.034	J	0.001	0.050
1319-77-3M	m,p-Cresol	0.064		0.000	0.050
95-48-7	o-Cresol	0.072		0.003	0.050

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Matrix: Soil

Sample wt/vol: 200 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 092-UST-198-1-SWC0...MS

Contract:

Lab File ID: 2030326/A6055

Lab Sample ID: 90512

Date Collected: 03/13/03 Time: 0800

Date Received: 03/15/03

Date Extracted: 03/26/03

Date Analyzed: 03/26/03 Time: 1446

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: 1311/8270C

Instrument ID: MSSV1

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
106-46-7	1,4-Dichlorobenzene	0.437		0.030	0.323
95-95-4	2,4,5-Trichlorophenol	0.581		0.004	0.323
88-06-2	2,4,6-Trichlorophenol	0.572		0.008	0.323
121-14-2	2,4-Dinitrotoluene	0.631		0.005	0.323
1319-77-3	Cresols	0.402	J	0.019	0.647
118-74-1	Hexachlorobenzene	0.586		0.009	0.323
87-68-3	Hexachlorobutadiene	0.485		0.003	0.323
67-72-1	Hexachloroethane	0.440		0.004	0.323
98-95-3	Nitrobenzene	0.550		0.013	0.323
87-86-5	Pentachlorophenol	0.570	J	0.030	0.647
110-86-1	Pyridine	0.178	J	0.009	0.323
1319-77-3M	m,p-Cresol	0.378		0.003	0.323
95-48-7	o-Cresol	0.428		0.016	0.323

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Matrix: Soil

Sample wt/vol: 200 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-5MS-30M ID: .25 (mm)

Concentrated Extract Volume: 1000 (µL)

Injection Volume: 1.0 (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 092-UST-198-1-SWC...MSD

Contract:

Lab File ID: 2030326/A6056

Lab Sample ID: 90513

Date Collected: 03/13/03 Time: 0800

Date Received: 03/15/03

Date Extracted: 03/26/03

Date Analyzed: 03/26/03 Time: 1507

Dilution Factor: 1 Analyst: RLW

Prep Method: 3510

Analytical Method: 1311/8270C

Instrument ID: MSSV1

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	PQL
106-46-7	1,4-Dichlorobenzene	0.424		0.030	0.323
95-95-4	2,4,5-Trichlorophenol	0.623		0.004	0.323
88-06-2	2,4,6-Trichlorophenol	0.601		0.008	0.323
121-14-2	2,4-Dinitrotoluene	0.627		0.005	0.323
1319-77-3	Cresols	0.436	J	0.019	0.647
118-74-1	Hexachlorobenzene	0.617		0.009	0.323
87-68-3	Hexachlorobutadiene	0.428		0.003	0.323
67-72-1	Hexachloroethane	0.416		0.004	0.323
98-95-3	Nitrobenzene	0.569		0.013	0.323
87-86-5	Pentachlorophenol	0.573	J	0.030	0.647
110-86-1	Pyridine	0.145	J	0.009	0.323
1319-77-3M	m,p-Cresol	0.413		0.003	0.323
95-48-7	o-Cresol	0.460		0.016	0.323

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 2 Case No.: SAS No.: SDG No.: 203032507

Method: 1311/8270C Level: (low/med) LOW

	EPA SAMPLE NO.	SMC1	#	SMC2	#	SMC3	#	SMC4	#	SMC5	#	SMC6	#	TOT OUT
1.	LCS90511	87		84		94		31		51		81		0
2.	MB90510	83		77		97		38		56		70		0

CONTROL LIMITS

SMC 1	Nitrobenzene-d5	43	110
SMC 2	2-Fluorobiphenyl	16	128
SMC 3	Terphenyl-d14	47	121
SMC 4	Phenol-d5	10	76
SMC 5	2-Fluorophenol	24	96
SMC 6	2,4,6-Tribromophenol	19	133

Column to be used to flag recovery limits

* Value outside of contract required limits

D Surrogate diluted out

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 2 Case No.: SAS No.: SDG No.: 203032507

Method: 1311/8270C Level: (low/med) LOW

EPA SAMPLE NO.	SMC1	#	SMC2	#	SMC3	#	SMC4	#	SMC5	#	SMC6	#	TOT OUT
1. 021-PL-S-0324-03	73		66		84		25		42		57		0

		CONTROL LIMITS	
SMC 1	Nitrobenzene-d5	43	110
SMC 2	2-Fluorobiphenyl	16	128
SMC 3	Terphenyl-d14	47	121
SMC 4	Phenol-d5	10	76
SMC 5	2-Fluorophenol	24	96
SMC 6	2,4,6-Tribromophenol	19	133

Column to be used to flag recovery limits

* Value outside of contract required limits

D Surrogate diluted out

3C

WATER SEMIVOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Contract: Method: 1311/8270C

Spike HSN : 90511

COMPOUND	UNITS	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS % REC	LCS % REC FLAG	QC. LIMITS
1,4-Dichlorobenzene	mg/L	.1	0	.079	79		40 - 122
2,4,5-Trichlorophenol	mg/L	.1	0	.091	91		45 - 135
2,4,6-Trichlorophenol	mg/L	.1	0	.091	91		45 - 135
2,4-Dinitrotoluene	mg/L	.1	0	.096	96		60 - 124
Hexachlorobenzene	mg/L	.1	0	.089	89		60 - 120
Hexachlorobutadiene	mg/L	.1	0	.082	82		60 - 120
Hexachloroethane	mg/L	.1	0	.078	78		45 - 135
Nitrobenzene	mg/L	.1	0	.088	88		60 - 120
Pentachlorophenol	mg/L	.1	0	.083	83		31 - 128
Pyridine	mg/L	.1	0	.034	34		30 - 150
m,p-Cresol	mg/L	.1	0	.064	64		30 - 150
o-Cresol	mg/L	.1	0	.072	72		30 - 150

Spike Dupe HSN :

COMPOUND	UNITS	SPIKE ADDED	LCSD CONC.	LCSD % REC	REC FLAG	% RPD	RPD FLAG	QC. LIMITS REC	QC. LIMITS RPD

RPD : 0 out of 0 outside limits

Spike Recovery: 0 out of 12 outside limits

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB90510

Lab Code: LA024 Case No.:

Contract:

Lab File ID: 2030326/A6052

SAS No.: SDG No.: 203032507

GC Column: DB-5MS-30M ID: .25 (mm)

Lab Sample ID: 90510 Date Extracted: 03/26/03

Instrument ID: MSSV1 Matrix: Water

Date Analyzed: 03/26/03 Time: 1344

Level: LOW

Method: 1311/8270C

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1.	LCS90511	90511	2030326/A6053	03/26/03	1405
2.	021-PL-S-0324-03	20303250701	2030326/A6061	03/26/03	1652

FORM IV SV

5B

SEMIVOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Lab File ID: 2030321/A5980 DFTPP Injection Date 03/21/03 Time: 0945

GC Column: ID: (mm)

Instrument ID: MSSV1

m / e	*ION ABUNDANCE CRITERIA*	*% Relative Abundance*
51	30.0-60.0% of mass 198	35.33 ( ) ( )
68	Less thab 2% of mass 69	0 (0) (1)
69	Mass 69 relative abundance	64.41 ( ) ( )
70	Less than 2.0% of mass 69	.09 (.15) (1)
127	40.0-60.0% of mass 198	47.98 ( ) ( )
197	Less than 1.0% of mass 198	0 ( ) ( )
198	Base Peak, 100% relative abundance	100 ( ) ( )
199	5.0-9.0% of mass 198	7.18 ( ) ( )
275	10.0-30.0% of mass 198	29.52 ( ) ( )
365	Greater than 1.0% of mass 198	3.12 ( ) ( )
441	Present, but less than mass 443	9.09 ( ) ( )
442	40.0-100.0% of mass 198	75.83 ( ) ( )
443	17.0-23.0% of mass 442	15.32 (20.21) (2)

(1)-Value is % mass 69 (2)-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	SAMPLE NO.	*LAB SAMPLE ID*	*LAB FILE ID*	*DATE ANALYZED*	*TIME ANALYZED*
1.	SSTD050	1202	2030321/A5981	03/21/03	1010
2.	SSTD010	1201	2030321/A5982	03/21/03	1035
3.	SSTD080	1203	2030321/A5983	03/21/03	1059
4.	SSTD120	1204	2030321/A5984	03/21/03	1124
5.	SSTD160	1205	2030321/A5985	03/21/03	1148
6.	SSTD200	1206	2030321/A5986	03/21/03	1213
7.	SSTD001	1207	2030321/A5987	03/21/03	1238
8.	SSTD00.2	1208	2030321/A5988	03/21/03	1303

5B

SEMIVOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab File ID: 2030326/A6050

DFTPP Injection Date 03/26/03 Time: 1259

GC Column: ID: (mm)

Instrument ID: MSSV1

m / e	*ION ABUNDANCE CRITERIA*	*% Relative Abundance*
51	30.0-60.0% of mass 198	32.48 ( ) ( )
68	Less thab 2% of mass 69	0 (0) (1)
69	Mass 69 relative abundance	60.76 ( ) ( )
70	Less than 2.0% of mass 69	.44 (.73) (1)
127	40.0-60.0% of mass 198	46.69 ( ) ( )
197	Less than 1.0% of mass 198	0 ( ) ( )
198	Base Peak, 100% relative abundance	100 ( ) ( )
199	5.0-9.0% of mass 198	7.16 ( ) ( )
275	10.0-30.0% of mass 198	28.47 ( ) ( )
365	Greater than 1.0% of mass 198	3.19 ( ) ( )
441	Present, but less than mass 443	15.18 ( ) ( )
442	40.0-100.0% of mass 198	79.78 ( ) ( )
443	17.0-23.0% of mass 442	15.2 (19.06) (2)

(1)-Value is % mass 69 (2)-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	SAMPLE NO.	*LAB SAMPLE ID*	*LAB FILE ID*	*DATE ANALYZED*	*TIME ANALYZED*
1.	SSTD050	1400	2030326/A6051	03/26/03	1320
2.	MB90510	90510	2030326/A6052	03/26/03	1344
3.	LCS90511	90511	2030326/A6053	03/26/03	1405
4.	021-PL-S-0324-03	20303250701	2030326/A6061	03/26/03	1652

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSSV1

Calibration Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Calibration Date 2: 03/21/03 Time 2: 1303

Method: 1311/8270C

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF 1	RF 2	RF 3	RF 4	RF 5	RF 6	RF 7	RF 8	RF 9	Avg RRF	% RSD	#	Type
Acenaphthylene	1.961	1.894	1.944	1.963	1.953	1.954				1.945	1.332		A
Anthracene	1.026	1.022	1.034	1.041	1.038	1.059				1.037	1.265		A
Benzo(a)anthracene	1.238	1.217	1.236	1.237	1.232	1.264	1.258	1.755		1.305	13.98		A
Benzidine		0.049	0.039	0.043	0.025	0.022				0.035	32.40		A
Benzo(b)fluoranthene	1.337	1.367	1.413	1.486	1.435	1.455	1.235	1.294		1.378	6.220		A
Benzo(k)fluoranthene	1.605	1.471	1.484	1.459	1.408	1.437	1.241	1.151		1.407	10.26		A
Benzo(g,h,i)perylene	1.778	1.809	1.858	1.844	1.885	1.952				1.854	3.278		A
Benzo(a)pyrene	1.298	1.328	1.380	1.375	1.368	1.398	1.132	1.015		1.287	10.79		A
Benzoic acid		0.194	0.163	0.222	0.173	0.166				0.184	13.50		A
Butylbenzylphthalate	0.403	0.468	0.469	0.489	0.461	0.464				0.459	6.309		A
Bis(2-Chloroethoxy)methane	0.515	0.502	0.515	0.509	0.506	0.513				0.510	1.088		A
Bis(2-Chloroethyl)ether	1.021	0.980	0.998	0.966	0.946	0.984	1.081			0.996	4.413		A
bis(2-Chloroisopropyl)ether	1.157	1.113	1.159	1.162	1.118	1.149				1.143	1.903		A
bis(2-ethylhexyl)phthalate	0.548	0.631	0.633	0.660	0.621	0.628	0.402			0.589	15.18		A
4-Bromophenyl-phenylether	0.224	0.221	0.227	0.225	0.228	0.233				0.226	1.765		A
Carbazole	1.128	1.103	1.140	1.172	1.136	1.137	1.120			1.134	1.875		A
4-Chlorophenyl-phenylether	0.773	0.753	0.770	0.766	0.743	0.750				0.759	1.593		A
Chrysene	1.214	1.163	1.180	1.187	1.166	1.200	1.297			1.201	3.816		A
Dibenz(a,h)anthracene	1.662	1.774	1.798	1.821	1.835	1.893	1.673	1.511		1.746	7.062		A
Dibenzofuran	1.795	1.718	1.755	1.763	1.742	1.768				1.757	1.469		A
1,2-Dichlorobenzene	1.419	1.356	1.379	1.373	1.377	1.418				1.387	1.852		A
1,3-Dichlorobenzene	1.489	1.416	1.429	1.444	1.433	1.507				1.453	2.518		A
3,3'-Dichlorobenzidine	0.437	0.444	0.437	0.415	0.403	0.409				0.424	4.110		A
2,4-Dichlorophenol	0.319	0.296	0.314	0.316	0.311	0.321	0.268	0.224		0.296	11.44		A
Diethylphthalate	1.204	1.190	1.217	1.266	1.207	1.201				1.214	2.199		A
2,4-Dimethylphenol	0.444	0.442	0.462	0.458	0.457	0.464				0.454	2.044		A
Dimethyl-phthalate	1.379	1.308	1.336	1.377	1.354	1.345				1.350	1.979		A
Di-n-octylphthalate	0.840	1.091	1.095	1.108	1.114	1.130				1.063	10.35		A
2,4-Dinitrophenol		0.111	0.154	0.202	0.218	0.228				0.183	26.89		A
2,6-Dinitrotoluene	0.298	0.293	0.319	0.319	0.312	0.313	0.206	0.257		0.290	13.59		A
Fluoranthene	1.196	1.197	1.231	1.269	1.233	1.212				1.223	2.259		A
Fluorene	1.385	1.367	1.419	1.437	1.407	1.406				1.404	1.771		A
Hexachlorobenzene	0.287	0.268	0.271	0.270	0.276	0.280	0.330			0.283	7.641		A
Hexachlorobutadiene	0.294	0.283	0.289	0.283	0.284	0.294	0.312	0.283		0.290	3.443		A

Column used to indicate that the required RRF or %RSD values is outside of QC limits

* Indicates that the compound is outside of the required minimum RRF and maximum %RSD values.

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSSV1

Calibration Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Calibration Date 2: 03/21/03 Time 2: 1303

Method: 1311/8270C

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF 1	RF 2	RF 3	RF 4	RF 5	RF 6	RF 7	RF 8	RF 9	Avg RRF	% RSD	#	Type
Hexachlorocyclopentadiene	0.237	0.385	0.409	0.436	0.447	0.481				0.399	21.51		A
Hexachloroethane	0.622	0.587	0.596	0.585	0.582	0.602	0.585			0.594	2.350		A
Isophorone	0.951	0.926	0.956	0.931	0.898	0.899				0.927	2.670		A
Indeno(1,2,3-cd)pyrene	1.966	2.059	2.100	2.121	2.154	2.222	1.838	0.925		1.923	21.85		A
2-Methylnaphthalene	0.744	0.720	0.758	0.767	0.759	0.767				0.752	2.406		A
o-Cresol	1.292	1.186	1.252	1.216	1.180	1.213				1.223	3.460		A
Naphthalene	1.098	1.051	1.079	1.092	1.086	1.115				1.087	1.961		A
Nitrobenzene	0.535	0.519	0.525	0.513	0.495	0.513	0.530			0.518	2.590		A
2-Nitrophenol	0.188	0.195	0.203	0.208	0.203	0.209				0.201	3.991		A
N-Nitrosodimethylamine	0.312	0.259	0.296	0.296	0.297	0.326				0.298	7.556		A
N-Nitrosodiphenylamine	0.557	0.511	0.524	0.516	0.538	0.536	0.485			0.524	4.385		A
Phenanthrene	1.068	1.035	1.042	1.051	1.064	1.067				1.055	1.346		A
2,4,5-Trichlorophenol	0.445	0.446	0.472	0.471	0.467	0.481	0.356			0.448	9.546		A
2,4,6-Trichlorophenol	0.421	0.418	0.442	0.447	0.445	0.456	0.390			0.431	5.320		A
Benzyl alcohol	0.888	0.859	0.915	0.902	0.870	0.894				0.888	2.323		A
Pentachloroethane	0.580	0.594	0.585	0.582	0.621					0.592	2.853		A
o-Toluidine	2.405	2.397	2.389	2.545	2.596					2.466	3.919		A
Aniline	1.870	1.749	1.862	1.817	1.740	1.768				1.801	3.161		A
Pentachlorobenzene	0.528	0.530	0.557	0.558	0.577					0.550	3.723		A
Pyridine	1.128	1.056	0.968	1.075	1.174	1.190				1.099	7.532		A
Caprolactam	0.093	0.106	0.118	0.118	0.114	0.096				0.107	10.18		A
Acetophenone	0.985	1.957	2.027	1.999	1.916	1.951				1.806	22.36		A
2-Acetylaminofluorene	0.617	0.635	0.641	0.702	0.732					0.665	7.352		A
4-Aminobiphenyl	0.809	0.788	0.791	0.730	0.733					0.770	4.727		A
Aramite	0.072	0.077	0.074	0.076	0.077					0.075	3.016		A
Chlorobenzilate	0.396	0.423	0.395	0.419	0.426					0.412	3.651		A
Diallate (Avadex)	0.491	0.478	0.464	0.414	0.431					0.456	7.135		A
p-Dimethylaminoazobenzene	0.465	0.506	0.474	0.470	0.480					0.479	3.363		A
7,12-Dimethylbenz(a)anthrace	0.587	0.637	0.677	0.694	0.689					0.657	6.891		A
3,3'-Dimethylbenzidine	0.748	0.755	0.713	0.649	0.642					0.701	7.592		A
Acrylamide	0.108	0.196	0.225	0.228	0.232					0.198	26.31		A
3-Nitroaniline	0.326	0.325	0.335	0.344	0.328	0.323				0.330	2.391		A
4-Nitroaniline	0.399	0.393	0.415	0.419	0.414	0.417				0.409	2.625		A
a,a-Dimethylphenethylamine	0.725	0.764	0.822	0.748	0.796					0.771	4.966		A

Column used to indicate that the required RRF or %RSD values is outside of QC limits

* Indicates that the compound is outside of the required minimum RRF and maximum %RSD values.

FORM VI SV-1

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSSV1

Calibration Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Calibration Date 2: 03/21/03 Time 2: 1303

Method: 1311/8270C

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF 1	RF 2	RF 3	RF 4	RF 5	RF 6	RF 7	RF 8	RF 9	Avg RRF	% RSD	#	Type
Dimethoate	0.421	0.437	0.439	0.379	0.382					0.412	7.123		A
Disulfoton	0.658	0.624	0.633	0.593	0.598					0.621	4.297		A
1,3-Dinitrobenzene	0.196	0.201	0.212	0.207	0.209					0.205	3.220		A
1,4-Dinitrobenzene	0.354	0.400	0.401	0.389	0.413					0.391	5.808		A
Famphur	0.510	0.440	0.315	0.215	0.210					0.338	39.73		A
Ethyl methanesulfonate	1.451	1.465	1.465	1.474	1.512					1.473	1.548		A
Hexachloropropene	0.301	0.313	0.334	0.339	0.364					0.330	7.487		A
Isodrin	0.148	0.144	0.145	0.134	0.139					0.142	3.794		A
Isosafrole	0.273	0.259	0.280	0.267	0.283					0.272	3.695		A
Kepone	0.044	0.066	0.075	0.085	0.103					0.075	29.57		A
Methyl parathion	0.319	0.332	0.343	0.298	0.293					0.317	6.757		A
Methapyriline	0.551	0.542	0.517	0.420	0.395					0.485	14.93		A
Phorate	0.931	0.909	0.912	0.830	0.896					0.896	4.331		A
3-Methylcholanthrene	0.791	0.799	0.858	0.915	0.938					0.860	7.710		A
Methylmethanesulfonate	1.139	1.316	1.347	1.348	1.421					1.314	8.005		A
Phthalic Acid	0.189	0.159	0.156	0.135	0.151					0.158	12.41		A
1,4-Naphthoquinone	0.415	0.411	0.415	0.399	0.396					0.407	2.243		A
Phthalic anhydride	0.189	0.159	0.156	0.135	0.151					0.158	12.41		A
Tris(2,3-dibromopropyl)	0.116	0.140	0.154	0.167	0.188					0.153	17.79		A
1-Naphthylamine	1.083	1.072	1.033	0.934	0.908					1.006	7.990		A
4,4'-Methylenebis(2-cloroanili	0.217	0.244	0.246	0.255	0.264					0.245	7.277		A
2-Naphthylamine	0.944	0.892	0.881	0.797	0.793					0.862	7.538		A
4-Nitroquinoline-1-oxide	0.043	0.033	0.038	0.028	0.028					0.034	19.45		A
N-Nitrosodibutylamine	0.360	0.361	0.380	0.365	0.371					0.367	2.244		A
N-Nitrosodiethylamine	0.731	0.783	0.779	0.761	0.806					0.772	3.643		A
N-Nitrosomethylethylamine	0.269	0.423	0.443	0.481	0.508					0.425	21.94		A
n-Nitroso morpholine	0.773	0.792	0.819	0.828	0.865					0.815	4.335		A
N-Nitrosopiperidine	0.181	0.191	0.198	0.189	0.199					0.192	3.640		A
N-Nitrosopyrrolidine	0.496	0.475	0.457	0.446	0.441					0.463	4.888		A
1,2,4,5-Tetrachlorobenzene	0.336	0.336	0.358	0.373	0.395					0.360	7.044		A
5-Nitro-o-toluidine	0.314	0.341	0.327	0.308	0.310					0.320	4.357		A
Parathion	0.200	0.220	0.243	0.212	0.218					0.218	7.245		A
Pentachloronitrobenzene(PCN	0.132	0.136	0.138	0.133	0.140					0.136	2.284		A
Phenacetin	0.487	0.536	0.578	0.526	0.529					0.531	6.107		A

Column used to indicate that the required RRF or %RSD values is outside of QC limits

* Indicates that the compound is outside of the required minimum RRF and maximum %RSD values.

FORM VI SV-1

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSSV1

Calibration Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Calibration Date 2: 03/21/03 Time 2: 1303

Method: 1311/8270C

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF 1	RF 2	RF 3	RF 4	RF 5	RF 6	RF 7	RF 8	RF 9	Avg RRF	% RSD	#	Type
p-Phenylenediamine	0.274	0.268	0.273	0.241	0.232					0.257	7.716		A
2-Picoline	1.555	1.842	1.975	1.988	2.096					1.891	11.01		A
Di-n-butylphthalate	1.039	1.107	1.143	1.168	1.154	1.133				1.124	4.119		A
Pronamide	0.366	0.379	0.386	0.368	0.368					0.373	2.390		A
1,2 Diphenylhydrazine	1.111	1.021	1.031	0.991	1.016	1.019				1.032	4.000		A
Safrole	0.451	0.448	0.458	0.433	0.447					0.447	2.009		A
Sulfotep	0.189	0.218	0.248	0.278	0.282					0.243	16.30		A
Thionazine	0.279	0.278	0.292	0.287	0.280					0.283	2.158		A
2-Nitroaniline	0.326	0.325	0.335	0.344	0.328	0.323				0.330	2.391		A
0,0,0-Triethylphosphorothioate	0.180	0.186	0.187	0.191	0.200					0.189	3.766		A
2-Chloronaphthalene	1.257	1.184	1.184	1.195	1.191	1.232				1.207	2.505		A
4-Chloroaniline	0.445	0.417	0.441	0.447	0.426	0.431				0.435	2.635		A
1,3,5-Trinitrobenzene	0.058	0.072	0.078	0.074	0.078					0.072	11.24		A
2,3,4,6-Tetrachlorophenol	0.232	0.257	0.289	0.287	0.299					0.273	10.07		A
2,6-Dichlorophenol	0.219	0.260	0.226	0.214	0.220					0.228	8.077		A
Dinoseb	0.144	0.151	0.178	0.181	0.189					0.169	11.70		A
Atrazine (Aatrex)	0.127	0.077	0.097	0.102	0.097	0.104				0.101	16.00		A
Benzaldehyde	1.920	1.878	1.917	1.889	1.815	1.833				1.875	2.316		A
Biphenyl	0.619	0.575	0.633	0.640	0.618	0.618				0.617	3.629		A
Cresols	2.565	2.425	2.574	2.525	2.442	2.504				2.506	2.473		A
m,p-Cresol	1.273	1.238	1.323	1.309	1.262	1.291				1.283	2.424		A
2-Methyl-4,6-dinitrophenol	0.062	0.164	0.184	0.188	0.190	0.184				0.162	30.69		A
1-Methylnaphthalene	0.659	0.641	0.675	0.677	0.665	0.686				0.667	2.379		A
Phenol	2.047	1.908	1.940	1.923	1.812	1.929				1.926	3.904		A
2-Chlorophenol	1.252	1.183	1.231	1.209	1.184	1.212				1.212	2.226		A
1,4-Dichlorobenzene	1.533	1.434	1.457	1.480	1.453	1.512				1.478	2.555		A
N-Nitroso-di-n-propylamine	1.271	1.162	1.258	1.240	1.186	1.207	1.161			1.212	3.716		A
1,2,4-Trichlorobenzene	0.416	0.400	0.402	0.410	0.406	0.415				0.408	1.608		A
4-Chloro-3-methylphenol	0.365	0.348	0.384	0.374	0.368	0.362				0.367	3.294		A
Acenaphthene	1.199	1.144	1.175	1.190	1.172	1.187				1.178	1.655		A
4-Nitrophenol	0.206	0.208	0.210	0.219	0.201	0.199				0.207	3.445		A
2,4-Dinitrotoluene	0.373	0.417	0.424	0.453	0.429	0.429	0.272	0.175		0.371	26.29		A
Pentachlorophenol	0.151	0.203	0.201	0.198	0.189	0.186				0.188	10.19		A
Pyrene	1.135	1.122	1.153	1.186	1.102	1.130				1.138	2.522		A

Column used to indicate that the required RRF or %RSD values is outside of QC limits

* Indicates that the compound is outside of the required minimum RRF and maximum %RSD values.

FORM VI SV-1

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSSV1

Calibration Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Calibration Date 2: 03/21/03 Time 2: 1303

Method: 1311/8270C

Lab File ID: Level 1: 1201 Level 2: 1202 Level 3: 1203

Level 4: 1204 Level 5: 1205 Level 6: 1206

Level 7: 1207 Level 8: 1208 Level 9:

COMPOUND	RF 1	RF 2	RF 3	RF 4	RF 5	RF 6	RF 7	RF 8	RF 9	Avg RRF	% RSD	#	Type
Nitrobenzene-d5	0.556	0.539	0.544	0.537	0.534	0.539				0.541	1.450		A
2-Fluorobiphenyl	1.524	1.470	1.479	1.515	1.512	1.547				1.508	1.886		A
Terphenyl-d14	0.910	0.899	0.913	0.943	0.869	0.882				0.903	2.899		A
Phenol-d5	1.895	1.781	1.850	1.828	1.795	1.833				1.830	2.224		A
2-Fluorophenol	1.353	1.336	1.325	1.303	1.279	1.309				1.317	1.993		A
2,4,6-Tribromophenol	0.256	0.234	0.245	0.250	0.237	0.236				0.243	3.629		A

Column used to indicate that the required RRF or %RSD values is outside of QC limits

* Indicates that the compound is outside of the required minimum RRF and maximum %RSD values.

FORM VI SV-1

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSSV1

Calibration Date: 03/26/03 Time: 1320

Lab File ID: 2030326/A6051

Init. Calib. Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Init. Calib. Date 2: 03/21/03 Time 2: 1303

Method: 1311/8270C

COMPOUND	Avg RF	RRF	Min RRF		% D	Max D	
Acenaphthylene	1.945	1.884	.01		-3.13	50	
Anthracene	1.037	1.010	.01		-2.62	50	
Benzo(a)anthracene	1.305	1.230	.01		-5.68	50	
Benzidine	0.035	0.011	.01		-69.5	50	
Benzo(b)fluoranthene	1.378	1.445	.01		4.882	50	
Benzo(k)fluoranthene	1.407	1.461	.01		3.863	50	
Benzo(g,h,i)perylene	1.854	1.715	.01		-7.53	50	
Benzo(a)pyrene	1.287	1.372	.01		6.611	20	
Benzoic acid	0.184	0.190	.01		3.476	50	
Butylbenzylphthalate	0.459	0.468	.01		1.872	50	
Bis(2-Chloroethoxy)methane	0.510	0.492	.01		-3.62	50	
Bis(2-Chloroethyl)ether	0.996	1.057	.01		6.061	50	
bis(2-Chloroisopropyl)ether	1.143	1.081	.01		-5.46	50	
bis(2-ethylhexyl)phthalate	0.589	0.627	.01		6.517	50	
4-Bromophenyl-phenylether	0.226	0.236	.01		4.432	50	
Carbazole	1.134	1.069	.01		-5.73	50	
4-Chlorophenyl-phenylether	0.759	0.728	.01		-4.07	50	
Chrysene	1.201	1.163	.01		-3.16	50	
Dibenz(a,h)anthracene	1.746	1.726	.01		-1.15	50	
Dibenzofuran	1.757	1.677	.01		-4.51	50	
1,2-Dichlorobenzene	1.387	1.338	.01		-3.53	50	
1,3-Dichlorobenzene	1.453	1.413	.01		-2.72	50	
3,3'-Dichlorobenzidine	0.424	0.441	.01		3.956	50	
2,4-Dichlorophenol	0.296	0.292	.01		-1.24	20	
Diethylphthalate	1.214	1.098	.01		-9.54	50	
2,4-Dimethylphenol	0.454	0.428	.01		-5.93	50	
Dimethyl-phthalate	1.350	1.248	.01		-7.56	50	
Di-n-octylphthalate	1.063	1.116	.01		4.959	20	
2,4-Dinitrophenol	0.183	0.166	.05		-9.40	50	
2,6-Dinitrotoluene	0.290	0.288	.01		-0.68	50	
Fluoranthene	1.223	1.147	.01		-6.19	20	
Fluorene	1.404	1.315	.01		-6.34	50	
Hexachlorobenzene	0.283	0.276	.01		-2.23	50	
Hexachlorobutadiene	0.290	0.290	.01		-0.27	20	
Hexachlorocyclopentadiene	0.399	0.455	.05		13.9	50	
Hexachloroethane	0.594	0.570	.01		-4.10	50	
Isophorone	0.927	0.873	.01		-5.81	50	
Indeno(1,2,3-cd)pyrene	1.923	2.003	.01		4.180	50	
2-Methylnaphthalene	0.752	0.694	.01		-7.79	50	

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSSV1

Calibration Date: 03/26/03 Time: 1320

Lab File ID: 2030326/A6051

Init. Calib. Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Init. Calib. Date 2: 03/21/03 Time 2: 1303

Method: 1311/8270C

COMPOUND	Avg RF	RRF	Min RRF		% D	Max D	
o-Cresol	1.223	1.152	.01		-5.81	50	
Naphthalene	1.087	1.065	.01		-2.03	50	
Nitrobenzene	0.518	0.515	.01		-0.66	50	
2-Nitrophenol	0.201	0.200	.01		-0.43	20	
N-Nitrosodimethylamine	0.298	0.307	.01		3.222	50	
N-Nitrosodiphenylamine	0.524	0.530	.01		1.183	20	
Phenanthrene	1.055	1.016	.01		-3.62	50	
2,4,5-Trichlorophenol	0.448	0.447	.01		-0.26	50	
2,4,6-Trichlorophenol	0.431	0.435	.01		0.877	20	
Benzyl alcohol	0.888	0.834	.01		-6.05	50	
Aniline	1.801	1.630	.01		-9.50	50	
Pyridine	1.099	1.109	.01		0.983	50	
Caprolactam	0.107	0.091	.01		-15.2	50	
Acetophenone	1.806	1.839	.01		1.824	50	
3-Nitroaniline	0.330	0.301	.01		-8.91	50	
4-Nitroaniline	0.409	0.301	.01		-26.5	50	
Di-n-butylphthalate	1.124	1.042	.01		-7.29	50	
1,2 Diphenylhydrazine	1.032	1.059	.01		2.663	50	
2-Nitroaniline	0.330	0.301	.01		-8.91	50	
2-Chloronaphthalene	1.207	1.198	.01		-0.70	50	
4-Chloroaniline	0.435	0.391	.01		-10.0	50	
Atrazine (Aatrex)	0.101	0.073	.01		-27.1	50	
Benzaldehyde	1.875	1.742	.01		-7.08	50	
Biphenyl	0.617	0.535	.01		-13.2	50	
Cresols	2.506	2.324	.01		-7.25	50	
m,p-Cresol	1.283	1.172	.01		-8.62	50	
2-Methyl-4,6-dinitrophenol	0.162	0.154	.01		-4.76	50	
1-Methylnaphthalene	0.667	0.618	.01		-7.38	50	
Phenol	1.926	1.843	.01		-4.32	20	
2-Chlorophenol	1.212	1.188	.01		-1.98	50	
1,4-Dichlorobenzene	1.478	1.435	.01		-2.94	20	
N-Nitroso-di-n-propylamine	1.212	1.097	.05		-9.50	50	
1,2,4-Trichlorobenzene	0.408	0.403	.01		-1.37	50	
4-Chloro-3-methylphenol	0.367	0.325	.01		-11.3	20	
Acenaphthene	1.178	1.139	.01		-3.27	20	
4-Nitrophenol	0.207	0.173	.05		-16.4	50	
2,4-Dinitrotoluene	0.371	0.374	.01		0.750	50	
Pentachlorophenol	0.188	0.172	.01		-8.69	20	
Pyrene	1.138	1.095	.01		-3.72	50	

FORM V II VOA

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: MSSV1

Calibration Date: 03/26/03 Time: 1320

Lab File ID: 2030326/A6051

Init. Calib. Date 1: 01/23/03 Time 1: 1406

GC Column: DB-5MS-30M ID: .25 (mm)

Init. Calib. Date 2: 03/21/03 Time 2: 1303

Method: 1311/8270C

COMPOUND	Avg RF	RRF	Min RRF		% D	Max D	
Nitrobenzene-d5	0.541	0.535	.01		-1.27	50	
2-Fluorobiphenyl	1.508	1.518	.01		0.663	50	
Terphenyl-d14	0.903	0.868	.01		-3.82	50	
Phenol-d5	1.830	1.742	.01		-4.85	50	
2-Fluorophenol	1.317	1.338	.01		1.601	50	
2,4,6-Tribromophenol	0.243	0.218	.01		-10.3	50	

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab File ID (Standard): 2030326/A6051

Date Analyzed: 03/26/03 Time: 1320

Instrument ID: MSSV1

GC Column: DB-5MS-30M ID: .25 (mm)

Method: 1311/8270C

	IS 1 (ACE)		IS 2 (DCB)		IS 3(NPT)	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	512612	6.037	314836	4.093	972630	4.939
UPPER LIMIT	1025224	6.537	629672	4.593	1945260	5.439
LOWER LIMIT	256306	5.537	157418	3.593	486315	4.439

EPA Sample No.

1 .	MB90510	488780		6.03		249294		4.09		844252		4.93	
2 .	LCS90511	382864		6.04		202721		4.09		648766		4.94	
3 .	021-PL-S-0324-03	463973		6.04		245201		4.09		835746		4.94	

IS 1 ID : Acenaphthene-d10
IS 2 ID : 1,4-Dichlorobenzene-d4
IS 3 ID : Naphthalene-d8

AREA UPPER LIMIT = +100% of internal standard area
AREALOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard values with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: _____ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID (Standard): 2030326/A6051 Date Analyzed: 03/26/03 Time: 1320

Instrument ID: MSSV1 GC Column: DB-5MS-30M ID: .25 (mm)

Method: 1311/8270C

	IS 4(PHN)			IS 5(CRY)			IS 6(PRY)		
	Area	#	RT	Area	#	RT	Area	#	RT
12 HOUR STD	842740		6.957	897872		8.827	813623		9.974
UPPER LIMIT	1685480		7.457	1795744		9.327	1627246		10.47
LOWER LIMIT	421370		6.457	448936		8.327	406811.5		9.474

1.	MB90510	767424		6.95		627492		8.82		538836		9.97		
2.	LCS90511	619613		6.96		692599		8.83		610457		9.97		
3.	021-PL-S-0324-03	688719		6.95		593094		8.82		533480		9.97		

IS 4 ID : Phenanthrene-d10
IS 5 ID : Chrysene-d12
IS 6 ID : Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREALOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard values with an asterisk.
* Values outside of QC limits.

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 100 Units: mL

Level: (low/med) LOW

% Moisture: 14 decanted: (Y/N)

GC Column: DB1701-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 20303250701

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted: 03/26/03

Date Analyzed: 03/27/03 Time: 1454

Dilution Factor: 1 Analyst: DLB

Prep Method: SW-846 3510

Analytical Method: 1311/8081A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS3A

Lab File ID: 2030327/SV3008

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
57-74-9	Chlordane	0.02500	U	0.00016	0.02500
72-20-8	Endrin	0.00100	U	0.00013	0.00100
76-44-8	Heptachlor	0.00050	U	0.00008	0.00050
1024-57-3	Heptachlor epoxide	0.00050	U	0.00010	0.00050
72-43-5	Methoxychlor	0.02500	U	0.00065	0.02500
8001-35-2	Toxaphene	0.25000	U	0.00050	0.25000
58-89-9	gamma-BHC (Lindane)	0.00050	U	0.00006	0.00050

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB1701-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: MB90444

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90444

Date Collected: Time:

Date Received:

Date Extracted: 03/26/03

Date Analyzed: 03/27/03 Time: 1252

Dilution Factor: 1 Analyst: DLB

Prep Method: 8081W Prep

Analytical Method: 1311/8081A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS3A

Lab File ID: 2030327/SV3004

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
57-74-9	Chlordane	0.02500	U	0.00016	0.02500
72-20-8	Endrin	0.00100	U	0.00013	0.00100
76-44-8	Heptachlor	0.00050	U	0.00008	0.00050
1024-57-3	Heptachlor epoxide	0.00050	U	0.00010	0.00050
72-43-5	Methoxychlor	0.02500	U	0.00065	0.02500
8001-35-2	Toxaphene	0.25000	U	0.00050	0.25000
58-89-9	gamma-BHC (Lindane)	0.00050	U	0.00006	0.00050

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB1701-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCS90445

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90445

Date Collected: Time:

Date Received:

Date Extracted: 03/26/03

Date Analyzed: 03/27/03 Time: 1322

Dilution Factor: 1 Analyst: DLB

Prep Method: 8081W Prep

Analytical Method: 1311/8081A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS3A

Lab File ID: 2030327/SV3005

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
57-74-9	Chlordane	0.02500	U	0.00016	0.02500
72-20-8	Endrin	0.00052	J	0.00013	0.00100
76-44-8	Heptachlor	0.00050		0.00008	0.00050
1024-57-3	Heptachlor epoxide	0.00039	J	0.00010	0.00050
72-43-5	Methoxychlor	0.02500	U	0.00065	0.02500
8001-35-2	Toxaphene	0.25000	U	0.00050	0.25000
58-89-9	gamma-BHC (Lindane)	0.00048	J	0.00006	0.00050

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB1701-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCSD90446

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90446

Date Collected: Time:

Date Received:

Date Extracted: 03/26/03

Date Analyzed: 03/27/03 Time: 1353

Dilution Factor: 1 Analyst: DLB

Prep Method: 8081W Prep

Analytical Method: 1311/8081A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS3A

Lab File ID: 2030327/SV3006

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
57-74-9	Chlordane	0.02500	U	0.00016	0.02500
72-20-8	Endrin	0.00045	J	0.00013	0.00100
76-44-8	Heptachlor	0.00045	J	0.00008	0.00050
1024-57-3	Heptachlor epoxide	0.00034	J	0.00010	0.00050
72-43-5	Methoxychlor	0.02500	U	0.00065	0.02500
8001-35-2	Toxaphene	0.25000	U	0.00050	0.25000
58-89-9	gamma-BHC (Lindane)	0.00041	J	0.00006	0.00050

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 100 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB1701-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03MS

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90447

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted: 03/26/03

Date Analyzed: 03/27/03 Time: 1525

Dilution Factor: 1 Analyst: DLB

Prep Method: 8081W Prep

Analytical Method: 1311/8081A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS3A

Lab File ID: 2030327/SV3009

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
57-74-9	Chlordane	0.29140	U	0.00185	0.29140
72-20-8	Endrin	0.00627	J	0.00153	0.01166
76-44-8	Heptachlor	0.00589		0.00089	0.00583
1024-57-3	Heptachlor epoxide	0.00497	J	0.00112	0.00583
72-43-5	Methoxychlor	0.00810	J	0.00753	0.29140
8001-35-2	Toxaphene	2.91404	U	0.00583	2.91404
58-89-9	gamma-BHC (Lindane)	0.00548	J	0.00072	0.00583

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 100 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB1701-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03MSD

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90448

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted: 03/26/03

Date Analyzed: 03/27/03 Time: 1556

Dilution Factor: 1 Analyst: DLB

Prep Method: 8081W Prep

Analytical Method: 1311/8081A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS3A

Lab File ID: 2030327/SV3010

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
57-74-9	Chlordane	0.29140	U	0.00185	0.29140
72-20-8	Endrin	0.00516	J	0.00153	0.01166
76-44-8	Heptachlor	0.00435	J	0.00089	0.00583
1024-57-3	Heptachlor epoxide	0.00532	J	0.00112	0.00583
72-43-5	Methoxychlor	0.00808	J	0.00753	0.29140
8001-35-2	Toxaphene	2.91404	U	0.00583	2.91404
58-89-9	gamma-BHC (Lindane)	0.00516	J	0.00072	0.00583

2E

WATER PESTICIDE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

GC Column (1): DB1701-30M ID: .53 (mm) GC Cloumn (2): ID: (mm)

Method: 1311/8081A

	EPA SAMPLE NO.	SMC1 1-(1)	Lo	Hi	F	SMC1 1-(2)	Lo	Hi	F	SMC2 2-(1)	Lo	Hi	F	SMC2 2-(2)	Lo	Hi	F	TOT OUT
1 .	MB90444	109	60	150						70	60	150						0
2 .	LCS90445	119	60	150						89	60	150						0
3 .	LCSD90446	114	60	150						75	60	150						0

SMC 1 : Tetrachloro-m-xylene SMC 2 : Decachlorobiphenyl

2F

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

GC Column (1) : DB1701-30M ID: .53 (mm) GC Cloumn (2) : ID: (mm)

Method: 1311/8081A

	EPA SAMPLE NO.	SMC1 1-(1)	Lo	Hi	F	SMC1 1-(2)	Lo	Hi	F	SMC2 2-(1)	Lo	Hi	F	SMC2 2-(2)	Lo	Hi	F	TOT OUT
1 .	021-PL-S-0324-03	111	60	150						66	60	150						0
2 .	021-PL-S-0324-03MS	120	60	150						80	60	150						0
3 .	021-PL-S-0324-03MSD	84	60	150						72	60	150						0

SMC 1 : Tetrachloro-m-xylene SMC 2 : Decachlorobiphenyl

3E

WATER PESTICIDE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Contract: Method: 1311/8081A

SAMPLE NO : 90445

COMPOUND	UNITS	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS % REC	LCS % REC FLAG	QC. LIMITS
Endrin	mg/L	.0005	0	.00052	103		30 - 147
Heptachlor	mg/L	.0005	0	.0005	100		34 - 111
Heptachlor epoxide	mg/L	.0005	0	.00039	79		37 - 142
Methoxychlor	mg/L	.0005	0	.00051	102		26 - 144
gamma-BHC (Lindane)	mg/L	.0005	0	.00048	96		32 - 127

SAMPLE NO : 90446

COMPOUND	UNITS	SPIKE ADDED	LCSD CONC.	LCSD % REC	REC FLAG	% RPD	RPD FLAG	QC. LIMITS REC	QC. LIMITS RPD
Endrin	mg/L	.0005	.00045	90		13		30 - 147	0 - 40
Heptachlor	mg/L	.0005	.00045	89		12		34 - 111	0 - 40
Heptachlor epoxide	mg/L	.0005	.00034	67		16		37 - 142	0 - 40
Methoxychlor	mg/L	.0005	.00046	92		10		26 - 144	0 - 40
gamma-BHC (Lindane)	mg/L	.0005	.00041	82		16		32 - 127	0 - 40

RPD : 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB90444

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 90444

SAS No.: SDG No.: 203032507

Matrix: Water Sulfur Cleanup: (Y/N) N

Date Extracted: 03/26/03

Date Analyzed (1): 03/27/03 Time (1): 1252

Date Analyzed (2): Time (2):

Instrument ID (1): GCS3A

Instrument ID (2):

GC Column (1): DB1701-30M ID: .53 (mm)

GC Column (2): ID: (mm)

Method: 1311/8081A

Lab File ID: 2030327/SV3004

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATE ANALYZED	TIME ANALYZED
1.	LCS90445	90445	03/27/03	1322		
2.	LCSD90446	90446	03/27/03	1353		
3.	021-PL-S-0324-03	20303250701	03/27/03	1454		
4.	021-PL-S-0324-03MS	90447	03/27/03	1525		
5.	021-PL-S-0324-03MSD	90448	03/27/03	1556		

6E

PESTICIDE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: GCS3A

Calibration Date 1: 03/12/03 Time 1: 1740

GC Column: DB1701-30M ID: .53 (mm)

Calibration Date 2: 03/13/03 Time 2: 0423

Method: 1311/8081A

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	$\overline{RF}$	RSD
4,4'-DDD	4168.800	4509.850	4600.492	4383.269	4567.675				4446.017	3.953
4,4'-DDE	4223.500	5585.425	5805.281	5908.750	5664.160				5437.423	12.69
4,4'-DDT	3184.700	3786.325	3801.733	3839.888	4005.475				3723.624	8.422
Aldrin	4506.000	5994.900	6548.633	6638.150	6481.370				6033.811	14.74
Aroclor-1016	1119.275	1228.244	1344.732	1439.745	1485.360				1323.471	11.39
Aroclor-1221	408.682								408.682	0
Aroclor-1232	688.275								688.275	0
Aroclor-1242	1088.235								1088.235	0
Aroclor-1248	1372.648								1372.648	0
Aroclor-1254	993.052								993.052	0
Aroclor-1260	1438.144	1526.901	1608.152	1709.640	1779.910				1612.55	8.503
Chlordane	1983.740								1983.74	0
Decachlorobiphenyl	4172.900	4874.025	4348.942	4259.312	4322.310				4395.498	6.278
Dieldrin	3897.100	5596.525	5873.158	5721.738	6029.395				5423.583	16.01
Endosulfan I	4042.400	5070.800	5480.333	5317.425	5677.040				5117.6	12.52
Endosulfan II	4242.700	5056.050	5069.600	5181.000	4912.450				4892.36	7.675
Endosulfan sulfate	3446.200	4296.525	4472.094	4523.217	4356.325				4218.872	10.45
Endrin	4004.300	5359.275	5466.867	5352.819	5592.225				5155.097	12.62
Endrin aldehyde	3475.000	3978.494	3986.592	3989.700	3910.050				3867.967	5.742
Endrin ketone	4204.400	4817.131	4957.800	5032.758	4704.285				4743.275	6.89
Heptachlor	4591.600	5672.600	5716.183	5488.350	5909.990				5475.745	9.432
Heptachlor epoxide	4804.800	5827.400	6117.175	6143.717	5941.460				5766.91	9.594
Methoxychlor	2178.540	2220.865	1996.990	1992.024	2060.210				2089.726	5.025
Tetrachloro-m-xylene	5246.400	6322.050	6075.050	5665.825	6040.100				5869.885	7.157
Toxaphene	678.982								678.982	0
alpha-BHC	4890.000	7282.800	8129.350	7737.200	8369.540				7281.778	19.21
alpha-Chlordane	5143.000	6109.850	6279.788	6337.017	6097.090				5993.349	8.121
beta-BHC	3363.000	3621.238	3707.433	3797.900	3490.380				3595.99	4.802
delta-BHC	4366.600	6142.250	6842.412	6887.550	6701.280				6188.018	17.14
gamma-BHC (Lindane)	4652.600	6700.850	7234.450	6905.488	7413.920				6581.462	16.91
gamma-Chlordane	4806.800	5852.000	6173.900	6204.467	5980.290				5803.491	9.917

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: GCS3A

Calibration Date: 03/27/03 Time: 1139

Init. Calib. Date 1: 03/12/03

GC Column: DB1701-30M ID: .53 (mm)

Init. Calib. Date 2: 03/13/03

COMPOUND	$\overline{RRF}$	RRF50	% D
alpha-BHC	7281.778	8041.51667	1.512
Endosulfan I	5117.59967	5457.46667	-11.4
4,4'-DDD	4446.01708	4105.975	-5.50
Methoxychlor	2089.72575	1524.105	-17.1
gamma-BHC (Lindane)	6581.4615	7164.35	.6790
Heptachlor	5475.74467	5400.88333	-6.89
Dieldrin	5423.58317	5780.49167	-1.48
Endrin	5155.09708	5035.86667	-5.29
4,4'-DDT	3723.62417	3206.975	-9.90
Tetrachloro-m-xylene	5869.885	6305.7	-4.70
Decachlorobiphenyl	4395.49783	4533.86667	-22.5

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: GCS3A

Calibration Date: 03/27/03 Time: 1210

Init. Calib. Date 1: 03/12/03

GC Column: DB1701-30M ID: .53 (mm)

Init. Calib. Date 2: 03/13/03

COMPOUND	$\overline{RRF}$	RRF50	% D
beta-BHC	3595.99017	3233.18333	-10.0
delta-BHC	6188.0185	5799.28333	-6.28
Heptachlor epoxide	5766.91033	5570.13333	-3.41
4,4'-DDE	5437.42325	4920.85833	-9.50
Endosulfan II	4892.36	4539.65833	-7.20
Endosulfan sulfate	4218.87208	4004.225	-5.08
Endrin ketone	4743.27492	4098.11667	-13.6
Endrin aldehyde	3867.96708	3508.21667	-9.30
alpha-Chlordane	5993.34883	5814.98333	-2.97
gamma-Chlordane	5803.49133	5605.31667	-3.41
Aldrin	6033.81067	5874.08333	-2.64

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: GCS3A

Calibration Date: 03/27/03 Time: 1657

Init. Calib. Date 1: 03/12/03

GC Column: DB1701-30M ID: .53 (mm)

Init. Calib. Date 2: 03/13/03

COMPOUND	$\overline{RRF}$	RRF50	% D
alpha-BHC	7281.778	8140.21667	2.758
Endosulfan I	5117.59967	5733.78333	-6.99
4,4'-DDD	4446.01708	4330.675	-.336
Methoxychlor	2089.72575	1613.62833	-12.2
gamma-BHC (Lindane)	6581.4615	7206.63333	1.273
Heptachlor	5475.74467	5207.08333	-10.2
Dieldrin	5423.58317	5803.15833	-1.10
Endrin	5155.09708	5242.54167	-1.40
4,4'-DDT	3723.62417	3291.69167	-7.52
Tetrachloro-m-xylene	5869.885	6348.8	-4.05
Decachlorobiphenyl	4395.49783	4563.06667	-22.0

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: GCS3A

Calibration Date: 03/27/03 Time: 1728

Init. Calib. Date 1: 03/12/03

GC Column: DB1701-30M ID: .53 (mm)

Init. Calib. Date 2: 03/13/03

COMPOUND	$\overline{RRF}$	RRF50	% D
beta-BHC	3595.99017	3686.28333	2.510
delta-BHC	6188.0185	6708.88333	8.417
Heptachlor epoxide	5766.91033	6219.68333	7.851
4,4'-DDE	5437.42325	5598.9	2.969
Endosulfan II	4892.36	5041.24167	3.043
Endosulfan sulfate	4218.87208	4534.80833	7.488
Endrin ketone	4743.27492	4720.55	-.479
Endrin aldehyde	3867.96708	3951.58333	2.161
alpha-Chlordane	5993.34883	6425.98333	7.218
gamma-Chlordane	5803.49133	6240.96667	7.538
Aldrin	6033.81067	6613.48333	9.607

FORM V II PEST

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 100 Units: mL

Level: (low/med) LOW

% Moisture: 14 decanted: (Y/N)

GC Column: DB-608-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 20303250701

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted: 03/26/03

Date Analyzed: 03/28/03 Time: 1329

Dilution Factor: 1 Analyst: TLS

Prep Method: SW-846 3510

Analytical Method: 1311/8151

Sulfur Cleanup: (Y/N) N Instrument ID: GCS6A

Lab File ID: 2030328/SV6005

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
94-75-7	2,4'-D	0.00500	U	0.00270	0.00500
93-72-1	2,4,5-TP (SILVEX)	0.00500	U	0.00320	0.00500

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Water

Sample wt/vol: 1000 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-608-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCS90577

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90577

Date Collected: Time:

Date Received:

Date Extracted: 03/26/03

Date Analyzed: 03/28/03 Time: 1238

Dilution Factor: 1 Analyst: TLS

Prep Method: SW-846 3510

Analytical Method: 1311/8151

Sulfur Cleanup: (Y/N) N Instrument ID: GCS6A

Lab File ID: 2030328/SV6003

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
94-75-7	2,4'-D	0.00500	U	0.00270	0.00500
93-72-1	2,4,5-TP (SILVEX)	0.00500	U	0.00320	0.00500

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 100 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-608-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03MS

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90578

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted: 03/26/03

Date Analyzed: 03/28/03 Time: 1354

Dilution Factor: 1 Analyst: TLS

Prep Method: SW-846 3510

Analytical Method: 1311/8151

Sulfur Cleanup: (Y/N) N Instrument ID: GCS6A

Lab File ID: 2030328/SV6006

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
94-75-7	2,4'-D	0.05828	U	0.03147	0.05828
93-72-1	2,4,5-TP (SILVEX)	0.05828	U	0.03730	0.05828

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 100 Units: mL

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: DB-608-30M ID: .53 (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03MSD

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90579

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted: 03/26/03

Date Analyzed: 03/28/03 Time: 1420

Dilution Factor: 1 Analyst: TLS

Prep Method: SW-846 3510

Analytical Method: 1311/8151

Sulfur Cleanup: (Y/N) N Instrument ID: GCS6A

Lab File ID: 2030328/SV6007

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
94-75-7	2,4'-D	0.05828	U	0.03147	0.05828
93-72-1	2,4,5-TP (SILVEX)	0.05828	U	0.03730	0.05828

2E

WATER PESTICIDE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

GC Column (1): DB-608-30M ID: .53 (mm) GC Cloumn (2): ID: (mm)

Method: 1311/8151

	EPA SAMPLE NO.	SMC1 1-(1)	Lo	Hi	F	SMC1 1-(2)	Lo	Hi	F	SMC2 2-(1)	Lo	Hi	F	SMC2 2-(2)	Lo	Hi	F	TOT OUT
1 .	MB90576	81	37	140														0
2 .	LCS90577	84	37	140														0

SMC 1 : DCAA SMC 2 :

2F

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

GC Column (1) : DB-608-30M ID: .53 (mm) GC Cloumn (2) : ID: (mm)

Method: 1311/8151

	EPA SAMPLE NO.	SMC1 1-(1)	Lo	Hi	F	SMC1 1-(2)	Lo	Hi	F	SMC2 2-(1)	Lo	Hi	F	SMC2 2-(2)	Lo	Hi	F	TOT OUT
1 .	021-PL-S-0324-03	49	37	140														0
2 .	021-PL-S-0324-03MS	66	37	140														0
3 .	021-PL-S-0324-03MSD	85	37	140														0

SMC 1 : DCAA SMC 2 :

3E

WATER PESTICIDE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Contract: Method: 1311/8151

SAMPLE NO : 90577

COMPOUND	*UNITS*	*SPIKE ADDED*	*SAMPLE CONCENTRATION*	*LCS CONCENTRATION*	*LCS % REC*	*LCS % REC FLAG*	*QC. LIMITS*
2,4'-D	mg/L	.002	0	.0021	105		10 - 126
2,4,5-TP (SILVEX)	mg/L	.002	0	.00246	123		34 - 124

RPD : 0 out of 0 outside limits

Spike Recovery: 0 out of 2 outside limits

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB90576

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 90576

SAS No.: SDG No.: 203032507

Matrix: Water Sulfur Cleanup: (Y/N) N

Date Extracted: 03/26/03

Date Analyzed (1): 03/28/03 Time (1): 1213

Date Analyzed (2): Time (2):

Instrument ID (1): GCS6A

Instrument ID (2):

GC Column (1): DB-608-30M ID: .53 (mm)

GC Column (2): ID: (mm)

Method: 1311/8151

Lab File ID: 2030328/SV6002

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATE ANALYZED	TIME ANALYZED
1.	LCS90577	90577	03/28/03	1238		
2.	021-PL-S-0324-03	20303250701	03/28/03	1329		
3.	021-PL-S-0324-03MS	90578	03/28/03	1354		
4.	021-PL-S-0324-03MSD	90579	03/28/03	1420		

6E

PESTICIDE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: GCS6A

Calibration Date 1: 03/17/03 Time 1: 0910

GC Column: DB-608-30M ID: .53 (mm)

Calibration Date 2: 03/17/03 Time 2: 1148

Method: 1311/8151

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	$\overline{RF}$	RSD
2,4'-D	220898.120	32936.260	214850.710	85299.200	155009.480	95326.080			200719.975	14.09
2,4,5-T	628258.480	84736.360	652399.680	81554.350	483051.652	28883.600			593147.354	12.95
2,4,5-TP (SILVEX)	691793.760	55809.360	721595.420	34468.390	531404.325	49452.160			664087.236	11.89
DCAA	247579.280	49614.500	227547.460	92724.425	154365.745	42541.200			219062.102	17.38

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: GCS6A

Calibration Date: 03/28/03 Time: 1139

Init. Calib. Date 1: 03/17/03

GC Column: DB-608-30M ID: .53 (mm)

Init. Calib. Date 2: 03/17/03

COMPOUND	$\overline{RRF}$	RRF50	% D
2,4'-D	200719.975	229124.13	14.15
2,4,5-T	593147.353	642681.47	8.351
2,4,5-TP (SILVEX)	664087.235	745542.3	12.26
DCAA	219062.101	247687.07	13.06

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: GCS6A

Calibration Date: 03/28/03 Time: 1538

Init. Calib. Date 1: 03/17/03

GC Column: DB-608-30M ID: .53 (mm)

Init. Calib. Date 2: 03/17/03

COMPOUND	$\overline{RRF}$	RRF50	% D
2,4'-D	200719.975	241639.04	20.38
2,4,5-T	593147.353	724015.81	22.06
2,4,5-TP (SILVEX)	664087.235	779642.03	17.40
DCAA	219062.101	250736.69	14.45

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: 14 decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 20303250701

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted: 03/28/03

Date Analyzed: 03/29/03 Time: 1310

Dilution Factor: 1 Analyst: DLB

Prep Method: SW-846 3550

Analytical Method: SW-846 8082

Sulfur Cleanup: (Y/N) N Instrument ID: GCS11B

Lab File ID: 2030329/SV1100

CONCENTRATION UNITS: ug/kg

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
12674-11-2	Aroclor-1016	46.6	U	15.6	46.6
11104-28-2	Aroclor-1221	46.6	U	10.7	46.6
11141-16-5	Aroclor-1232	46.6	U	11.7	46.6
53469-21-9	Aroclor-1242	46.6	U	13.7	46.6
12672-29-6	Aroclor-1248	46.6	U	9.10	46.6
11097-69-1	Aroclor-1254	46.6	U	7.56	46.6
11096-82-5	Aroclor-1260	46.6	U	11.0	46.6

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: MB90864

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90864

Date Collected: Time:

Date Received:

Date Extracted: 03/28/03

Date Analyzed: 03/29/03 Time: 1211

Dilution Factor: 1 Analyst: TLS

Prep Method: SW-846 3550

Analytical Method: SW-846 8082

Sulfur Cleanup: (Y/N) N Instrument ID: GCS11B

Lab File ID: 2030329/SV1100

CONCENTRATION UNITS: ug/kg

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
12674-11-2	Aroclor-1016	40.0	U	13.4	40.0
11104-28-2	Aroclor-1221	40.0	U	9.17	40.0
11141-16-5	Aroclor-1232	40.0	U	10.1	40.0
53469-21-9	Aroclor-1242	40.0	U	11.7	40.0
12672-29-6	Aroclor-1248	40.0	U	7.81	40.0
11097-69-1	Aroclor-1254	40.0	U	6.49	40.0
11096-82-5	Aroclor-1260	40.0	U	9.40	40.0

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCS90865

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90865

Date Collected: Time:

Date Received:

Date Extracted: 03/28/03

Date Analyzed: 03/29/03 Time: 1241

Dilution Factor: 1 Analyst: TLS

Prep Method: SW-846 3550

Analytical Method: SW-846 8082

Sulfur Cleanup: (Y/N) N Instrument ID: GCS11B

Lab File ID: 2030329/SV1100

CONCENTRATION UNITS: ug/kg

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
12674-11-2	Aroclor-1016	158		13.4	40.0
11104-28-2	Aroclor-1221	40.0	U	9.17	40.0
11141-16-5	Aroclor-1232	40.0	U	10.1	40.0
53469-21-9	Aroclor-1242	40.0	U	11.7	40.0
12672-29-6	Aroclor-1248	40.0	U	7.81	40.0
11097-69-1	Aroclor-1254	40.0	U	6.49	40.0
11096-82-5	Aroclor-1260	167		9.40	40.0

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03MS

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90867

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted: 03/28/03

Date Analyzed: 03/29/03 Time: 1340

Dilution Factor: 1 Analyst: DLB

Prep Method: SW-846 3550

Analytical Method: SW-846 8082

Sulfur Cleanup: (Y/N) N Instrument ID: GCS11B

Lab File ID: 2030329/SV1100

CONCENTRATION UNITS: ug/kg

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
12674-11-2	Aroclor-1016	212		15.6	46.6
11104-28-2	Aroclor-1221	46.6	U	10.7	46.6
11141-16-5	Aroclor-1232	46.6	U	11.7	46.6
53469-21-9	Aroclor-1242	46.6	U	13.7	46.6
12672-29-6	Aroclor-1248	46.6	U	9.10	46.6
11097-69-1	Aroclor-1254	46.6	U	7.56	46.6
11096-82-5	Aroclor-1260	223		11.0	46.6

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03MSD

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90868

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted: 03/28/03

Date Analyzed: 03/29/03 Time: 1410

Dilution Factor: 1 Analyst: DLB

Prep Method: SW-846 3550

Analytical Method: SW-846 8082

Sulfur Cleanup: (Y/N) N Instrument ID: GCS11B

Lab File ID: 2030329/SV1100

CONCENTRATION UNITS: ug/kg

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
12674-11-2	Aroclor-1016	152		15.6	46.6
11104-28-2	Aroclor-1221	46.6	U	10.7	46.6
11141-16-5	Aroclor-1232	46.6	U	11.7	46.6
53469-21-9	Aroclor-1242	46.6	U	13.7	46.6
12672-29-6	Aroclor-1248	46.6	U	9.10	46.6
11097-69-1	Aroclor-1254	46.6	U	7.56	46.6
11096-82-5	Aroclor-1260	156		11.0	46.6

2F

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

GC Column (1) : ID: (mm) GC Cloumn (2) : ID: (mm)

Method: SW-846 8082

	EPA SAMPLE NO.	SMC1 1-(1)	Lo	Hi	F	SMC1 1-(2)	Lo	Hi	F	SMC2 2-(1)	Lo	Hi	F	SMC2 2-(2)	Lo	Hi	F	TOT OUT
1 .	021-PL-S-0324-03	125	60	150														0
2 .	MB90864	85	60	150														0
3 .	LCS90865	137	60	150														0
4 .	021-PL-S-0324-03MS	143	60	150														0
5 .	021-PL-S-0324-03MSD	134	60	150														0

SMC 1 : Decachlorobiphenyl SMC 2 :

3F

SOIL PESTICIDE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Contract: Method: SW-846 8082

Spike HSN : 90865

COMPOUND	UNITS	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS % REC	LCS % REC FLAG	QC. LIMITS
Aroclor-1016	ug/kg	133	0	158	119		62 - 124
Aroclor-1260	ug/kg	133	0	167	125		62 - 129

RPD : 0 out of 0 outside limits

Spike Recovery: 0 out of 2 outside limits

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB90864

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 90864

SAS No.: SDG No.: 203032507

Matrix: Soil Sulfur Cleanup: (Y/N) N

Date Extracted: 03/28/03

Date Analyzed (1): 03/29/03 Time (1): 1211

Date Analyzed (2): Time (2):

Instrument ID (1): GCS11B

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

Method: SW-846 8082

Lab File ID: 2030329/SV1100

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATE ANALYZED	TIME ANALYZED
1.	LCS90865	90865	03/29/03	1241		
2.	021-PL-S-0324-03	20303250701	03/29/03	1310		
3.	021-PL-S-0324-03MS	90867	03/29/03	1340		
4.	021-PL-S-0324-03MSD	90868	03/29/03	1410		

6E

PESTICIDE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: GCS11B

Calibration Date 1: 03/28/03 Time 1: 1758

GC Column: ID: (mm)

Calibration Date 2: 03/29/03 Time 2: 0419

Method: SW-846 8082

COMPOUND	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	$\overline{RF}$	RSD
4,4'-DDD	55269.300	70520.950	82422.575	84088.012	84752.555				75410.678	16.79
4,4'-DDE	90069.800	98491.075	113936.975	16111.430	119684.131				107658.682	11.83
4,4'-DDT	52951.700	65066.625	75738.133	78111.056	79660.645				70305.632	16.00
Aldrin	83432.200	91225.550	114469.733	27295.260	129762.788				109237.106	19.23
Aroclor-1016	15831.286	17596.850	19291.182	21190.755	22028.140				19187.643	13.25
Aroclor-1221	5347.662								5347.662	0
Aroclor-1232	8644.095								8644.095	0
Aroclor-1242	14492.412								14492.412	0
Aroclor-1248	19103.182								19103.182	0
Aroclor-1254	16399.905								16399.905	0
Aroclor-1260	31720.008	32854.155	33781.070	34090.388	34927.710				33474.666	3.673
Chlordane	26692.360								26692.36	0
Decachlorobiphenyl	103357.200	17059.900	116407.567	13051.438	111700.455				112315.312	4.885
Dieldrin	71010.200	88614.475	108569.633	11509.694	113101.795				98561.159	18.55
Endosulfan I	72511.800	82785.200	101694.567	06703.338	108789.970				94496.975	16.94
Endosulfan II	69584.200	77072.425	92882.067	96244.735	98356.606				86828.007	14.69
Endosulfan sulfate	64198.400	67760.250	83051.467	85303.570	86312.006				77325.139	13.57
Endrin	43147.500	50138.025	58533.933	59683.175	60624.140				54425.355	13.88
Endrin aldehyde	64726.200	66148.675	74429.517	74729.795	75973.506				71201.539	7.468
Endrin ketone	75833.000	83747.375	97249.015	97388.825	99133.912				90670.426	11.41
Heptachlor	44177.800	48106.300	57784.717	60813.650	63641.990				54904.891	15.26
Heptachlor epoxide	76548.200	81930.050	100967.667	09267.210	111632.300				96069.085	16.63
Methoxychlor	25545.320	29039.450	30408.363	30232.079	30604.523				29165.947	7.248
Tetrachloro-m-xylene	91065.600	99156.200	101855.050	01032.288	101203.630				98862.554	4.524
Toxaphene	11713.815								11713.815	0
alpha-BHC	89777.200	19933.250	157072.567	61885.050	166391.120				139011.837	23.82
alpha-Chlordane	69930.800	87786.050	109780.867	17463.980	121354.612				101263.262	21.53
beta-BHC	59285.400	60939.750	66921.633	68356.090	70945.975				65289.77	7.621
delta-BHC	74974.000	91213.950	125584.533	36333.460	138752.675				113371.724	25.28
gamma-BHC (Lindane)	87953.200	13170.100	141433.950	44458.800	147988.330				127000.876	20.34
gamma-Chlordane	84186.000	90921.350	112132.833	21133.990	123601.525				106395.14	16.80

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: GCS11B

Calibration Date: 03/29/03 Time: 1136

Init. Calib. Date 1: 03/28/03

GC Column: ID: (mm)

Init. Calib. Date 2: 03/29/03

COMPOUND	$\overline{RRF}$	RRF50	% D
Aroclor-1016	19187.6426	19269.675	.4275
Aroclor-1260	33474.666	34459.0875	2.940

FORM VII PEST

7E

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Instrument ID: GCS11B

Calibration Date: 03/29/03 Time: 1439

Init. Calib. Date 1: 03/28/03

GC Column: ID: (mm)

Init. Calib. Date 2: 03/29/03

COMPOUND	$\overline{RRF}$	RRF50	% D
Aroclor-1016	19187.6426	18472.9	-3.72
Aroclor-1260	33474.666	33013.2075	-1.37

FORM V II PEST

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 25 Units: g

Level: (low/med) LOW

% Moisture: 14 decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 20303250701

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted:

Date Analyzed: 04/04/03 Time: 1051

Dilution Factor: 500 Analyst: DLB

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030402/SV2AD0

CONCENTRATION UNITS: ug/kg

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	28300000		2910000	4660000

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 25 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: MB90869

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90869

Date Collected: Time:

Date Received:

Date Extracted:

Date Analyzed: 04/04/03 Time: 0956

Dilution Factor: 1 Analyst: DLB

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030402/SV2AD0

CONCENTRATION UNITS: ug/kg

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	8000	U	5000	8000

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 25 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: LCS90870

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90870

Date Collected: Time:

Date Received:

Date Extracted:

Date Analyzed: 04/03/03 Time: 1835

Dilution Factor: 1 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030402/SV2AD0

CONCENTRATION UNITS: ug/kg

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	73500		5000	8000

FORM I PEST-1

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 25 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03MSD

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90872

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted:

Date Analyzed: 04/04/03 Time: 1345

Dilution Factor: 500 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030402/SV2AD0

CONCENTRATION UNITS: ug/kg

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	39300000		2910000	4660000

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Soil

Sample wt/vol: 25 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Soil Extract Volume: (µL)

Soil Aliquot Volume: (µL)

Injection Volume: (µL)

GPC Cleanup: (Y/N) N pH:

Sample ID: 021-PL-S-0324-03MS

Contract:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90871

Date Collected: 03/24/03 Time: 1200

Date Received: 03/25/03

Date Extracted:

Date Analyzed: 04/04/03 Time: 1250

Dilution Factor: 500 Analyst: TLS

Prep Method: FLORIDA PRO

Analytical Method: FLORIDA PRO

Sulfur Cleanup: (Y/N) N Instrument ID: GCS2A

Lab File ID: 2030402/SV2AD0

CONCENTRATION UNITS: ug/kg

CAS NO.	COMPOUND	RESULT	Q	MDL	RL
FLPRO-01	Petroleum Hydrocarbons	50400000		2910000	4660000

2F

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

GC Column (1) : ID: (mm) GC Cloumn (2) : ID: (mm)

Method: FLORIDA PRO

	EPA SAMPLE NO.	SMC1 1-(1)	Lo	Hi	F	SMC1 1-(2)	Lo	Hi	F	SMC2 2-(1)	Lo	Hi	F	SMC2 2-(2)	Lo	Hi	F	TOT OUT
1 .	021-PL-S-0324-03	0	62	109	D					0	60	118	D					0
2 .	MB90869	86	62	109						83	60	118						0
3 .	LCS90870	74	62	109						107	60	118						0
4 .	021-PL-S-0324-03MSD	0	62	109	D					0	60	118	D					0
5 .	021-PL-S-0324-03MS	0	62	109	D					0	60	118	D					0

SMC 1 : O-Terphenyl SMC 2 : Nonatriacontane

3F

SOIL PESTICIDE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

Contract: Method: FLORIDA PRO

Spike HSN : 90870

COMPOUND	*UNITS*	*SPIKE ADDED*	*SAMPLE CONCENTRATION*	*LCS CONCENTRATION*	*LCS % REC*	*LCS % REC FLAG*	*QC. LIMITS*
Petroleum Hydrocarbons	ug/kg	68000	0	73500	108		63 - 153

RPD : 0 out of 0 outside limits

Spike Recovery: 0 out of 1 outside limits

FORM III PEST-2

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB90869

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 90869

SAS No.: SDG No.: 203032507

Matrix: Soil Sulfur Cleanup: (Y/N) N

Date Extracted:

Date Analyzed (1): 04/04/03 Time (1): 0956

Date Analyzed (2): Time (2):

Instrument ID (1): GCS2A

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

Method: FLORIDA PRO

Lab File ID: 2030402/SV2AD0

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	DATE ANALYZED	TIME ANALYZED
1.	LCS90870	90870	04/03/03	1835		
2.	021-PL-S-0324-03	20303250701	04/04/03	1051		
3.	021-PL-S-0324-03MS	90871	04/04/03	1250		
4.	021-PL-S-0324-03MSD	90872	04/04/03	1345		

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032507 SAS No.: SDG No.: 203032507

Instrument ID: GCSV2AD Calibration Date(s): 03/29/03 03/29/03

Calibration Time(s): 1508 1937

LAB FILE ID: RRF5 =SV2AD002S RRF50 =SV2AD003S
RRF150=SV2AD004S RRF250=SV2AD005S RRF350=SV2AD006S

COMPOUND	RRF5	RRF50	RRF150	RRF250	RRF350	$\overline{RRF}$	% RSD
TOTAL PRO	172611	259089	240193	237108	229558		
O-TERPHENYL	535787	550599	529781	522715	502395		
Nonatriacontane	3415.8	2708.8	3081.2	2909.5	3302.5		

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: GCAL Contract:

Lab Code: Case No.: FLPRO SAS No.: SDG No.: 2030402

Instrument ID: GCSV2AD Calibration Date(s): 03/29/03 03/29/03

Calibration Time(s): 1508 1937

LAB FILE ID: RRF500=SV2AD007S

COMPOUND	RRF500					$\overline{RRF}$	% RSD
TOTAL PRO	222144					226784	12.9
O-TERPHENYL	484480					520960	4.6
Nonatriacontane	3517.1					3155.8	9.9

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032507 SAS No.: SDG No.: 203032507

Instrument ID: GCSV2AD Calibration Date: 04/03/03 Time: 1140

Lab File ID: SV2AD017S Init. Calib. Date(s): 03/29/03 03/29/03

Init. Calib. Times: 1508 1937

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
TOTAL PRO	226784	246107		8.5	
O-TERPHENYL	520960	481712		7.5	
Nonatriacontane	3155.8	3528.2		-11.8	

All other compounds must meet a minimum RRF of 0.010.

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032507 SAS No.: SDG No.: 203032507

Instrument ID: GCSV2AD Calibration Date: 04/03/03 Time: 2213

Lab File ID: SV2AD028S Init. Calib. Date(s): 03/29/03 03/29/03

Init. Calib. Times: 1508 1937

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
TOTAL PRO	226784	246264		8.6	
O-TERPHENYL	520960	481712		7.5	
Nonatriacontane	3155.8	3528.2		-11.8	

All other compounds must meet a minimum RRF of 0.010.

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032507 SAS No.: SDG No.: 203032507

Instrument ID: GCSV2AD Calibration Date: 04/04/03 Time: 0057

Lab File ID: SV2AD031S Init. Calib. Date(s): 03/29/03 03/29/03

Init. Calib. Times: 1508 1937

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
TOTAL PRO	226784	230266		1.5	
O-TERPHENYL	520960	481712		7.5	
Nonatriacontane	3155.8	3528.2		-11.8	

All other compounds must meet a minimum RRF of 0.010.

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032507 SAS No.: SDG No.: 203032507

Instrument ID: GCSV2AD Calibration Date: 04/04/03 Time: 0835

Lab File ID: SV2AD032S Init. Calib. Date(s): 03/29/03 03/29/03

Init. Calib. Times: 1508 1937

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
TOTAL PRO	226784	243304		7.3	
O-TERPHENYL	520960	481712		7.5	
Nonatriacontane	3155.8	3528.2		-11.8	

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: GCAL Contract:

Lab Code: Case No.: 203032507 SAS No.: SDG No.: 203032507

Instrument ID: GCSV2AD Calibration Date: 04/04/03 Time: 1440

Lab File ID: SV2AD037S Init. Calib. Date(s): 03/29/03 03/29/03

Init. Calib. Times: 1508 1937

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
TOTAL PRO	226784	265106		16.9	
O-TERPHENYL	520960	481712		7.5	
Nonatriacontane	3155.8	3528.2		-11.8	

All other compounds must meet a minimum RRF of 0.010.

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: 021-PL-S-0324-03
Lab Code: LA024
Case No.:
Contract:
Matrix: (soil / water) Soil
SAS No.:
SDG No.: 203032507
Level: (low / med)
% Solids: 85.79
Lab Sample ID: 20303250701
Date Received: 03/25/03
Time: 0945
Date Collected: 03/24/03
Time: 1200

Analyte	Concentration	Units	C	MDL	PQL	Method	Type
Arsenic	0.20	mg/L	U	0.0035	0.20	SW-846 1311/6010B	P
Barium	0.091	mg/L	B	0.00060	1.00	SW-846 1311/6010B	P
Cadmium	0.0045	mg/L	B	0.00020	0.010	SW-846 1311/6010B	P
Chromium	0.0027	mg/L	B	0.00050	0.050	SW-846 1311/6010B	P
Lead	0.0031	mg/L	B	0.0024	0.10	SW-846 1311/6010B	P
Mercury	0.00020	mg/L	U	0.00008	0.00020	SW-846 1311/7470A	AV
Selenium	0.0086	mg/L	B	0.0043	0.10	SW-846 1311/6010B	P
Silver	0.00094	mg/L	B	0.00040	0.050	SW-846 1311/6010B	P

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032507
Calibration Source: 106-1-4 CPI/EXAXOL
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 03/26/03 Time: 1050

INITIAL CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Antimony	1.00	0.970	97	mg/L	SW-846 1311/6010B	P
Arsenic	1.00	1.02	102	mg/L	SW-846 1311/6010B	P
Beryllium	1.00	0.990	99	mg/L	SW-846 1311/6010B	P
Cadmium	1.00	0.990	99	mg/L	SW-846 1311/6010B	P
Calcium	1.00	0.990	99	mg/L	SW-846 1311/6010B	P
Chromium	1.00	1.01	101	mg/L	SW-846 1311/6010B	P
Cobalt	1.00	1.01	101	mg/L	SW-846 1311/6010B	P
Copper	1.00	0.970	97	mg/L	SW-846 1311/6010B	P
Iron	1.00	0.990	99	mg/L	SW-846 1311/6010B	P
Lead	1.00	1.03	103	mg/L	SW-846 1311/6010B	P
Magnesium	1.00	1.01	101	mg/L	SW-846 1311/6010B	P
Manganese	1.00	1.01	101	mg/L	SW-846 1311/6010B	P
Molybdenum	1.00	0.990	99	mg/L	SW-846 1311/6010B	P
Nickel	1.00	1.01	101	mg/L	SW-846 1311/6010B	P
Selenium	1.00	0.990	99	mg/L	SW-846 1311/6010B	P
Silver	1.00	1.03	103	mg/L	SW-846 1311/6010B	P
Strontium	1.00	1.01	101	mg/L	SW-846 1311/6010B	P
Thallium	1.00	1.00	100	mg/L	SW-846 1311/6010B	P
Titanium	1.00	0.980	98	mg/L	SW-846 1311/6010B	P
Vanadium	1.00	0.990	99	mg/L	SW-846 1311/6010B	P
Zinc	1.00	0.970	97	mg/L	SW-846 1311/6010B	P

ICV CONTROL LIMITS EPA 6010B = 90-100 EPA 200.7 = 95-105

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032507
Calibration Source: 100-100-9
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 03/26/03 Time: 1057

INITIAL CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Aluminum	10.0	10.2	102	mg/L	SW-846 1311/6010B	P
Barium	1.00	1.04	104	mg/L	SW-846 1311/6010B	P
Boron	5.00	4.78	96	mg/L	SW-846 1311/6010B	P
Potassium	10.0	9.96	100	mg/L	SW-846 1311/6010B	P
Sodium	10.0	9.68	97	mg/L	SW-846 1311/6010B	P
Tin	1.00	0.960	96	mg/L	SW-846 1311/6010B	P
Zirconium	1.00	0.830	83	mg/L	SW-846 1311/6010B	P

ICV CONTROL LIMITS EPA 6010B = 90-100 EPA 200.7 = 95-105

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032507
Calibration Source: 106-1-1 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 03/26/03 Time: 1133

CONTINUING CALIBRATION VERIFICATION

Analyte	True	Found	CAL %R	Units	Method	Type
Aluminum	5.00	4.94	99	mg/L	SW-846 1311/6010B	P
Arsenic	0.500	0.520	103	mg/L	SW-846 1311/6010B	P
Barium	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Beryllium	0.500	0.500	101	mg/L	SW-846 1311/6010B	P
Cadmium	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Calcium	5.00	5.01	100	mg/L	SW-846 1311/6010B	P
Chromium	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Cobalt	0.500	0.510	102	mg/L	SW-846 1311/6010B	P
Copper	0.500	0.500	101	mg/L	SW-846 1311/6010B	P
Iron	5.00	5.01	100	mg/L	SW-846 1311/6010B	P
Lead	0.500	0.520	105	mg/L	SW-846 1311/6010B	P
Magnesium	5.00	5.19	104	mg/L	SW-846 1311/6010B	P
Manganese	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Nickel	0.500	0.510	102	mg/L	SW-846 1311/6010B	P
Potassium	10.0	10.1	101	mg/L	SW-846 1311/6010B	P
Selenium	0.500	0.510	102	mg/L	SW-846 1311/6010B	P
Silver	0.500	0.500	101	mg/L	SW-846 1311/6010B	P
Sodium	20.0	20.2	101	mg/L	SW-846 1311/6010B	P
Strontium	0.500	0.520	104	mg/L	SW-846 1311/6010B	P
Thallium	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Vanadium	0.500	0.500	100	mg/L	SW-846 1311/6010B	P
Zinc	0.500	0.500	100	mg/L	SW-846 1311/6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032507
Calibration Source: 106-1-1 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 03/26/03 Time: 1706

CONTINUING CALIBRATION VERIFICATION

Analyte	True	Found	CAL %R	Units	Method	Type
Aluminum	5.00	5.01	100	mg/L	SW-846 1311/6010B	P
Arsenic	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Barium	0.500	0.500	100	mg/L	SW-846 1311/6010B	P
Beryllium	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Cadmium	0.500	0.500	101	mg/L	SW-846 1311/6010B	P
Calcium	5.00	5.00	100	mg/L	SW-846 1311/6010B	P
Chromium	0.500	0.500	101	mg/L	SW-846 1311/6010B	P
Cobalt	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Copper	0.500	0.500	99	mg/L	SW-846 1311/6010B	P
Iron	5.00	5.06	101	mg/L	SW-846 1311/6010B	P
Lead	0.500	0.520	104	mg/L	SW-846 1311/6010B	P
Magnesium	5.00	5.18	104	mg/L	SW-846 1311/6010B	P
Manganese	0.500	0.510	102	mg/L	SW-846 1311/6010B	P
Nickel	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Potassium	10.0	10.2	102	mg/L	SW-846 1311/6010B	P
Selenium	0.500	0.510	102	mg/L	SW-846 1311/6010B	P
Silver	0.500	0.500	100	mg/L	SW-846 1311/6010B	P
Sodium	20.0	20.2	101	mg/L	SW-846 1311/6010B	P
Strontium	0.500	0.520	104	mg/L	SW-846 1311/6010B	P
Thallium	0.500	0.520	103	mg/L	SW-846 1311/6010B	P
Vanadium	0.500	0.500	100	mg/L	SW-846 1311/6010B	P
Zinc	0.500	0.500	100	mg/L	SW-846 1311/6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032507
Calibration Source: 106-1-1 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 03/26/03 Time: 1838

CONTINUING CALIBRATION VERIFICATION

Analyte	True	Found	CAL %R	Units	Method	Type
Aluminum	5.00	4.95	99	mg/L	SW-846 1311/6010B	P
Arsenic	0.500	0.500	101	mg/L	SW-846 1311/6010B	P
Barium	0.500	0.500	100	mg/L	SW-846 1311/6010B	P
Beryllium	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Cadmium	0.500	0.500	99	mg/L	SW-846 1311/6010B	P
Calcium	5.00	4.92	98	mg/L	SW-846 1311/6010B	P
Chromium	0.500	0.500	101	mg/L	SW-846 1311/6010B	P
Cobalt	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Copper	0.500	0.500	99	mg/L	SW-846 1311/6010B	P
Iron	5.00	5.07	101	mg/L	SW-846 1311/6010B	P
Lead	0.500	0.520	103	mg/L	SW-846 1311/6010B	P
Magnesium	5.00	4.98	100	mg/L	SW-846 1311/6010B	P
Manganese	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Nickel	0.500	0.510	101	mg/L	SW-846 1311/6010B	P
Potassium	10.0	10.5	105	mg/L	SW-846 1311/6010B	P
Selenium	0.500	0.510	102	mg/L	SW-846 1311/6010B	P
Silver	0.500	0.500	100	mg/L	SW-846 1311/6010B	P
Sodium	20.0	22.0	110	mg/L	SW-846 1311/6010B	P
Strontium	0.500	0.500	99	mg/L	SW-846 1311/6010B	P
Thallium	0.500	0.520	104	mg/L	SW-846 1311/6010B	P
Vanadium	0.500	0.500	100	mg/L	SW-846 1311/6010B	P
Zinc	0.500	0.500	100	mg/L	SW-846 1311/6010B	P

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032507
Calibration Source: 106-1-2 CPI
Instrument ID: FIMS1 ICAL ID: 1
Date Analyzed: 03/27/03 Time: 1427

INITIAL CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Mercury	0.00500	0.00474	95	mg/L	SW-846 1311/7470A	AV

ICV CONTROL LIMITS EPA 6010B = 90-100 EPA 200.7 = 95-105

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032507
Calibration Source: 106-1-3 EXAXOL
Instrument ID: FIMS1 ICAL ID: 1
Date Analyzed: 03/27/03 Time: 1430

CONTINUING CALIBRATION VERIFICATION

Analyte	True	Found	CAL %R	Units	Method	Type
Mercury	0.00500	0.00493	99	mg/L	SW-846 1311/7470A	AV

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 203032507
Calibration Source: 106-1-3 EXAXOL
Instrument ID: FIMS1 ICAL ID: 1
Date Analyzed: 03/27/03 Time: 1451

CONTINUING CALIBRATION VERIFICATION

Analyte	*True*	*Found*	*CAL %R*	*Units*	*Method*	*Type*
Mercury	0.00500	0.00486	97	mg/L	SW-846 1311/7470A	AV

CCV CONTROL LIMITS EPA 6010B AND 200.7 = 90-100 EPA 7470/7471 AND 7XXX = 80-120

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab Sample ID: ICB

ICAL ID: 2

Lab Sample DESC: ICB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 03/26/03 Time: 1104

INITIAL CALIBRATION BLANK

Analyte	*Conc.*	*C*	*Units*	*MDL*	*PQL*	*Method*	*Type*
Arsenic	0.040	U	mg/L	0.0015	0.040	SW-846 1311/6010B	P
Barium	0.010	U	mg/L	0.00050	0.010	SW-846 1311/6010B	P
Cadmium	0.0050	U	mg/L	0.00020	0.0050	SW-846 1311/6010B	P
Chromium	0.010	U	mg/L	0.00050	0.010	SW-846 1311/6010B	P
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 1311/6010B	P
Selenium	0.040	U	mg/L	0.0047	0.040	SW-846 1311/6010B	P
Silver	0.010	U	mg/L	0.00040	0.010	SW-846 1311/6010B	P

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab Sample ID: CCB

ICAL ID: 2

Lab Sample DESC: CCB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 03/26/03 Time: 1148

CONTINUING CALIBRATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Arsenic	0.040	U	mg/L	0.0015	0.040	SW-846 1311/6010B	P
Barium	0.010	U	mg/L	0.00050	0.010	SW-846 1311/6010B	P
Cadmium	0.0050	U	mg/L	0.00020	0.0050	SW-846 1311/6010B	P
Chromium	0.010	U	mg/L	0.00050	0.010	SW-846 1311/6010B	P
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 1311/6010B	P
Selenium	0.040	U	mg/L	0.0047	0.040	SW-846 1311/6010B	P
Silver	0.010	U	mg/L	0.00040	0.010	SW-846 1311/6010B	P

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab Sample ID: CCB

ICAL ID: 2

Lab Sample DESC: CCB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 03/26/03 Time: 1721

CONTINUING CALIBRATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Arsenic	0.040	U	mg/L	0.0015	0.040	SW-846 1311/6010B	P
Barium	0.010	U	mg/L	0.00050	0.010	SW-846 1311/6010B	P
Cadmium	0.0050	U	mg/L	0.00020	0.0050	SW-846 1311/6010B	P
Chromium	0.010	U	mg/L	0.00050	0.010	SW-846 1311/6010B	P
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 1311/6010B	P
Selenium	0.040	U	mg/L	0.0047	0.040	SW-846 1311/6010B	P
Silver	0.010	U	mg/L	0.00040	0.010	SW-846 1311/6010B	P

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90424

ICAL ID: 2

Lab Sample DESC: MB90424

Preparation Blank Matrix: (soil / water) Water

Instrument ID: ICP5

Date Analyzed: 03/26/03 Time: 1728

PREPARATION BLANK

Analyte	*Conc.*	*C*	*Units*	*MDL*	*PQL*	*Method*	*Type*
Arsenic	0.20	U	mg/L	0.0035	0.20	SW-846 1311/6010B	P
Barium	1.00	U	mg/L	0.00060	1.00	SW-846 1311/6010B	P
Cadmium	0.010	U	mg/L	0.00020	0.010	SW-846 1311/6010B	P
Chromium	0.0022	B	mg/L	0.00050	0.050	SW-846 1311/6010B	P
Lead	0.10	U	mg/L	0.0024	0.10	SW-846 1311/6010B	P
Selenium	0.10	U	mg/L	0.0043	0.10	SW-846 1311/6010B	P
Silver	0.050	U	mg/L	0.00040	0.050	SW-846 1311/6010B	P

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab Sample ID: CCB

ICAL ID: 2

Lab Sample DESC: CCB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 03/26/03 Time: 1853

CONTINUING CALIBRATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Arsenic	0.040	U	mg/L	0.0015	0.040	SW-846 1311/6010B	P
Barium	0.010	U	mg/L	0.00050	0.010	SW-846 1311/6010B	P
Cadmium	0.0050	U	mg/L	0.00020	0.0050	SW-846 1311/6010B	P
Chromium	0.010	U	mg/L	0.00050	0.010	SW-846 1311/6010B	P
Lead	0.015	U	mg/L	0.0016	0.015	SW-846 1311/6010B	P
Selenium	0.040	U	mg/L	0.0047	0.040	SW-846 1311/6010B	P
Silver	0.010	U	mg/L	0.00040	0.010	SW-846 1311/6010B	P

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab Sample ID: ICB

ICAL ID: 1

Lab Sample DESC: ICB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: FIMS1

Date Analyzed: 03/27/03 Time: 1429

INITIAL CALIBRATION BLANK

Analyte	*Conc.*	*C*	*Units*	*MDL*	*PQL*	*Method*	*Type*
Mercury	0.00020	U	mg/L	0.00003	0.00020	SW-846 1311/7470A	AV

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab Sample ID: CCB

ICAL ID: 1

Lab Sample DESC: CCB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: FIMS1

Date Analyzed: 03/27/03 Time: 1432

CONTINUING CALIBRATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Mercury	0.00020	U	mg/L	0.00003	0.00020	SW-846 1311/7470A	AV

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab Sample ID: 90429

ICAL ID: 1

Lab Sample DESC: MB90429

Preparation Blank Matrix: (soil / water) Water

Instrument ID: FIMS1

Date Analyzed: 03/27/03 Time: 1434

PREPARATION BLANK

Analyte	*Conc.*	*C*	*Units*	*MDL*	*PQL*	*Method*	*Type*
Mercury	0.00013	B	mg/L	0.00008	0.00020	SW-846 1311/7470A	AV

FORM III - IN

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 203032507

Lab Sample ID: CCB

ICAL ID: 1

Lab Sample DESC: CCB FOR HBN 255160 [LACH/2150]

Preparation Blank Matrix: (soil / water)

Instrument ID: FIMS1

Date Analyzed: 03/27/03 Time: 1453

CONTINUING CALIBRATION BLANK

Analyte	Conc.	C	Units	MDL	PQL	Method	Type
Mercury	0.00020	U	mg/L	0.00003	0.00020	SW-846 1311/7470A	AV

ICP INTERFERENCE CHECK SAMPLE

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 203032507

ICP ID Number: ICP5 ICS Source: 100-96-3 SPEX~

Concentration Units: mg/L

Analyte	True		Initial Found			Final Found		
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R
Aluminum	200	200	200	209	104			
Antimony	0	1.00		1.00	100			
Arsenic	0	1.00		1.01	101			
Barium	0	0.50		0.52	104			
Beryllium	0	0.50		0.53	106			
Boron	0	1.00		1.02	102			
Cadmium	0	1.00		0.99	99			
Calcium	200	200	196	200	100			
Chromium	0	0.50		0.50	100			
Cobalt	0	0.50		0.49	98			
Copper	0	0.50		0.53	106			
Iron	80.0	80.0	76.5	80.0	100			
Lead	0	1.00		1.00	100			
Magnesium	200	200	207	207	104			
Manganese	0	0.50		0.52	104			
Molybdenum	0	1.00		1.00	100			
Nickel	0	1.00		0.96	96			
Selenium	0	1.00		1.05	105			
Silver	0	1.00		1.07	107			
Thallium	0	1.00		1.04	104			
Vanadium	0	0.50		0.49	98			
Zinc	0	1.00		1.02	102			

LABORATORY CONTROL SAMPLE

Lab Name: GCAL

Sample ID: LCS90425

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203032507

Lab Sample ID: 90425

LCS Source: 334-13-17 INORGANIC VENTURES

Analyte	True	Found	% R	LL	UL	Units	Method	Type
Arsenic	1.00	1.07	107	80	120	mg/L	SW-846 1311/6010B	P
Barium	1.00	1.04	104	80	120	mg/L	SW-846 1311/6010B	P
Cadmium	1.00	1.05	105	80	120	mg/L	SW-846 1311/6010B	P
Chromium	1.00	1.02	102	80	120	mg/L	SW-846 1311/6010B	P
Lead	1.00	1.04	104	80	120	mg/L	SW-846 1311/6010B	P
Selenium	1.00	1.23	123	80	120	mg/L	SW-846 1311/6010B	P
Silver	1.00	1.11	111	80	120	mg/L	SW-846 1311/6010B	P

FORM VII - IN

LABORATORY CONTROL SAMPLE

Lab Name: GCAL

Sample ID: LCS90430

Lab Code: LA024 Case No.:

Contract:

Matrix: (soil / water) Water

SAS No.: SDG No.: 203032507

Lab Sample ID: 90430

LCS Source: 106-1-3 EXAXOL

Analyte	True	Found	% R	LL	UL	Units	Method	Type
Mercury	0.00500	0.00555	111	80	120	mg/L	SW-846 1311/7470A	AV

FORM VII - IN

CH2M HILL CONSTRUCTORS / 4380 / 203032501 / 4/1/03 - 002 [illegible]

CH2M Hill Constructors, Inc.
115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No (770) 604-9182 ; Fax No (770) 604-9282

CHAIN-OF-CUSTODY RECORD

COC NUMBER

153141-002 Page 1 of 1

PROJECT NAME:	PROJECT NUMBER:	LAB NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 1 (Name and Company)	RECIPIENT 1 (Address, Tel No. , and Fax No.):
Pipeline Pigging	153141	Gulf Coast Labs. Dana Merril	Paul Malewicki J.A. Jones Environmental Services	6219 Authority Ave. Building 1 Jacksonville, FL 32221 Ph:(904) 7774812 Fax: (904) 7774262
PROJECT PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 2 (Name and Company)	RECIPIENT 2 (Address, Tel No. , and Fax No.):
Pipeline Pigging: Soil Waste Disposal Characterization	0021	5107	Christelle Newsome / CH2M Hill Constuctors, Inc.	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 Ph:(770)604-9182 Ext.561 Fax:604-9282
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	LAB TEL NO AND FAX NO:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No. , and Fax No.):
Paul Malewicki J.A. Jones Environmental	Ph:(904)777-4812 Fax:(904) 777-4262	Ph:(225) 769-4900		

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (see codes on back)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (see codes on back)	TAT (calendar days)	TCLP Volatiles by 1311/8260B (Grab)	TCLP Semi-volatiles(1311/8270C),TCLP pesticides(1311/8081 A),TCLP herbicides(1311/8151 A),TCLP metals(1311/6010B,7 470A).				PAH ~~TCLP~~ PCB's by 1311/8082, Reactivity by Chapter 7.3, Corrosivity by 9045A, Ignitability by 1010/1020, TPH by FL-PRO.				SAMPLE TYPE (see codes on back)	COMMENTS/ SCREENING READINGS	LAB ID
1	021-PL-S-0324-03	Waste Characterization	S	03/24/03	12:00	III/B	7 Day	1	1				1				Grab / Composite		
2	021-PLTB2-W-0324-03	Pipeline Trip Blank #2	W	03/24/03	NA	III/B	7 Day	3										Prepared by Lab	
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:	SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT:
Randy Dumaop / Sean Smith J.A. Jones Environmental Services	Federal Express Tracking # 7915 5898 9826.	3°C Good

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
R. Dumaop	3/24/03	17:00	Federal Express	3/24/03	17:00
Printed Name and Signature:			Printed Name and Signature:		
Fed. Ex. 7915 5898 9826	3-25-03	0945	David Hughes	3-25-03	0945
Printed Name and Signature:			Printed Name and Signature:		

0001142

PRESERVATION CHECKLIST / COOLER RECEIPT

Gulf Coast Analytical Laboratories, Inc.

WO:	203032507	**Type:**	D
Desc:		**Report:**	REVIEW_RPT
Work ID:	N.A.S. Cecil Field	**Status:**	WP
Project Seq:	11600	**Created:**	3/25/03 11:03
Client:	4380 - CH2M HILL Constructors Inc.	**QA:**	
Profile:	53396 - CTO 0021 - N.A.S. Cecil Field	**PO:**	

WORKORDER SAMPLES

			pH PRESERVATIVE			VOA HEADSPACE			
Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20303250701-1	16	NONE			X			X	OK
20303250701-2	2	NONE			X			X	OK
20303250701-3	16	NONE			X			X	OK

Container ID	**Type**	**Preservative**	A	U	N\A	A	U	N\A	**CONTAINER CONDITION**
20303250702-1	40	NONE			X				OK

A = ACCEPTABLE
U = UNACCEPTABLE
N\A = NOT APPLICABLE

COOLER (S) TEMPERATURE (A) U LIMIT = 4C + \ - 2C

MAXIMUM VOLATILE HEADSPACE BUBBLE 6MM

Custody Seal
used [✓] Yes [ ] No
in tact [✓] Yes [ ] No

CUSTODIAN J.J.J