

BP Exploration (Alaska) Inc.

Liberty Island Route
Water / Sediment Sampling

March 1997



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1.2 DATA REPORT

This report describes sampling sites, analytes, and methodologies; presents analytical findings; and quality control established for this field effort.

2. MONITORING PROCEDURES

2.1 LOCATION AND PROBLEM STATEMENT

Three proposed pipeline alignments for the Liberty Island project have been identified by BPX (Alaska) Inc. (Figure 1). They are: Transect A extends N-NW from shore at SW1/2, Sec. 23, T.10N., R.18E., Umiat Meridian, to the proposed island. Transect B extends N-NE from shore at SE 1/4, Sec. 24, T.10N., R.17E., Umiat Meridian through Foggy Island Bay and terminating at the proposed island. Transect C extends NW from the proposed island through the Duck Island unit terminating at the Endicott Satellite Drilling Island. Sampling was conducted at 11 sites in water (ice) depths ranging from approximately 20.4 to 3.5 feet. Ice thickness varied from approximately 5:0 to 3.8 feet.

A shallow (10-feet), narrow (5 to 6-feet) trench below the sea floor has been proposed for Liberty pipeline construction, using a large hydraulic excavator working from a thickened ice pad on top of the sea ice. A major consideration is the potential occurrence of contaminants, including trace metals and hydrocarbons in the sediments. A baseline of sediment chemical quality is necessary to evaluate potential effects of construction activity on the marine environment. Work by Montgomery Watson at the Northstar Development Project (Montgomery Watson, April 1, 1996) demonstrated that sediment dispersal from trenching activities is most likely short in duration and limited to a small area near the trench. However, associated with the disruption of the sediment by trenching is the potential for release of toxic contaminants from the sediments that may affect the viability of epibenthos and/or plankton which live in the shallow waters of the nearshore Beaufort Sea. Background levels of these constituents were documented by measuring their concentrations at roughly 6 inches to one-foot, and 6 to 8 feet beneath the sediment surface.

2.2 SAMPLE LOCATIONS AND MOBILIZATION

Sample sites were positioned along the three proposed pipeline route centerlines at the locations identified on the map attached as Figure 1. The locations were staked and identified with respect to Alaska State Plane coordinates and latitude/longitude in advance by BPXA contract surveyor support. Each of the sampling locations was located by the field sampling crew by navigating a Rolligon vehicle using the GPS coordinates provided by the BPXA contract surveyor.

One Rolligon was used during the sampling regimen, and two skids were towed separately to each location. One skid held an enclosed CME-75 drill rig, which augered through the sea ice and drove and retrieved the split spoons for soil samples. The second skid held a warming shack in which extra equipment and supplies were stored.

2.3 SAMPLE COLLECTION PROCEDURES

Data collection at each station was performed in the following order:

1. Locate station using GPS positioning

2. Bore through ice and monitor thickness
3. Measure bottom depth (depth to seafloor)
4. Conduct salinity, conductivity/temperature profiles
5. Collect sample for dissolved oxygen (DO), turbidity, and pH at each distinct stratum
6. Collect total suspended solids (TSS)(laboratory) and turbidity (field and laboratory) samples at each distinct stratum
7. Measure current speed and direction at each distinct stratum
8. Drive and retrieve 4"x5' split spoon from surface to 5 feet below surface
9. Collect soil samples from 6" to 1' for organic, metal, and grain size analyses
10. Collect soil samples from 1' to 6' for organic, metal, and grain size analyses (to be held for possible future use)
11. Drive and retrieve 4"x5' split spoon from surface to 6 to 8 feet below surface
12. Collect soil samples from 1' to 8' for organic, metal, and grain size analyses
13. Confirm GPS location and close out site

Station positioning (Activities 1 and 13) have been outlined in Section 2.2. Techniques for each of the other activities are discussed below: Field measurements and conditions are contained in the field note forms supplied in Appendix A and are summarized in Table 2.

Activity 2: Sea Ice Thickness

The CME-75 enclosed drill rig-mounted auger was used to bore through the ice for water column and sediment sampling. Depth of the boring was monitored closely; the auger was withdrawn for depth checking and clearing of ice chips several times as the drilling progressed.

Ice depth and depth to water surface were measured using a graduated sounding rod equipped with a small hook to catch the ice edge. The top of the "black" sea ice was used as a datum.

Activity 3: Bottom Depth

The bottom depth was measured using a sounding lead and calibrated brass chain. Ice-free water depth was calculated as the difference of depth to bottom and ice-depth. The maximum free water below the ice was 15.6 feet deep at the sampling location A-8. Nearly grounded ice at a total depth of 3.5 feet was encountered at sampling location B-3, only .3 of ice free water was available.

Activity 4: Conduct Salinity(Conductivity)/Temperature profiles

Temperature and salinity measurements were made at 1-foot increments through the water profile. Pycnoclines were noted at sampling locations A-8, A-10, B-8, and C-2. After review of equipment and procedures it's most likely pycnoclines were not actually present, but false readings were recorded due to ice build-up on the salinity probe. The remaining parameters were measured at the midpoint of each ice-free water column.

Activity 5: Measure Dissolved Oxygen and pH at each distinct stratum

Due to the harsh conditions, dissolved oxygen was measured ex-situ rather than in-situ as originally planned. The field probe membrane is extremely sensitive to the cold ambient temperatures resulting in "bubble-breaches" and inaccurate readings. DO measurements were completed with a Hach 2100 colorimeter and a high range (HR) standard. Field measurements for pH were made with a Beckman

pH meter and were also conducted ex-situ. A sample aliquot collected at the midpoint, or within each pycnocline of the ice-free water column was used to measure both DO and pH within the warming shack.

Activity 6: Measure Turbidity and Total Suspended Solids

Samples of under-ice free water were collected with a stainless steel point source sampler to document the occurrence of turbidity and total suspended solids. Samples were contained in 1-liter, nalgene plastic bottles. Color and appearance were documented in the field note form for the site. Turbidity was measured on-site with a field nephelometric turbidimeter. This meter seemed to produce inaccurate readings. Thus, an additional water sample was collected for turbidity. Total suspended solids and turbidity were shipped off-site to be measured by CT&E Laboratories in Anchorage.

Activity 7: Current measurements

An Anderaa doppler current meter was used to measure current speed and direction. The meter was immersed to the centerpoint of each water column profile. The Anderaa current meter works on the doppler principle by measuring the rate of return of radio signals it emits which bounce off moving particles. If a current is present the meter measures the direction (with respect to magnetic north) and the speed. In all instances the reading was 500.14 cm/s, the maximum measurable by the instrument.

Given our past experience the high velocity readings seemed unlikely as conditions approaching quiescence were anticipated. Subsequently, it was determined that the meter does not have the capability of registering zero flow and defaults to its maximum setting when current flow is below 2 cm/sec. Thus, all readings have been reported as less than the rated sensitivity of the meter, 2 cm/sec.

Activities 8, and 9 through 12: Sediment sampling

Soil samples were collected from 6 to 12 inches below the soil/water interface as requested in the RFP.

In each instance a split spoon was driven by 340 lb. mechanical hammer with a 30-inch drop into the sediment. Each core was removed, drained, and troweled into sample jars, beginning with samples for volatile organics, and progressing to semivolatiles, petroleum hydrocarbons, total organic carbon, metals, and finally, grain size analysis. The process was repeated for a one-foot to six foot collection to be held for possible future use and finally a 6-8 foot below grade sample. Only two cores were required when using the drill rig and split spoon.

Duplicate core samples were collected for all analyses at two stations (A6 and C2), selected at random in the field.

Activity 13: Site close-out

At the completion of each site sampling effort, the field team leader confirmed that all field note form information had been entered by initialing the form. The final GPS location was recorded prior to leaving the site

3. MONITORING RESULTS

3.1 SAMPLING CHRONOLOGY

Sampling was performed over three days, (four 12 hours shifts) from Friday, February 14, 1997 through Sunday, February 16, 1997. The following table relates the sampling order for this project:

Date	Site	Geodetic Location		Sampled by
2-14-97	B-3	Lat: 70 12 33.669	Long: 147 41 5.537	BN
	B-6	Lat: 70 13 36.283	Long: 147 39 34.382	BN
	B-8	Lat: 70 14 44.232	Long: 147 37 55.264	BN
2-15-97	B-10	Lat: 70 15 52.360	Long: 147 36 15.682	BGM
	I-1	Lat: 70 16 47.769	Long: 147 34 54.558	BGM
	C-4	Lat: 70 18 29.141	Long: 147 47 46.192	BGM
2-16-97	C-2	Lat: 70 17 7.317	Long: 147 41 21.529	BN
	A-10	Lat: 70 16 10.431	Long: 147 34 18.399	BN
	A-8	Lat: 70 14 55.970	Long: 147 33 6.441	BN
	A-6	Lat: 70 13 41.428	Long: 147 31 54.557	BGM
	A-4	Lat: 70 12 26.876	Long: 147 30 42.818	BGM

BGM = Bonnie McLean, MW

BN = Bill Nettleton, MW

3.1.1 Laboratory Analyses

Samples were analyzed by LAS Laboratories, Inc. in Las Vegas Nevada and CT&E in Anchorage. Appropriate methodologies are available in the following references:

- Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW-846, November 1990)
- Methods for Chemical Analysis of Water and Wastes (EPA 600/4-79-020, March 1982)
- The following table summarizes project sampling requirements:

Measurement	Matrix	Method	Sample Container	Preservation Method	Holding Time
Salinity (Conductivity)	water	field measurement	field aliquot	n/a	n/a
Dissolved Oxygen	water	field measurement	in-situ	n/a	n/a
Turbidity	water	field measurement/ EPA 180.1	field aliquot/ 500 ml. HDPE	n/a	48 hours
Total Suspended Solids	water	SWA 160.2	500 ml HDPE	Cool to 4°C	28 days
Total Organic Carbon	soil	SWA 415.1	4oz Clear Wide Mouth	Cool to 4°C	28 days
Grain Size	soil	ASTM D-422	1L polyethylene bag	n/a	indefinite
Arsenic As	soil	SWA 6010	4oz Clear Wide Mouth	Cool to 4°C	6 months
Barium Ba, Total ionic	soil	SWA 6010	"	"	6 months
Chromium Cr, Total	soil	SWA 6010	"	"	6 months
Chromium Cr VI, Hexavalent	soil	SW 7196M	"	"	24 hours
Lead Pb	soil	SWA 6010	"	"	6 months
Mercury Hg	soil	SWA 7471	"	"	28 days
Barium sulfate	soil	Lab Method	"	"	6 months
Volatile Organic Compounds	soil	8260	2oz Clear Wide Mouth	"	14 days
Semi-volatile Organic Compounds	soil	8270	4oz Clear Wide Mouth	"	14 days
Petroleum Hydrocarbons (DRO)	soil	AK 102	8oz Clear Wide Mouth	Cool to 4°C	14 days

3.2 ANALYTICAL RESULTS

A summary of the analytical results for soils and water is shown in Table 4. A more detailed summary of water quality parameters including field measurements is shown in Table 2. All laboratory and field data are also included in the appendices.

3.2.1 Sea Water

Total suspended solids ranged from a low of 2.5 mg/l to a high of 76.5 mg/l.

Turbidity field measurements ranged from a low of 1.0 NTU to a high of 35.6 NTU. Turbidity laboratory measurements ranged from a low of 0.54 NTU to a high of 24 NTU.

Field measurements fluctuated with the inclusion of ice crystals so laboratory samples were collected for turbidity and submitted to CT&E Environmental Services in Anchorage.

3.2.2 Sediment Chemistry

Arsenic averaged 5.5 mg/kg throughout the pipeline alignment. The coefficient of variation (the standard deviation of the samples divided by the mean) for all of the sites was 0.43.

Barium and barium sulfate were analyzed separately as a method to quantify the barium available for biotic uptake. Barium sulfate concentration measures only insoluble barium; thus not available for biotic uptake. Total barium, as reported, is a measure of ionic or "free" barium. The mean total barium concentration was 67.5 mg/kg and the mean barium sulfate concentration was 27.5 mg/kg. The coefficients of variation were 0.48 and 0.26 for total barium and barium sulfate.

Chromium averaged 18.5 mg/kg across the pipeline alignment with a coefficient of 0.38. There were no hexavalent chromium results reported above the MRL of 3 mg/kg.

Mercury averaged 0.24 mg/kg across the pipeline alignment with a coefficient of variation of 1.03.

Lead averaged 10.1 mg/kg across the pipeline alignment with a coefficient of variation of 1.24.

There were no detections of diesel range organics (DRO).

Acetone was detected in all of the sediment samples ranging from 12 to 88 mg/kg. All of the Acetone detections are viewed as external contaminants.

With the exception of Acetone there were no volatile or semi-volatile organic compounds detected in any of the sediment samples.

3.3 SEDIMENT QUALITY STANDARDS

Sediment quality standards are driven by the impacts of pollutants on benthic biota. State sediment quality standards have not been established by the state of Alaska, thus other benchmark criteria were sought for comparative analysis. As the work performed at Liberty Island is a baseline study of the water and sediment quality, all criteria are used for comparison only. Exceedances do not necessarily indicate concern.


The EPA has developed a group of ecotoxicologically-based benchmark criteria (Ecotox Thresholds (ET)) for use in ecological risk assessments at Superfund sites. The ETs developed by EPA are intended to provide technical information to EPA and other government employees but do not constitute rulemaking by the EPA.

In addition to the EPA Ecotox benchmarks, the Puget Sound Dredged Disposal Analysis and EPA Region III's Risk-Based Concentrations may also serve as comparative benchmarks.

EPA Ecotox Thresholds Benchmarks have been developed for surface water and sediments, with sediment benchmarks presented as sediment quality criteria (SQC) for fresh and marine environments, sediment quality benchmarks (SQB), and effects range low (ERL). If neither SQC nor an SQB has been calculated, the ERL will be used as the sediment Ecotox Threshold. For the analytes detected at Liberty Island only ERLs have been calculated. The ERL represents the lower 10th-percentile concentration associated with observation of biological effects. Accordingly concentrations below the ERL should rarely be associated with adverse effects. With the exception of arsenic, lead, and mercury all results are below the ERLs. Arsenic was detected above the ERL (8.2 mg/kg) at sample locations A-4(01), A-8(01), A-10(01 & 08), B-3(01), B-6 (01 & 08), B-8 (01 & 08), B-10 (01 & 08), C-2(01 & 08), and I-1(08) with a range of 9.1 to 11.4 mg/kg. Mercury was detected above the ERL (0.15 mg/kg) in sample locations A-8(01), A-10(01 & 08) with a range of 0.151 to 0.399. It should be noted that the ERL for mercury has a relatively low correlation and consequently low accuracy between the incidence of effect and concentration, and thus is used cautiously. The presence of arsenic, lead, and mercury above their respective ERLs are viewed as variations in existing background conditions along the proposed Liberty Island pipeline routes. Table 4 provides a summary of the analytical results and benchmark screening levels.

Puget Sound Dredged Disposal Analysis (PSDDA) PSDDA analytic methods and criteria have been established for the Puget Sound area in Washington state. PSDDA chemical analyses were developed by the collaborative efforts of EPA Region X (Seattle), the U.S. Army Corps of Engineers, and the Washington state departments of Natural Resources and Ecology. (The Washington Department of Ecology was responsible for issuing certification for Corps of Engineers Section 404 permits). Data and criteria are reviewed annually. However, no changes in numeric standards have been made since 1988.

Three levels of contaminant concentrations have been established by PSDDA: a screening level, a bioaccumulation level, and a maximum level. Standards for each level are derived from a statistical model, in which apparent effects thresholds are defined. The model is applied to a rigorously quality-controlled database of sediment chemistry and bio-effect data. The maximum level is the level of highest apparent effects. The screening level is established at either the lowest biological effects level or at 10% of the maximum effect level. Arsenic, lead, mercury, and 42 volatile and semi-volatile organic compounds are included in the list of PSDDA parameters. There are no PSDDA criteria for diesel range organics, barium or chromium species.

Liberty Island sediment results are uniformly below the PSDDA screening level criteria for total arsenic, lead, and mercury as shown in Table 4. Results for analyses of discrete volatile and semi-volatile compounds were all below detection levels with the exception of Acetone which has been classified as an external contaminant. 

Risk-Based Concentrations (RBCs) EPA Region III has calculated separate carcinogenic and non-

carcinogenic RBCs for various pathways of ingestion or inhalation. The lower of the two is presented in the RBC tables published by EPA Region III, which are updated and distributed semi-annually. The various pathways include residential water, ambient air, edible fish, industrial soil ingestion, and residential soil ingestion (which are generally lower (more stringent) than industrial soil ingestion). There are no RBCs for diesel range organics.

Liberty Island sediment results are uniformly below the RBCs for all the metals sampled, including total arsenic, lead, barium and compounds, mercury, chromium III and chromium VI, as shown in Table 4. Results of analyses for discrete volatile and semi-volatile compounds were all below detection levels, with the exception of acetone.

4. DOCUMENTATION AND REPORTING

4.1 FIELD DOCUMENTATION

The field team leader was responsible for maintaining records of field activities, including field analytical measurements, sample locations, and sample identification. Data was entered into a bound notebook while field activities were in progress. All field documents were supplied to the project manager at the end of the field investigation. Field results were incorporated into progress reports or final reports, as appropriate. A sample plan checklist was used to identify sample numbers, sample locations, sample matrices, analytical parameters, sample containers, and quality control samples. This checklist was prepared by the project manager prior to mobilization and provided the field team with a concise list of samples by location. The field team leader reviewed the checklist for completion following sample collection, prior to the shipment of samples or departing from the site.

4.1.1 Field Logbook

Logbooks and data forms are necessary to provide sufficient data and observations to enable participants to reconstruct events that occurred during the project and to refresh the memory of field personnel if called upon to give testimony during legal proceedings. All daily logs were kept in bound, waterproof notebooks containing numbered pages. All entries were dated and signed. No pages were removed for any reason. Unused pages were crossed through, signed, and dated by the field team leader or project manager. Corrections were made by drawing a single line through the original entry (so the original entry can still be read) and writing the corrected entry beside the original. Corrections were initialed and dated. Copies of the original field notebook are provided in Appendix B.

4.1.2 Field Note Forms

Field note forms were used to record all data pertaining to a particular sampling event at a single sampling station. Field note forms are designed to assist the field crews in completing the work at each station. Field note forms were reviewed for completeness and accuracy and initialed in the field by the field sampling task leader. Copies of the original field note forms are provided in Appendix A.

4.1.3 Photographs

Photographs were taken at the sampling locations as directed by the team leader. Selected

photographs are provided in Appendix E. Documentation of a photograph is crucial to its validity as a representation of an existing situation. The following information was noted in the field log book:

- Date, time, and location at which the photograph was taken
- Photographer
- Weather conditions
- Description of photograph taken
- Direction

4.1.4 Chain-of-Custody Forms

The purpose of chain-of-custody procedures is to ensure that the integrity of samples is maintained during their collection, transportation, storage, and analysis. All chain-of-custody requirements comply with standard operating procedures indicated in EPA sample handling protocol. Chain-of-custody records are provided in Appendix D.

4.1.5 Sample Documentation

The field crew recorded the location of all samples on scaled site maps.

Each sample was labeled and sealed immediately after collection. The sample label was filled out using waterproof ink and firmly affixed to the sample containers with clear waterproof tape. An alphanumeric code was assigned to each sample as an identification number to track samples at the site. The sample code is broken down as follows:

<u>Year</u>	<u>Project</u>	<u>Sample matrix</u>	<u>Sample Location</u>	<u>Sample</u>	<u>Depth</u>
97	BPXLI	SD=Sediment WA=Water	1-19	01=primary 61=duplicate	(feet)

The sample label contains the following identification:

- Date and time of collection;
- Sample identification number;
- Analysis required (including analytical method number);
- Preservation method used; and
- Initials of field team member compiling samples.

Sample volume levels were marked on each liquid sample container. After the sample was collected, pertinent information, such as sample identification number, date and time of sample collection, sample collection method, description of sample, and any field measurements (temperature, salinity, turbidity, etc.), were recorded on the field note form, and the recorder will initial the entry.

4.1.6 Laboratory Data Log

All data generated was reviewed by comparing and interpreting results from chromatograms (responses, stability, retention times), accuracy (mean percent recovery of spiked samples), and precision (reproducibility of results). Laboratory Data Sheets are presented in Appendix C.

4.1.7 Data Reporting and Data Deliverables

All laboratory-generated data was supplied in both hard copy and electronic formats in compliance with EPA Tier 1 guidelines.

4.1.8 Summary Statistics

Station values for water quality parameters have been summarized in tabular form. The table includes date, time, and depth of sample; current speed and direction; temperatures, salinity, turbidity, dissolved oxygen, pH, and total suspended solids.

Water quality parameters have also been graphically displayed to illustrate the value of certain parameters at each station.

5. QUALITY ASSURANCE AND QUALITY CONTROL

5.1 QUALITY ASSURANCE OBJECTIVES

Characteristics used to assess generated data were precision, accuracy, representativeness, completeness, and comparability, often referred to as PARCC parameters. PARCC parameters are integrated throughout the work plan and applied throughout the data collection process.

Project goals express specific PARCC parameters necessary to meet regulatory requirements, such as maximum level. Performance goals are specifically related to indicator QC samples as quantitative measures of PARCC parameters. For example, analysis of one duplicate in ten samples is a performance goal, and the results of duplicate analyses are an indicator of precision.

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Accuracy and Precision Criteria

	Laboratory Precision (Duplicate Relative Percent Difference)		Laboratory Accuracy (Laboratory Control Sample % Recovery)	
Total Suspended Solids	20		80-120	
Total Organic Carbon	20		80-120	
Grain Size	n/a		n/a	
Arsenic As	20		80-120	
Barium Ba, Total ionic	20		80-120	
Chromium Cr, Total	20		80-120	
Chromium Cr VI, Hexavalent	20		80-120	
Lead Pb	20		80-120	
Mercury Hg	20		80-120	
Barium sulfate	20*		80-120*	
Volatile Organic Compounds	1,1-Dichloroethene	22	1,1-Dichloroethene	54-138
	Benzene	21	Benzene	70-130
	Trichloroethene (TCE)	24	Trichloroethene (TCE)	57-132
	Toluene	21	Toluene	71-129
	Chlorobenzene	21	Chlorobenzene	72-128
Semi-volatile Organic Compounds	Phenol	35	Phenol	28-110
	2-Chlorophenol	50	2-Chlorophenol	22-110
	1,4-Dichlorobenzene	27	1,4-Dichlorobenzene	21-110
	N-Nitroso-di-n-propylamine	38	N-Nitroso-di-n-propylamine	24-110
	1,2,4-Trichlorobenzene	23	1,2,4-Trichlorobenzene	32-110
	4-Chloro-3-methylphenol	33	4-Chloro-3-methylphenol	35-112
	Acenaphthene	19	4-Nitrophenol	29-127
	4-Nitrophenol	50	2,4-Dinitrotoluene	51-112
	2,4-Dinitrotoluene	47	Pentachlorophenol	41-133
	Pentachlorophenol	47	Pyrene	45-135
Pyrene	36			
Petroleum Hydrocarbons (DRO/RRO)	Diesel Range Organics	30	Diesel Range Organics	51-153

Note:

Only system monitoring compounds are listed for Volatile and Semi-volatile Organic Compounds.

n/a - Criteria do not apply due to the nature of the analysis

* - Because this parameter has no standard analysis method, Limits are advisory only.

5.2 CALIBRATION PROCEDURES

All instruments and equipment used during the sampling and analysis were operated, calibrated, and maintained according to the manufacturer's guidelines and recommendations as well as criteria set for the instrument in the applicable methodology references. Operation, calibration, and maintenance was performed by personnel properly trained in these procedures.

5.2.1 Field Equipment

Each field instrument was calibrated daily and in some instances where appropriate before each use. These instruments include a portable digital temperature/salinity/conductivity meter, pH meter, dissolved oxygen meter, and a turbidity meter. Daily calibration assured accurate readings for each day of use and was noted in the Field Notebook of the calibrator.

5.2.2 Laboratory Instrumentation

Laboratory capabilities will be initially demonstrated for instrument and reagent/standards performed as well as accuracy and precision of analytical methodology. Brief descriptions of calibration procedures for major instrument types are presented in the previously referenced methodologies.

5.3 DATA VALIDATION SUMMARY

DATA VALIDATION SUMMARY

Twenty four soil samples were collected from February 14 to February 16, 1997 for inorganics, metals, volatile organic compounds, semivolatile organic compounds, diesel range organics and grain size.

Eleven water samples were collected on February 14 to February 16, 1997 for Total Suspended Solids and Turbidity.

Data validation was done in accordance with the accuracy and precision objectives established by Lockheed Analytical Services. The data were also evaluated for conformance with the Quality Assurance Objectives specified in Section 4 of the Technical Plan (MW, 1997). Acceptance limits for accuracy and precision as well as the method reporting limit (MRL) are stated in the laboratory reports. Where applicable, data validation guidance contained in *National Functional Guidelines for Organics and Inorganic Data Review* (EPA, 1994) was followed. All data is considered valid as qualified under the data quality objectives of this project except for the issues discussed below.

Volatile Organic Compounds

- The surrogate compound 4-bromofluorobenzene is below acceptance criteria (78-125%) for 97BPXLIA8SD01(01) (71%), 97BPXLIB8SD01(01)(72%), 97BPXLIB8SD02(08)(70%), 97BPXLIA10SD02(08)(68%), 97BPXLH1SD01(01)(70%) and 97BPXLIC4SD01(01)(75%). Sample results and the method reporting limits are usable as low estimates due to the reduced recoveries.
- The surrogate compounds 4-bromofluorobenzene and toluene-d8 are below acceptance criteria for sample ID 97BPXLIB8SD01(01). The recoveries are 83 and 72% respectively, while the acceptance limits are 84-120 and 78-125 respectively. Sample results and the method reporting limits are usable as low estimates due to the reduced recoveries.
- The internal standard compound 1,4-dichlorobenzene is below acceptance limits for 97BPXLIA6SD02(08), 97BPXLIA6SD62(08) duplicate, 97BPXLIA8SD01(01) and 97BPXLIB8SD02(08). Sample results and the method reporting limits are usable as low estimates due to the reduced recoveries.
- Several samples contain acetone, methylethylketone (MEK or 2-butanone) and carbon disulfide. These analytes are common laboratory contaminants and are due to external contamination.

Hexavalent Chromium, Cr⁺⁶

- For hexavalent Chromium in soil by EPA Method 7196M all samples were analyzed past the 24 hour holding time. This was due to time constraints associated with shipment of the

samples to the laboratory. The results are usable as estimates due the expired holding times.

Inorganics

- For Total Organics Carbon in soil the relative percent difference (RPD) is 29% for the duplicate analyses. This exceeds the acceptance limit of 20% for this parameter. All results are usable as estimates due to the failed RPD.
- For Turbidity in water several samples were analyzed past the 24 hour holding time. Associated sample results are usable as estimates due to the expired holding time.

Barium Sulfate

- The method blank for selected samples was positive for barium sulfate at a concentration of 7.39 mg/kg. Associated samples within a factor of ten of the method blank concentration are flagged in the laboratory report with a "C". These results are usable as estimates due to the method blank contamination.
- The matrix spike result (26%) fails acceptance criteria (75-125%). The low percent recovery indicates a low bias in associated samples. These samples are flagged with an "N" in the laboratory report.

Mercury

- The duplicate sample precision (84.6 and 81.5%) was outside acceptance limits (20%). Results are estimates due to the failed precision. Samples are flagged with an "*" in the laboratory report.
- The matrix spike result (-44%) fails acceptance criteria (75-125%). The low percent recovery indicates a low bias in associated samples. These samples are flagged with an "N" in the laboratory report.

Cadmium

- The matrix spike result (179%) fails acceptance criteria (75-125%). The low percent recovery indicates a high bias in associated samples. These samples are flagged with an "N" in the laboratory report.

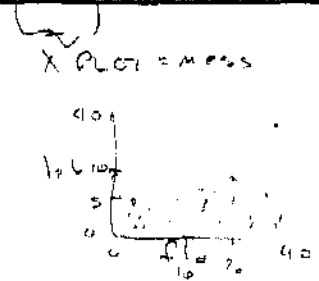
Throughout the data some sample results are flagged with a "J" qualifier as estimates. This is used for results that are below the RDL (Reporting Detection Limit) but above the MDL (Method Detection Limit). It is intended for informational purposes and in no way adversely affects data quality.

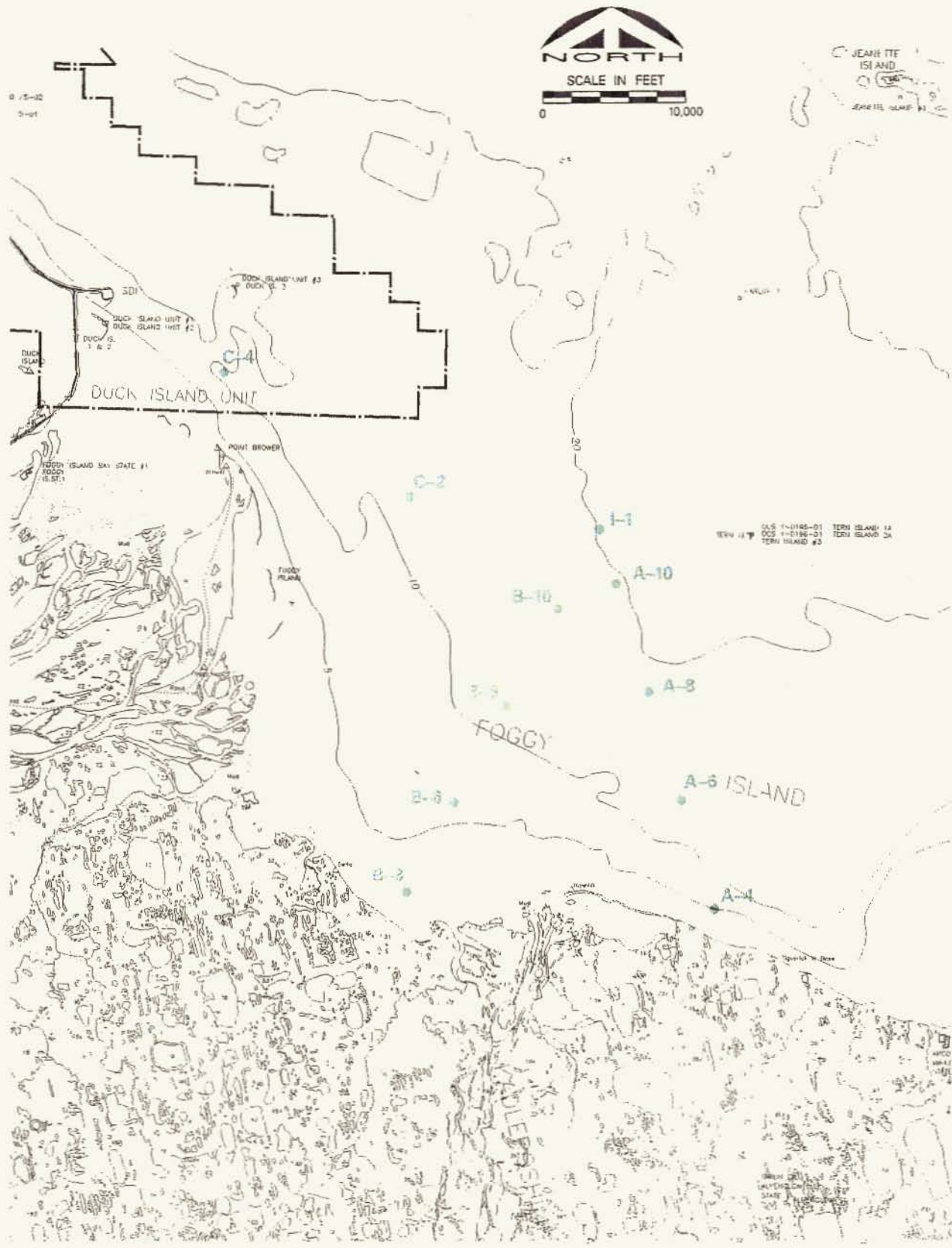
Table 2
Water Quality Parameters
Liberty Island Pipeline Routes
Water and Sediment Sampling

Sample Identification	Borehole Number	Date	Time	Ice Thickness	Depth to Water Surface	Depth to Bottom	Total Water Depth	Ice Free Water Depth	Depth of Water above Ice Bottom	Temp (°C)	Salinity (ppt) ²	Calculated ¹ Seawater Density (kg/m ³)	Dissolved Oxygen (mg/l)	Turbidity (ntu), Field	Turbidity (ntu), EPA 180.1	Total Suspended Solids (TSS) EPA 160.2	pH	Conductivity (µmhos)
97BPXLIA6WA01(06)	A6	2/16/97	900	4.6	0.4	17.2	16.8	12.6	4.2	-1	30	24.34	12.6	33	24	18.4	7.8	25500
97BPXLIA10WA02(11)	A10	2/16/97	120	4.5	0.7	18.4	17.7	13.9	3.8	-2	21.5	error	10.1	31.7	3.1	76.5	7.63	18000
97BPXLIB6WA01(2.0)	B6	2/15/97	100	3.7	0.9	7.6	6.7	3.9	2.8	0	27	21.65	10.8	1	0.89	2.5	8.4	23000
97BPXLIB10WA01(8.0)	B10	2/15/97	830	3.9	0.4	13.1	12.7	9.2	3.5	-1	28	22.72	7.6	14.2	5.4	39.5	8.1	24000
97BPXLIC4WA01(7.0)	C4	2/15/97	1700	3.8	0.2	11.8	11.6	8	3.6	-1	29	24.34	11.6	18.5	7.4	15.5	7.88	18000

Note:

1. Millero, F.J. and A. Poisson. 1981. International one-atmosphere equation of state of sea water. Deep-Sea Research, Vol. 28A, No. 6, p. 625-626
2. Salinity in Parts Per Thousand (ppt) converted from percent (%)
 error = density value not available for corresponding field salinity and temperature
 Sigma_t = density in kg/m³ - 1,000





JOB NO. 63,336
 TIME: 3-MAR-93T 14:50
 FILE: G:\Dp\liberty\compas7\Fig.d7



MONTGOMERY WATSON
 Anchorage, Alaska

FIGURE 1
 BP EXPLORATION (ALASKA) INC.
LIBERTY PIPELINE
BOREHOLE LOCATIONS

3-5-97

Figure 2
Arsenic Concentrations
by Sample Location

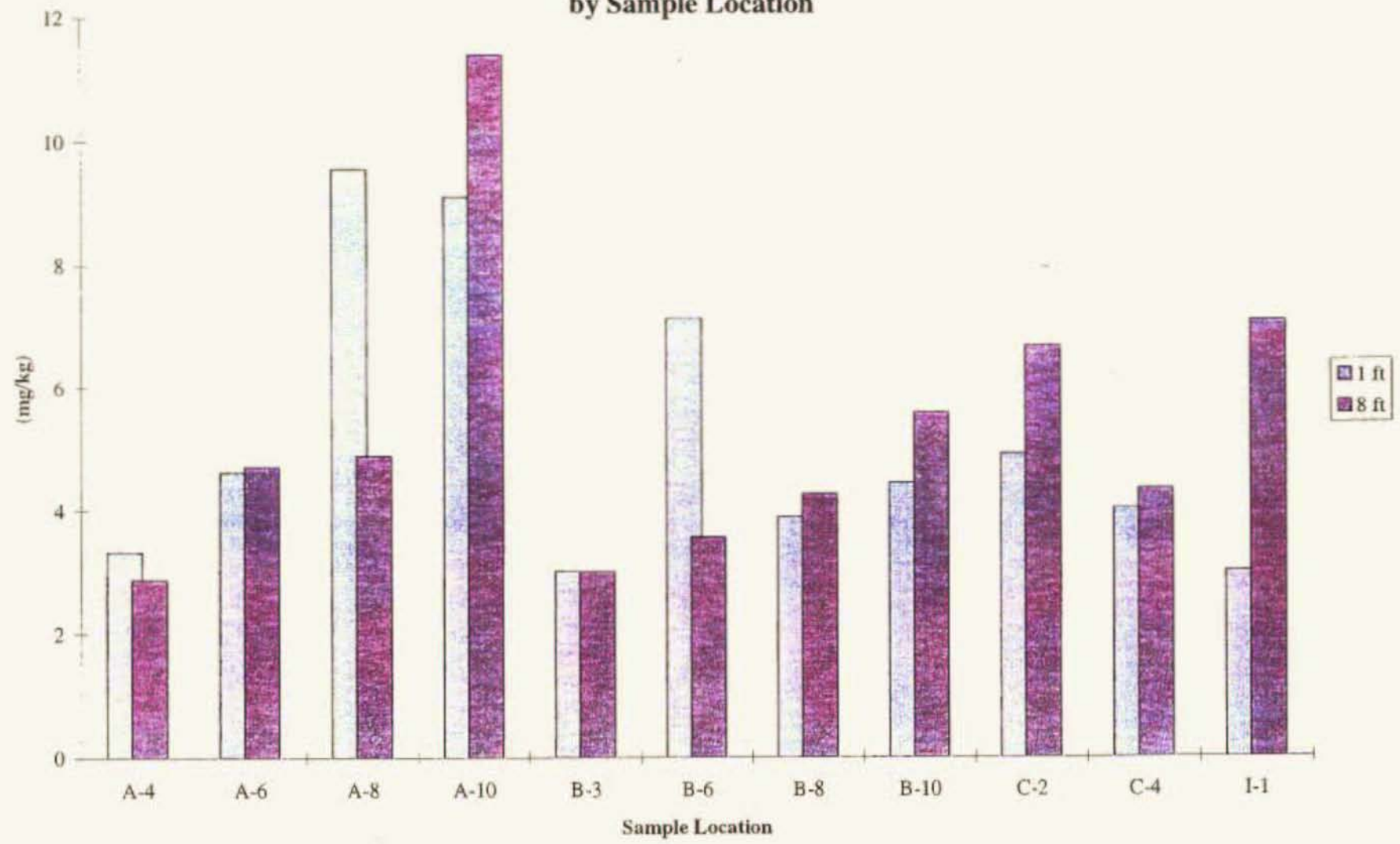


Figure 3
Barium and Barium Sulfate Concentrations
by Sample Location

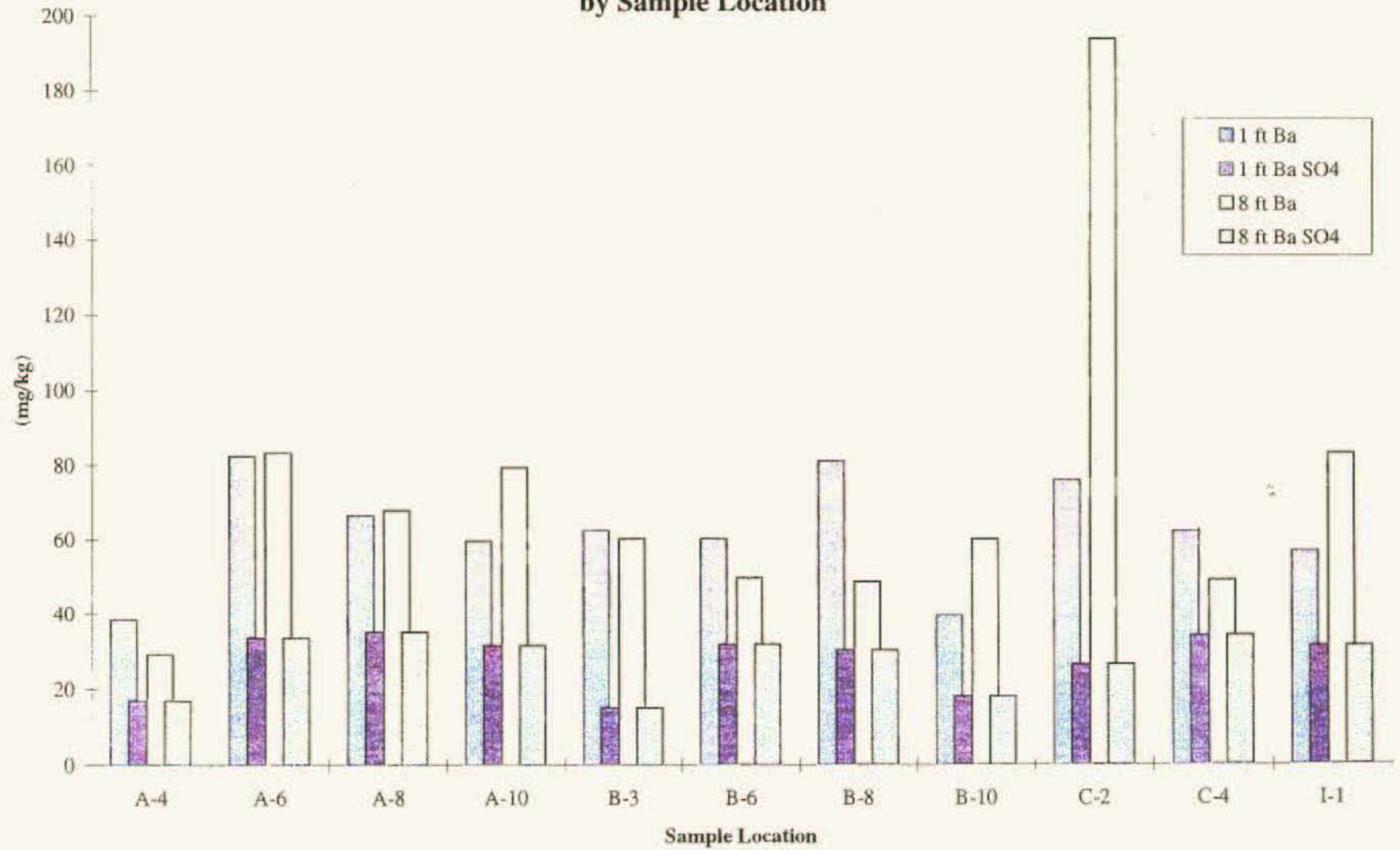


Figure 4
Chromium Concentrations
by Sample Location

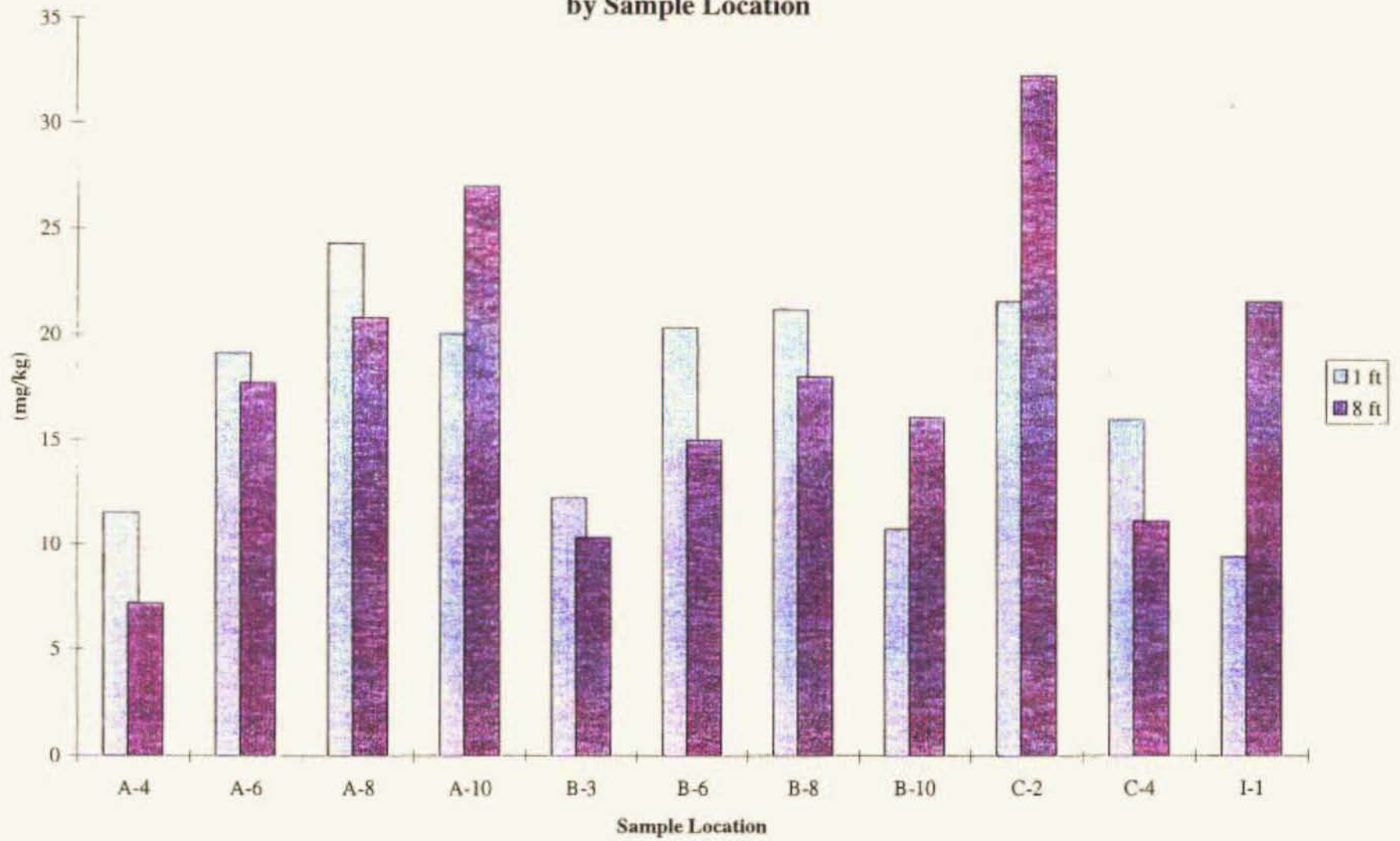


Figure 5
Lead Concentrations
by Sample Location

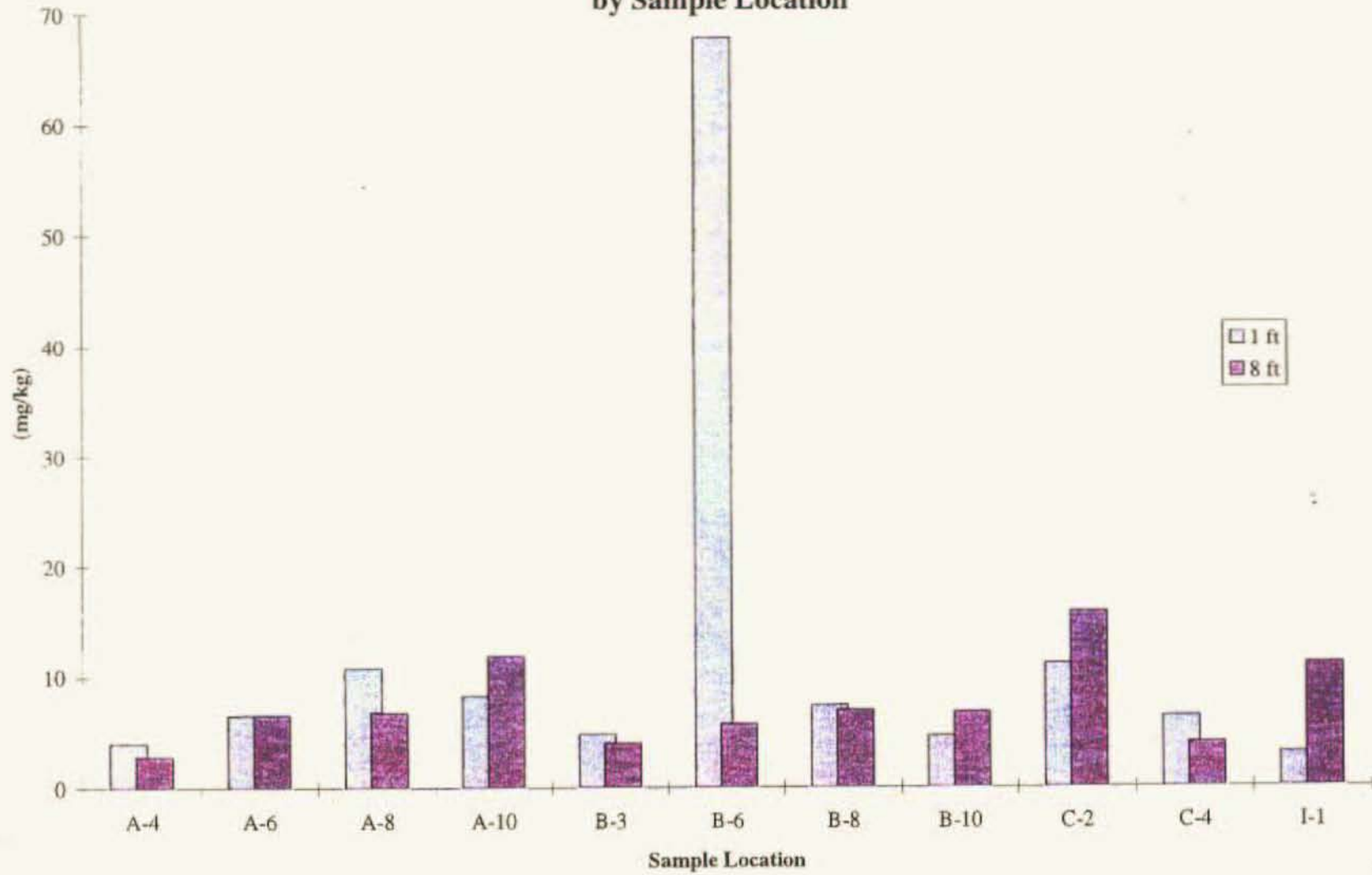


Figure 6
Concentration of Mercury
by Sample Location

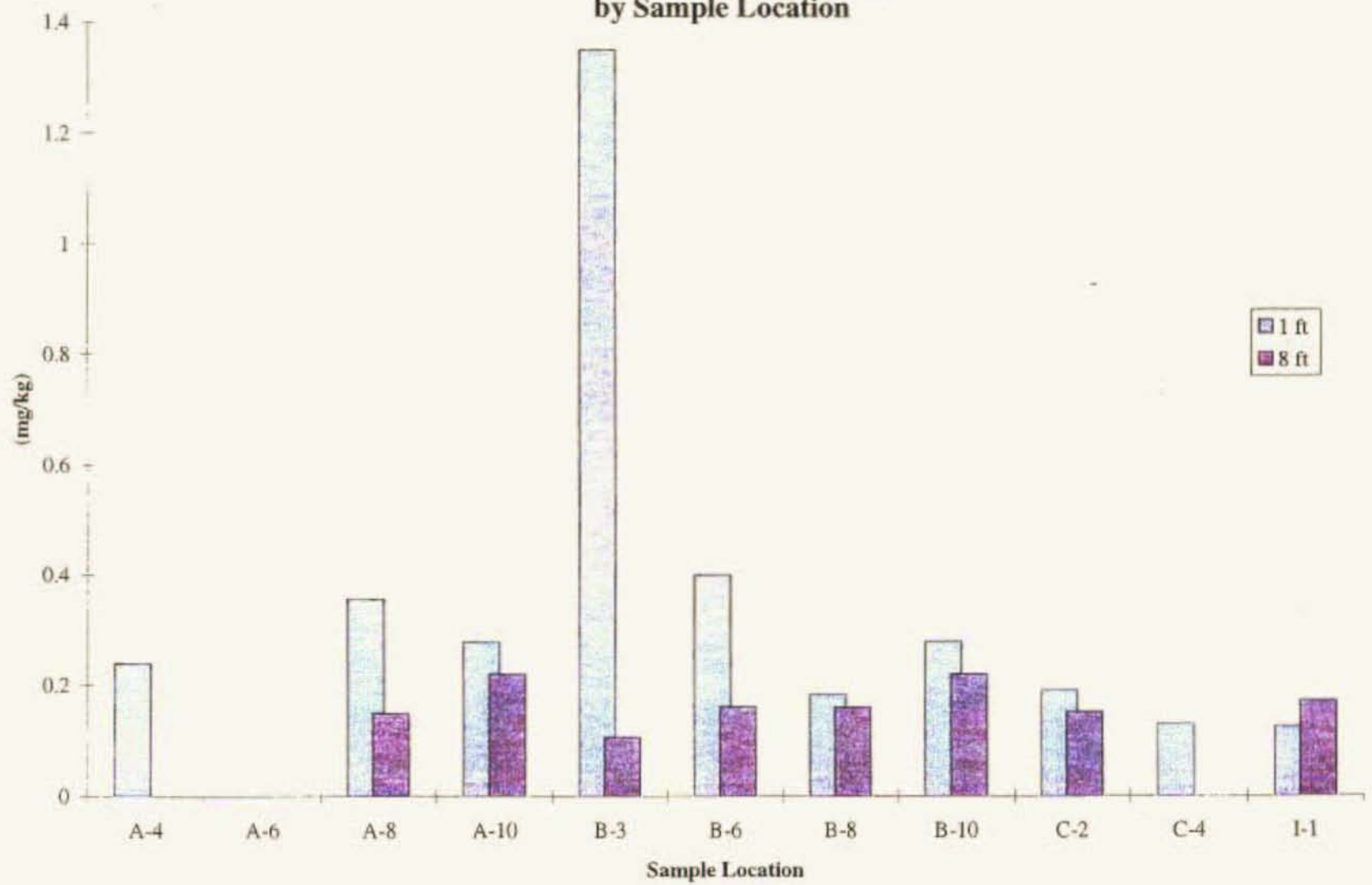


Figure 7
Grain Size Distribution
Sample Locations A4-A10

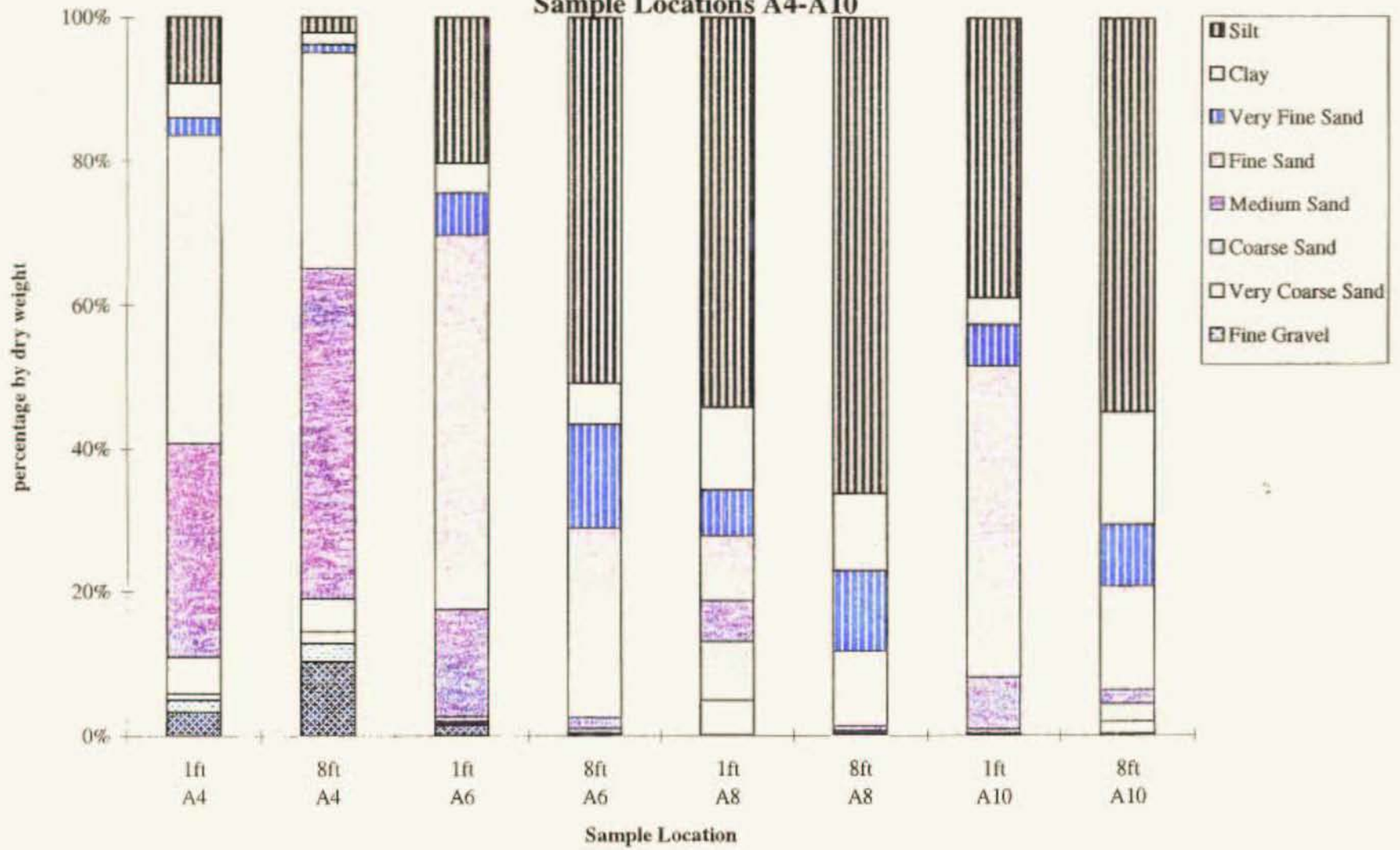


Figure 9
Grain Size Distribution
Sample Locations C2, C4, I1

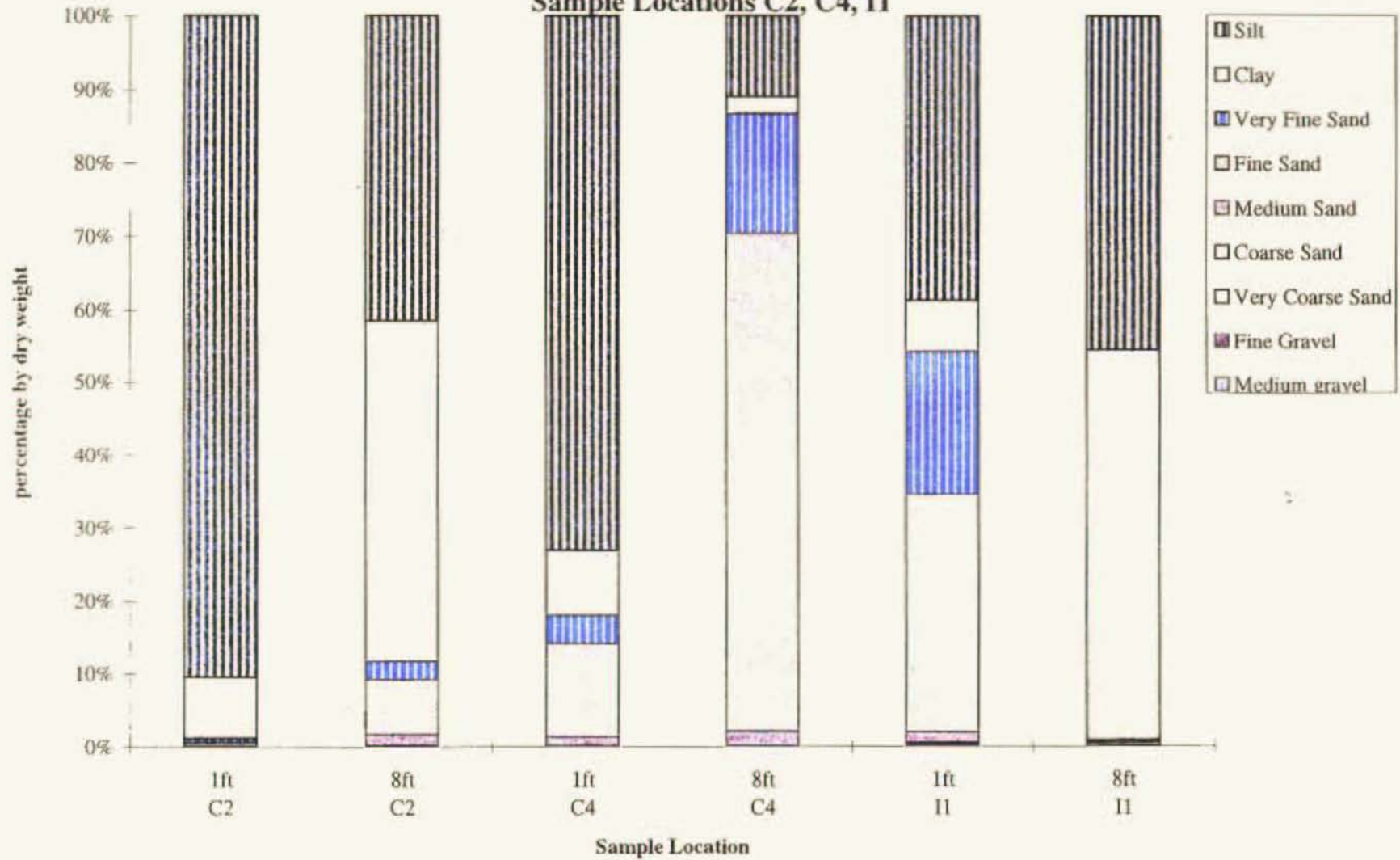


Figure 12 Total Suspended Solids by Ice Free Water Depth

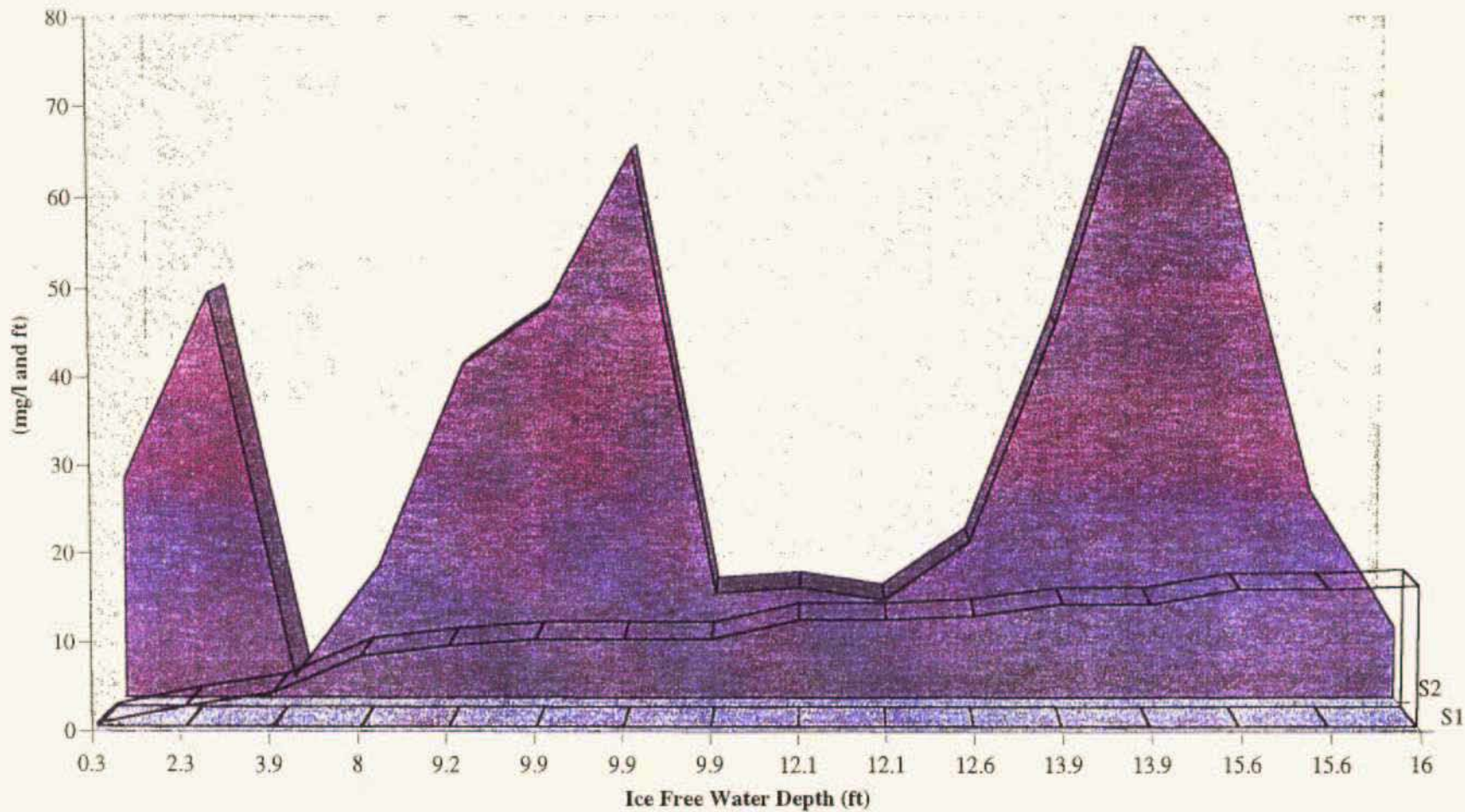


TABLE 4
Summary of Analytical results and Benchmark Criteria
Liberty Island Pipeline Routes

Analyte	units	Physical and Chemical Parameters							Biological and Ecological Parameters					
		Minimum Reporting Limit (MRL)	Minimum Detection Limit (MDL)	Minimum	Maximum	Average	Standard Deviation	Coefficient of Variation	MDS for PSDDA	Screening Level	Bioaccumulation Level	Maximum Level	Risk Based Concentrations (RBC)**	Ecotox Effects Range Low (ERL)***
Metals														
total metals														
arsenic	mg/kg	3	2-3	3	11.4	5.5	2.36	0.43	2.5	57	507.1	700	23	8.2
barium	mg/kg	10	10	29	194	67.5	32.6	0.48	-	-	-	-	5500	-
chromium	mg/kg	3	2-3	7.15	34	18.5	7.08	0.38	-	-	-	-	78000	81
lead	mg/kg	0.6	0.2	2.79	67.8	10.1	12.6	1.24	0.5	66	-	660	660	47
mercury	mg/kg	0.1	0.1	ND	1.35	0.24	0.24	1.03	0.02	0.21	1.5	2.1	2.1	0.15
hexavalent chromium	mg/kg	0.2	0.2	ND	ND	ND	-	-	-	-	-	-	-	-
barium sulfate	mg/kg	3	2-3	15	34.9	27.5	7.2	0.26	29.7	-	-	-	-	5500
diesel range organics	mg/kg	36-54	3.6-5.4	ND	ND	ND	-	-	-	-	-	-	-	-
volatile organics	mg/kg	V		V	V	V	-	-	V	V	V	V	V	V
semi-volatile organics	mg/kg	V		ND	ND	ND	-	-	V	V	V	V	V	V
total organic carbon	mg/kg	100		<100	85900	28611	17849	0.62	-	-	-	-	-	-
Water														
turbidity	ntu	1	0.1	0.54	24	6.74	6.72	1						
total suspended solids	mg/l	2	0.2	2.5	76.5	32.2	22.9	0.71	na	na	na	na	na	na

V Variable values - see Table 5



Appendix A
Field Note Forms



MONTGOMERY WATSON

On February 16, 1997, sampling was completed with the collection at sites A-6 and A-4. Flowmeter still fluctuates (no flow). After completing all the water quality parameters sampling and soil sampling.

All equipment moved to a pick-up, traveled to Endicott, packed equipment for shipping, all samples to travel to Anchorage as checked baggage.

Upon arrival in Anchorage, all samples were put into refrigerator.

On February 17, 1997, turbidity and TSS water was taken to CAS, which was closed for the holiday. The samples were taken to CT & E, Anchorage. This change occurred because of the short holding time for the turbidity samples.

Liberty Is. 2-14-97
Table Contents

~~2-14-97~~

Start
Liberty Is

(Signature)

2-14-97 Liberty Is
1200 at airport
1305 Take off
1430 arrive - Jose & Dil. on site
Plu Veeo vehicle
20165

1600 Arrive Svalbard
ok in, move equipment
from Bldg 604 to 608
AK AL process shipment
not yet Plu. Contact
Exp. on wild Plu.

1800 @ dinner

1830 Plu remaining
Equipment

1900 Leave for Ice Rd.

1930 arrived @ B3 setup
on location

off loaded equipment to
Polygon to skids.

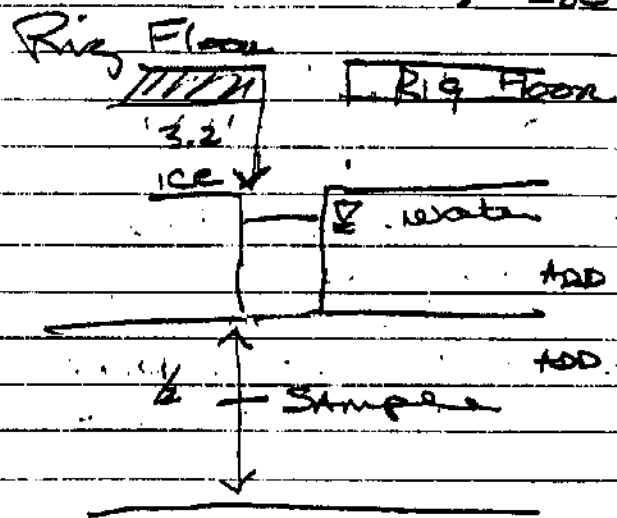
Set up work station within
Inll Rig enclosure.

H&S meeting completed by
Doc. Diller. I spent 3 hrs
w/ Bill on frost sample to review procedure
RSM

BPX(A) 2-15-97

Liberty TS

0280101



Reviewed w/BLO

BPM

2-15-97 Liberty TS

0600 get fuel - 7 gal. complete

0630 Drive for site w/ walt

0800 arrive on BJO

0830 Tailgate Meeting

collected water sample

@ 8' BTI

Soil samples

to LAB 0900 (1.5-1')

Hold 0915 (1-2.5) comp.

to LAB 0930 (6-8') comp.

0950 → Rig Stand hit by ROD

slides from bracing - we

go to warm up stack while
Discovery repairs

1100 still on stand by

1118 Travel to II

1300 arrive II

Completed samples

Wa 1345

Soil 1400, 1430, 1445

Traveled to

C-4 This movement
took 1.75 Hr. completed

BPM

(1 1/2 hrs
total)

2-15-97 Liberty Is.

C4

usa @ 1700

Sol. 1730, 1745, 1800

Travel of Poligon to main
load change over crew.

Took Stamps to
Warehouse. Packed & cleaned
bottles, left in coolers
secured in P/L.

Difficult to collect
0-1.0' because of deep
like conditions.

Question Turb meter -
Will collect additional
500 mg for Turb @ Lab.

End 2115

Bgm

2-16-97

0530 prepare for days
sampling -
2 locations on A line

Left
Prepare cooler for
ship samples @ baggage

0730 at A6

Bill didn't take in
Flow meter for shipping
to UW.

Mike will take to
Deadhorse - AK Goldstak
Shipping on MW#.

A6 usa (06) @ 900

sol (01) 5-11

(02) 6-8

1-6' Hdd

100 Depe 97 BPX LE A6 SD 62 (08)

Moved to A4
Wind continued to increase
F 35' mph, snow ground
blow out = 1/2 in. 1

2-16-97 Liberty Is

A4

WA 01 (05) @ 1100

1130 5-10'

1200 6-8'

1145 1-6' Helo

Very soupy - lost most 5-10"
Ropes w/ Rig moved to road.
Pack and equipment to P/U
Moved to Endicott

Packed-up equipment left
2 pallets @ warehouse
for shipment.

Samples packed for baggage
tagging (4 coolers)
Drove to Deadhorse

Dropped off P/U

Travel to PB Bx

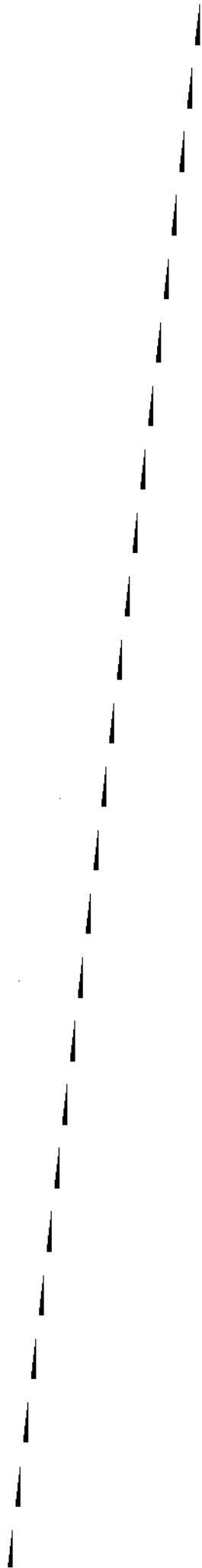
to Anch

to Fox - left

all samples in Refrig

End. 2030

Bern



Liberty Is. 2-14-97
Table Contents

1.

2-14-97
Start
Liberty Is
Eger

2-14-97 Liberty Island

1200 at airport

1305 Take off

1430 arrive - Jose & Dil on site
Plu. Veeo vehicle

20165

1600 Arrive Enderott

ok. in, move equipment
from Bldg 604 to 608.
AKAL priority, shipment
not yet Plu. Contact
Expedition vehicle Plu.

1800 @ Dinner

1830 Plu. Remaining
Equipment

1900 Leave for Ice Rd

1930 arrived @ B3 setup
on location

off loaded equipment to
Rolligon to skids.

Set up work station within
Inlet Rig enclosure.

H&S meeting completed by
Doc Duller. I spent 3 hrs
w/ Billon hot temps to review procedure

2-15-97 Liberty Is.

C4

Lsa @ 1700

SOL 1730, 1745, 1800

Travel w/ Roligan to main
road change over crews.Took Stamples to
Warehouse. Packed & cleaned
bottles, left in coolers
secured in P/C.Difficult to collect
0-1.0' because of trap
like conditions.Question Turb meter -
will collect additional
500 mg for Turb @ Lab.

End 2/15

Bgm

2-16-97

0530 prepare for days
sampling -
2 locations on A line

Dyt

Prepare cooler for
ship samples @ baggage

0730 at A6

Bill didn't take in
Flora meter for shipping
to UW.Mike will take to
Dea Shoran - AK Goldstark
Shipping on MUI#.

A6 Lsa (06) @ 900

sol (01) 5-15'

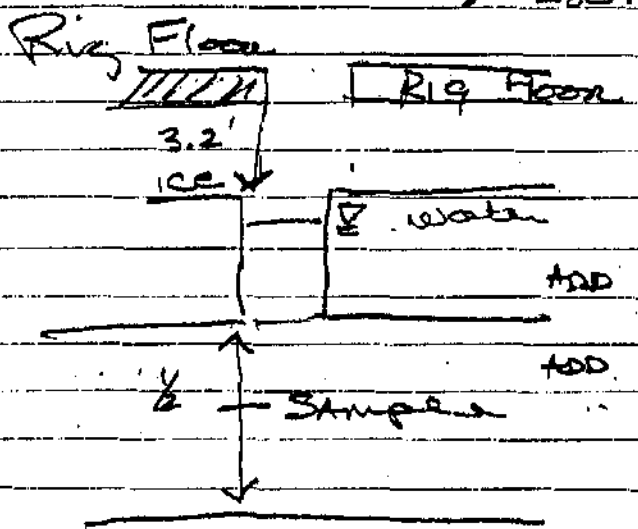
(02) 6-8'

1-6' Held

1010 Depo 97 Bpx LZ A6 SD 62 (08)

Moved to A4
Wind continued to increase
7 35' mph, snow ground
blizzard = visibility poor. 100

BPX(A) 2-15-97 Liberty TS
. 0280101



Reviewed w/BLO

2-15-97 Liberty Ts

0600 get fuel - Total complete
 0630 Leave for site w/ walt
 0800 arrive on B10
 0830 Tailgate meeting
 collected water samples @ 8' BTI

Soil samples

to LAB 0900 (1.5-1')
 Hold 0915 (1-2.5' comp)
 to LAB 0930 (6-8') comp

0950 → Rig Stand hit by ROD
 slides from bracing - we
 go to warm up shack while
 Discovery repairs

1100 still on Stand by (1 1/2 Hr)
 1118 Travel to I1
 1300 arrive I1

Completed samples

Wa 1345
 Soil 1400, 1430, 1445

Travelled to
 C-4 This movement
 took 1.75 Hr. Completed
 BSM

BSM

7 2-16-97 Liberty Is

A4

WA 01 (05) @ 1100

1130 5-10'

1200 6-8'

1145 1-6' Held

Very scruffy - lost most 5-10"
Relinquish w/ Rig moved to road.
Pack and equipment to P/U
Moved to Endeavor

Packed up equipment left
2 pallets @ warehouse
for shipment.

Samples packed for baggage
tagging (4 coolers)
Drove to Deadhorse

Dropped off P/U

Travel to PB Bt

to Anch

to Fox - left

all samples in Refrig

End. 2030

Boyer



MONTGOMERY WATSON

NIGHTS

DATE: 2/14/97 - 2/15/97

DAY	S	M	T	W	TH	FR	S
						X	

FIELD

DAILY QUALITY CONTROL REPORT

PROJECT MANAGER Brett Johela
 PROJECT Liberty Island
 JOB NO. 1189002.280101
 CONTRACT NO. _____

WEATHER	Bright Sun	<u>Clear</u>	Overcast	Rain	Snow
TEMP	<u>To 32</u>	32-50	50-70	70-85	85 up
WIND	Still	<u>Moderate</u>	High		Report No. <u>EPX LI</u>
HUMIDITY	<u>Dry</u>	Moderate	Humid		# /

SUBCONTRACTORS ON SITE:

Discovery Drilling - GARY + KEH
Deane Miller & Assoc. ERIN
CatCo TR (CARL)

EQUIPMENT ON SITE:

CME-75 on site RD-85
Snowwand chain

WORK PERFORMED (INCLUDING SAMPLING):

SAMPLED B-3, very little water, Banded on site for water sampling.

SAMPLED B-6, NOT ENOUGH WATER FOR FLOW METER

SAMPLED B-9, took 3 sets of WATER SAMPLES BASED ON SALINITY PROFILE. RAN OUT OF SOIL TARS HAD ENOUGH TO TAKE VOLS AT EACH DEPTH. ISAGED ENOUGH TO DO OTHER TARS LATER. FLOW METER DID NOT WORK. SAMPLED IT TWICE WITH NO LUCK. VELOCITIES INTERMITTENT BETWEEN 30% + 20%. ICE IN HOLE MAY BE CAUSING PROBLEM

SET RIG UP ON B-10.

NO PICTURES TAKEN

PROJECT: _____
JOB NO.: _____

REPORT NO.: _____
DATE: 2/15/97

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)

Microtip calibrated at _____ ppm

PID N/A

DO - ~~1450~~

HEALTH AND SAFETY LEVELS AND ACTIVITIES: Daily tailgate meeting completed

GARY (DISCOVERY) COMPLETED TAILGATE SAFETY MEETING.

INJURIES: NONE ACCIDENTS: NONE NEAR MISSES: NONE

PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:

Weight on chain adds 0.7'

SAMPLE Bomb on CHAIN ADDS 0.6' (center of bomb)

FLOW METER PRODUCES ERRATIC READINGS WHEN USED. ONLY USED ONCE, BUT TRIED SEVERAL TIMES.

SPECIAL NOTES:

CAMERA!!!

ERIN PREFERS HER LOGGING FORM. I SAID OK, BUT WILL NEED COPIES OF HER COMPLETED LOGS

TOMORROW'S EXPECTATIONS:

3-6 holes tomorrow IF ALL GOES WELL

BY: Bill Hamm

TITLE: Asst. Eng.

PROJECT: BPX LI
JOB NO.: 0250/01

REPORT NO.: LI #2
DATE: 2-15-97 0800

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)

Microtip calibrated at: _____ ppm

PID N/A

DO - Hach 700 DR - HR 0-14 mg/L

HEALTH AND SAFETY LEVELS AND ACTIVITIES: Daily tailgate meeting completed 0800

INJURIES: 0 ACCIDENTS: 0 NEAR MISSES: 0

PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:

Difficult to collect the 0-1.0 samples - ^{soapy, no recovery -} had to open
drisk at BIO.

SPECIAL NOTES: Standby 0850-1110 repair rig shed -
D Travel from ~~IL~~ IL to C4 took 1 hr 45 min

TOMORROW'S EXPECTATIONS: Complete prepare equipment
and samples for shipping

BY: Zurchan TITLE: FTL



MONTGOMERY WATSON

NIGHT SHIFT

DATE: 2-5-97 / 2-16-97

DAY X S M T W TH F X

FIELD

DAILY QUALITY CONTROL REPORT

PROJECT MANAGER Brett Johal
PROJECT Liberty Island
JOB NO. 1189002, 220101
CONTRACT NO. _____

WEATHER	Bright Sun	<u>Clear</u>	Overcast	Rain	Snow
TEMP	<u>To 32</u>	32-50	50-70	70-85	85 up
WIND	Still	Moderate	<u>High</u>	Report No. <u>BPX LI</u>	
HUMIDITY	<u>Dry</u>	Moderate	Humid	3	

SUBCONTRACTORS ON SITE:

Discovery Dredging
Dreama Miller & Assoc.
CatCo

EQUIPMENT ON SITE:

CME-75 on site, RD-85
Swampland chad

WORK PERFORMED (INCLUDING SAMPLING):

- SAMPLED C2, A10, & A8
- ROLLED DUPE ON A10(B) SO
- CAUGHT UP ON LABELS (still need some done)
- Took pictures of soil & WATER SAMPLING

PROJECT: Liberty Is
JOB NO.: _____

REPORT NO.: 3
DATE: 2/16/97

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)

Microtip calibrated at: _____ ppm

PID N/A

DS - NO STANDARD

ALSO NEED SALINITY STANDARD

HEALTH AND SAFETY LEVELS AND ACTIVITIES: Daily tailgate meeting completed ✓

INJURIES: NONE ACCIDENTS: NONE NEAR MISSES: NONE

PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:

SALINITY PROBE GETS GLOGGED WITH ICE
ON THE WAY DOWN & UP - CLEAN & CHECK
W/ EACH USE - SALINITY OF SALT WATER OCEANS
≈ 29-30‰

SPECIAL NOTES:

SEE NOTE IN DRILL SHACK
TO BENNIE

TOMORROW'S EXPECTATIONS:

A6 & A4
DEMO BE

BY: _____ TITLE: _____



MONTGOMERY WATSON

DATE: 2/16/97 0700-2100

FIELD

DAY	S	M	T	W	TH	F	S
	X						

DAILY QUALITY CONTROL REPORT

PROJECT MANAGER: Brett Schelan
 PROJECT: Liberty Island
 JOB NO.: 1189002.280101
 CONTRACT NO.:

WEATHER	Bright Sun	Clear X	Overcast	Rain	Snow ground
TEMP	To 32 -20°F	32-50	50-70	70-85	85 up
WIND	Still	Moderate	High	30-50mph	
HUMIDITY	Dry	Moderate X	Humid	Report No. BPK LI 4	

SUBCONTRACTORS ON SITE:

Discovery Drilling
 Duane Miller & Assoc.
 Catco

EQUIPMENT ON SITE:

CME-75 on site RD-85
 Snowward chain

DO, EC, pH, Turb.

WORK PERFORMED (INCLUDING SAMPLING):

WA 01 (06) @ 0900
 Sampled A6 @ .5' & 6-8' BGS
 Duplicate 97 BPK LI A6 SD 62 (08) @ 1010
 Comp. 1-6' Bagged for later use

WA 01 (05) @ 1100
 Sampled 1130, 1204 (A 4) @ .5' & 6-8' BGS
 @ 1145 Comp. 1-6' Bagged for later use

Recovered 05 - 1' very lumpy, lost most,
 moved forward & resampled using
 3' x 2 1/2" SS, this worked better.

Packed out equipment, samples & all
 debris. Ground Blipped under travel
 to greatest extent possible.

Packed equipment for equipment, left
 2-pallets at warehouse w/ Ed & Bruce,
 prepared samples for travel to Anch.
 Four sevens check at baggage.

PROJECT: Liberty
JOB NO.: _____

REPORT NO.: 04
DATE: 2-16-97

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)

Microtip calibrated at: _____ ppm
PTD N/A
DO - HR

HEALTH AND SAFETY LEVELS AND ACTIVITIES: Daily tailgate meeting completed by Kyle Blum

INJURIES: 0 ACCIDENTS: 0 NEAR MISSES: 0

PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN: Turb meter operation
mastered - collect samples, soil
for lab. analysis

SPECIAL NOTES:

TOMORROW'S EXPECTATIONS: Prepare samples for
ship ment to Lab.

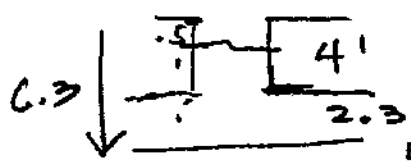
BY: Ben TITLE: FLT

Appendix B

Field Notes



MONTGOMERY WATSON



A4

BP Exploration (Alaska), Inc.
LIBERTY ISLAND Water/Sediment Sampling

wind chills -35°F

FIELD NOTE FORM

Station No.	A4	Air Temp	-20°F	Date	2-16-97
		Wind	NE 20-40 mph	Crew	BGM
		Sky	clear	Start Time	1050

Deck
3.3' to Ice
Surface

A	Ice Thickness	4.0	Description	Staked by BP
B	Depth to Water Surface	0.5		
C	Depth to Bottom	6.3	Latitude	70 12 26.88
C-B	Total Water Depth	5.8	Longitude	147 30.42.82
D-(A-B)	Ice Free Water Depth	2.3	Northing	312 495.83
D-F	Depth of Water Above Ice Bottom:		Easting	5 927 747.46

8.3
-3.3

Depth	Temp. C	Salinity	EC	DO	Turb./TSS	Current V	Direction
0.5	-1.5	22	19,000	13.1	21-	None	recorded
1.0	-1.5	2					
1.5	-1.5						
2.1	-1.5						
<i>BGM</i>							

Bottom

sampled
TSS
Turb
pH 7.8

WATER SAMPLE:	96	BPK LI	WA	01 (05)
TSS	DATE: 2-16	TIME: 1100	DEPTH (BIS)	(5.0)

Depth	Grain Size	Metals #1	TOC	DRO	SVOA's	VOA	TIME
5-10'	✓	✓	✓	✓	✓	✓	1130
6.0-8.0	✓	✓	✓	✓	✓	✓	1200
1.0-6.0'	Comp held ml						1145

little
recovery -
resampled
HOLD 3'-5.

COMMENTS:	21.2'	96	BPL LI	A4	WA	01 (01)
-----------	-------	----	--------	----	----	---------

DO METER USED: YSI OR HACH (STD.) HR 0-14 mg/l
Turb. collect by Gals
Shallow water Turb may be high
Flow meter would not stop at 3' flow

BGM



MONTGOMERY WATSON

BP Exploration (Alaska), Inc.
LIBERTY ISLAND Water/Sediment Sampling
FIELD NOTE FORM

Station No. A 8	Air Temp -20°F	Date 2/16/97
	Wind 25 mph	Crew KILL EUN GARY BEN
	Sky Clear	Start Time 0320

Ice		Location	
A	Ice Thickness 4.3	Description	
B	Depth to Water Surface 0.8'		
C	Depth to Bottom 19.9'		
C-B	Total Water Depth 19.1'		
D-(A-B)	Ice Free Water Depth 15.6'		
D-F	Depth of Water Above Ice Bottom:		
		Latitude	
		Longitude	
		Northing	
		Easting	

Below Bottom ICE

Water Column Profile						TIME	PEI
Depth	Temp. C	Salinity	EC	DO	Turb./TSS	Current V	Direction
1.0	-1.0	29.5	25,000				
2.0	-1.0	29.5	25,000	8.7	21.2	0350	7.83
3.0	-1.0	29.5	25,000				
4.0	-1.0	29.5	25,000				
5.0	-2.0	31.0	25,500				
6.0	-2.0	31.0	25,500				
7.0	-2.0	31.0	25,500				
8.0	-2.0	31.0	25,500				
9.0	-2.0	31.0	25,500	9.8	7.5	0400	7.88
10.0	-2.0	31.0	25,500				
11.0	-2.0	31.0	25,500				
12.0	-2.0	31.0	26,000				
13.0	-2.0	31.5	26,000				
14.0	-2.0	31.5	26,000				

SAMPLE 2.5'

SAMPLE 9.5'

WATER SAMPLE: TSS DATE: **2/16/97** TIME: **BRE** DEPTH (MIS): ()

Sediment		Record Sample Time					
Depth	Grain Size	Metals #1	TOC	DRO	SVOA's	VOA	TIME
5-1.0'							0430
6.0-8.0							0440
1.0-6.0'							0430

HOLD

Comments:

DO METER USED: YSI OR HACH (STD.)

SHOULD HAVE SALINITY QUAC SOLUTION
 USE PROBE CLOGGED W/ICE. D-TCEN + USED



BP Exploration (Alaska), Inc.
LIBERTY ISLAND Water/Sediment Sampling
FIELD NOTE FORM

Station No. A-10	Air Temp -20°F	Date 2/16/97
	Wind 25 mph	Crew BN, EB, GARY + KEN
	Sky Clear	Start Time 0030

A	Ice Thickness	4.5	Description	
B	Depth to Water Surface	0.7	Latitude	
C	Depth to Bottom	18.4	Longitude	
C-B	Total Water Depth	17.7	Northing	
D-(A-B)	Ice Free Water Depth	13.9	Easting	
D-F	Depth of Water Above Ice Bottom:			

BELOW
ICE
BOTTOM

Depth #	Temp. C	Salinity	EC	DO	Turb./TSS	Current V	Direction
01	-2°C	17.523	20000				
02	-2°	17.523	20000			TIME	
03	-2	17.0235	19000				
04	-2	17.0235	19000	9.4	23.9	0110	7.70
05	-2	17.0235	19000				
06	-2	17.0242	19000				
07	-2	17.0240	19000				
08	-2	17.0235	19000				
09	-2	17.0212	18000				
10	-2	21.0	18000				
11	-2	21.0	18000	10.1	31.7	0120	7.63
12	-2	22.0	18000				
13	-2	22.0	18500				

SAMPLE 4.5'

SAMPLE 0.0'

WATER SAMPLE: TSS DATE: **2/16/97** TIME: **SEE ABOVE** DEPTH (BIS) ()

Depth	Grain Size	Metals #1	TOC	DRO	SVOA's	VOA	TIME
.5-1.0'	/	/	/	/	/	/	0130
6.0-8.0	/	/	/	/	/	/	0150
1.0-6.0'	/	/	/	/	/	/	0130

HOLD

Comments:

DO METER USED: YSI OR HACH (STD.)
YSI METER FOR PROFILE MAY BE GIVING FALSE READINGS FROM ICE CLOGGING PROBE. WE WASHED THE PROBE OUT (UP + DOWN QUICKLY) + RE-SAMPLED PREVIOUS STATIONS



MONTGOMERY WATSON

BP Exploration (Alaska), Inc.
LIBERTY ISLAND Water/Sediment Sampling
FIELD NOTE FORM

Station No. B6, Air Temp -19°C, Wind ±10 Kts, Sky Clear, Date 2/15/97, Crew Bill, Eric, Gary, + Ken, Start Time 0030

Table with columns for Ice (A-F) and Location (Latitude, Longitude, Northing, Easting). Values include Ice Thickness 3.7', Depth to Water Surface 0.9', etc.

Water Column Profile table with columns: Depth, Temp. C, Salinity, EC, DO %, Turb/TSS, Current V, Direction. Data points from 1' to 6' depth.

PH 8.4

WATER SAMPLE: TSS, DATE: 2/15, TIME: 0100, DEPTH (BIS) (5.7) 20' BEL

Sediment table with columns: Depth, Grain Size, Metals #1, TOC, DRO, SVOA's, VOA, TIME. Rows for 5-1.0', 6.0-8.0', 1.0-6.0'.

HOLD

Comments: Double checked @ 20' +/- below bottom of ice. Below ice free water. DO METER USED: YSI OR (HACH (STD.))



MONTGOMERY WATSON

BP Exploration (Alaska), Inc.
LIBERTY ISLAND Water/Sediment Sampling
FIELD NOTE FORM

Station No. B8	Air Temp -20 F	Date 2-15-97
	Wind 15	Crew Bill, Eric, Gary, & Ken
	Sky clear	Start Time

Ice		Location	
A	Ice Thickness 5'	Description	
B	Depth to Water Surface 0.7'	Latitude 70 14' 44"	Longitude 147 37' 56"
C	Depth to Bottom 15.0'	Northing	
C-B	Total Water Depth 14.3'	Easting	
D-(A-B)	Ice Free Water Depth 9.9'		
D-F	Depth of Water Above Ice Bottom:		

Water Column Profile							P _H
Depth	Temp. C	Salinity	EC	DO	Turb./TSS	Current V	Direction
1.0	-2°C	29.2	24,000	9.2	5.19 4.73		7.9
2.0	-2	29.2	24,500				
3.0	-2	31.0	24,500	8.9	1.02		7.60
4.0	-2	31.0	24,500				
5.0	-2	29.2	24,000				
6.0	-2	29.2	24,000	8.7	2.46		7.74
7.0	-2	29.2	24,000				
8.0	-2	29.2	24,000				

CURRENT

SAMPLE 1.5'
- sample 3.5'
- sample 6.5'

WATER SAMPLE: **3 depths (1.5', 3.5', 6.5' BBI)**

TSS DATE: **2/15** TIME: **0400 (4:00)** DEPTH (BIS) ()

Sediment:		Record Sample Time					
Depth	Grain Size	Metals #1	TOC	DRO	SVOA's	VOA	TIME
5-1.0'							
6.0-8.0							
1.0-6.0'							

HOLD

Comments

DO METER USED: YSI OR **HACH (STD.)**



BP Exploration (Alaska), Inc.
LIBERTY ISLAND Water/Sediment Sampling
FIELD NOTE FORM

Station No.	B 10	Air Temp	-19°F	Date	2-15-97
		Wind	20 E	Crew	Logan - WP
		Sky	clear	Start Time	8:20 AM

above
3.2
above

A	Ice Thickness	3.9	Description	
B	Depth to Water Surface	0.4		
C	Depth to Bottom	13.1	Latitude	70 15 52.360
C-B	Total Water Depth	12.7	Longitude	147 36 15.682
D-(A-B)	Ice Free Water Depth	9.2	Northing	5948 925.57
D-F	Depth of Water Above Ice Bottom:		Easting	301 581.47

2.7
3 =
9.2

Depth	Temp. C	Salinity	EC	DO mg/L	Turb. FSS	Current V	Direction
4	0.0	13	21000				
5	-0.5	25	22000				
6	-1.0	28	24000				
7	-1.0	28	24000				
8	-1.0	28	24000	7.6	14.2	None detected	
9	-1.0	28	24500				
10	-1.0	28	25000				
11	-1.0	29	24000				
12	-1.0	29	24000				

sample
pH
8.1

Bottom

WATER SAMPLE:			
TSS	DATE: 4/16	TIME: 8:30	DEPTH (BIS) (8.0) Below Ice Surface

Depth	Grain Size	Metals #1	TOC	DRO	SVOA's	VOA	TIME
5-1.0'	✓	✓	✓	✓	✓	✓	0900
6.0-8.0	✓	✓	✓	✓	✓	✓	0915
1.0-6.0'	✓	✓	✓	✓	✓	✓	0930

HOLD

DO METER USED: XSLOR HACH (STD.) NR (1-14 mg) Module 525



MONTGOMERY WATSON

BP Exploration (Alaska), Inc.
LIBERTY ISLAND Water/Sediment Sampling
FIELD NOTE FORM

Station No. C-2 (We) Air Temp -17°F Wind 20 mph Sky clear Date 2/15/97 Crew E.H., E.H.N., GARY, & KEH Start Time 2000

Table with columns: Parameter (A-F), Value (e.g., 4.5', 1.0', 16.6', 15.6', 12.1'), and Location (Latitude, Longitude, Northing, Easting)

Water Column Profile table with columns: Depth, Temp. C, Salinity ppt, EC, DO, Turb./TSS, Current V, Direction. Includes handwritten data from 1.0 to 11.0 depth.

4.5
BELOW ICE BOTTOM

51

52

WATER SAMPLE: TSS, DATE: 2/15, TIME: 2100, DEPTH (BIS): (3.0', 2.0')

Table with columns: Depth, Grain Size, Metals #1, TOC, DRO, SVOA's, VOA, TIME. Includes handwritten data for depths 5-1.0', 6.0-8.0', and 1.0-6.0'.

HOLD

Comments: SD-62-08 IS DUPE FOR SD-62-08
DO METER USED: YSI OR HACH (STD.)



BP Exploration (Alaska), Inc.
LIBERTY ISLAND Water/Sediment Sampling
FIELD NOTE FORM

Station No.	II	Air Temp	-22	Date	2-15-97
		Wind	E 25 mph	Crew	Byn
		Sky	Clear	Start Time	1310

A	Ice Thickness	4.4	Description	
B	Depth to Water Surface	.45		
C	Depth to Bottom	20.4	Latitude	70 16 47.769
C-B	Total Water Depth	19.5	Longitude	147.34 54.558
D-(A-B)	Ice Free Water Depth	15.5	Northing	5925 150 15
D-F	Depth of Water Above Ice Bottom:		Easting	

3.3
23.7
14

7.7 Icefree
9.4
33
14.4

Depth	Temp. C	Salinity	EC	DO	Turb./TSS	Current V	Direction
7	1.0	23	21000				
9	0.0	29	25000				
11	-0.5	29	24000				
13	-1.0	29	24000				
15	-1.0	29	24000	93	14.	ND	ND
17	-1.0	29	24000				
19	-1.0	29.5	25000				
21	-1.0	29.5	25000				
23	-1.0	29.	25000				

Sample
14 Below
Depth
Ph
7.5

WATER SAMPLE:
TSS DATE: 2/15 TIME: 1345 DEPTH (BIS) (11 -)

97 Bpx LI II

Depth	Grain Size	Metals #1	TOC	DRO	SVOA's	VOA	TIME
5-1.0'							1450
6.0 - 8.0							1430
1.0 - 6.0'							1445

01 SD (01)
03 SD (05)
02 HOLD SD (08)

DO METER USED: YSI OR HACH (STD.)



SOIL BORING LOG

PROJECT NO.:

1189002.028101

BORING NO.:

A4

SHEET

1 OF 1

PROJECT LIBERTY Island SITE Sample Loc

CLIENT BDX (A)

GEOLOGIST Bon

DATE 2/16/97 WEATHER -19°F clear

LOCATION COORDINATES 32495.63/5927747.44

ELEVATION DATUM

DRILLING METHOD HS

BORING SIZE 1 1/4" ID HAMMER DROP (NVLBS) 30/340

RIG TYPE CME 75

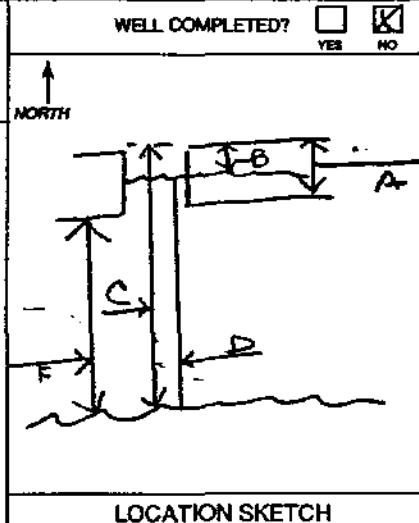
DRILLER/COMPANY Discover

SAMPLES 4 SAMPLE TYPE Split-spoon SAMPLER TYPE/DIAMETER 4 / 2-1/2" TOTAL DEPTH (FT) 14 see bottom of log DEPTH TO SWL (FT) N/A TOP OF HOLE ELEVATION N/A

DEPTH (FEET)	GRAIN SIZE				SOIL CLASS	PID (PPM)	SAMPLE	
	BLOWS (8 IN.)	% GRAVEL	% SAND	% FINES			MAX SIZE (#)	TIME
0								
1							1130	1130
2								
3								
4							1145	1145
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								

SOIL DESCRIPTION (ASTM 2488)

Be, gravelly sand, little fines
broken gravel, some 1-2"
most < 1/2"



- A = Ice Thickness
- B = Depth to water from Top Ice
- C = Depth to Bot. (Top Ice)
- D = Total water ⇒ (C - B)
- E = Ice Free Water ⇒ D - (A - B)
- G = Depth of water above Ice ⇒ (D - F)



SOIL BORING LOG

PROJECT NO.: 189002.028101

BORING NO.: A6

SHEET 1 OF 1

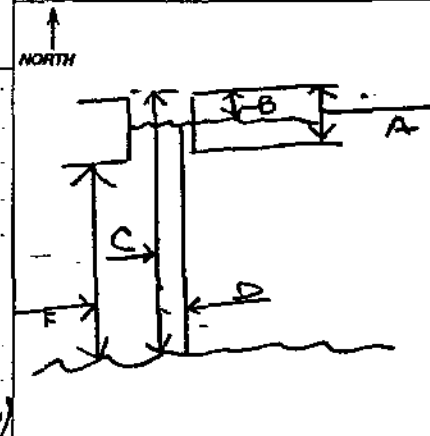
PROJECT Liberty Island SITE Sample Loc 97 BPX LI CLIENT BPX (A) GEOLOGIST _____

DATE 2/16/96 WEATHER -33°F 35 mph wind LOCATION COORDINATES _____ ELEVATION DATUM _____

DRILLING METHOD HS BORING SIZE 6 1/4" HAMMER DROP (IN/LBS) 20/340 RIG TYPE CME 75 DRILLER/COMPANY Discover

SAMPLES _____ SAMPLE TYPE Split-spoon SAMPLER TYPE/DIAMETER 4" / 2.1/2" TOTAL DEPTH (FT) _____ see bottom of log _____ DEPTH TO SW (FT) N/A TOP OF HOLE ELEVATION _____

DEPTH (FEET)	GRAIN SIZE				SOIL CLASS	PID (PPM)	SAMPLE TIME	INTERVAL	SOIL DESCRIPTION (ASTM 2486)	WELL COMPLETED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
	BLOWS (6 IN.)	% GRAVEL	% SAND	% FINES						MAX SIZE (IN)	
0											
1									SP, dete, coarse		
2					SP				0.0-5.0 Gray fine sand, loose - no 1/4" pebbles noted		
3											
4									5.0 - Gray Sand, med dense to dense w/ thin (1/16 to 1/4") interbeds of black silt (organic?) silt) - thicker black zones include some organic fragments (PE)		
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											



- _____ A = Ice Thickness
- _____ B = Depth to water from Top Ice
- _____ C = Depth to Btm. (Top Ice)
- _____ D = Total Water
⇒ (C - B)
- _____ E = Ice Free Water
⇒ D - (A - B)
- _____ G = Depth of water above Ice
⇒ (D - F)





Location of Hole
DECK TO ICE: 32
ICE THICK: 75 - 32 = 43
DECK TO MUD: 238 - 32 = 192
DECK TO H₂O: 40 - 32 = 08

23
3
20

Conditions

Rig Type Same
Sampling Methods Same
Hammer Wt. and Drop Same
Hammer Type MANUAL AUTOMATIC
Started TIME 0305 DATE 2-16-97
Completed TIME 0500 DATE 2-16-97

Hole Depth (Ft)				
Casing Depth (Ft)				
Water Depth (Ft)				
Time				
Date				

Surface Elevation _____ Datum _____

Sample Depth	Sampler Type*	Blows / 6-in.	Inches Driven	Inches Recovered	Depth In Feet	Sample	Graphic Log	Frozen?
0405		1/2	6	4.8	1			
		1/2	6		1			
		2	6		2			
		2	6		2			
		3	6		3			
		3	6		3			
		4	6		4			
		4	6		4			
		8	6		5			
		8	6		5			
0440		9	6	3.5	5			
		7	6		6			
		4	6		6			
		4	6		7			
		5	6		7			
		5	6		8			
		7	6		8			
					9		TD	
					10			
					11			

Instrumentation _____ Date _____
Backfilled TIME _____ DATE _____ BY _____

Gry Silt (ml) very soft, wet, becoming stiff below 2.5
Brn fibrous organic layer, odoriferous moist, soft
overstuffed sampler
Silty sand (sm) gry, moist to dry, compact
Very layered - predominantly silt w/some fine sand (ml), gry, moist to dry, stiff
occas. ±2" layer clean sands (fine to med grain) gry, moist → to (SP-SM)

*Sample Types: ac = air chip; ag = auger grab; ab = auger bit; cc = continuous core; cb = logged continuous core; fs = Shelby tube; sh = 2.5" ID Split barrel w/340 lb hammer; ss = 1.4" ID Split barrel w/140 lb hammer



Location of Hole

DECK TO ICE: 3^2
 DECK TO H₂O: $39 - 3^2 = 0^7$
 ICE THICKNESS: $7^2 - 3^2 = 4^2$
 DECK TO MUD: $21^6 - 3^2 = 18^4$

Conditions

Rig Type CME 75
 Sampling Methods SM SS 4"
 Hammer Wt. and Drop 340 / 30
 Hammer Type MANUAL AUTOMATIC
 Started TIME 0015 DATE 2-16-97
 Completed TIME 0215 DATE 2-16-97

Hole Depth (Ft)				
Casing Depth (Ft)				
Water Depth (Ft)				
Time				
Date				

Surface Elevation _____ Datum _____

Sample Depth	Sampler Type*	Blows / 6-in.	Inches Driven	Inches Recovered	Depth in Feet	Sample Graphic Log	Frozen?
		2	6	4 ²			
		4	6		1		
		3	6		2		
		6	6		3		
		10	6		4		
		11	6		5		
		10	6		6		
		13	6		7		
		16	6		8		
		12	6		9		
		4	6		10		
		7	6		11		
		6	6				
		5	6				
		5	6				
		4	6				

Instrumentation _____ Date _____
 Backfilled TIME _____ DATE _____ BY _____

0130

Fine grained silty sand to silt w/ sm / SM, moist, stiff, layered w/ blk organics grey to tan

Sampler stuffed

Distinct tan layer silty sand

0200

Grey silt (mc), moist, stiff, w/ blk layers Multiple layers 2-3" thick mc / SM

Ben Fibrous organics, moist, stiff

Silt w/ some sand

Silty Sand (SM) layer, moist, tan, Fine-grained

*Sample Types: ac = air drop; ag = auger grab; ab = auger bulk; ac = continuous core; cb = bagged continuous core; br = Shelby tube; sb = 2.5" ID Split barrel w/340 lb hammer; ss = 1.4" ID Split barrel w/140 lb hammer



MONTGOMERY & ATSON

SOIL BORING LOG

PROJECT NO.: 189002 028101

BORING NO.: B3

SHEET 1 OF 1

PROJECT Liberty Island SFFE Sample Loc

CLIENT EPX (A) GEOLOGIST QB

DATE 2-14-97 WEATHER clear - 17°C, calm

LOCATION COORDINATES

ELEVATION DATUM MSL

DRILLING METHOD HS

BORING SIZE

HAMMER DROP (IN/LS)

RIG TYPE CME 75

DRILLER/COMPANY Discover

SAMPLES 1 SAMPLE TYPE Soil-spoon SAMPLER TYPE/DIAMETER 2.1/2" TOTAL DEPTH (FT) see bottom of log DEPTH TO SWL (FT) N/A TOP OF HOLE ELEVATION N/A

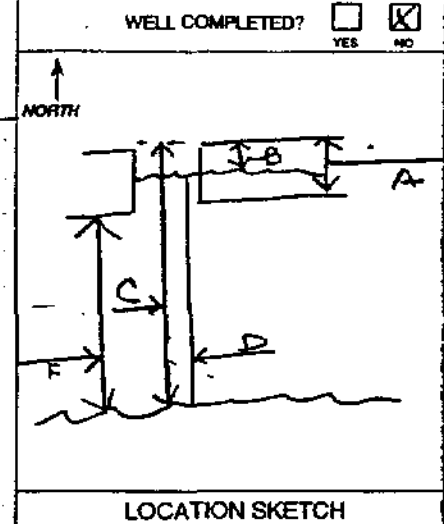
DEPTH (FEET)	GRAIN SIZE				SOIL CLASS	PID (PPM)	SAMPLE	
	BLOWS (6 IN)	% GRAVEL	% SAND	% FINES			MAX SIZE (Ø)	TIME
0								
1	1/4							
2	1/4							
3	1/4							
4	3							
5	3							
6	3							
7	4							
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								

SOIL DESCRIPTION (ASTM 2488)

Soft saturated @ mudline - no recovery

DRX Gry

14.8
2
12.8
3
15.8
6.3
2.5



B-6

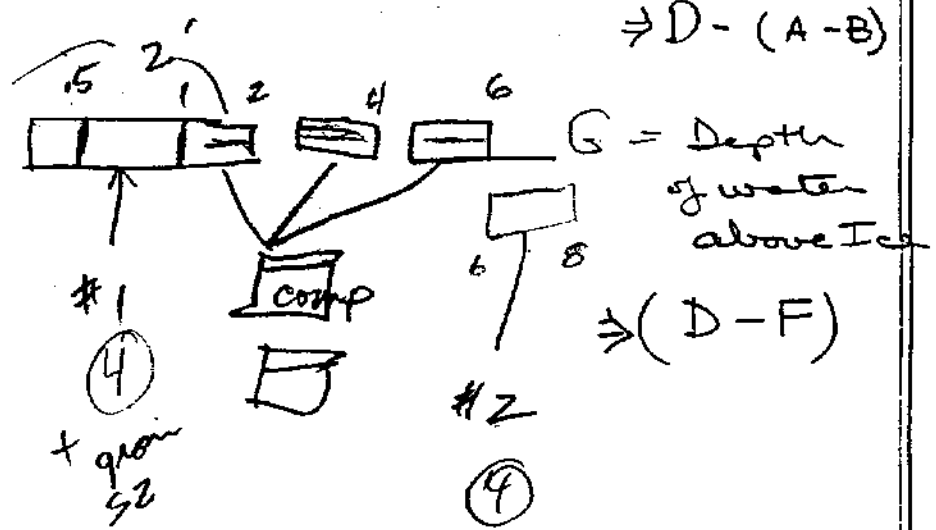
3.7' A = Ice Thickness

0.9' B = Depth to water from Top Ice

7.6' C = Depth to SWL (Top Ice)

6.7' D = Total water ⇒ (C - B)

4.1' E = Ice Free Water ⇒ D - (A - B)



File: user name\project\Fire Name
s: 00-XXX-00 00:00
JOB No. 0000 0000



Project: Liberty GEO Hole No. B3 (E)

Job No. 4119.22 Total Depth 85



Contractor: Discovery Operator GC Logged By CB

Location of Hole B3 - Environmental
* suggest auger 6" then push Shelby or Shelby @
mudline - let it rest prior to pulling.
[Environmental samples taken]

Deck to ice: 30
Conditions DECK TO MUD: 63 - 30 = 33
Depth to H₂O: 30 - 30 = 0
Ice thickness: 3

Rig Type CME 75
Sampling Methods 4" SS
Hammer Wt. and Drop 340
Hammer Type MANUAL AUTOMATIC
Started TIME 2100 DATE 2-14-97
Completed TIME 2320 DATE 2-14-97

Hole Depth (Ft)			
Casing Depth (Ft)			
Water Depth (Ft)			
Time			
Date			

Surface Elevation _____ Datum _____

Instrumentation _____
Backfilled TIME _____ DATE _____ BY _____

Sample Depth	Sampler Type*	Blows / 6-in.	Inches Driven	Inches Recovered	Depth in Feet	Sample Graphic Log	Frozen?
2220	0 ² SS	3	6	24" ^{ENV}	1	<p>* Saturated, very soft mudline no recovery @ top 6" trace fibrous DRK GRY SILT (MC) w/ some organics (sticks) soft, moist, sample color layered blk/gy (predominant) [4 grab samples @ top 6" / 1 grain / 1 composite samples]</p> <p>becoming soft to stiff below 3", less layered coloring</p> <p>4" Peat (PE) brn moist, soft fibrous</p> <p>Grey silty sand (to sandy SILT (SM)), moist, fine grained, stiff [2 bag composite samples] sampler not overfilled</p> <p>Coarse silty gravel w/ sand (G-SM), sub sand, coarse < 1/4", wet</p>	
		3	6		2		
		3	6		3		
		4	6		4		
		5	6		5		
		6	6		6		
		6	6		7		
		7	6		8		
		7	6		9		
		3	6		10		
		3	6		11		
2330		4	6			TD	

* Sample Types: ac = air chip; ag = auger grab; ab = auger bulk; cc = continuous core; cb = bagged continuous core; fb = Shelby tube; sh = 2.5" ID Split barrel w/340 lb hammer; ss = 1.4" ID Split barrel w/140 lb hammer



Location of Hole
DECK TO MUD: 10⁶ - 3 = 7⁶
DECK TO ICE: 3⁰
DEPTH TO H₂O: 3⁹ @ 0037
ICE THICKNESS: 6⁷ - 3⁰ = 3⁷

Conditions

Rig Type CME 45
Sampling Methods 4" SS
Hammer Wt. and Drop 340 30"
Hammer Type MANUAL AUTOMATIC
Started TIME 0030 DATE 2-15-97
Completed TIME 0200 DATE 2-15-97

Hole Depth (Ft)			
Casing Depth (Ft)			
Water Depth (Ft)			
Time			
Date			

Surface Elevation _____ Datum _____

Instrumentation _____ Date _____
Backfilled TIME _____ DATE _____ BY _____

0108
0136

Sample Depth	Sampler Type*	Blows / 6-in.	Inches Driven	Inches Recovered	Depth in Feet	Sample	Graphic Log	Freeze?
	SH	2	6	48"				
		2	6		1		DRY-GRY SILT (ML), soft, moist, coloring layered Blk/Gry	
		3	6					
		5	6		2			
		5	6					
		7	6		3			
		8	6				GRY silt w/sand (ML), stiff, moist, occas: 1/2" fibrous organic layers	
		8	6		4			
		4	6		5		sand - very color layered - no organics noted moist, fine grained	
		4	6					
		7	6		6			
		7	6					
		6	6		7			
		6	6					
		7	6		8		medium grain sand w/silt (SP-SM), dk gry, V _c (50%?)	
		8	6					
					9			
					10			
					11			

*Sample Types: sh = sh chip; sg = sizer grab; sb = sizer bulk; cc = continuous core; cb = logged continuous core; fsr = Shelby tube; sh = 2.5" ID Split barrel w/340 lb hammer; sc = 1.4" ID Split barrel w/140 lb hammer



Duane Miller & Associates
Arctic & Geotechnical Engineering
FIELD LOG

Project: L1B GED Hole No. BBE
Job No. 4119.22 Total Depth 86
Contractor: Discovery Operator GL Logged By CR

Location of Hole
DECK TO ICE: 3^2
DECK TO MUD: $18^2 - 3^2 = 15^2$
DEPTH TO H₂O: $3^2 @ 0240$
ICE THICK: $8^2 - 3^2 = 5^2$

20
3
19
17
Conditions
 $\frac{26^2}{-18^2}$
86

Rig Type CME 175
Sampling Methods SS
Hammer Wt. and Drop 340 / 30
Hammer Type MANUAL AUTOMATIC
Started TIME 0230 DATE 2-15-
Completed TIME 0500 DATE 2-15-

Hole Depth (Ft)			
Casing Depth (Ft)			
Water Depth (Ft)			
Time			
Date			

Surface Elevation _____ Datum _____

Sample Depth	Sampler Type*	Blows / 6-in.	Inches Driven	Inches Recovered	Depth in Feet	Sample Graphic Log	Instrumentation	Date
0400		2	6	4 ⁰				
		3	6		1			
		5	6					
		6	6		2			
		6	6					
		6	6		3			
		7	6					
		7	6		4			
		7	6					
		8	6		5			
0990		6	6					
		8	6		6			
		7	6					
		8	6		7			
		8	6					
		8	6		8			
		7	6					
					9			
					10			
					11			

DRK GRAY w/ BRN LAYERS SILT (ML), soft, moist
Layers of BRN organic (not fibrous) (PT)

becoming Lt Gray to ~~ML~~ below 3⁶
sander still (ML) silt w/ sand

Same

BRN Fibrous organics (PT), woody fragments

Gray silt (ML), stiff, moist, w/ some sand

*Sample Types: ac = air chip; ag = auger grab; ab = auger bulk; oc = continuous core; cb = bagged continuous core; tw = Shelby tube; at = 2.5" ID Split barrel w/340 lb hammer; aa = 1.4" ID Split barrel w/140 lb hammer



MONTGOMERY WATSON

SOIL BORING LOG

PROJECT NO.:

189002 028101

BORING NO.:

310

SHEET

1 OF 1

PROJECT Liberty Island SITE Sample Loc

CLIENT BPX (A)

GEOLOGIST B...

DATE 2-15-57 WEATHER Clear -20°F

LOCATION COORDINATES 5948 42557/301581

ELEVATION DATUM

DRILLING METHOD HS

BORING SIZE 6 1/4" SS HAMMER DROP (BLUES) 30/340

RIG TYPE CME 75

DRILLER/COMPANY Discovery

SAMPLES 1 SAMPLE TYPE Split-spoon SAMPLER TYPE/DIAMETER 4" / 2.125" TOTAL DEPTH (FT) 7.5 see bottom of log DEPTH TO SWL (FT) N/A TOP OF HOLE ELEVATION N/A

DEPTH (FEET)	GRAIN SIZE			SOIL CLASS	PI (PPM)	TIME	INTERVAL
	BLOWS (6 IN)	% GRAVEL	% SAND				
0	0			SP+ML			
1	0			SP	2.5		
2	0			SP+ML			
3	0			ML	2.5		
4	0			SP			
5	0			SP			
6	0			ML	4.0		
7	0			ML			
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							

SOIL DESCRIPTION (ASTM 2486)

0.0-3.0 Gray silty Sand (SP+ML) grading to fine grained Sand (SP), loose

3.0-4.5 (SP+ML) Banded dk gray to black silt & fine sand, with silt zones to 4" thick (but varying from 1/4" to 4")

4.5-6.0 Gray fine sand (SP), loose to med dense

6.0-7.0 Black silt (check organic content) stiff (ML)

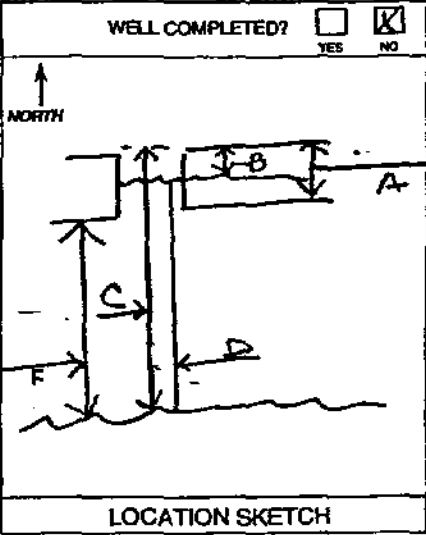
7.0-7.5 Interbedded (1/2" to 2") black silt and Gray Brown silt w/ trace (P) sand

7.5-8.0 silt in bit (stiff) (ML) Black

Summary -

0.0-6.0 Sand (SP) w/ scattered thin silt layers

6.0-8.0 Silt (ML)



A = Ice Thickness
 B = Depth to water from Top Ice
 C = Depth to B (Top Ice)
 D = Total water ⇒ (C - B)
 E = Ice Free Water
 ⇒ D - (A - B)
 G = Depth of water above Ice ⇒ (D - F)

G.No. 0000 0000 File: user name\project\file Name



Duane Miller & Associates
Arctic & Geotechnical Engineering
FIELD LOG

Project: LIB GEO Hole No. 02 E
Job No. 4119.22 Total Depth 5'
Contractor: DD Operator LC Logged By SAB

Sheet
1/1

43
16
5
24
3
17
16
10
10
17
19
+ 80
276

Location of Hole
DECK TO ICE: 33'
DECK TO MUD: 19' 6" - 3" = 16' 6"
DECK TO H₂O: 4' 6" - 3" = 1' 3" @ 2015
ICE THICKNESS: 7' 5" - 3" = 4' 2"

Conditions

Rig Type CME 75
Sampling Methods SS
Hammer Wt. and Drop 340 / 30
Hammer Type MANUAL AUTOMATIC
Started TIME 2000 DATE 2-15-97
Completed TIME _____ DATE _____

Hole Depth (Ft)			
Casing Depth (Ft)			
Water Depth (Ft)			
Time			
Date			

Surface Elevation _____ Datum _____

Instrumentation _____
Backfilled TIME _____ DATE _____ BY _____

2055

2120

Sample Depth	Sampler Type*	Blows / 6-in.	Inches Driven	Inches Recovered	Depth in Feet	Sample Graphic Log	Frozen?
		2	6				
		3	6		1		
		3	6				
		4	6		2		
		4	6				
		4	6		3		
		4	6				
		4	6		4		
		4	6				
		4	6		5		
					6		
					7		
					8		
					9		
					10		
					11		

No Recover. - very soft grey silt (MC) moist - weight of hammer pushing sampler down - tried again hoping hole would collapse - no luck - moving ahead 3rd Redrill @ 2135

*Sample Types: ac = air chip; ag = auger grab; ab = auger bucket; cc = continuous core; cb = bagged continuous core; br = Shelby tube; sh = 2.5" ID Split barrel w/340 lb hammer; sb = 1.4" ID Split barrel w/140 lb hammer



Duane Miller & Associates
Arctic & Geotechnical Engineering
FIELD LOG

Project: L13 GEO Hole No. C2E 204
Job No. 4119.22 Total Depth 80
Contractor: DT Operator GL Logged By GLB

Sheet 1

217
30
247

Location of Hole
DECK TO ICE: 30
DECK TO MUD: 196 - 30 = 166
DECK TO H₂O: 40 - 30 = 10 @ 2015
ICE THICKNESS: 75 - 30 = 45

N 70 17' 12"
W 147 41' 36"
Conditions

Rig Type CME-75
Sampling Methods SS 4"
Hammer Wt. and Drop 340/30
Hammer Type MANUAL AUTOMATIC
Started TIME 2135 DATE 2-15-97
Completed TIME 2240 DATE 2-15-97

Hole Depth (Ft)				
Casing Depth (Ft)				
Water Depth (Ft)				
Time				
Date				

Surface Elevation _____ Datum _____

Sample Depth	Sampler Type*	Blows / 6-in.	Inches Driven	Inches Recovered	Depth in Feet	Sample	Graphic Log	Frozen?
2200	1	6	40		1			
	2	6			2			
	3	6			3			
	4	6			4			
	5	6			5			
	6	6			6			
	7	6			7			
	8	6			8			
2230	9	6			9			
	10	6			10			
	11	6			11			
	12	6	20		12			
	13	6			13			
	14	6			14			
	15	6			15			
	16	6			16			
	17	6			17			
	18	6			18			
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					79			
					80			

Instrumentation _____
Backfilled TIME _____ DATE _____ BY _____

Sampler over-stuffed w/ice from auger
- disregard last 12" blow counts

Layered blk/gry (predominant) silt/cl
stiff moist, fine grained, 2" layer
of black organics @ 40

Sampler over-stuffed

lt grey silt (clay?), dry, very stiff

TD

*Sample Types: ac = air chip; ag = auger grab; ab = auger bulk; cc = continuous core; cb = bagged continuous core; br = Shelby tube; sh = 2.5" ID Split barrel w/340 lb hammer; ss = 1.4" ID Split barrel w/140 lb hammer



MONTGOMERY WATSON

SOIL BORING LOG

PROJECT NO.:

1189002.028101

BORING NO.:

C-4

SHEET

1 OF 1

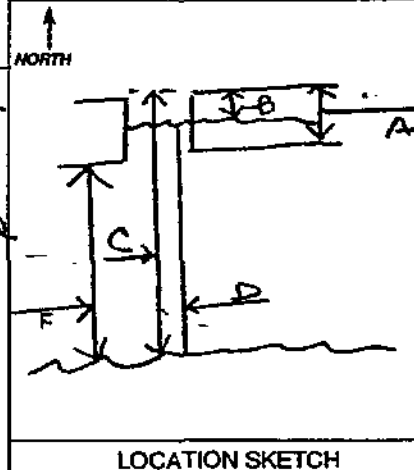
PROJECT Liberty Island SITE Sample LocCLIENT BPX (A) GEOLOGIST BgnDATE 2/15/97 WEATHER cold, clearLOCATION COORDINATES N 80° 45' 5" W 5952260' ELEVATION DATUM (MSL/Other)DRILLING METHOD HS

BORING SIZE

HAMMER DROP (IN/LBS)

RIG TYPE CME 75DRILLER/COMPANY Discover# SAMPLES Split-spoon SAMPLER TYPE/DIAMETER 2-1/2" TOTAL DEPTH (FT) 17.0 sec bottom of log N/A DEPTH TO SWL (FT) N/A TOP OF HOLE ELEVATION N/A

DEPTH (FEET)	GRAN SIZE				SOIL CLASS	PID (PPM)	SAMPLE		SOIL DESCRIPTION (ASTM 2488)	WELL COMPLETED?	
	BLOWS (6 IN)	% GRAVEL	% SAND	% FINES			MAX SIZE (IN)	TIME		INTERVAL	YES
0		10	90		ML				Soil split w/ fine sand De olive green to blk, silty sand 97 BPX LI SD 01 (01)		<input checked="" type="checkbox"/>
1		2	98		ML	1630			silt, black		
2									silt, dk. blk, silt, <2% sand		
3									medium to fine		
4					ML	1645			dk. blk, silt, very silty		
5											
6									97 BPX LI SD 03 (5) DK grey, silty sand 1/4" coarse fine sand		
7						1700					
8									97 BPX LI SD 02 (8)		
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											



A = Ice Thickness
 B = Depth to top of ice
 C = Depth to B (Top Ice)
 D = Total water depth
 $\Rightarrow (C - B)$
 E = Ice Free Water
 $\Rightarrow D - (A - B)$
 G = Depth of water above ice
 $\Rightarrow (D - F)$

JOB No. 0000.0000
 # 00-XXX-00 00.00
 PMS: user name\project\file name



MONTGOMERY WATSON

SOIL BORING LOG

PROJECT NO.:

1189002.028101

BORING NO.:

I1

SHEET

1 OF 1

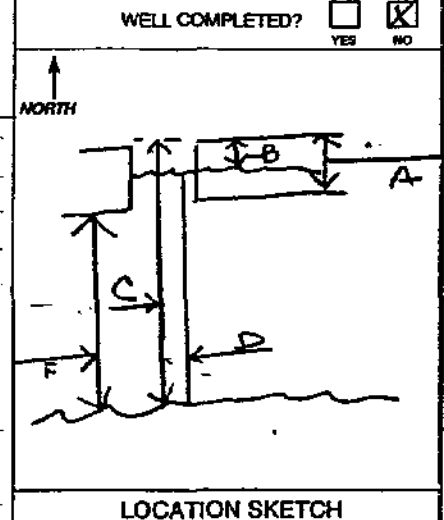
PROJECT Liberty Island SITE Sample Loc I1 CLIENT BPX (A) GEOLOGIST SP

DATE 2/15/97 WEATHER Clear -19°F LOCATION COORDINATES

DRILLING METHOD HS BORING SIZE 6 1/4" HAMMER DROP (IN/LBS) 30/340 RIG TYPE CME 75 DRILLER/COMPANY Discovery

SAMPLES 36 SAMPLE TYPE Split-spoon SAMPLER TYPE/DIAMETER 4" / 2 1/2" TOTAL DEPTH (FT) N/A see bottom of log DEPTH TO SWL (FT) N/A TOP OF HOLE ELEVATION N/A

DEPTH (FEET)	GRAIN SIZE				SOIL CLASS	PID (PPM)	SAMPLE TIME	INTERVAL	SOIL DESCRIPTION (ASTM 2488)
	BLOWS (6 IN)	% GRAVEL	% SAND	% FINES					
0					ML			0.0-0.5 Soft Silt w/ fine sand.	
1					SP+ ML	25'		0.5-3.0 dk gray v. fine sand w/ thin layers of dk gray to black silt; (soft)	
2									
3									
4					SP	4"		3.0-5.0 Gray med. sand (loose to m. dense)	
5									
6					SP+ ML			5.0-6.5 Interbedded black silt (ML) and fine to v. fine gray and gray brown sand (SP)	
7								Bands of silt generally $\leq 1/4"$, sand $\leq 1/2"$	
8	36	0	0	100	ML	4"		6.5-8.0 DK Gray silt stiff to H. stiff	
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									



A = Ice Thickness
 B = Depth to water from Top Ice
 C = Depth to Bottom (Top Ice)
 D = Total water $\Rightarrow (C - B)$
 E = Ice Free Water
 $\Rightarrow D - (A - B)$
 G = Depth of water above Ice
 $\Rightarrow (D - F)$

e 97 BPX LI SD
 1400 - 01 (1.5-1.0')
 1445 - 02 (6.0-8.0')
 1430 - 03 (1.0-6.0')
 K4cl2

File: user name/project/File Name
 01: 00:XX-00 00:00
 JOB No. 0000.0000

Appendix C
Laboratory Data Results



MONTGOMERY WATSON



LAS Laboratories, Inc.

MONTGOMERY WATSON-LIBERTY ISLAND

ANALYTICAL DATA REPORT

FOR

**METALS, BARIUM SULFATE, CHROMIUM VI,
TOTAL ORGANIC CARBON, VOLATILES,
SEMIVOLATILES, 102.0 DIESEL RANGE
ORGANICS**

RECEIVED

MAR 13 1997

ANCH

MONTGOMERY WATSON

LOG-IN NUMBER	<u>L8849</u>
QUOTATION NUMBER	<u>Q703026</u>
DOCUMENT FILE NUMBER	<u>0219471</u>



March 11, 1997

Ms. Jane Whitsett
Montgomery Watson
4100 Spenard Road
Anchorage, AK 99517

RE: Log-in No. L8849
Quotation No. Q703026
Document File No. 0219471

The attached data report contains the analytical results of samples that were submitted to LAS Laboratories, Inc. on 19 February 1997. The temperatures of the two coolers upon receipt were 4 and 4°C. The temperature of the blanks provided were 2 and 1°C. All sample containers did not coincide with the chain-of-custody documentation. All sample containers were received intact. Samples were received in time to meet the analytical holding time requirements. The following sample for volatile analysis contained headspace: 97 BPXLIO2-1497. All discrepancies (if applicable) identified upon receipt of the samples have been forwarded to the client and are documented in the enclosed chain-of-custody records. (See attached Sample Receiving Checklist for details).

The case narratives included in the following attachments provide a detailed description of all events that occurred during sample preparation, analysis, and data review specific to the samples and analytical methods requested.

A list of data qualifiers, chain-of-custody forms, sample receiving checklist, and log-in report are also enclosed representing the samples received within this group.

If you have any questions concerning the analysis or the data please call Mary Wolf at (702) 361-3955, ext 311. If you are unable to contact the client services representative, please call Mary B. Ford, client services manager, at extension 326.

Release of this data report has been authorized by the Laboratory Director or the Director's designee as evidenced by the following signature.

Sincerely,

Mary K. Wolf
Client Services Representative

cc: Client Services
Document Control

**CASE NARRATIVE
INORGANIC NON METALS ANALYSES**

The routine calibration and quality control analyses performed for this batch include as applicable: initial and continuing calibration verification, initial and continuing calibration blanks, method blank(s), laboratory control sample(s), matrix spike sample(s), and duplicate sample(s).

Preparation and Analysis Requirements

All samples were received on February 19, 1997. The samples were logged in as L8849 and prepared and analyzed in batch 219-MW1 and 219-MW2 for:

- A. Method 415.2 Total Carbon
- B. Method 7196 Chromium (VI)

Method Blanks

- The concentration levels of all the requested analytes in the method blank were below the reporting detection limits.

Holding Time Requirements

- All samples were analyzed within the method-specific holding times.

Internal Quality Control

- All Internal Quality Control were within acceptance limits with the following exceptions:
- The quality control sample's (97BPXLIB8SD01(01) (L8849-100)) used for Total Organic Carbon in batch 219-MW1 duplicate precision was outside acceptance limits. This is likely due to sample inhomogeneity with respect to this analyte. All TOC results are flagged with an "***".
- Sample values for Total Organic Carbon (TOC) are calculated from Total Inorganic Carbon (TIC) and Total Carbon (TC) analyses.
- Matrix spike recoveries for TC and TIC were not reported on the QC report forms due to computer software's inability to calculate recoveries in this manner. Matrix spike recoveries for TIC and TC are:

L8849-11S for TIC	=	107.7%
L8849-11S for TC	=	118.5%

L8849-100S for TIC	=	124.2
L8849-100S for TC	=	115.8%

- Laboratory control samples are also reported for TIC and TC.

M.B. Watson-Garrett
Prepared By

February 27, 1997
Date

**CASE NARRATIVE
INORGANIC METALS ANALYSES
BARIUM SULFATE**

The routine calibration and quality control analyses performed for this batch include as applicable: instrument tune (ICP/MS only), initial and continuing calibration verification, initial and continuing calibration blanks, method blank(s), laboratory control sample(s), ICP interference check samples (ICP only), serial dilutions, analytical (post-digestion) spike samples, matrix spike (predigestion) sample(s), and duplicate sample(s).

Preparation and Analysis Requirements

All samples were received on February 19, 1997. The samples were logged in as L8849 and were prepared and analyzed in batches 219 mwX1 and 2 for barium sulfate. The samples were analyzed by Method 6020 Barium and converted to barium sulfate.

Holding Time Requirements

- All samples were analyzed within the method-specific holding times.

Method Blanks

- The concentration levels of all the requested analytes in the method blank were below the reporting detection limits for batch 219 mwX2. Batch 219 mwX1 contained 7.39 mg/kg barium sulfate in the blank. The sample results were flagged with a "C".

Internal Quality Control

- All Internal Quality Control were within acceptance limits with the following exception: The matrix spike recovery for barium sulfate in batch 219 mwX1 was outside of acceptance limits (26%). The recovery based on the (LCS 71% and 89%) support that the analytical system was operating within control limits.

Shellee McGrath

March 11, 1997

CASE NARRATIVE INORGANIC METALS ANALYSES

The routine calibration and quality control analyses performed for this batch include as applicable: instrument tune (ICP/MS only), initial and continuing calibration verification, initial and continuing calibration blanks, method blank(s), laboratory control sample(s), ICP interference check samples (ICP only), serial dilutions, analytical (post-digestion) spike samples, matrix spike (predigestion) sample(s), and duplicate sample(s).

Preparation and Analysis Requirements

All samples were received on February 19, 1997. The samples were logged in as L8849 and were prepared and analyzed in batches 219 mw1 and 2 for total metals. The samples were analyzed by Method 6020 ICP-MS Metals and Method 7471 Mercury.

Holding Time Requirements

- All samples were analyzed within the method-specific holding times.

Method Blanks

- The concentration levels of all the requested analytes in the method blank were below the reporting detection limits.

Internal Quality Control

- All Internal Quality Control were within acceptance limits with the following exceptions: The matrix spike recovery for cadmium in batch 219 mw2 was outside of acceptance limits (179%). The recovery based on the LCS Solid ERA Lot#222 (104%) supports that the analytical system was operating within control limits. The matrix spike recovery for mercury in batch 219 mw1 was outside of acceptance limits (-44%). The recovery based on the LCS Solid (104%) supports that the analytical system was operating within control limits.
- The duplicate sample precision for mercury (Batch 219 mw1) was outside of acceptance limits. All associated samples are flagged with an "**".

Shellee McGrath

March 11, 1997

**CASE NARRATIVE
ORGANIC ANALYSES**

Analytical Method 8260 Volatiles

The associated samples were analyzed in six analytical batches. All instrument tunes, initial and continuing calibrations met criteria.

Analytical Batch 021997-8260-D1

The samples were analyzed within holding time on February 19 and 20, 1997. Target compounds were not detected in the method blank (45798MB). Surrogate recoveries were within QC limits for all samples. Compound recoveries were within QC limits in the laboratory control sample (45798LCS). The associated matrix spike (45852MS) and matrix spike duplicate (45852MSD) were analyzed in analytical batch 022097-8260-D1. All internal standard area counts and retention times were within QC limits for all samples.

Analytical Batch 022097-8260-D1

Note: Sample 97BPXLIB3SD01(01) (L8849-1) was the native sample used for the 45852MS and 45852MSD analyzed in this analytical batch.

The samples were analyzed within holding time on February 20 and 21, 1997. Target compounds were not detected in the method blank (45852MB). Surrogate recoveries were within QC limits for all samples. Compound recoveries were within QC limits in the 45852MS, 45852MSD, and 45852LCS. The relative percent differences (RPDs) between the MS and MSD recoveries were within QC limits. All internal standard area counts and retention times were within QC limits for all samples.

Analytical Batch 022197-8260-D1

The samples were analyzed within holding time on February 21 and 22, 1997. Target compounds were not detected in the method blank (45925MB). Surrogate recoveries were within QC limits except for Bromofluorobenzene in samples 97BPXLIA6SD01(01) (L8849-60), 97BPXLIA6SD02(08) (L8849-64), 97BPXLIA6SD62(08) (L8849-68), and compounds 1,2-Dichloroethane-d4 and Bromofluorobenzene in sample 97BPXLIA8SD01(01) (L8849-76), due to matrix interference. Compound recoveries were within QC limits in the 45925LCS. The associated 45852MS and 45852MSD were analyzed in analytical batch 022097-8260-D1. All internal standard area counts and retention times were within QC limits except for the DCB area count in samples 97BPXLIA6SD01(01) (L8849-60), 97BPXLIA6SD02(08) (L8849-64), and 97BPXLIA6SD62(08) (L8849-68), and PFB, DFB, CBZ, and DCB area counts in sample 97BPXLIA8SD01(01) (L8849-76), due to matrix interference. These samples were reanalyzed in analytical batch 022497-8260-D1 with similar results. All analyses results were reported in this data package. The concentration of Acetone exceeded the calibration range in sample 97BPXLI1SD02(08) (L8849-33). This concentration result includes the percent moisture factor, however, the on column concentration was within the calibration range. This sample

was not diluted and reanalyzed.

Analytical Batch 022497-8260-D1

Note: Sample 97BPXLIA4SD01(01) (L8849-53) was the native sample used for the 46007MS and 46007MSD analyzed in this analytical batch.

The samples were analyzed within holding time on February 24 and 25, 1997. Target compounds were not detected in the method blank (46007MB). Surrogate recoveries were within QC limits except for Bromofluorobenzene in the reanalyzed sample 97BPXLIA8SD01(01) (L8849-76) and in samples 97BPXLIA10SD02(08) (L8849-84) and 97BPXLIB8SD02(08) (L8849-94), and compounds Toluene-d8 and Bromofluorobenzene in sample 97BPXLIB8SD01(01) (L8849-98), due to matrix interference. Compound recoveries were within QC limits in the 46007MS, 46007MSD, and 46007LCS. The RPDs between the MS and MSD recoveries were within QC limits. All internal standard area counts and retention times were within QC limits except for the DCB area count in the reanalyzed samples 97BPXLIA6SD02(08) (L8849-64), 97BPXLIA6SD62(08) (L8849-68), and 97BPXLIA8SD01(01) (L8849-76) and in sample 97BPXLIAB8SD02(08) (L8849-94), and CBZ and DCB area counts in sample 97BPXLIB8SD01(01) (L8849-98), due to matrix interference. Samples 97BPXLIA10SD02(08) (L8849-84), 97BPXLIAB8SD02(08) (L8849-94), and 97BPXLIB8SD01(01) (L8849-98) were reanalyzed in analytical batch 022597-8260-D1 with similar results. All analyses results were reported in this data package. The concentration of Acetone exceeded the calibration range in the reanalyzed samples 97BPXLIA6SD02(08) (L8849-64) and 97BPXLIA6SD62(08) (L8849-68). These samples were not diluted and reanalyzed because the Acetone concentration was within the calibration range in the initial analysis found in analytical batch 022197-8260-D1.

Analytical Batch 022597-8260-D1

The samples were analyzed within holding time on February 25 and 26, 1997. Target compounds were not detected in the method blank (46011MB). Surrogate recoveries were within QC limits except for Bromofluorobenzene in the reanalyzed samples 97BPXLIA10SD02(08) (L8849-84), 97BPXLIB8SD02(08) (L8849-94), 97BPXLIC4SD01(01) (L8849-102), and 97BPXLII1SD01(01) (L8849-107) and in the initial analysis of samples 97BPXLIC4SD01(01) (L8849-102) and 97BPXLII1SD01(01) (L8849-107), and compounds Toluene-d8 and Bromofluorobenzene in the reanalyzed sample 97BPXLIB8SD01(01) (L8849-98), due to matrix interference. Compound recoveries were within QC limits in the 46011LCS. The associated 46007MS and 46007MSD were analyzed in analytical batch 022497-8260-D1. All internal standard area counts and retention times were within QC limits except for the DCB area count in the reanalyzed sample 97BPXLIB8SD02(08) (L8849-94), due to matrix interference.

Analytical Batch 022597-8260-C1

The samples were analyzed within holding time on February 25, 1997. Target compound Acetone was detected in the method blank (46012MB). All corresponding sample results were flagged accordingly. Surrogate recoveries were within QC limits for all samples. Compound recoveries were within QC limits in the 46012LCS. The associated 46007MS and 46007MSD were analyzed in analytical batch 022497-8260-D1. All internal standard area counts and retention times were within QC limits for all samples.

Analytical Method 8270 Semivolatiles

The associated samples were analyzed in two analytical batches. All instrument tunes, initial and continuing calibrations met criteria. Surrogate recoveries were within QC limits for all samples. All internal standard area counts and retention times were within QC limits for all samples.

Analytical Batch 022097-8270-K

Note: Sample 97BPXLIB6SD02(08) (L8849-14) was the native sample used for the 45791MS and 45791MSD analyzed in this analytical batch.

The samples were extracted within holding time on February 19, 1997 and analyzed within holding time on February 20, 1997. Target compounds were not detected in the method blank (45791MB). Compound recoveries were within QC limits in the 45791MS, 45791MSD, and 45791LCS. The RPDs between the MS and MSD recoveries were within QC limits.

Analytical Batch 022197-8270-K

Note: Sample 97BPXLIA8SD02(08) (L8849-73) was the native sample used for the 45795MS and 45795MSD analyzed in this analytical batch.

The associated samples were extracted within holding time on February 20, 1997 and analyzed within holding time on February 21 and 22, 1997. Target compounds were not detected in the method blank (45795MB). Compound recoveries were within QC limits in the 45795MS, 45795MSD, and 45795LCS. The RPDs between the MS and MSD recoveries were within QC limits except for 1,4-Dichlorobenzene and 1,2,4-Trichlorobenzene.

Analytical Method 102.0 Diesel Range Organics

The associated samples were analyzed in three analytical batches. All initial and continuing calibrations met criteria. The recovery of the surrogate compound N-Octacosane was within QC limits for all samples.

Analytical Batches 021897-8015-D-2,3

Note: Sample 97BPXLIC4SD01(01) (L8849-103) was the native sample used for the 45797MS and 45797MSD.

X Qualifier - The Diesel Range Organics results in samples 97BPXLIA6SD02(08) (L8849-65), 97BPXLIA6SD62(08) (L8849-69), 97BPXLIA10SD02(08) (L8849-85), and 97BPXLIB8SD02(08) (L8849-95) were flagged with the X qualifier to denote that these samples were quantified as Diesel Range Organics but these samples also contained small amounts of heavier hydrocarbons, which were outside the retention time window of Diesel Range Organics.

J Qualifier *

- * Determined values at less than the Method Detection Limits (MDL) are reported as less than the Reporting Detection Limits (RDL).
- * Determined values at greater than the MDL and less than the RDL are reported as a value with the J qualifier.
- * Determined values at greater than the RDL are reported as a value with no qualifier.

The samples were extracted within holding time on February 20, 1997 and analyzed within holding time on February 21 and 22, 1997. Diesel Range Organics was not detected in the method blank (45797MB). The recovery of Diesel Range Organics was within QC limits in the 45797MS, 45797MSD, and 45797LCS. The RPD between the MS and MSD recoveries was within QC limits.

Analytical Batches 021897-8015-D-3,5

Note: Sample 97BPXLIB3SD02(08) (L8849-6) was the native sample used for the 45796MS and 45796MSD.

X Qualifier - The Diesel Range Organics results in samples 97BPXLIB10SD62(08) (L8849-26) and 97BPXLII1SD02(08) (L8849-34) were flagged with the X qualifier to denote that these samples were quantified as Diesel Range Organics but these samples also contained small amounts of heavier hydrocarbons, which were outside the retention time window of Diesel Range Organics.

J Qualifier *

- * Determined values at less than the Method Detection Limits (MDL) are reported as less than the Reporting Detection Limits (RDL).
- * Determined values at greater than the MDL and less than the RDL are reported as a value with the J qualifier.
- * Determined values at greater than the RDL are reported as a value with no qualifier.

The samples were extracted within holding time on February 20, 1997 and analyzed within holding time on February 22 and 24, 1997. Diesel Range Organics was not detected in the method blank (45796MB). The recovery of Diesel Range Organics was within QC limits in the 45796MS, 45796MSD, and 45796LCS. The RPD between the MS and MSD recoveries was within QC limits.

Lydia M. Coleman
Prepared By

February 25 and 26, 1997
Date

Lockheed Analytical Services
DATA QUALIFIERS FOR INORGANIC ANALYSES

[Revised 08/28/92]

For Use on the Analytical Data Reporting Forms	
B	<i>For CLP Analyses Only</i> -- Reported value is less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).
C	<i>For Routine, Non-CLP Analyses Only</i> -- Any constituent that was also detected in the associated blank whose concentration was greater than the reporting detection limit (RDL).
D	Presence of high levels of interfering constituents required dilution of sample which increased the RDL by the dilution factor.
E	Estimated value due to presence of interference.
H	Sample analysis performed outside of method-or client-specified maximum holding time requirement.
M	<i>For CLP Analyses Only</i> -- Duplicate injection precision criterion was not met.
N	Matrix spike recovery exceeded acceptance limits.
S	Reported value was determined from the method of standard addition.
U	<i>For CLP Reporting Only</i> -- Constituent was analyzed for but not detected (sample quantitation must be corrected for dilution and percent moisture).
W	<i>For AAS Only</i> -- Post-digestion spike for Furnace AAS did not meet acceptance criteria and sample absorbance is less than 50% of spike absorbance.
X, Y, or Z	Analyst-defined qualifier.
*	Relative percent difference (RPD) for duplicate analysis exceeded acceptance limits.
+	Correlation coefficient (r) for the MSA is less than 0.995.
For Use on the QC Data Reporting Forms	
a¹	The spike recovery and/or RPD for matrix spike and matrix spike duplicates cannot be evaluated due to insufficient spiking level compared to the elevated sample analyte concentration.
b¹	The RPD cannot be computed because the sample and/or duplicate concentration was below the RDL.

¹ Used as footnote designations on the QC summary form.

Lockheed Analytical Services
DATA QUALIFIERS FOR ORGANIC ANALYSES

[Revised 02/09/1996]

For Use On The Analytical Data Reporting Forms	
A	<i>For CLP analyses Only</i> -- The TIC is a suspected aldol-condensation product.
B	Any constituent that was also detected in the associated blank whose concentration was greater than the practical or reporting detection limit (PQL or RDL).
C	Constituent confirmed by GC/MS analysis. [<i>pesticide/PCB analyses only</i>]
D	Constituent detected in the diluted sample. It also indicates that an accurate quantitation is not possible due to <u>surrogates</u> being diluted out of the samples during the course of the analysis.
E	Constituent concentration exceeded the calibration range.
G	The quantitation is not gasoline or diesel but believed to be some other combination of hydrocarbons.
H	Sample analysis performed outside of method- or client-specified maximum holding time requirement.
J	<i>Estimated value</i> -- (1) constituent detected at a level less than the RDL or PQL and greater than or equal to the MDL; (2) estimated concentration for TICs (<i>For CLP Reporting Only</i>).
N	<i>For CLP Reporting Only</i> -- Tentatively identified constituents (TICs) identified based on mass spectral library search.
NQ	Analyte detected, but Not Quantified; see result from subsequent analysis
P	<i>For CLP Reporting Only</i> -- The percent difference between the concentrations detected on both GC columns was greater than 25 percent [<i>pesticide/PCB analyses only</i>].
U	<i>For CLP Reporting Only</i> -- Constituent was analyzed for but not detected (sample quantitation must be corrected for dilution and percent moisture).
X, Y, or Z	Analyst-defined qualifier.
N/A (% Moisture)	N/A in the % moisture cell indicates that data are reported on an "as received" basis. A value in the % moisture cell indicates that data are reported based on a "dry weight" basis.
For Use On The QC Data Reporting Forms	
*	QC data (i.e., percent recovery data for matrix spike, matrix spike duplicate, laboratory control standard, or surrogates; and RPD for matrix spike duplicate or unspiked duplicate) exceeded acceptance limits.
a ¹	The spike recovery and/or RPD for matrix spike and matrix spike duplicates cannot be evaluated due to insufficient spiking level compared to the elevated sample analyte concentration.
b ¹	The RPD cannot be computed because the sample and/or duplicate concentration was below the RDL.

¹ Used as footnote designations on the QC Summary Form.

SAMPLE LOGIN AND CHAIN OF CUSTODY

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

LABORATORY	CLIENT	COLLECTOR	RECEIVED	ISSUE
Sample Number	Sample Number	Date	Date	PK Date
L8849-23	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
* L8849-24	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-113				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-25	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: 130				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-26	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-27	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
* L8849-28	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-114				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-30	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (Ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Sample ID	Sample Number	Collect Date	Receive Date	Release Date
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* L8849-16	97BPXLIB6SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-111				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-17	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-18	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-19	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
* L8849-20	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-112				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-21	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-22	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Contract Date	Received Date	Due PR Date
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Soil	4	S	7196 CHROMIUM (VI)	Hold:15-FEB-97
Soil	4	S	7471 MERCURY	Hold:14-MAR-97
Soil	4	S	PERCENT SOLIDS	Hold:19-FEB-97

L8849-9	97BPXLIB6SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4;
 Location: RFG19-15B
 Soil 4 S 8260 VOLATILES Hold:01-MAR-97

L8849-10	97BPXLIB6SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4;
 Location: RFG19-15B
 Soil 4 S 8270 SEMI-VOLATILES Hold:01-MAR-97
 Soil 4 S AK 102.0 DRO Hold:01-MAR-97

L8849-11	97BPXLIB6SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4;
 Location: RFG19-15B
 Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97

* L8849-12	97BPXLIB6SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4, As, Ba, Cr, Cd
 Location: L8849-110
 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97
 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97
 Soil 4 S 7471 MERCURY Hold:15-MAR-97
 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97

L8849-13	97BPXLIB6SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4;
 Location: RFG19-15B
 Soil 4 S 8260 VOLATILES Hold:01-MAR-97

L8849-14	97BPXLIB6SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4;
 Location: RFG19-15B
 Soil 4 S 8270 SEMI-VOLATILES Hold:01-MAR-97
 Soil 4 S AK 102.0 DRO Hold:01-MAR-97

L8849-15	97BPXLIB6SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4;
 Location: RFG19-15B
 Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97

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Revised

LOCKHEED ANALYTICAL SERVICES
LOGIN CHAIN OF CUSTODY REPORT (In01)
Feb 21 1997, 01:47 pm

Login Number: L8849
Account: 471 Montgomery Watson * Anchorage, AK
Project: LIBERTY ISLAND

Laboratory	Sample Number	Contract	Received	Date	PR Date	
L8849-1	97BPXLIB3SD01(01)			14-FEB-97	19-FEB-97	26-FEB-97
Temp 4;						
Location: RFG19-15B						
Soil	4	S 8260 VOLATILES		Hold:28-FEB-97		
L8849-2	97BPXLIB3SD01(01)			14-FEB-97	19-FEB-97	26-FEB-97
Temp 4;						
Location: RFG19-15B						
Soil	4	S 8270 SEMI-VOLATILES		Hold:28-FEB-97		
Soil	4	S AK 102.0 DRO		Hold:28-FEB-97		
L8849-3	97BPXLIB3SD01(01)			14-FEB-97	19-FEB-97	26-FEB-97
Temp 4;						
Location: RFG19-15B						
Soil	4	S 415.2 CARBON (TOC)		Hold:14-MAR-97		
* L8849-4	97BPXLIB3SD01(01)			14-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd						
Location: L8849-108						
Soil	4	S 6020 ICP-MS METALS		Hold:13-AUG-97		
Soil	4	S 7196 CHROMIUM (VI)		Hold:15-FEB-97		
Soil	4	S 7471 MERCURY		Hold:14-MAR-97		
Soil	4	S PERCENT SOLIDS		Hold:19-FEB-97		
L8849-5	97BPXLIB3SD02(08)			14-FEB-97	19-FEB-97	26-FEB-97
Temp 4;						
Location: RFG19-15B						
Soil	4	S 8260 VOLATILES		Hold:28-FEB-97		
L8849-6	97BPXLIB3SD02(08)			14-FEB-97	19-FEB-97	26-FEB-97
Temp 4;						
Location: RFG19-15B						
Soil	4	S 8270 SEMI-VOLATILES		Hold:28-FEB-97		
Soil	4	S AK 102.0 DRO		Hold:28-FEB-97		
L8849-7	97BPXLIB3SD02(08)			14-FEB-97	19-FEB-97	26-FEB-97
Temp 4;						
Location: RFG19-15B						
Soil	4	S 415.2 CARBON (TOC)		Hold:14-MAR-97		
L8849-8	97BPXLIB3SD02(08)			14-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd						
Location: L8849-109						
Soil	4	S 6020 ICP-MS METALS		Hold:13-AUG-97		

* Inorg Correction

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LOCKHEED ANALYTICAL SERVICES
LOGIN CHAIN OF CUSTODY REPORT (ln01)
Feb 27 1997, 07:58 am

Login Number: L8849
Account: 471 Montgomery Watson * Anchorage, AK
Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due Date
L8849-129 Temp 4; BaSO4; ALSO L8849-87 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
		Hold:15-AUG-97		
L8849-130 Temp 4; BaSO4; ALSO L8849-97 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIB8SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
		Hold:15-AUG-97		
L8849-131 Temp 4; BaSO4; ALSO L8849-101 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIB8SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
		Hold:14-AUG-97		
L8849-132 Temp 4; BaSO4; ALSO L8849-105 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIC4SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
		Hold:14-AUG-97		

Signature: _____

Date: _____

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 27 1997, 07:58 am

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L8849-120 Temp 4; BaSO4; ALSO L8849-52 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIC4SD02 (08)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:14-AUG-97
L8849-121 Temp 4; BaSO4; ALSO L8849-55 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIA4SD01 (01)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:14-AUG-97
L8849-122 Temp 4; BaSO4; ALSO L8849-59 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIA4SD02 (08)	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:15-AUG-97
L8849-123 Temp 4; BaSO4; ALSO L8849-63 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIA6SD01 (01)	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:15-AUG-97
L8849-124 Temp 4; BaSO4; ALSO L8849-67 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIA6SD02 (08)	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:15-AUG-97
L8849-125 Temp 4; BaSO4; ALSO L8849-71 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIA6SD62 (08)	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:15-AUG-97
L8849-126 Te; ALSOL8849-75 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIA8SD02 (08)	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:15-AUG-97
L8849-127 Temp 4; BaSO4; ALSO L8849-79 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIA8SD01 (01)	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:15-AUG-97
L8849-128 Temp 4; BaSO4; ALSO L8849-83 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIA10SD01 (01)	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:15-AUG-97

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 27 1997, 07:58 am

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L8849-111 Temp 4; BaSO ₄ ; ALSO L8849-16 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIB6SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:14-AUG-97				
L8849-112 Temp 4; BaSO ₄ ; ALSO L8849-20 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:14-AUG-97				
L8849-113 Temp 4; BaSO ₄ ; ALSO L8849-24 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:14-AUG-97				
L8849-114 Temp 4; BaSO ₄ ; ALSO L8849-28 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:14-AUG-97				
L8849-115 Temp 4; BaSO ₄ ; ALSO L8849-32 Location: 133 Soil 4 S 6020 BARIUM	97BPXLII1SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:14-AUG-97				
L8849-116 Temp 4; BaSO ₄ ; ALSO L8849-36 Location: 133 Soil 4 S 6020 BARIUM	97BPXLII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:14-AUG-97				
L8849-117 Temp 4; BaSO ₄ ; ALSO L8849-40 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:14-AUG-97				
L8849-118 Temp 4; BaSO ₄ ; ALSO L8849-43 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:14-AUG-97				
L8849-119 Temp 4; BaSO ₄ ; ALSO L8849-48 Location: 133 Soil 4 S 6020 BARIUM	97BPXLIC2SD61(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:14-AUG-97				

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L8849-104 Temp 4; Location: RFG19-15B Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97	97BPXLIC4SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-105 Temp 4, As, Ba, Cr, Cd Location: L8849-132 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97 Soil 4 S 7471 MERCURY Hold:15-MAR-97 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97	97BPXLIC4SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-106 N-slope Location: Water 1 S DEFAULT Water 1 S EDD - DISK DEL. Water 1 S GC2 Water 1 S GCMS2 Water 1 S INORG TYPE 2 RPT Water 1 S WOLF	REPORT TYPE	19-FEB-97	19-FEB-97	26-FEB-97
L8849-107 Temp 4; Location: RFG19-6B Soil 4 S 8260 VOLATILES Hold:01-MAR-97	97BPXLI11SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-108 Temp 4; BaSO4; ALSO L8849-4 Location: 133 Soil 4 S 6020 BARIUM Hold:13-AUG-97	97BPXLIB3SD01(01)	14-FEB-97	19-FEB-97	26-FEB-97
L8849-109 Temp 4; BaSO4; ALS L8849-8 Location: 133 Soil 4 S 6020 BARIUM Hold:13-AUG-97	97BPXLIB3SD02(08)	14-FEB-97	19-FEB-97	26-FEB-97
L8849-110 Temp 4; BaSO4; ALSO L8849-12 Location: 133 Soil 4 S 6020 BARIUM Hold:14-AUG-97	97BPXLIB6SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97

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Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
L8849-97	97BPXLIB8SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-130				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-98	97BPXLIB8SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-6B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-99	97BPXLIB8SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-100	97BPXLIB8SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
L8849-101	97BPXLIB8SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-131				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-102	97BPXLIC4SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-6B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-103	97BPXLIC4SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		

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L8849-88 Temp 4; Location: RFG19-145C Soil 4 S 8260 VOLATILES	97BPXLITB21697	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:02-MAR-97
L8849-89 Temp 4; Location: RFG18-48A3 Soil 4 S NONE	97BPXLITB21697	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:26-FEB-97
L8849-90 Temp 4; Location: RFG18-47A3 Soil 4 S NONE	97BPXLITB21697	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:26-FEB-97
L8849-91 Temp 4; Location: 130 Water 1 S 8260 VOLATILES	97BPXLI021497	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:02-MAR-97
L8849-92 Temp 4; Location: RFG18-47A3 Water 1 S NONE	97BPXLI021497	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:26-FEB-97
L8849-93 Temp 4; Location: RFG18-47A3 Water 1 S NONE	97BPXLI021497	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:26-FEB-97
L8849-94 Temp 4; Location: RFG19-6B Soil 4 S 8260 VOLATILES	97BPXLIB8SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:01-MAR-97
L8849-95 Temp 4; Location: RFG19-124B Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO	97BPXLIB8SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:01-MAR-97 Hold:01-MAR-97
L8849-96 Temp 4; Location: RFG19-124B	97BPXLIB8SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97

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Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L8849-81	97BPXLIA10SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-82	97BPXLIA10SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
L8849-83	97BPXLIA10SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-128				
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-84	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-6B				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-85	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-86	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
L8849-87	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-129				
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		

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L8849-74 Temp 4; Location: RFG19-124B Soil	97BPXLIASD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
4 S 415.2 CARBON (TOC)		Hold:16-MAR-97		
L8849-75 Temp 4, As, Ba, Cr, Cd Location: L8849-126 Soil	97BPXLIASD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
4 S 6020 ICP-MS METALS		Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-76 Temp 4; Location: RFG19-34B Soil	97BPXLIASD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
4 S 8260 VOLATILES		Hold:02-MAR-97		
L8849-77 Temp 4; Location: RFG19-124B Soil	97BPXLIASD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
4 S 8270 SEMI-VOLATILES		Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-78 Temp 4; Location: RFG19-124B Soil	97BPXLIASD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
4 S 415.2 CARBON (TOC)		Hold:16-MAR-97		
L8849-79 Temp 4, As, Ba, Cr, Cd Location: L8849-127 Soil	97BPXLIASD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
4 S 6020 ICP-MS METALS		Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-80 Temp 4; Location: 130 Soil	97BPXLIASD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
4 S 8260 VOLATILES		Hold:02-MAR-97		

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Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L8849-67	97BPXLIA6SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-124				
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-68	97BPXLIA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-34B				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-69	97BPXLIA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-70	97BPXLIA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
L8849-71	97BPXLIA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-125				
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-72	97BPXLIA8SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-34B				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-73	97BPXLIA8SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		

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Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-60	97BPXLIA6SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-34B				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-61	97BPXLIA6SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-62	97BPXLIA6SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
L8849-63	97BPXLIA6SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-123				
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-64	97BPXLIA6SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-34B				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-65	97BPXLIA6SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-66	97BPXLIA6SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		

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Sample Number	Sample Number	Date	Date	PR Date
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-53	97BPXLIA4SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
*MS/MSD Temp 4;				
Location: RFG19-34B				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-54	97BPXLIA4SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-55	97BPXLIA4SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-121				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-56	97BPXLIA4SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-52A				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-57	97BPXLIA4SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-58	97BPXLIA4SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
L8849-59	97BPXLIA4SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-122				
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		

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L8849-45 Temp 4; Location: RFG19-52A Soil 4 S 8260 VOLATILES	97BPXLIC2SD61(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:01-MAR-97				
L8849-46 Temp 4; Location: RFG19-124B Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO	97BPXLIC2SD61(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:01-MAR-97 Hold:01-MAR-97				
L8849-47 Temp 4; Location: RFG19-124B Soil 4 S 415.2 CARBON (TOC)	97BPXLIC2SD61(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:15-MAR-97				
L8849-48 Temp 4, As, Ba, Cr, Cd Location: L8849-119 Soil 4 S 6020 ICP-MS METALS Soil 4 S 7196 CHROMIUM (VI) Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	97BPXLIC2SD61(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:14-AUG-97 Hold:16-FEB-97 Hold:15-MAR-97 Hold:19-FEB-97				
L8849-49 Temp 4; Location: RFG19-52A Soil 4 S 8260 VOLATILES	97BPXLIC4SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:01-MAR-97				
L8849-50 Temp 4; Location: RFG19-124B Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO	97BPXLIC4SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:01-MAR-97 Hold:01-MAR-97				
L8849-51 Temp 4; Location: RFG19-124B Soil 4 S 415.2 CARBON (TOC)	97BPXLIC4SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:15-MAR-97				
L8849-52 Temp 4, As, Ba, Cr, Cd Location: L8849-120 Soil 4 S 6020 ICP-MS METALS	97BPXLIC4SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Hold:14-AUG-97				

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L8849-38 Temp 4; Location: RFG19-124B Soil 4 S 8270 SEMI-VOLATILES Hold:01-MAR-97 Soil 4 S AK 102.0 DRO Hold:01-MAR-97	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-39 Temp 4; Location: RFG19-124B Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-40 Temp 4, As, Ba, Cr, Cd Location: L8849-117 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97 Soil 4 S 7471 MERCURY Hold:15-MAR-97 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-41 Temp 4; Location: RFG19-52A Soil 4 S 8260 VOLATILES Hold:01-MAR-97	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-42 Temp 4; Location: RFG19-124B Soil 4 S 8270 SEMI-VOLATILES Hold:01-MAR-97 Soil 4 S AK 102.0 DRO Hold:01-MAR-97	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-43 Temp 4; Location: RFG19-124B Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-44 Temp 4, As, Ba, Cr, Cd Location: L8849-118 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97 Soil 4 S 7471 MERCURY Hold:15-MAR-97 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97

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L8849-31 Temp 4; Location: RFG19-15B Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97	97BPXLIII1SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-32 Temp 4, As, Ba, Cr, Cd Location: L8849-115 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97 Soil 4 S 7471 MERCURY Hold:15-MAR-97 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97	97BPXLIII1SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-33 Temp 4; Location: RFG19-17B Soil 4 S 8260 VOLATILES Hold:01-MAR-97	97BPXLIII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-34 Temp 4; Location: RFG19-15B Soil 4 S 8270 SEMI-VOLATILES Hold:01-MAR-97 Soil 4 S AK 102.0 DRO Hold:01-MAR-97	97BPXLIII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-35 Temp 4; Location: RFG19-15B Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97	97BPXLIII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-36 Temp 4, As, Ba, Cr, Cd Location: L8849-116 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97 Soil 4 S 7471 MERCURY Hold:15-MAR-97 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97	97BPXLIII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-37 Temp 4; Location: RFG19-52A Soil 4 S 8260 VOLATILES Hold:01-MAR-97	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97

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Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L8849-23 Temp 4; Location: RFG19-15B Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-24 Temp 4, As, Ba, Cr, Cd Location: L8849-113 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97 Soil 4 S 7471 MERCURY Hold:15-MAR-97 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-25 Temp 4; Location: RFG19-17B Soil 4 S 8260 VOLATILES Hold:01-MAR-97	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-26 Temp 4; Location: RFG19-15B Soil 4 S 8270 SEMI-VOLATILES Hold:01-MAR-97 Soil 4 S AK 102.0 DRO Hold:01-MAR-97	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-27 Temp 4; Location: RFG19-15B Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-28 Temp 4, As, Ba, Cr, Cd Location: L8849-114 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97 Soil 4 S 7471 MERCURY Hold:15-MAR-97 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-30 Temp 4; Location: RFG19-15B Soil 4 S 8270 SEMI-VOLATILES Hold:01-MAR-97 Soil 4 S AK 102.0 DRO Hold:01-MAR-97	97BPXLIII1SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97

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Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L8849-16	97BPXLIB6SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-111				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-17	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-18	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-19	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
L8849-20	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-112				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-21	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-22	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		

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Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
Soil	4 S 7196 CHROMIUM (VI)	Hold:15-FEB-97		
Soil	4 S 7471 MERCURY	Hold:14-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-9	97BPXLIB6SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-10	97BPXLIB6SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-11	97BPXLIB6SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
L8849-12	97BPXLIB6SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-110				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-13	97BPXLIB6SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-14	97BPXLIB6SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-15	97BPXLIB6SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-15B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		

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Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L8849-1 *MS/MSD Temp 4; Location: RFG19-15B Soil 4 S 8260 VOLATILES	97BPXLIB3SD01(01)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:28-FEB-97
L8849-2 Temp 4; Location: RFG19-15B Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO	97BPXLIB3SD01(01)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:28-FEB-97
				Hold:28-FEB-97
L8849-3 Temp 4; Location: RFG19-15B Soil 4 S 415.2 CARBON (TOC)	97BPXLIB3SD01(01)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:14-MAR-97
L8849-4 Temp 4, As, Ba, Cr, Cd Location: L8849-108 Soil 4 S 6020 ICP-MS METALS Soil 4 S 7196 CHROMIUM (VI) Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	97BPXLIB3SD01(01)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:13-AUG-97
				Hold:15-FEB-97
				Hold:14-MAR-97
				Hold:19-FEB-97
L8849-5 Temp 4; Location: RFG19-15B Soil 4 S 8260 VOLATILES	97BPXLIB3SD02(08)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:28-FEB-97
L8849-6 Temp 4; Location: RFG19-15B Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO	97BPXLIB3SD02(08)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:28-FEB-97
				Hold:28-FEB-97
L8849-7 Temp 4; Location: RFG19-15B Soil 4 S 415.2 CARBON (TOC)	97BPXLIB3SD02(08)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:14-MAR-97
L8849-8 Temp 4, As, Ba, Cr, Cd Location: L8849-109 Soil 4 S 6020 ICP-MS METALS	97BPXLIB3SD02(08)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:13-AUG-97

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Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due Date
L8849-37 Temp 4; Location: RFG01-42B Soil 4 S 8260 VOLATILES Hold:01-MAR-97	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-38 Temp 4; Location: 124 Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO Hold:01-MAR-97 Hold:01-MAR-97	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-39 Temp 4; Location: RFG01-42B Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-40 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-42B Soil 4 S 6020 BARIUM Soil 4 S 6020 ICP-MS METALS Soil 4 S 7196 CHROMIUM (VI) Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS Hold:14-AUG-97 Hold:14-AUG-97 Hold:16-FEB-97 Hold:15-MAR-97 Hold:19-FEB-97	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-41 Temp 4; Location: RFG01-42B Soil 4 S 8260 VOLATILES Hold:01-MAR-97	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-42 Temp 4; Location: 124 Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO Hold:01-MAR-97 Hold:01-MAR-97	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-43 Temp 4; Location: RFG01-42B Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-44 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-42B	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97

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Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
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Laboratory Sample Number	Staff Sample Number	Collect Date	Receipt Date	Due Date
Soil	4 S 6020 BARIUM	Hold:14-AUG-97		
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-45 97BPXLIC2SD61(08) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-42B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-46 97BPXLIC2SD61(08) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: 124				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-47 97BPXLIC2SD61(08) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-42B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
L8849-48 97BPXLIC2SD61(08) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4, As, Ba, Cr, Cd, BaSO4				
Location: RFG01-42B				
Soil	4 S 6020 BARIUM	Hold:14-AUG-97		
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-49 97BPXLIC4SD02(08) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-42B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-50 97BPXLIC4SD02(08) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-42B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		

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Login Number: L8849
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Apparatory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L8849-51 Temp 4; Location: RFG01-42B Soil	97BPXLIC4SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
L8849-52 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-42B Soil	97BPXLIC4SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
	4 S 6020 BARIUM	Hold:14-AUG-97		
	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
	4 S 7471 MERCURY	Hold:15-MAR-97		
	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-53 Temp 4; Location: RFG01-9C Soil	97BPXLIA4SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-54 Temp 4; Location: RFG01-9C Soil	97BPXLIA4SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-55 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-9C Soil	97BPXLIA4SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
	4 S 6020 BARIUM	Hold:15-AUG-97		
	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
	4 S 7471 MERCURY	Hold:16-MAR-97		
	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-56 Temp 4; Location: RFG01-9C Soil	97BPXLIA4SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-57 Temp 4; Location: RFG01-9C Soil	97BPXLIA4SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		

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Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory	Client	Collector	Receive	Date
Sample Number	Sample Number	Date	Date	Date

Soil	4	S AK 102.0 DRO		Hold:02-MAR-97
L8849-58 97BPXLIA4SD02(08) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-9C				
Soil	4	S 415.2 CARBON (TOC)		Hold:16-MAR-97
L8849-59 97BPXLIA4SD02(08) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4, As, Ba, Cr, Cd, BaSO4				
Location: RFG01-9C				
Soil	4	S 6020 BARIUM		Hold:15-AUG-97
Soil	4	S 6020 ICP-MS METALS		Hold:15-AUG-97
Soil	4	S 7196 CHROMIUM (VI)		Hold:17-FEB-97
Soil	4	S 7471 MERCURY		Hold:16-MAR-97
Soil	4	S PERCENT SOLIDS		Hold:19-FEB-97
L8849-60 97BPXLIA6SD01(01) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-9C				
Soil	4	S 8260 VOLATILES		Hold:02-MAR-97
L8849-61 97BPXLIA6SD01(01) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-9C				
Soil	4	S 8270 SEMI-VOLATILES		Hold:02-MAR-97
Soil	4	S AK 102.0 DRO		Hold:02-MAR-97
L8849-62 97BPXLIA6SD01(01) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-9C				
Soil	4	S 415.2 CARBON (TOC)		Hold:16-MAR-97
L8849-63 97BPXLIA6SD01(01) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4, As, Ba, Cr, Cd, BaSO4				
Location: RFG01-9C				
Soil	4	S 6020 BARIUM		Hold:15-AUG-97
Soil	4	S 6020 ICP-MS METALS		Hold:15-AUG-97
Soil	4	S 7196 CHROMIUM (VI)		Hold:17-FEB-97
Soil	4	S 7471 MERCURY		Hold:16-MAR-97
Soil	4	S PERCENT SOLIDS		Hold:19-FEB-97
L8849-64 97BPXLIA6SD02(08) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-9C				

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Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory	Client	Collection	Receive	Due
Sample Number	Sample Number	Date	Date	PR Date
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-65	97BPXLIA6SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-66	97BPXLIA6SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
L8849-67	97BPXLIA6SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd, BaSO4				
Location: RFG01-9C				
Soil	4 S 6020 BARIUM	Hold:15-AUG-97		
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-68	97BPXLIA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-69	97BPXLIA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-70	97BPXLIA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
L8849-71	97BPXLIA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd, BaSO4				
Location: RFG01-9C				
Soil	4 S 6020 BARIUM	Hold:15-AUG-97		
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		

021447

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (Ln01)
 Feb 19 1997, 06:38 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory	Client	Collect	Receive	Due
Sample Number	Sample Number	Date	Date	PR Date
Soil	4 S 7471 MERCURY			Hold:16-MAR-97
Soil	4 S PERCENT SOLIDS			Hold:19-FEB-97
L8849-72	97BPXLIA8SD02 (08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES			Hold:02-MAR-97
L8849-73	97BPXLIA8SD02 (08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8270 SEMI-VOLATILES			Hold:02-MAR-97
Soil	4 S AK 102.0 DRO			Hold:02-MAR-97
L8849-74	97BPXLIA8SD02 (08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 415.2 CARBON (TOC)			Hold:16-MAR-97
L8849-75	97BPXLIA8SD02 (08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd, BaSO4				
Location: RFG01-9C				
Soil	4 S 6020 BARIUM			Hold:15-AUG-97
Soil	4 S 6020 ICP-MS METALS			Hold:15-AUG-97
Soil	4 S 7196 CHROMIUM (VI)			Hold:17-FEB-97
Soil	4 S 7471 MERCURY			Hold:16-MAR-97
Soil	4 S PERCENT SOLIDS			Hold:19-FEB-97
L8849-76	97BPXLIA8SD01 (01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES			Hold:02-MAR-97
L8849-77	97BPXLIA8SD01 (01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8270 SEMI-VOLATILES			Hold:02-MAR-97
Soil	4 S AK 102.0 DRO			Hold:02-MAR-97
L8849-78	97BPXLIA8SD01 (01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 415.2 CARBON (TOC)			Hold:16-MAR-97

CJ1947

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (Ln01)
 Feb 19 1997, 06:38 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

LABORATORY	CLIENT	COLLECT	RECEIVE	DATE
Sample Number	Sample Number	Date	Date	PR Date
L8849-79	97BPXLIA8SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd, BaSO4				
Location: RFG01-9C				
Soil	4 S 6020 BARIUM	Hold:15-AUG-97		
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-80	97BPXLIA10SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-81	97BPXLIA10SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-82	97BPXLIA10SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
L8849-83	97BPXLIA10SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd, BaSO4				
Location: RFG01-9C				
Soil	4 S 6020 BARIUM	Hold:15-AUG-97		
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-84	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-85	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		

021447

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 19 1997, 06:38 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due Date
L8849-86 Temp 4; Location: RFG01-9C Soil 4 S 415.2 CARBON (TOC)	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:16-MAR-97
L8849-87 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-9C Soil 4 S 6020 BARIUM Soil 4 S 6020 ICP-MS METALS Soil 4 S 7196 CHROMIUM (VI) Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:15-AUG-97 Hold:15-AUG-97 Hold:17-FEB-97 Hold:16-MAR-97 Hold:19-FEB-97
L8849-88 Temp 4; Location: RFG18-48A3 Soil 4 S 8260 VOLATILES	97BPXLITB21697	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:02-MAR-97
L8849-89 Temp 4; Location: RFG18-48A3 Soil 4 S NONE	97BPXLITB21697	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:26-FEB-97
L8849-90 Temp 4; Location: RFG18-47A3 Soil 4 S NONE	97BPXLITB21697	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:26-FEB-97
L8849-91 Temp 4; Location: RFG18-47A3 Water 1 S 8260 VOLATILES	97BPXLI021497	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:02-MAR-97
L8849-92 Temp 4; Location: RFG18-47A3 Water 1 S NONE	97BPXLI021497	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:26-FEB-97
L8849-93 Temp 4; Location: RFG18-47A3 Water 1 S NONE	97BPXLI021497	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:26-FEB-97

0219471

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (1n01)
 Feb 19 1997, 06:38 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L8849-94 Temp 4; Location: RFG01-9C Soil 4 S 8260 VOLATILES	97BPXLIB8SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:01-MAR-97
L8849-95 Temp 4; Location: RFG01-9C Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO	97BPXLIB8SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:01-MAR-97
				Hold:01-MAR-97
L8849-96 Temp 4; Location: RFG01-9C Soil 4 S 415.2 CARBON (TOC)	97BPXLIB8SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:15-MAR-97
L8849-97 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-9C Soil 4 S 6020 BARIUM Soil 4 S 6020 ICP-MS METALS Soil 4 S 7196 CHROMIUM (VI) Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	97BPXLIB8SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:14-AUG-97
				Hold:14-AUG-97
				Hold:16-FEB-97
				Hold:15-MAR-97
				Hold:19-FEB-97
L8849-98 Temp 4; Location: RFG01-9C Soil 4 S 8260 VOLATILES	97BPXLIB8SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:01-MAR-97
L8849-99 Temp 4; Location: RFG01-9C Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO	97BPXLIB8SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:01-MAR-97
				Hold:01-MAR-97
L8849-100 Temp 4; Location: RFG01-9C Soil 4 S 415.2 CARBON (TOC)	97BPXLIB8SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:15-MAR-97
L8849-101 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-9C	97BPXLIB8SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97

0219471

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 19 1997, 06:38 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due Date
Soil 4	S 6020 BARIUM		Hold:14-AUG-97	
Soil 4	S 6020 ICP-MS METALS		Hold:14-AUG-97	
Soil 4	S 7196 CHROMIUM (VI)		Hold:16-FEB-97	
Soil 4	S 7471 MERCURY		Hold:15-MAR-97	
Soil 4	S PERCENT SOLIDS		Hold:19-FEB-97	
L8849-102 97BPXLIC4SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-9C				
Soil 4	S 8260 VOLATILES		Hold:01-MAR-97	
L8849-103 97BPXLIC4SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-9C				
Soil 4	S 8270 SEMI-VOLATILES		Hold:01-MAR-97	
Soil 4	S AK 102.0 DRO		Hold:01-MAR-97	
L8849-104 97BPXLIC4SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-9C				
Soil 4	S 415.2 CARBON (TOC)		Hold:15-MAR-97	
L8849-105 97BPXLIC4SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4, As, Ba, Cr, Cd, BaSO4				
Location: RFG01-9C				
Soil 4	S 6020 BARIUM		Hold:14-AUG-97	
Soil 4	S 6020 ICP-MS METALS		Hold:14-AUG-97	
Soil 4	S 7196 CHROMIUM (VI)		Hold:16-FEB-97	
Soil 4	S 7471 MERCURY		Hold:15-MAR-97	
Soil 4	S PERCENT SOLIDS		Hold:19-FEB-97	
L8849-106 REPORT TYPE 19-FEB-97 19-FEB-97 26-FEB-97				
N-slope				
Location:				
Water 1	S DEFAULT			
Water 1	S EDD - DISK DEL.			
Water 1	S GC2			
Water 1	S GCMS2			
Water 1	S INORG TYPE 2 RPT			
Water 1	S WOLF			
L8849-107 97BPLI11SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-42B				

0219471

LOCKHEED ANALYTICAL SERVICES
LOGIN CHAIN OF CUSTODY REPORT (ln01)
Feb 19 1997, 06:38 pm

Login Number: L8849
Account: 471 Montgomery Watson * Anchorage, AK
Project: LIBERTY ISLAND

Laboratory	Client	Collect	Receive	Due
Sample Number	Sample Number	Date	Date	PR Date

Soil 4 S 8260 VOLATILES Hold:01-MAR-97

Signature: Hal Alunan
Date: 2-19-97

021945



MONTGOMERY WATSON

C of C, #97-LI2

Page 1 of 2

BP EXPLORATION (ALAS. 1) INC. LIBERTY ISLAND PIPELINE SEDIMENT AND WATER SAMPLING

CP849

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: LOCKHEED, Attn: MARY WOLFE		TOTAL NO. OF CON- TAINERS	WATER			REMARKS
SAMPLERS: (Signature) 1987 WL [Signature]		[Signature]			TSS, EPA 160.2	VOC, 8260A 2-2 OZ	SVOC(8270B), DRO (8100M), TOC (415.1), 8 OZ.	
DATE	TIME	S/W	Sample ID					
2/14	2300	SED	97BPXLIB3SD0101	4	X	X	X	
2/14	2330	SED	97BPXLIB3SD0108	4				
2/15	0120	SED	97BPXLIB6SD0101	4				
2/15	0145	SED	97BPXLIB6SD0208	4				
2/15	0900	SED	97BPXLIB10SD01(07)	4				
2/15	0930	SED	97BPXLIB10SD02(08)	4				
2/15	1000	SED	97BPXLIB10SD62(08)	4				
2/15	1400	SED	97BPXLII1SD01(01)	4				
2/15	1445	SED	97BPXLII1SD02(08)	4				
2/15	2220	SED	97BPXLIC2SD01(01)	4				
2/15	2240	SED	97BPXLIC2SD02(08)	4				
2/15	2300	SED	97BPXLIC2SD61(08)	4				
2/15	1800	SED	97BPXLIC4SD02(08)	4				
2/15	1730	SED	97BPXLIC4SD01(08)	4				
2/16	1130	SED	97BPXLIA4SD01(01)	3				
2/16	1200	SED	97BPXLIA4SD02(08)	4				
2/16	0930	SED	97BPXLEA6SD01(01)	4	X	X	X	
Relinquished by: [Signature]		Date/Time: 2/10/97 1200	Shipped via: FedEx 3842059662		Notified: [Signature]			Date/Time
Received for Laboratory by: [Signature]				Date: 02-19-97			Time: 09 45	

(SEA)

126710



MONTGOMERY WATSON

C of C, #97-LI2

Page 2 of 2

BP EXPLORATION (ALASKA) INC.
LIBERTY ISLAND PIPELINE SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

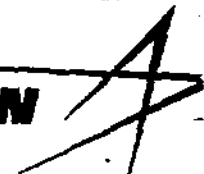
CHAIN OF CUSTODY FORM

LF49

PROJ. NO. 1189002.280101		To: LOCKHEED, Attn: MARY WOLFE		TOTAL NO. OF CON- TAINERS	WATER			REMARKS
SAMPLERS: (Signature) 1997 <i>W. J. [Signature]</i>					TSS, EPA 160.2	VOC, 8260A 2.2 oz	SVOC (8270B), DRO (8100M), TOC (415.1), 8 OZ.	
DATE	TIME	S/W	Sample ID					
2/16	1000	SED	97BPX LIA6 SD 02 (08)	4	X	X	X	
2/16	1010	SED	97BPX LIA6 SD 62 (08)	4				
2/16	0440	SED	97BPX LIA8 SD 02 (08)	4				
2/16	0430	SED	97BPX LIA8 SD 01 (01)	4				
2/16	0130	SED	97BPX LIA10 SD 01 (01)	4				
2/16	0150	SED	97BPX LIA10 SD 02 (08)	4	X	X	X	
2/16	1900	W	97 BPX LI TB 216 97	3	X			
2/14	1900	W	97 BPX LI 0214 97	3	X			
<i>[Signature]</i>								
Relinquished by: <i>[Signature]</i>		Date/Time 2/18/97 1200		Shipped via FedEx 384 2009652		Notified: Date/Time		
Received for Laboratory by: <i>[Signature]</i>				Date: 02-19-97		Time: 08:45		

121310

LOCKHEED MARTIN



Sample Login Login Review Checklist

Lot Number L8849

The login review should be conducted by that person logging in the samples as well as a peer. Please use this checklist to ensure that such reviews occur in a uniform basis. Please sign and date below to verify that a login review has occurred. This checklist should be affixed to each login package prior to distribution.

For effective login review, at a minimum, five reports from the login process are required. These are the COC (or equivalent), the login COC report, the sample summary report, the sample receiving checklist, and the login quotation. Before beginning review, ensure that these five components are available. Jobs with single component samples, the sample summary report may be omitted.

SAMPLE SUMMARY REPORT

	YES	NO	N/A	Comment
1. Are all sample ID's correct?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Are all samples present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. Are all matrices indicated correctly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. Are all analyses on the COC logged in for the appropriate samples?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. Are all analyses logged in for the correct container?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. Are samples logged in according to LAS batching procedures?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

LOGIN CHAIN OF CUSTODY

	YES	NO	N/A	Comment
1. Are the collect, receive, and due dates correct for every sample?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Have all appropriate comments been indicated in the comment section?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

SAMPLE RECEIVING CHECKLIST

	YES	NO	N/A	Comment
1. Are all discrepancies between the COC and the login noted (if applicable)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Gail E. Cickerman 2-19-97
primary review signature date

[Signature] 2-19-97
secondary review signature date

0219471

Sample Receiving Checklist

Client Name: *Matheson Industrial*

Job No. *6897*

Cooler ID: *6897*

COOLER CONDITION UPON RECEIPT

Temperature of cooler upon receipt: *4°*
temperature of temp. blank upon receipt: *2°*

	Yes	No	* Comments/Discrepancies
custody seals intact	<input checked="" type="checkbox"/>		
chain of custody present	<input checked="" type="checkbox"/>		
blue ice (or equiv.) present/frozen	<input checked="" type="checkbox"/>		
rad survey completed	<input checked="" type="checkbox"/>		

SAMPLE CONDITION UPON RECEIPT

	Yes	No	* Comments/Discrepancies
all bottles labeled	<input checked="" type="checkbox"/>		
samples intact	<input checked="" type="checkbox"/>		
proper container used for sample type	<input checked="" type="checkbox"/>		
sample volume sufficient for analysis	<input checked="" type="checkbox"/>		
proper pres. indicated on the COC	<input checked="" type="checkbox"/>		
VOA's contain headspace	<input checked="" type="checkbox"/>		
are samples bi-phasic (if so, indicate sample ID'S):			<i>97 BPX L 4021497</i>

MISCELLANEOUS ITEMS

	Yes	No	* Comments/Discrepancies
samples with short holding times		<input checked="" type="checkbox"/>	
samples to subcontract		<input checked="" type="checkbox"/>	

ADDITIONAL COMMENTS/DISCREPANCIES *several bottles not listed on COC - 97BPX L C 45D0101 (4 bottles) is listed on COC as 97BPX L C 45D0101 (4 bottles) = 12 total*

Completed by / date: *[Signature] - 102-18-97*

Sent to the client (date/initials): *[Signature]* ** Client's signature upon receipt:

Note: ** contact the appropriate CSR of any discrepancies immediately upon receipt
** please review this information and return via facsimile to the appropriate CSR (702) 361-8146

1Lhb180

Sample Receiving Checklist

Client Name:

Job No.

6849

Cooler ID:

6887

COOLER CONDITION UPON RECEIPT

Temperature of cooler upon receipt: **4°**

temperature of temp. blank upon receipt: **10**

	Yes	No	* Comments/Discrepancies
custody seals intact	<input checked="" type="checkbox"/>		
chain of custody present	<input checked="" type="checkbox"/>		
blue ice (or equiv.) present/frozen	<input checked="" type="checkbox"/>		
rad survey completed	<input checked="" type="checkbox"/>		

SAMPLE CONDITION UPON RECEIPT

	Yes	No	* Comments/Discrepancies
all bottles labeled	<input checked="" type="checkbox"/>		
samples intact	<input checked="" type="checkbox"/>		
proper container used for sample type	<input checked="" type="checkbox"/>		
sample volume sufficient for analysis	<input checked="" type="checkbox"/>		
proper pres. indicated on the COC	<input checked="" type="checkbox"/>		
VOA's contain headspace		<input checked="" type="checkbox"/>	
are samples bi-phasic (if so, indicate sample ID'S):		<input checked="" type="checkbox"/>	

MISCELLANEOUS ITEMS

	Yes	No	* Comments/Discrepancies
samples with short holding times		<input checked="" type="checkbox"/>	
samples to subcontract		<input checked="" type="checkbox"/>	

ADDITIONAL COMMENTS/DISCREPANCIES

Completed by / date: *[Signature]* / **02-19-97**

Sent to the client (date/initials): *[Signature]*

** Client's signature upon receipt:

*Note: ** - contact the appropriate CSR of any discrepancies immediately upon receipt

** - please review this information and return via facsimile to the appropriate CSR (702) 361-8146

1171110

Lockheed Analytical Laboratory
 SAMPLE SUMMARY REPORT (su02)
 Montgomery Watson * Anchorage, AK

Sample Number	Sample Number	Matrix	Method
97BPLIISD01(01)	L8849-107	Soil	8260 VOLATILES
97BPXLI021497	L8849-91	Water	8260 VOLATILES
	L8849-92	Water	NONE
	L8849-93	Water	NONE
97BPXLIA10SD01(01)	L8849-80	Soil	8260 VOLATILES
	L8849-81	Soil	8270 SEMI-VOLATI
	L8849-81	Soil	AK 102.0 DRO
	L8849-82	Soil	415.2 CARBON (TC
	L8849-83	Soil	6020 BARIUM
	L8849-83	Soil	6020 ICP-MS MET/
	L8849-83	Soil	7196 CHROMIUM (V
	L8849-83	Soil	7471 MERCURY PERCENT SOLIDS
97BPXLIA10SD02(08)	L8849-84	Soil	8260 VOLATILES
	L8849-85	Soil	8270 SEMI-VOLATI
	L8849-85	Soil	AK 102.0 DRO
	L8849-86	Soil	415.2 CARBON (TC
	L8849-87	Soil	6020 BARIUM
	L8849-87	Soil	6020 ICP-MS META
	L8849-87	Soil	7196 CHROMIUM (V
	L8849-87	Soil	7471 MERCURY PERCENT SOLIDS
97BPXLIA4SD01(01)	L8849-53	Soil	8260 VOLATILES
	L8849-54	Soil	8270 SEMI-VOLATI
	L8849-54	Soil	AK 102.0 DRO
	L8849-55	Soil	415.2 CARBON (TO
	L8849-55	Soil	6020 BARIUM
	L8849-55	Soil	6020 ICP-MS META
	L8849-55	Soil	7196 CHROMIUM (V
	L8849-55	Soil	7471 MERCURY PERCENT SOLIDS
97BPXLIA4SD02(08)	L8849-56	Soil	8260 VOLATILES
	L8849-57	Soil	8270 SEMI-VOLATI
	L8849-57	Soil	AK 102.0 DRO
	L8849-58	Soil	415.2 CARBON (TO
	L8849-59	Soil	6020 BARIUM
	L8849-59	Soil	6020 ICP-MS META
	L8849-59	Soil	7196 CHROMIUM (V
	L8849-59	Soil	7471 MERCURY PERCENT SOLIDS
97BPXLIA6SD01(01)	L8849-60	Soil	8260 VOLATILES
	L8849-61	Soil	8270 SEMI-VOLATI
	L8849-61	Soil	AK 102.0 DRO
	L8849-62	Soil	415.2 CARBON (TC
	L8849-63	Soil	6020 BARIUM
	L8849-63	Soil	6020 ICP-MS META
	L8849-63	Soil	7196 CHROMIUM (V 7471 MERCURY

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Lockheed Analytical Laboratory
 SAMPLE SUMMARY REPORT (su02)
 Montgomery Watson * Anchorage, AK

Client	Lab	SDG	Matrix	Method
Sample Number	Sample Number	Number		
	L8849-63		Soil	PERCENT SOLIDS
97BPXLIA6SD02(08)	L8849-64		Soil	8260 VOLATILES
	L8849-65		Soil	8270 SEMI-VOLA
	L8849-65		Soil	AK 102.0 DRO
	L8849-66		Soil	415.2 CARBON (
	L8849-67		Soil	6020 BARIUM
	L8849-67		Soil	6020 ICP-MS MET
	L8849-67		Soil	7196 CHROMIUM (
	L8849-67		Soil	7471 MERCURY
	L8849-67		Soil	PERCENT SOLIDS
97BPXLIA6SD62(08)	L8849-68		Soil	8260 VOLATILES
	L8849-69		Soil	8270 SEMI-VOLA
	L8849-69		Soil	AK 102.0 DRO
	L8849-70		Soil	415.2 CARBON (T
	L8849-71		Soil	6020 BARIUM
	L8849-71		Soil	6020 ICP-MS MET
	L8849-71		Soil	7196 CHROMIUM (
	L8849-71		Soil	7471 MERCURY
	L8849-71		Soil	PERCENT SOLIDS
97BPXLIA8SD01(01)	L8849-76		Soil	8260 VOLATILES
	L8849-77		Soil	8270 SEMI-VOLAT
	L8849-77		Soil	AK 102.0 DRO
	L8849-78		Soil	415.2 CARBON
	L8849-79		Soil	6020 BARIUM
	L8849-79		Soil	6020 ICP-MS MET
	L8849-79		Soil	7196 CHROMIUM (
	L8849-79		Soil	7471 MERCURY
	L8849-79		Soil	PERCENT SOLIDS
97BPXLIA8SD02(08)	L8849-72		Soil	8260 VOLATILES
	L8849-73		Soil	8270 SEMI-VOLAT
	L8849-73		Soil	AK 102.0 DRO
	L8849-74		Soil	415.2 CARBON (T
	L8849-75		Soil	6020 BARIUM
	L8849-75		Soil	6020 ICP-MS MET
	L8849-75		Soil	7196 CHROMIUM (V
	L8849-75		Soil	7471 MERCURY
	L8849-75		Soil	PERCENT SOLIDS
97BPXLIB10SD01(01)	L8849-17		Soil	8260 VOLATILES
	L8849-18		Soil	8270 SEMI-VOLAT
	L8849-18		Soil	AK 102.0 DRO
	L8849-19		Soil	415.2 CARBON (TO
	L8849-20		Soil	6020 BARIUM
	L8849-20		Soil	6020 ICP-MS MET
	L8849-20		Soil	7196 CHROMIUM (V
	L8849-20		Soil	7471 MERCURY
	L8849-20		Soil	PERCENT SOLIDS
97BPXLIB10SD02(08)	L8849-21		Soil	8260 VOLATILF
	L8849-22		Soil	8270 SEMI-VOL
	L8849-22		Soil	AK 102.0 DRO

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 SAMPLE SUMMARY REPORT (su02)
 Montgomery Watson * Anchorage, AK

Sample Number	Sample Number	Matrix	Method
	L8849-23	Soil	415.2 CARBON (T
	L8849-24	Soil	6020 BARIUM
	L8849-24	Soil	6020 ICP-MS MET/
	L8849-24	Soil	7196 CHROMIUM (
	L8849-24	Soil	7471 MERCURY
	L8849-24	Soil	PERCENT SOLIDS
97BPXLIB10SD62(08)	L8849-25	Soil	8260 VOLATILES
	L8849-26	Soil	8270 SEMI-VOLAT
	L8849-26	Soil	AK 102.0 DRO
	L8849-27	Soil	415.2 CARBON (T
	L8849-28	Soil	6020 BARIUM
	L8849-28	Soil	6020 ICP-MS MET/
	L8849-28	Soil	7196 CHROMIUM (
	L8849-28	Soil	7471 MERCURY
	L8849-28	Soil	PERCENT SOLIDS
97BPXLIB3SD01(01)	L8849-1	Soil	8260 VOLATILES
	L8849-2	Soil	8270 SEMI-VOLAT
	L8849-2	Soil	AK 102.0 DRO
	L8849-3	Soil	415.2 CARBON (T
	L8849-4	Soil	6020 BARIUM
	L8849-4	Soil	6020 ICP-MS MET/
	L8849-4	Soil	7196 CHROMIUM (
	L8849-4	Soil	7471 MERCURY
	L8849-4	Soil	PERCENT SOLIDS
97BPXLIB3SD02(08)	L8849-5	Soil	8260 VOLATILES
	L8849-6	Soil	8270 SEMI-VOLAT
	L8849-6	Soil	AK 102.0 DRO
	L8849-7	Soil	415.2 CARBON (T
	L8849-8	Soil	6020 BARIUM
	L8849-8	Soil	6020 ICP-MS MET/
	L8849-8	Soil	7196 CHROMIUM (
	L8849-8	Soil	7471 MERCURY
	L8849-8	Soil	PERCENT SOLIDS
97BPXLIB6SD01(01)	L8849-9	Soil	8260 VOLATILES
	L8849-10	Soil	8270 SEMI-VOLAT
	L8849-10	Soil	AK 102.0 DRO
	L8849-11	Soil	415.2 CARBON (T
	L8849-12	Soil	6020 BARIUM
	L8849-12	Soil	6020 ICP-MS MET/
	L8849-12	Soil	7196 CHROMIUM (
	L8849-12	Soil	7471 MERCURY
	L8849-12	Soil	PERCENT SOLIDS
97BPXLIB6SD02(08)	L8849-13	Soil	8260 VOLATILES
	L8849-14	Soil	8270 SEMI-VOLAT
	L8849-14	Soil	AK 102.0 DRO
	L8849-15	Soil	415.2 CARBON (T
	L8849-16	Soil	6020 BARIUM
	L8849-16	Soil	6020 ICP-MS MET/
	L8849-16	Soil	7196 CHROMIUM (
	L8849-16	Soil	7471 MERCURY

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 SAMPLE SUMMARY REPORT (su02)
 Montgomery Watson * Anchorage, AK

Client Sample Number	Sample Number	Matrix	Method
	L8849-16	Soil	PERCENT SOLIDS
97BPXLIB8SD01(01)	L8849-98	Soil	8260 VOLATILES
	L8849-99	Soil	8270 SEMI-VOLAT
	L8849-99	Soil	AK 102.0 DRO
	L8849-100	Soil	415.2 CARBON (T
	L8849-101	Soil	6020 BARIUM
	L8849-101	Soil	6020 ICP-MS MET/
	L8849-101	Soil	7196 CHROMIUM (V
	L8849-101	Soil	7471 MERCURY
	L8849-101	Soil	PERCENT SOLIDS
97BPXLIB8SD02(08)	L8849-94	Soil	8260 VOLATILES
	L8849-95	Soil	8270 SEMI-VOLAT
	L8849-95	Soil	AK 102.0 DRO
	L8849-96	Soil	415.2 CARBON (TC
	L8849-97	Soil	6020 BARIUM
	L8849-97	Soil	6020 ICP-MS MET.
	L8849-97	Soil	7196 CHROMIUM (V
	L8849-97	Soil	7471 MERCURY
	L8849-97	Soil	PERCENT SOLIDS
97BPXLIC2SD01(01)	L8849-37	Soil	8260 VOLATILES
	L8849-38	Soil	8270 SEMI-VOLAT
	L8849-38	Soil	AK 102.0 DRO
	L8849-39	Soil	415.2 CARBON (TC
	L8849-40	Soil	6020 BARIUM
	L8849-40	Soil	6020 ICP-MS MET/
	L8849-40	Soil	7196 CHROMIUM (I
	L8849-40	Soil	7471 MERCURY
	L8849-40	Soil	PERCENT SOLIDS
97BPXLIC2SD02(08)	L8849-41	Soil	8260 VOLATILES
	L8849-42	Soil	8270 SEMI-VOLATI
	L8849-42	Soil	AK 102.0 DRO
	L8849-43	Soil	415.2 CARBON (TC
	L8849-44	Soil	6020 BARIUM
	L8849-44	Soil	6020 ICP-MS META
	L8849-44	Soil	7196 CHROMIUM (V
	L8849-44	Soil	7471 MERCURY
	L8849-44	Soil	PERCENT SOLIDS
97BPXLIC2SD61(08)	L8849-45	Soil	8260 VOLATILES
	L8849-46	Soil	8270 SEMI-VOLATI
	L8849-46	Soil	AK 102.0 DRO
	L8849-47	Soil	415.2 CARBON (TO
	L8849-48	Soil	6020 BARIUM
	L8849-48	Soil	6020 ICP-MS META
	L8849-48	Soil	7196 CHROMIUM (V
	L8849-48	Soil	7471 MERCURY
	L8849-48	Soil	PERCENT SOLIDS
97BPXLIC4SD01(01)	L8849-102	Soil	8260 VOLATILE
	L8849-103	Soil	8270 SEMI-VOLA...
	L8849-103	Soil	AK 102.0 DRO

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 SAMPLE SUMMARY REPORT (su02)
 Montgomery Watson * Anchorage, AK

Client Sample Number	LAL Sample Number	SDG Number	Matrix	Method
	L8849-104		Soil	415.2 CARBON (T
	L8849-105		Soil	6020 BARIUM
	L8849-105		Soil	6020 ICP-MS MET
	L8849-105		Soil	7196 CHROMIUM (
	L8849-105		Soil	7471 MERCURY
	L8849-105		Soil	PERCENT SOLIDS
97BPXLIC4SD02(08)	L8849-49		Soil	8260 VOLATILES
	L8849-50		Soil	8270 SEMI-VOLAT
	L8849-50		Soil	AK 102.0 DRO
	L8849-51		Soil	415.2 CARBON (T
	L8849-52		Soil	6020 BARIUM
	L8849-52		Soil	6020 ICP-MS MET
	L8849-52		Soil	7196 CHROMIUM (
	L8849-52		Soil	7471 MERCURY
	L8849-52		Soil	PERCENT SOLIDS
97BPXLIII1SD01(01)	L8849-30		Soil	8270 SEMI-VOLAT
	L8849-30		Soil	AK 102.0 DRO
	L8849-31		Soil	415.2 CARBON (T
	L8849-32		Soil	6020 BARIUM
	L8849-32		Soil	6020 ICP-MS MET/
	L8849-32		Soil	7196 CHROMIUM (
	L8849-32		Soil	7471 MERCURY
	L8849-32		Soil	PERCENT SOLIDS
97BPXLIII1SD02(08)	L8849-33		Soil	8260 VOLATILES
	L8849-34		Soil	8270 SEMI-VOLAT
	L8849-34		Soil	AK 102.0 DRO
	L8849-35		Soil	415.2 CARBON (T
	L8849-36		Soil	6020 BARIUM
	L8849-36		Soil	6020 ICP-MS MET/
	L8849-36		Soil	7196 CHROMIUM (
	L8849-36		Soil	7471 MERCURY
	L8849-36		Soil	PERCENT SOLIDS
97BPXLITB21697	L8849-88		Soil	8260 VOLATILES
	L8849-89		Soil	NONE
	L8849-90		Soil	NONE
REPORT TYPE	L8849-106		Water	DEFAULT
	L8849-106		Water	EDD - DISK DEL.
	L8849-106		Water	GC2
	L8849-106		Water	GCMS2
	L8849-106		Water	INORG TYPE 2 RP
	L8849-106		Water	WOLF

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
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L8849-31	97BPXLII1SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4;
 Location: RFG19-15B
 Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97

* L8849-32	97BPXLII1SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4, As, Ba, Cr, Cd
 Location: L8849-115
 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97
 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97
 Soil 4 S 7471 MERCURY Hold:15-MAR-97
 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97

L8849-33	97BPXLII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4;
 Location: 130
 Soil 4 S 8260 VOLATILES Hold:01-MAR-97

L8849-34	97BPXLII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4;
 Location: RFG19-15B
 Soil 4 S 8270 SEMI-VOLATILES Hold:01-MAR-97
 Soil 4 S AK 102.0 DRO Hold:01-MAR-97

L8849-35	97BPXLII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4;
 Location: RFG19-15B
 Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97

* L8849-36	97BPXLII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4, As, Ba, Cr, Cd
 Location: L8849-116
 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97
 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97
 Soil 4 S 7471 MERCURY Hold:15-MAR-97
 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97

L8849-37	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
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Temp 4;
 Location: 130
 Soil 4 S 8260 VOLATILES Hold:01-MAR-97

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Shipped Date	Received Date	Due Date
L8849-38	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-39	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
* L8849-40	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-117				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-41	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-42	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-43	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
* L8849-44	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-118				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

LABORATORY	CLIENT	DATE	DATE	DATE
SAMPLE NUMBER	SAMPLE NUMBER	DATE	DATE	PR DATE

L8849-45	97BPXLIC2SD61(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-46	97BPXLIC2SD61(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-47	97BPXLIC2SD61(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
* L8849-48	97BPXLIC2SD61(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-119				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-49	97BPXLIC4SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-42B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-50	97BPXLIC4SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-51	97BPXLIC4SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
* L8849-52	97BPXLIC4SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-120				
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (Ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due Date
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-53 97BPXLIA4SD01(01) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-54 97BPXLIA4SD01(01) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
* L8849-55 97BPXLIA4SD01(01) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4, As, Ba, Cr, Cd				
Location: L8849-121				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-56 97BPXLIA4SD02(08) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-57 97BPXLIA4SD02(08) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-58 97BPXLIA4SD02(08) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
* L8849-59 97BPXLIA4SD02(08) 16-FEB-97 19-FEB-97 26-FEB-97				
Temp 4, As, Ba, Cr, Cd				
Location: L8849-122				
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory	Client	Collection	Request	Issue
Sample Number	Sample Number	Date	Date	PR Date
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-60	97BPXLIA6SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-61	97BPXLIA6SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-62	97BPXLIA6SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
* L8849-63	97BPXLIA6SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-123				
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-64	97BPXLIA6SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-65	97BPXLIA6SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-66	97BPXLIA6SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (1n01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due Date
* L8849-67	97BPXLIJA6SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-124				
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-68	97BPXLIJA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-69	97BPXLIJA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-70	97BPXLIJA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
* L8849-71	97BPXLIJA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-125				
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-72	97BPXLIJA8SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-73	97BPXLIJA8SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (In01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Lab. No.	Client	Collection Date	Received Date	PR Date
Sample Number	Sample Number	Date	Date	PR Date
L8849-74	97BPXLIASD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
* L8849-75	97BPXLIASD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-126				
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-76	97BPXLIASD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		
L8849-77	97BPXLIASD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES	Hold:02-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:02-MAR-97		
L8849-78	97BPXLIASD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)	Hold:16-MAR-97		
* L8849-79	97BPXLIASD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-127				
Soil	4 S 6020 ICP-MS METALS	Hold:15-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:17-FEB-97		
Soil	4 S 7471 MERCURY	Hold:16-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-80	97BPXLIASD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES	Hold:02-MAR-97		

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR DATA
L8849-81	97BPXLIA10SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES		Hold:02-MAR-97	
Soil	4 S AK 102.0 DRO		Hold:02-MAR-97	
L8849-82	97BPXLIA10SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)		Hold:16-MAR-97	
* L8849-83	97BPXLIA10SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-128				
Soil	4 S 6020 ICP-MS METALS		Hold:15-AUG-97	
Soil	4 S 7196 CHROMIUM (VI)		Hold:17-FEB-97	
Soil	4 S 7471 MERCURY		Hold:16-MAR-97	
Soil	4 S PERCENT SOLIDS		Hold:19-FEB-97	
L8849-84	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-9C				
Soil	4 S 8260 VOLATILES		Hold:02-MAR-97	
L8849-85	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 8270 SEMI-VOLATILES		Hold:02-MAR-97	
Soil	4 S AK 102.0 DRO		Hold:02-MAR-97	
L8849-86	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG19-124B				
Soil	4 S 415.2 CARBON (TOC)		Hold:16-MAR-97	
* L8849-87	97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd				
Location: L8849-129				
Soil	4 S 6020 ICP-MS METALS		Hold:15-AUG-97	
Soil	4 S 7196 CHROMIUM (VI)		Hold:17-FEB-97	
Soil	4 S 7471 MERCURY		Hold:16-MAR-97	
Soil	4 S PERCENT SOLIDS		Hold:19-FEB-97	

C21947

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (1n01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Analysis Date	Release Date	Exp. Date
L8849-88 Temp 4; Location: RFG18-48A3 Soil 4 S 8260 VOLATILES	97BPXLITB21697	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:02-MAR-97
L8849-89 Temp 4; Location: RFG18-48A3 Soil 4 S NONE	97BPXLITB21697	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:26-FEB-97
L8849-90 Temp 4; Location: RFG18-47A3 Soil 4 S NONE	97BPXLITB21697	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:26-FEB-97
L8849-91 Temp 4; Location: RFG18-47A3 Water 1 S 8260 VOLATILES	97BPXLI021497	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:02-MAR-97
L8849-92 Temp 4; Location: RFG18-47A3 Water 1 S NONE	97BPXLI021497	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:26-FEB-97
L8849-93 Temp 4; Location: RFG18-47A3 Water 1 S NONE	97BPXLI021497	16-FEB-97	19-FEB-97	26-FEB-97
				Hold:26-FEB-97
L8849-94 Temp 4; Location: RFG01-9C Soil 4 S 8260 VOLATILES	97BPXLIB8SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:01-MAR-97
L8849-95 Temp 4; Location: RFG19-124B Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO	97BPXLIB8SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:01-MAR-97 Hold:01-MAR-97
L8849-96 Temp 4; Location: RFG19-124B	97BPXLIB8SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Sample Number	Client	Sample Number	Contact Date	Receive Date	Due Date
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Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97

* L8849-97 97BPXLIB8SD02(08) 15-FEB-97 19-FEB-97 26-FEB-97

Temp 4, As, Ba, Cr, Cd

Location: L8849-130

Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97

Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97

Soil 4 S 7471 MERCURY Hold:15-MAR-97

Soil 4 S PERCENT SOLIDS Hold:19-FEB-97

L8849-98 97BPXLIB8SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97

Temp 4;

Location: RFG01-9C

Soil 4 S 8260 VOLATILES Hold:01-MAR-97

L8849-99 97BPXLIB8SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97

Temp 4;

Location: RFG19-15B

Soil 4 S 8270 SEMI-VOLATILES Hold:01-MAR-97

Soil 4 S AK 102.0 DRO Hold:01-MAR-97

L8849-100 97BPXLIB8SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97

Temp 4;

Location: RFG19-124B

Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97

* L8849-101 97BPXLIB8SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97

Temp 4, As, Ba, Cr, Cd

Location: L8849-131

Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97

Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97

Soil 4 S 7471 MERCURY Hold:15-MAR-97

Soil 4 S PERCENT SOLIDS Hold:19-FEB-97

L8849-102 97BPXLIC4SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97

Temp 4;

Location: RFG01-9C

Soil 4 S 8260 VOLATILES Hold:01-MAR-97

L8849-103 97BPXLIC4SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97

Temp 4;

Location: RFG19-15B

Soil 4 S 8270 SEMI-VOLATILES Hold:01-MAR-97

Soil 4 S AK 102.0 DRO Hold:01-MAR-97

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Hold PR Date
L8849-104	97BPXLIC4SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4; Location: RFG19-15B Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97				
* L8849-105	97BPXLIC4SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd Location: L8849-132 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97 Soil 4 S 7471 MERCURY Hold:15-MAR-97 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97				
L8849-106	REPORT TYPE	19-FEB-97	19-FEB-97	26-FEB-97
N-slope Location: Water 1 S DEFAULT Water 1 S EDD - DISK DEL. Water 1 S GC2 Water 1 S GCMS2 Water 1 S INORG TYPE 2 RPT Water 1 S WOLF				
L8849-107	97BPLI11SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4; Location: RFG01-42B Soil 4 S 8260 VOLATILES Hold:01-MAR-97				
* L8849-108	97BPXLIB3SD01(01)	14-FEB-97	19-FEB-97	26-FEB-97
Temp 4; BaSO4; ALSO L8849-4 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:13-AUG-97				
* L8849-109	97BPXLIB3SD02(08)	14-FEB-97	19-FEB-97	26-FEB-97
Temp 4; BaSO4; ALS L8849-8 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:13-AUG-97				
* L8849-110	97BPXLIB6SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4; BaSO4; ALSO L8849-12 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97				

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Citant Sample Number	Collect Date	Receive Date	Due Date
* L8849-111 Temp 4; BaSO4; ALSO L8849-16 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLIH6SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
* L8849-112 Temp 4; BaSO4; ALSO L8849-20 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
* L8849-113 Temp 4; BaSO4; ALSO L8849-24 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLIH10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
* L8849-114 Temp 4; BaSO4; ALSO L8849-28 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
* L8849-115 Temp 4; BaSO4; ALSO L8849-32 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLII1SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
* L8849-116 Temp 4; BaSO4; ALSO L8849-36 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLI11SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
* L8849-117 Temp 4; BaSO4; ALSO L8849-40 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
* L8849-118 Temp 4; BaSO4; ALSO L8849-43 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
* L8849-119 Temp 4; BaSO4; ALSO L8849-48 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLIC2SD61(08)	15-FEB-97	19-FEB-97	26-FEB-97

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	DOB PR Date
* L8849-120 Temp 4; BaSO4; ALSO L8849-52 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLIC4SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
* L8849-121 Temp 4; BaSO4; ALSO L8849-55 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLIA4SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
* L8849-122 Temp 4; BaSO4; ALSO L8849-59 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:15-AUG-97	97BPXLIA4SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
* L8849-123 Temp 4; BaSO4; ALSO L8849-63 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:15-AUG-97	97BPXLIA6SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
* L8849-124 Temp 4; BaSO4; ALSO L8849-67 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:15-AUG-97	97BPXLIA6SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
* L8849-125 Temp 4; BaSO4; ALSO L8849-71 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:15-AUG-97	97BPXLIA6SD62(08)	16-FEB-97	19-FEB-97	26-FEB-97
* L8849-126 Te; ALSOL8849-75 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:15-AUG-97	97BPXLIA8SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
* L8849-127 Temp 4; BaSO4; ALSO L8849-79 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:15-AUG-97	97BPXLIA8SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97
* L8849-128 Temp 4; BaSO4; ALSO L8849-83 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:15-AUG-97	97BPXLIA10SD01(01)	16-FEB-97	19-FEB-97	26-FEB-97

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (1n01)
 Feb 21 1997, 01:47 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
* L8849-129 Temp 4; BaSO4; ALSO L8849-87 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:15-AUG-97	97BPXLI1A10SD02(09)	16-FEB-97	19-FEB-97	26-FEB-97
* L8849-130 Temp 4; BaSO4; ALSO L8849-97 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:15-AUG-97	97BPXLIB8SD02(08)	16-FEB-97	19-FEB-97	26-FEB-97
* L8849-131 Temp 4; BaSO4; ALSO L8849-101 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLIB8SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
* L8849-132 Temp 4; BaSO4; ALSO L8849-105 Location: 133 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97	97BPXLIC4SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97

Signature: 

Date: 21 21 1997

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (Ln01)
 Feb 19 1997, 06:38 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due ER Date
L8849-1 Temp 4; Location: RFG01-42B Soil 4 S 8260 VOLATILES	97BPXLIB3SD01(01)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:28-FEB-97
L8849-2 Temp 4; Location: 124 Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO	97BPXLIB3SD01(01)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:28-FEB-97 Hold:28-FEB-97
L8849-3 Temp 4; Location: RFG01-42B Soil 4 S 415.2 CARBON (TOC)	97BPXLIB3SD01(01)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:14-MAR-97
L8849-4 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-42B Soil 4 S 6020 BARIUM Soil 4 S 6020 ICP-MS METALS Soil 4 S 7196 CHROMIUM (VI) Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	97BPXLIB3SD01(01)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:13-AUG-97 Hold:13-AUG-97 Hold:15-FEB-97 Hold:14-MAR-97 Hold:19-FEB-97
L8849-5 Temp 4; Location: RFG01-42B Soil 4 S 8260 VOLATILES	97BPXLIB3SD02(08)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:28-FEB-97
L8849-6 Temp 4; Location: 124 Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO	97BPXLIB3SD02(08)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:28-FEB-97 Hold:28-FEB-97
L8849-7 Temp 4; Location: RFG01-42B Soil 4 S 415.2 CARBON (TOC)	97BPXLIB3SD02(08)	14-FEB-97	19-FEB-97	26-FEB-97
				Hold:14-MAR-97
L8849-8 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-42B	97BPXLIB3SD02(08)	14-FEB-97	19-FEB-97	26-FEB-97

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (Ln01)
 Feb 19 1997, 06:38 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory	Client	Collect	Receive	Due
Sample Number	Sample Number	Date	Date	SR Date
Soil	4 S 6020 BARIUM	Hold:13-AUG-97		
Soil	4 S 6020 ICP-MS METALS	Hold:13-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:15-FEB-97		
Soil	4 S 7471 MERCURY	Hold:14-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-9 97BPXLIB6SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-42B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-10 97BPXLIB6SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: 124				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-11 97BPXLIB6SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-42B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
L8849-12 97BPXLIB6SD01(01) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4, As, Ba, Cr, Cd, BaSO4				
Location: RFG01-42B				
Soil	4 S 6020 BARIUM	Hold:14-AUG-97		
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-13 97BPXLIB6SD02(08) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: RFG01-42B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-14 97BPXLIB6SD02(08) 15-FEB-97 19-FEB-97 26-FEB-97				
Temp 4;				
Location: 124				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		

021947

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 19 1997, 06:38 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L8849-15 Temp 4; Location: RFG01-42B Soil 4 S 415.2 CARBON (TOC)	97BPXLIB6SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:15-MAR-97
L8849-16 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-42B Soil 4 S 6020 BARIUM Soil 4 S 6020 ICP-MS METALS Soil 4 S 7196 CHROMIUM (VI) Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	97BPXLIB6SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:14-AUG-97
				Hold:14-AUG-97
				Hold:16-FEB-97
				Hold:15-MAR-97
				Hold:19-FEB-97
L8849-17 Temp 4; Location: RFG01-42B Soil 4 S 8260 VOLATILES	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:01-MAR-97
L8849-18 Temp 4; Location: 124 Soil 4 S 8270 SEMI-VOLATILES Soil 4 S AK 102.0 DRO	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:01-MAR-97
				Hold:01-MAR-97
L8849-19 Temp 4; Location: RFG01-42B Soil 4 S 415.2 CARBON (TOC)	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:15-MAR-97
L8849-20 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-42B Soil 4 S 6020 BARIUM Soil 4 S 6020 ICP-MS METALS Soil 4 S 7196 CHROMIUM (VI) Soil 4 S 7471 MERCURY Soil 4 S PERCENT SOLIDS	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:14-AUG-97
				Hold:14-AUG-97
				Hold:16-FEB-97
				Hold:15-MAR-97
				Hold:19-FEB-97
L8849-21 Temp 4; Location: RFG01-42B Soil 4 S 8260 VOLATILES	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
				Hold:01-MAR-97

0219471

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (Ln01)
 Feb 19 1997, 06:38 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due FR Date
L8849-22	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: 124				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-23	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-42B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
L8849-24	97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd, BaSO4				
Location: RFG01-42B				
Soil	4 S 6020 BARIUM	Hold:14-AUG-97		
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		
L8849-25	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-42B				
Soil	4 S 8260 VOLATILES	Hold:01-MAR-97		
L8849-26	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: 124				
Soil	4 S 8270 SEMI-VOLATILES	Hold:01-MAR-97		
Soil	4 S AK 102.0 DRO	Hold:01-MAR-97		
L8849-27	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4;				
Location: RFG01-42B				
Soil	4 S 415.2 CARBON (TOC)	Hold:15-MAR-97		
L8849-28	97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	26-FEB-97
Temp 4, As, Ba, Cr, Cd, BaSO4				
Location: RFG01-42B				
Soil	4 S 6020 BARIUM	Hold:14-AUG-97		
Soil	4 S 6020 ICP-MS METALS	Hold:14-AUG-97		
Soil	4 S 7196 CHROMIUM (VI)	Hold:16-FEB-97		
Soil	4 S 7471 MERCURY	Hold:15-MAR-97		
Soil	4 S PERCENT SOLIDS	Hold:19-FEB-97		

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LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Feb 19 1997, 06:38 pm

Login Number: L8849
 Account: 471 Montgomery Watson * Anchorage, AK
 Project: LIBERTY ISLAND

Lab Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L8849-30 Temp 4; Location: 124 Soil 4 S 8270 SEMI-VOLATILES Hold:01-MAR-97 Soil 4 S AK 102.0 DRO Hold:01-MAR-97	97BPXLIII1SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-31 Temp 4; Location: RFG01-42B Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97	97BPXLIII1SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-32 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-42B Soil 4 S 6020 BARIUM Hold:14-AUG-97 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97 Soil 4 S 7471 MERCURY Hold:15-MAR-97 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97	97BPXLIII1SD01(01)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-33 Temp 4; Location: RFG01-42B Soil 4 S 8260 VOLATILES Hold:01-MAR-97	97BPXLIII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-34 Temp 4; Location: 124 Soil 4 S 8270 SEMI-VOLATILES Hold:01-MAR-97 Soil 4 S AK 102.0 DRO Hold:01-MAR-97	97BPXLIII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-35 Temp 4; Location: RFG01-42B Soil 4 S 415.2 CARBON (TOC) Hold:15-MAR-97	97BPXLIII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97
L8849-36 Temp 4, As, Ba, Cr, Cd, BaSO4 Location: RFG01-42B Soil 4 S 6020 BARIUM Hold:14-AUG-97 Soil 4 S 6020 ICP-MS METALS Hold:14-AUG-97 Soil 4 S 7196 CHROMIUM (VI) Hold:16-FEB-97 Soil 4 S 7471 MERCURY Hold:15-MAR-97 Soil 4 S PERCENT SOLIDS Hold:19-FEB-97	97BPXLIII1SD02(08)	15-FEB-97	19-FEB-97	26-FEB-97

NON-METALS



LAS Laboratories, Inc.

WT CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB3SD01(01)
Date Collected: 14-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 73.67

Element	Method	Lab#	Value	UCL	MDL	FI	Qual	Units	Analysis	Lab ID
TOTAL ORGANIC CARBON		415.2	45828	16700	30	100	1		25-FEB-97	L8849-3
CHROMIUM, HEXAVALENT		7196	45838	<0.3	0.04	0.3	1	U	24-FEB-97	L8849-4

LAS Laboratories, Inc.

WET CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB3SD02(08)
Date Collected: 14-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 81.17

Constituent	Method	Batch	Value	REL	REL	REL	LAB	Units	Analysis	Lab ID
TOTAL ORGANIC CARBON	415.2	45828	<100	30	100	1	U	mg/kg	25-FEB-97	L8849-7
CHROMIUM, HEXAVALENT	7196	45830	<0.2	0.04	0.2	1	U	mg/kg	24-FEB-97	L8849-8

LAS Laboratories, Inc.

T CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB6SD01(01)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 67.8

Constituent	Method	Batch	Value	MOE	ADL	U1	Qual	Units	Analyzed	Lab ID
TOTAL ORGANIC CARBON	415.2	45828	36200	30	100	1		mg/kg	25-FEB-97	L8849-11
CHROMIUM, HEXAVALENT	7196	45830	<0.3	0.04	0.3	1	U	mg/kg	24-FEB-97	L8849-12

LAS Laboratories, Inc.

WET CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB10SD01(01)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 79.94

Constituent	Method	Batch	Value	mg/L	min	max	Qual	Units	Analyzed	Lab ID
TOTAL ORGANIC CARBON	415.2	45828	23900	30	100	1		mg/kg	25-FEB-97	L8849-19
CHROMIUM, HEXAVALENT	7196	45830	<0.3	0.04	0.3	1	U	mg/kg	24-FEB-97	L8849-20

LAS Laboratories, Inc.

T CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB6SD02(08)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 77.97

Parameter	Method	Result	Unit	MDL	RM	Soil	QTY	Units	Date Analyzed	Lab ID
TOTAL ORGANIC CARBON		415.2	45828	29200	30	100	1		25-FEB-97	L8849-15
CHROMIUM, HEXAVALENT		7196	45630	<0.3	0.04	0.3	1	U	24-FEB-97	L8849-16

LAS Laboratories, Inc.

WET CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB8SD01(01)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 71.56

Constituent	Method	Batch	Value	MDL	REL	PH	Qual	Units	Analyzed	Lab ID
TOTAL ORGANIC CARBON	415.2	45829	22100	30	100	1	*	wg/kg	25-FEB-97	L8849-100
CHROMIUM, HEXAVALENT	7196	45831	<0.3	0.04	0.3	1	U	wg/kg	26-FEB-97	L8849-101

LAS Laboratories, Inc.

T CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB8SD02(08)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 71.24

Parameter	Method	Batch	Value	MDL	SDL	HL	Qm	Units	Analysis	Lab ID
TOTAL ORGANIC CARBON	415.2	45829	45100	30	100	1	*	mg/kg	25-FEB-97	L8849-96
CHROMIUM, HEXAVALENT	7196	45831	<0.3	0.04	0.3	1	U	mg/kg	26-FEB-97	L8849-97

LAS Laboratories, Inc.

WET CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB10SD02(08)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 72.81

Concentration	Method	Batch	Value	Unit	Unit	Unit	Unit	Unit	Unit	Unit
TOTAL ORGANIC CARBON	415.2	45828	34000	30	100	1		mg/kg	25-FEB-97	L8849-23
CHROMIUM, HEXAVALENT	7196	45830	<0.3	0.04	0.3	1	U	mg/kg	24-FEB-97	L8849-24

LAS Laboratories, Inc.

T CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK

Project Name: LIBERTY ISLAND

Project Desc:

Client Sample ID: 97BPXLIB10SD62(08)

Date Collected: 15-FEB-97

Matrix: Soil

Login Number: L8849

Date Received: 19-FEB-97

Percent Solids: 73.51

Element	Method	Result	Value	SD	SDG	DU	Unit	Date Analyzed	Lab ID
TOTAL ORGANIC CARBON	415.2	45828	33600	30	100	1	mg/kg	25-FEB-97	L8849-27
CHROMIUM, HEXAVALENT	7196	45830	<0.3	0.04	0.3	1	mg/kg	24-FEB-97	L8849-28

LAS Laboratories, Inc.

WET CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK

Project Name: LIBERTY ISLAND

Project Desc:

Client Sample ID: 97BPXLI11SD01(01)

Date Collected: 15-FEB-97

Matrix: Soil

Login Number: L8849

Date Received: 19-FEB-97

Percent Solids: 76.81

Constituent	Method	Batch	Value	MDL	SLD	MLL	QMLL	Units	Date	Lab ID
TOTAL ORGANIC CARBON	415.2	45828	38100	30	100	1		mg/kg	25-FEB-97	L8849-31
CHROMIUM, HEXAVALENT	7196	45830	<0.3	0.04	0.3	1	U	mg/kg	24-FEB-97	L8849-32

LAS Laboratories, Inc.

T CHEM DATA REPORT

Count Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIILSD02(08)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 78.66

Constituent	Method	Range	Value	REL	TOL	HL	Qual	Units	Analysis	LAP ID
TOTAL ORGANIC CARBON	415.2	45828	30200	30	100	1		mg/kg	25-FEB-97	L8849-35
CHROMIUM, HEXAVALENT	7196	45830	<0.3	0.04	0.3	1	U	mg/kg	24-FEB-97	L8849-36

LAS Laboratories, Inc.

WET CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIC4SD01(01)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 80.59

Constituent	Method	Batch	Value	MDL	SDG	BIT	Unit	Date	Analyst	Lab ID
TOTAL ORGANIC CARBON	415.2	45829	16000	30	100	1	*	mg/kg	25-FEB-97	L8849-104
CHROMIUM, HEXAVALENT	7196	45831	<0.2	0.04	0.2	1	U	mg/kg	26-FEB-97	L8849-105

LAS Laboratories, Inc.

CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIC4SD02(08)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 76.15

Method	ACCG	VAL	UNIT	REL	ML	QCAL	DATE	ANALYST	LAB ID
TOTAL ORGANIC CARBON	415.2	45828	16400	30	100	1		mg/kg	25-FEB-97 L8849-51
CHROMIUM, HEXAVALENT	7196	45830	<0.3	0.04	0.3	1	U	mg/kg	24-FEB-97 L8849-52

LAS Laboratories, Inc.

WET CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPKLIC2SD01(01)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 73.28

Element	Method	Batch	Value	MDL	MDL	DF	Qual	Units	Analyzed	Lab ID
TOTAL ORGANIC CARBON		45828	40200	30	100	1		mg/kg	25-FEB-97	L8849-39
CHROMIUM, HEXAVALENT		45830	<0.3	0.04	0.3	1	U	mg/kg	24-FEB-97	L8849-40

LAS Laboratories, Inc.

T CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIC2SD02(08)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 80.26

Constituent	Method	Batch #	Value	UCL	REL	DCI	UCL	Units	Analysis	Lab ID
TOTAL ORGANIC CARBON	415.2	45828	9110	30	100	1		mg/kg	25-FEB-97	L8849-43
CHROMIUM, HEXAVALENT	7196	45830	<0.2	0.04	0.2	1	U	mg/kg	24-FEB-97	L8849-44

LAS Laboratories, Inc.

WET CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIC2SD61(08)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 80.77

CONSTITUENT	Method	Batch	Value	Unit	ED	DL	QAD	Units	Analysis	Lab ID
TOTAL ORGANIC CARBON	415.2	45828	19700	30	100	1		mg/kg	25-FEB-97	L8849-47
CHROMIUM, HEXAVALENT	7196	45830	<0.2	0.04	0.2	1	U	mg/kg	24-FEB-97	L8849-48

LAS Laboratories, Inc.

T CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIA10SD01(01)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 64.75

Constituent	Method	Batch	Value	MDL	EDL	DFI	Qual	Units	Analysis Date	Lab ID
TOTAL ORGANIC CARBON	415.2	45829	16000	30	100	1	*	mg/kg	25-FEB-97	L8849-82
CHROMIUM, HEXAVALENT	7196	45831	<0.3	0.05	0.3	1	U	mg/kg	26-FEB-97	L8849-83

LAS Laboratories, Inc.

WET CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK

Project Name: LIBERTY ISLAND

Project Desc:

Client Sample ID: 97BPXLIA10SD02 (08)

Date Collected: 16-FEB-97

Matrix: Soil

Login Number: L8849

Date Received: 19-FEB-97

Percent Solids: 55.4

Constituent	Method	Result	Value	Min	Max	DPI	Unit	Analysis	Lab ID
TOTAL ORGANIC CARBON	415.2	45829	85900	30	100	1	*	wg/kg	25-FEB-97 L8849-86
CHROMIUM, HEXAVALENT	7196	45031	<0.4	0.05	0.4	1	U	wg/kg	26-FEB-97 L8849-87

LAS Laboratories, Inc.

T CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIASD01(01)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 61.62

Element	Method	Batch	Value	MDL	REL	DU1	Qual	Units	Analysis	Lab ID
TOTAL ORGANIC CARBON	415.2	45829	29800	30	100	1	*	mg/kg	25-FEB-97	L8849-78
CHROMIUM, HEXAVALENT	7196	45831	<0.3	0.05	0.3	1	U	mg/kg	26-FEB-97	L8849-79

LAS Laboratories, Inc.

WET CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIABSD02(08)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 73.31

Constituent	Method	Batch	Value	MDL	SD	HL	QAC	Units	Analyzed	Lab ID
TOTAL ORGANIC CARBON	415.2	45829	25000	30	100	1	*	mg/kg	25-FEB-97	L8849-74
CHROMIUM, HEXAVALENT	7196	45831	<0.3	0.04	0.3	1	U	mg/kg	26-FEB-97	L8849-75

LAS Laboratories, Inc.

F CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIA6SD01(01)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 57.12

Element	Method	Batch	Value	UOL	RD	DIL	Qual	Units	Analysis	Lab ID
TOTAL ORGANIC CARBON	415.2	45829	20800	30	100	1	*	ng/kg	25-FEB-97	L8849-62
CHROMIUM, HEXAVALENT	7196	45831	<0.4	0.05	0.4	1	U	ng/kg	26-FEB-97	L8849-63

LAS Laboratories, Inc.

WET CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIA6SD02(08)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 71.38

Constituent	Method	Date	Value	UOL	ADP	DIL	QUAL	Units	Analyzed	Lab ID
TOTAL ORGANIC CARBON	415.2	45829	25600	30	100	1	*	mg/kg	25-FEB-97	L8849-66
CHROMIUM, HEXAVALENT	7196	45831	<0.3	0.04	0.3	1	U	mg/kg	26-FEB-97	L8849-67

LAS Laboratories, Inc.

TEST CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIA6SD62(08)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 67.93

Method	Method	Unit	Value	Unit	SD	DF	Qual	Units	Analysis	Lab ID
TOTAL ORGANIC CARBON	415.2	45829	29300	30	100	1	*	mg/kg	25-FEB-97	L8849-70
CHROMIUM, HEXAVALENT	7196	45831	<0.3	0.04	0.3	1	U	mg/kg	26-FEB-97	L8849-71

LAS Laboratories, Inc.

WET CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK

Project Name: LIBERTY ISLAND

Project Desc:

Client Sample ID: 97BPXLIA4SD01(01)

Date Collected: 16-FEB-97

Matrix: Soil

Login Number: L8849

Date Received: 19-FEB-97

Percent Solids: 82.87

Constituent	Method	Batch	Value	MDL	RL	DL	QAC	Units	Analysed	Lab ID
TOTAL ORGANIC CARBON	415.2	45829	1440	30	100	1	*	mg/kg	25-FEB-97	L8849-55
CHROMIUM, HEXAVALENT	7196	45831	<0.2	0.04	0.2	1	U	mg/kg	26-FEB-97	L8849-55

LAS Laboratories, Inc.

T CHEM DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

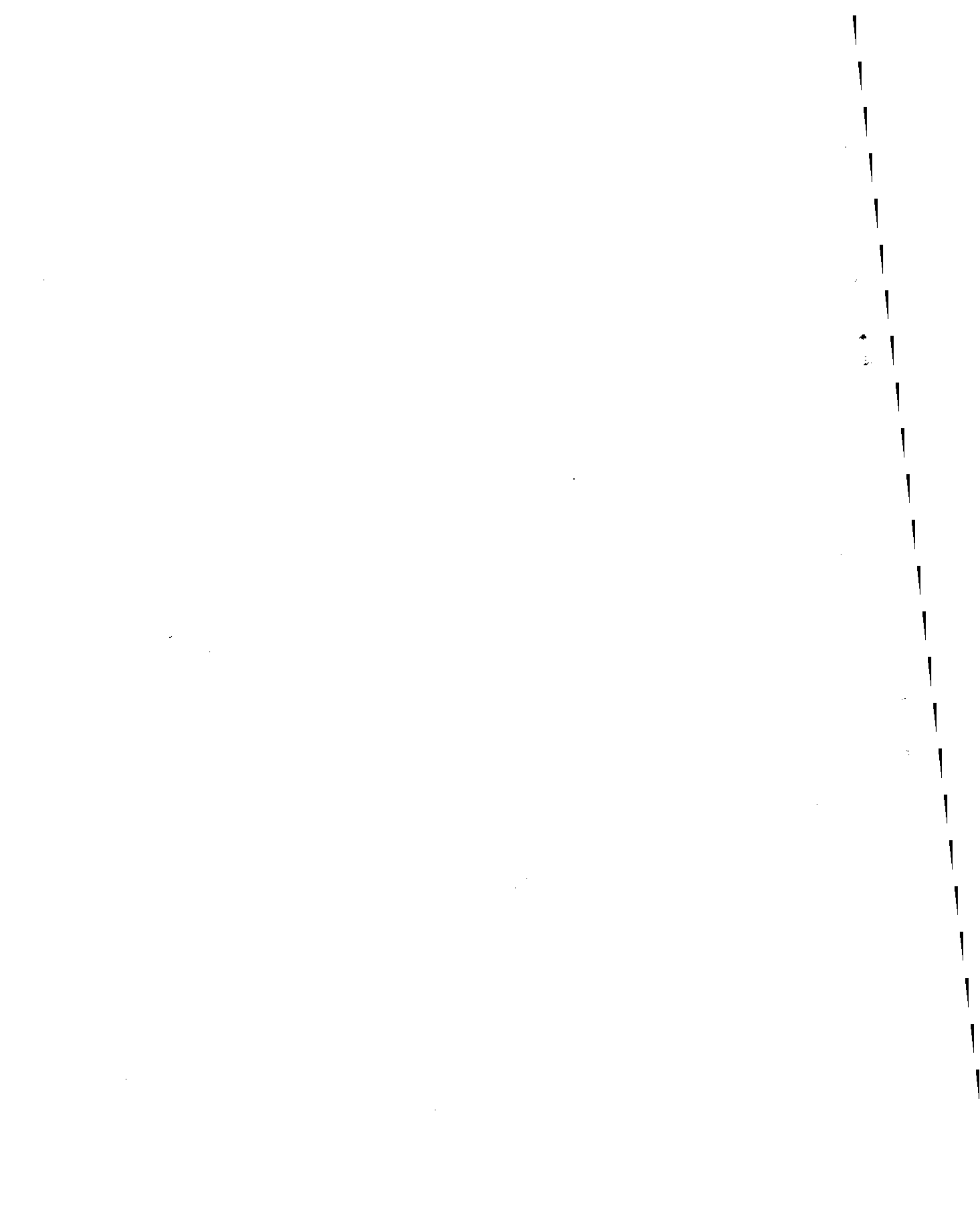
Client Sample ID: 97BPXLIA4SD02(08)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 81.34

Constituent	Method	Batch	Value	MDL	RFL	Dil	Qdet	Units	Analysed	Lab ID
TOTAL ORGANIC CARBON	415.2	45829	1570	30	100	1	*	mg/kg	25-FEB-97	L8849-58
CHROMIUM, HEXAVALENT	7196	45831	<0.2	0.04	0.2	1	U	mg/kg	26-FEB-97	L8849-59



QUALITY CONTROL



LAS Laboratories, Inc.

MATRIX SPIKE DATA SUMMARY

Login/SDG Number: L8849

Analyte	Batch ID	Date Analyzed	Client ID	LAL ID	Sample ID	ME Result	MPD Result	Known Value	Units	Rec	Lab	QC
Chromium, hexavalent	45830	24-FEB-97	97BPXLIB3SD01(01)	L8849-4	45830MS	0.547	<0.3	0.679	mg/kg	81		75-125
Chromium, hexavalent	45831	26-FEB-97	97BPXLIA4SD01(01)	L8849-55	45831MS	0.556	<0.2	0.603	mg/kg	86		75-125

RPT NAME: genlongc2 TYPE (S=SDG, L=Login): L LIST: ANALYTICAL TRACE: N SOLIDS ADJUSTED: Y UNITS: mg

LAS Laboratories, Inc.

LCS DATA SUMMARY

Login/SDG Number: L8849

Analyte	Batch ID	Date Analyzed	LCS ID	LCS Result	Known Value	Units	% Rec	Pass/Fail	DL
Total Carbon	45828	24-FEB-97	45828LCS1	73000	71400	mg/kg	102		80-120
Total Inorganic Carbon	45828	25-FEB-97	45828LCS2	70400	71400	mg/kg	99		80-120
Total Carbon	45829	24-FEB-97	45829LCS1	73000	71400	mg/kg	102		80-120
Total Inorganic Carbon	45829	25-FEB-97	45829LCS2	70400	71400	mg/kg	99		80-120
Chromium, hexavalent	45830	24-FEB-97	45830LCS	0.0490	0.0500	mg/L	98		80-120
Chromium, hexavalent	45831	26-FEB-97	45831LCS	0.0490	0.0500	mg/L	98		80-120

RPT NAME: ganiocq2 TYPE (S=SDG, L=Login): L LIST: ANALYTICAL TRACE: N SOLIDS ADJUSTED: Y UNITS: mg

LAS Laboratories, Inc.

METHOD BLANK DATA SUMMARY

Login/SDG Number: L8849

Analyte	Batch ID	Date Analyzed	DAL ID	ME Result	NDL	RDB	Units	Data Qual
Total Carbon	45828	24-FEB-97	45828MB1	<100	30	100	mg/kg	U
Total Inorganic Carbon	45828	25-FEB-97	45828MB2	<100	30	100	mg/kg	U
Total Carbon	45829	24-FEB-97	45829MB1	<100	30	100	mg/kg	U
Total Inorganic Carbon	45829	25-FEB-97	45829MB2	<100	30	100	mg/kg	U
Chromium, hexavalent	45830	24-FEB-97	45830MB	<0.2	0.03	0.2	mg/L	U
Chromium, hexavalent	45831	26-FEB-97	45831MB	<0.2	0.03	0.2	mg/L	U

RPT NAME: genionqc2 TYPR (S=SDG, L=Login): L LIST: ANALYTICAL TRACE: N SOLIDS ADJUSTED: Y UNITS: mg

LAS Laboratories, Inc.

DUPLICATE DATA SUMMARY

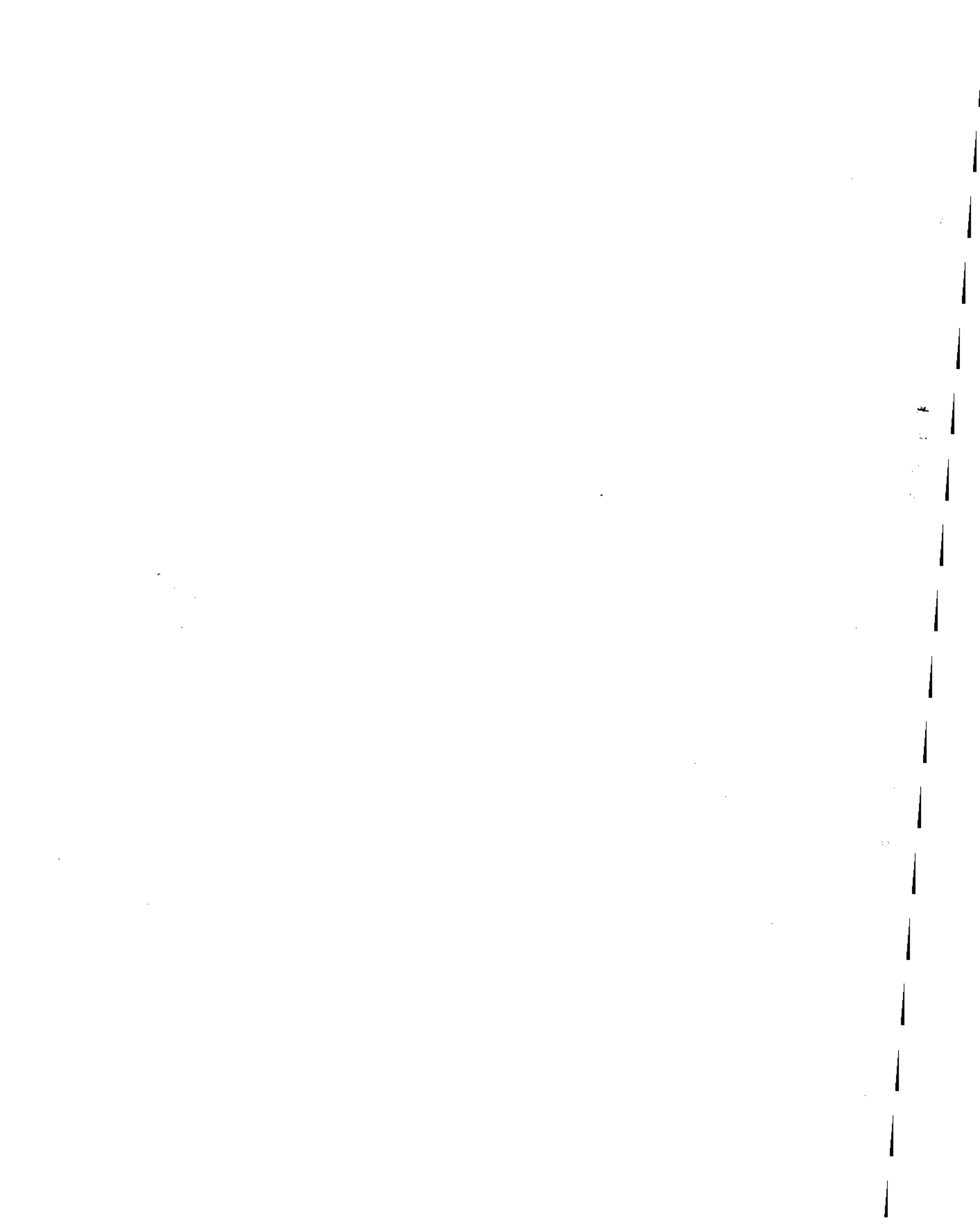
Login/SDG Number: L8849

ANALYTE	BATCH NO	DATE ANALYZED	CLIENT ID	LAB ID	SAMPLE ID	RFP RESULT	DUP RESULT	UNITS	RPD	DATA QUAL	RPD LIMIT
Total Organic Carbon	45828	25-FEB-97	97BPXLIB6SD01(01)	L8849-11	45828DUP	36200	40800	mg/kg	11.8		20
Total Organic Carbon	45829	25-FEB-97	97BPXLIB6SD01(01)	L8849-11	45829DUP	36200	29700	mg/kg	29.0	*	20
Chromium, hexavalent	45830	24-FEB-97	97BPXLIB3SD01(01)	L8849-4	45830DUP	<0.2	<0.2	mg/kg		b	20
Chromium, hexavalent	45831	26-FEB-97	97BPXLIB4SD01(01)	L8849-55	45831DUP	<0.2	<0.2	mg/kg		b	20

RPT NAME: genionqc2 TYPE (S=SDG, L=Login): L LIST: ANALYTICAL TRACE: N SOLIDS ADJUSTED: Y UNITS: mg

- * - Relative Percent Difference (RPD) for duplicate analysis exceeded acceptance limits.
- b - The RPD cannot be computed because the sample and/or duplicate concentration was below the RDL.

METALS RESULTS



LAS Laboratories, Inc.

ALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB3SD01(01)
Date Collected: 14-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 73.67

Element	Method	Batch	Value	U1	U2	U3	U4	Units	Analysed	Lab ID
BARIUM SULFATE	6020	46096	19.7	0.04	0.5	1	CN	mg/kg	07-MAR-97	L8849-108
ARSENIC_75	6020	45832	2.91	0.5	3.	1		mg/kg	25-FEB-97	L8849-4
ARIUM_135	6020	45832	37.1	0.3	10	1		mg/kg	25-FEB-97	L8849-4
ADMUM_111	6020	45832	<1.	0.3	1.	1	U	mg/kg	25-FEB-97	L8849-4
AROMIUM_52	6020	45832	12.2	0.3	3.	1		mg/kg	25-FEB-97	L8849-4
LEAD_208	6020	45832	4.82	0.3	0.8	1		mg/kg	27-FEB-97	L8849-4
MERCURY	7471	45834	1.35	0.1	0.1	1	N*	mg/kg	25-FEB-97	L8849-4

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB3SD02(08)
Date Collected: 14-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 81.17

Constituent	Method	Batch	Value	MOE	Std	Dil	Qual	Units	Analyzed	Lab ID
BARIUM SULFATE	6020	46096	15.0	0.04	0.5	1	CN	mg/kg	07-MAR-97	L8849-109
ARSENIC_75	6020	45832	2.94	0.5	3.	1		mg/kg	25-FEB-97	L8849-8
BARIUM_135	6020	45832	62.3	0.3	10	1		mg/kg	25-FEB-97	L8849-8
CADMIUM_111	6020	45832	<1.	0.3	1.	1	U	mg/kg	25-FEB-97	L8849-8
CHROMIUM_52	6020	45832	10.3	0.3	3.	1		mg/kg	25-FEB-97	L8849-8
LEAD_208	6020	45832	4.00	0.3	0.8	1		mg/kg	27-FEB-97	L8849-8
MERCURY	7471	45834	<0.1	0.1	0.1	1	NU*	mg/kg	25-FEB-97	L8849-8

LAS Laboratories, Inc.

TALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
 Project Name: LIBERTY ISLAND
 Project Desc:

Client Sample ID: 97BPXLIB6SD01(01)
 Date Collected: 15-FEB-97
 Matrix: Soil

Login Number: L8849
 Date Received: 19-FEB-97
 Percent Solids: 67.8

Element	Method	Ref	Value	DD	MD	SL	Unit	Trace	Analyzed	Lab ID
BARION SULFATE	6020	46096	31.5	0.04	0.5	1	CN	mg/kg	07-MAR-97	L8849-110
ARSENIC_75	6020	45832	7.15	0.5	3.	1		mg/kg	25-FEB-97	L8849-12
BARION_135	6020	45832	60.0	0.3	10	1		mg/kg	25-FEB-97	L8849-12
CADMIUM_111	6020	45832	<1.	0.3	1.	1	U	mg/kg	25-FEB-97	L8849-12
CHROMIUM_52	6020	45832	20.3	0.3	3.	1		mg/kg	25-FEB-97	L8849-12
LEAD_208	6020	45832	67.8	0.3	0.8	1		mg/kg	27-FEB-97	L8849-12
MERCURY	7471	45834	0.399	0.1	0.1	1	N*	mg/kg	25-FEB-97	L8849-12

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB6SD02(08)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 77.97

Constituent	Method	Batch	Value	MLL	MDL	DL	Qual	Units	Analysis Date	Lab ID
BARIUM SULFATE	6020	46096	19.5	0.04	0.5	1	CN	mg/kg	07-MAR-97	L8849-111
ARSENIC_75	6020	45832	3.56	0.5	3.	1		mg/kg	25-FEB-97	L8849-16
BARIUM_135	6020	45832	49.3	0.3	10	1		mg/kg	25-FEB-97	L8849-16
CADMIUM_111	6020	45832	<1.	0.3	1.	1	U	mg/kg	25-FEB-97	L8849-16
CHROMIUM_52	6020	45832	15.0	0.3	3.	1		mg/kg	25-FEB-97	L8849-16
LEAD_208	6020	45832	5.72	0.3	0.8	1		mg/kg	27-FEB-97	L8849-16
MERCURY	7471	45834	0.161	0.1	0.1	1	N*	mg/kg	25-FEB-97	L8849-16

LAS Laboratories, Inc.

FALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
 Project Name: LIBERTY ISLAND
 Project Desc:

Client Sample ID: 97BPXLIB10SD01(01)
 Date Collected: 15-FEB-97
 Matrix: Soil

Login Number: L8849
 Date Received: 19-FEB-97
 Percent Solids: 79.94

Element Name	Method	Lab #	Value	MDL	MDL	DL	Class	Units	Analyzed	Lab ID
BARIUM SULFATE	6020	46096	17.9	0.04	0.5	1	CN	mg/kg	07-MAR-97	L8849-112
ARSENIC_75	6020	45832	4.44	0.5	2.	1		mg/kg	25-FEB-97	L8849-20
BARIUM_135	6020	45832	39.2	0.2	10	1		mg/kg	25-FEB-97	L8849-20
CADMIUM_111	6020	45832	<1.	0.2	1.	1	U	mg/kg	25-FEB-97	L8849-20
CHROMIUM_52	6020	45832	10.7	0.2	2.	1		mg/kg	25-FEB-97	L8849-20
LEAD_208	6020	45832	4.61	0.3	0.7	1		mg/kg	27-FEB-97	L8849-20
MERCURY	7471	45834	0.277	0.1	0.1	1	N*	mg/kg	25-FEB-97	L8849-20

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK

Project Name: LIBERTY ISLAND

Project Desc:

Client Sample ID: 97BPXLIB10SD02(08)

Date Collected: 15-FEB-97

Matrix: Soil

Login Number: L8849

Date Received: 19-FEB-97

Percent Solids: 72.81

Element	Method	Lab No	Value	PK	Std	Q	Unit	Unit	Date	Sample ID	
BARIUM SULFATE		6020	46096	22.1	0.04	0.5	1	CN	mg/kg	07-MAR-97	L8849-113
ARSENIC_75		6020	45832	5.59	0.5	3.	1		mg/kg	25-FEB-97	L8849-24
BARIUM_135		6020	45832	59.8	0.3	10	1		mg/kg	25-FEB-97	L8849-24
CADMIUM_111		6020	45832	<1.	0.3	1.	1	U	mg/kg	25-FEB-97	L8849-24
CHROMIUM_52		6020	45832	16.1	0.3	3.	1		mg/kg	25-FEB-97	L8849-24
LEAD_206		6020	45832	6.78	0.3	0.8	1		mg/kg	27-FEB-97	L8849-24
MERCURY		7471	45834	0.219	0.1	0.1	1	N*	ug/kg	25-FEB-97	L8849-24

LAS Laboratories, Inc.

TALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB10SD62(08)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 73.51

Element	Method	Batch	Value	SD	ED	DL	Qualifier	Units	Analysed	Lab ID
BARIUM SULFATE	6020	46096	23.6	0.04	0.5	1	CH	mg/kg	07-MAR-97	L8849-114
ARSENIC_75	6020	45832	8.84	0.5	3.	1		mg/kg	25-FEB-97	L8849-28
ARIUM_135	6020	45832	99.6	0.3	10	1		mg/kg	25-FEB-97	L8849-28
ADMUM_111	6020	45832	<1.	0.3	1.	1	U	mg/kg	25-FEB-97	L8849-28
HRONIUM_52	6020	45832	29.4	0.3	3.	1		mg/kg	25-FEB-97	L8849-28
LEAD_208	6020	45832	14.4	0.3	0.8	1		mg/kg	27-FEB-97	L8849-28
MERCURY	7471	45834	0.277	0.1	0.1	1	N*	mg/kg	25-FEB-97	L8849-28

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK

Project Name: LIBERTY ISLAND

Project Desc:

Client Sample ID: 97BPXLIII1SD01(01)

Date Collected: 15-FEB-97

Matrix: Soil

Login Number: L8849

Date Received: 19-FEB-97

Percent Solids: 76.81

Element	Method	Batch	Value	MDL	RDL	DIL	Qual	Units	Analyzed	Lab ID
BARIUM SULFATE	6020	46096	31.2	0.04	0.5	1	CN	mg/kg	07-MAR-97	L8849-115
ARSENIC_75	6020	45832	<3.	0.5	3.	1	U	mg/kg	25-FEB-97	L8849-32
BARIUM_135	6020	45832	56.5	0.3	10	1		mg/kg	25-FEB-97	L8849-32
CADMIUM_111	6020	45832	<1.	0.3	1.	1	U	mg/kg	25-FEB-97	L8849-32
CHROMIUM_52	6020	45832	9.38	0.3	3.	1		mg/kg	25-FEB-97	L8849-32
LEAD_208	6020	45832	3.08	0.3	0.8	1		mg/kg	27-FEB-97	L8849-32
MERCURY	7471	45834	0.125	0.1	0.1	1	N*	mg/kg	25-FEB-97	L8849-32

LAS Laboratories, Inc.

RESULTS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
 Project Name: LIBERTY ISLAND
 Project Desc:

Client Sample ID: 97BPXLIII1SD02(08)
 Date Collected: 15-FEB-97
 Matrix: Soil

Login Number: L8849
 Date Received: 19-FEB-97
 Percent Solids: 78.66

Element	Lab No	Batch No	Value	SDG	REL	DL	Unit	Units	Analyzed	Lab ID
BARIUM SULFATE	6020	46096	20.7	0.04	0.4	1	CN	mg/kg	07-MAR-97	L8849-116
ARSENIC_75	6020	45832	7.11	0.5	3.	1		mg/kg	25-FEB-97	L8849-36
BARIUM_135	6020	45832	82.9	0.3	10	1		mg/kg	25-FEB-97	L8849-36
CADMIUM_111	6020	45832	<1.	0.3	1.	1	U	mg/kg	25-FEB-97	L8849-36
CHROMIUM_52	6020	45832	21.6	0.3	3.	1		mg/kg	25-FEB-97	L8849-36
LEAD_208	6020	45832	11.1	0.3	0.8	1		mg/kg	27-FEB-97	L8849-36
MERCURY	7471	45834	0.171	0.1	0.1	1	N*	mg/kg	25-FEB-97	L8849-36

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIC2SD01(01)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 73.28

Element	Method	Batch	Value	MDL	RD	Units	Stat	Units	Analysis	Lab ID
BARIUM SULFATE	6020	46096	26.2	0.04	0.5	1	CN	mg/kg	07-MAR-97	L8849-117
ARSENIC_75	6020	45832	4.91	0.6	3.	1		mg/kg	25-FEB-97	L8849-40
BARIUM_135	6020	45832	75.7	0.3	10	1		mg/kg	25-FEB-97	L8849-40
CADMIUM_111	6020	45832	<1.	0.3	1.	1	U	mg/kg	25-FEB-97	L8849-40
CHROMIUM_52	6020	45832	21.6	0.3	3.	1		mg/kg	25-FEB-97	L8849-40
LEAD_208	6020	45832	11.1	0.3	0.8	1		mg/kg	27-FEB-97	L8849-40
MERCURY	7471	45834	0.190	0.1	0.1	1	N*	mg/kg	25-FEB-97	L8849-40

LAS Laboratories, Inc.

TALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIC2SD02 (08)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 80.26

Element	Method	Value	Unit	PC1	PC2	DL1	Qual	Units	Analyzed	Lab ID
BARIUM SULFATE	6020	46096	27.3	0.04	0.4	1	CN	mg/kg	07-MAR-97	L8849-118
ARSENIC_75	6020	45832	6.69	0.5	2.	1		mg/kg	25-FEB-97	L8849-44
BARIUM_135	6020	45832	194.	0.2	10	1		mg/kg	25-FEB-97	L8849-44
CADMIUM_111	6020	45832	<1.	0.2	1.	1	U	mg/kg	25-FEB-97	L8849-44
CHROMIUM_52	6020	45832	32.3	0.2	2.	1		mg/kg	25-FEB-97	L8849-44
LEAD_208	6020	45832	15.8	0.3	0.8	1		mg/kg	27-FEB-97	L8849-44
MERCURY	7471	45834	0.151	0.1	0.1	1	N*	mg/kg	25-FEB-97	L8849-44

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIC2SD61(08)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 80.77

Element	Method	Batch	Value	DDI	DDI	DDI	Units	Units	Analyzed	Lab ID
BARIUM SULFATE	6020	46096	28.4	0.04	0.4	1	CN	mg/kg	07-MAR-97	L8849-119
ARSENIC_75	6020	45832	8.00	0.5	2.	1		mg/kg	25-FEB-97	L8849-48
BARIUM_135	6020	45832	198.	0.2	10	1		mg/kg	25-FEB-97	L8849-48
CADMIUM_111	6020	45832	<1.	0.2	1.	1	U	mg/kg	25-FEB-97	L8849-48
CHROMIUM_52	6020	45832	34.0	0.2	2.	1		mg/kg	25-FEB-97	L8849-48
LEAD_208	6020	45832	16.0	0.3	0.7	1		mg/kg	27-FEB-97	L8849-48
MERCURY	7471	45834	0.173	0.1	0.1	1	N*	mg/kg	25-FEB-97	L8849-48

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
 Project Name: LIBERTY ISLAND
 Project Desc:

Client Sample ID: 97BPXLIC4SD02(08)
 Date Collected: 15-FEB-97
 Matrix: Soil

Login Number: L8849
 Date Received: 19-FEB-97
 Percent Solids: 76.15

Element	Method	Lab No	Value	MDL	FDL	Q	Unit	Units	Analysis Date	Lab ID
BARIUM SULFATE	6020	46096	14.3	0.04	0.5	1	CN	mg/kg	07-MAR-97	L8849-120
ARSENIC_75	6020	45832	4.35	0.5	3.	1		mg/kg	25-FEB-97	L8849-52
BARIUM_135	6020	45832	48.7	0.3	10	1		mg/kg	25-FEB-97	L8849-52
CADMIUM_111	6020	45832	<1.	0.3	1.	1	U	mg/kg	25-FEB-97	L8849-52
CHROMIUM_52	6020	45832	11.1	0.3	3.	1		mg/kg	25-FEB-97	L8849-52
LEAD_208	6020	45832	3.98	0.3	0.8	1		mg/kg	27-FEB-97	L8849-52
MERCURY	7471	45834	<0.1	0.1	0.1	1	NU*	mg/kg	25-FEB-97	L8849-52

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
 Project Name: LIBERTY ISLAND
 Project Desc:

Client Sample ID: 97BPXLIA4SD01(01)
 Date Collected: 15-FEB-97
 Matrix: Soil

Login Number: L8849
 Date Received: 19-FEB-97
 Percent Solids: 82.87

Element	Method	Lab#	Value	MDL	PSL	DIL	Unit	Date	Lab#
BARIUM SULFATE	6020	46097	16.9	0.04	0.5	1	mg/kg	07-MAR-97	L8849-121
ARSENIC_75	6020	45833	3.32	0.4	2.	1	mg/kg	25-FEB-97	L8849-55
BARIUM_135	6020	45833	38.2	0.2	10	1	mg/kg	25-FEB-97	L8849-55
CADMIUM_111	6020	45833	<1.	0.2	1.	1	mg/kg	25-FEB-97	L8849-55
CHROMIUM_52	6020	45833	11.5	0.2	2.	1	mg/kg	25-FEB-97	L8849-55
LEAD_208	6020	45833	4.01	0.2	0.7	1	mg/kg	27-FEB-97	L8849-55
MERCURY	7471	45835	0.238	0.1	0.1	1	mg/kg	25-FEB-97	L8849-55

LAS Laboratories, Inc.

WTALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIA4SD02(08)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 81.34

Element	Method	Lab No.	Value	MDL	DDI	DLI	Cost	Units	Analysis	Lab No.
BARIUM SULFATE		6020	46097	16.0	0.04	0.4	1	mg/kg	07-MAR-97	L8849-122
ARSENIC_75		6020	45833	2.87	0.5	2.	1	mg/kg	25-FEB-97	L8849-59
BARIUM_135		6020	45833	29.0	0.2	10	1	mg/kg	25-FEB-97	L8849-59
CADMIUM_111		6020	45833	<1.	0.2	1.	1	NU	25-FEB-97	L8849-59
CHROMIUM_52		6020	45833	7.15	0.2	2.	1	mg/kg	25-FEB-97	L8849-59
LEAD_208		6020	45833	2.79	0.2	0.7	1	mg/kg	27-FEB-97	L8849-59
MERCURY		7471	45835	<0.1	0.1	0.1	1	U*	25-FEB-97	L8849-59

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIAGSD01(01)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 57.12

Element	Method	Lab ID	Value	DDG	DDI	DL	Qual	Units	Analysis	Lab ID
BARIUM SULFATE	6020	46097	33.4	0.04	0.5	1		mg/kg	07-MAR-97	L8849-123
ARSENIC_75	6020	45833	4.62	0.7	3.	1		mg/kg	25-FEB-97	L8849-63
BARIUM_135	6020	45833	82.3	0.3	20	1		mg/kg	25-FEB-97	L8849-63
CADMIUM_111	6020	45833	<2.	0.3	2.	1	NU	mg/kg	25-FEB-97	L8849-63
CHROMIUM_52	6020	45833	19.1	0.3	3.	1		mg/kg	25-FEB-97	L8849-63
LEAD_208	6020	45833	6.50	0.3	1.	1		mg/kg	27-FEB-97	L8849-63
MERCURY	7471	45835	<0.2	0.2	0.2	1	U*	mg/kg	25-FEB-97	L8849-63

LAS Laboratories, Inc.

TALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIA6SD02(08)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 71.38

Element	Method	Result	Value	MDL	MDL	DL	Q+	Q+	Q+	Analyzed	Lab ID
BARIUM SULFATE	6020	46097	31.7	0.04	0.4	1				07-MAR-97	L8849-124
ARSENIC_75	6020	45833	4.71	0.6	3.	1				25-FEB-97	L8849-67
BARIUM_135	6020	45833	83.2	0.3	10	1				25-FEB-97	L8849-67
CADMIUM_111	6020	45833	<1.	0.3	1.	1	NO			25-FEB-97	L8849-67
CHROMIUM_52	6020	45833	17.7	0.3	3.	1				25-FEB-97	L8849-67
LEAD_208	6020	45833	6.55	0.3	0.9	1				27-FEB-97	L8849-67
MERCURY	7471	45835	<0.1	0.1	0.1	1	U*			25-FEB-97	L8849-67

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIA6SD62(08)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 67.93

Element	Method	Date	Value	UCL	FDL	DL	Unit	Trace	Analyzed	Lab ID
BARIUM SULFATE	6020	46097	40.9	0.04	0.4	1		mg/kg	07-MAR-97	L8849-125
ARSENIC_75	6020	45833	5.33	0.6	3.	1		mg/kg	25-FEB-97	L8849-71
BARIUM_135	6020	45833	61.8	0.3	10	1		mg/kg	25-FEB-97	L8849-71
CADMIUM_111	6020	45833	<1.	0.3	1.	1	NU	mg/kg	25-FEB-97	L8849-71
CHROMIUM_52	6020	45833	16.9	0.3	3.	1		mg/kg	25-FEB-97	L8849-71
LEAD_208	6020	45833	6.00	0.3	0.9	1		mg/kg	27-FEB-97	L8849-71
MERCURY	7471	45835	0.190	0.1	0.1	1	*	mg/kg	25-FEB-97	L8849-71

LAS Laboratories, Inc.

TALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
 Project Name: LIBERTY ISLAND
 Project Desc:

Client Sample ID: 97BPXLIASD02(08)
 Date Collected: 16-FEB-97
 Matrix: Soil

Login Number: L8849
 Date Received: 19-FEB-97
 Percent Solids: 73.31

ANALYTE	METHOD	LAB ID	VALUE	UNITS	CONC	REMARKS	DATE	LAB ID
BARITUM SULFATE	6020	46097	32.0	0.04	0.4	1		07-MAR-97 L8849-126
ARSENIC_75	6020	45833	4.89	0.6	3.	1		25-FEB-97 L8849-75
BARITUM_I35	6020	45833	67.7	0.3	10	1		25-FEB-97 L8849-75
CADMIUM_111	6020	45833	<1.	0.3	1.	1	NU	25-FEB-97 L8849-75
CHROMIUM_52	6020	45833	20.8	0.3	3.	1		25-FEB-97 L8849-75
LEAD_208	6020	45833	6.77	0.3	0.8	1		27-FEB-97 L8849-75
MERCURY	7471	45835	0.149	0.1	0.1	1	*	25-FEB-97 L8849-75

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIASD01(01)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 61.62

Element	Method	Filter	Value	MDL	DD	Dil	Unit	Trace	Analysis	Lab No
BARIUM SULFATE	6020	46097	34.9	0.04	0.5	1			mg/kg	07-MAR-97 L8849-127
ARSENIC_75	6020	45833	9.56	0.7	3.	1			mg/kg	25-FEB-97 L8849-79
BARIUM_135	6020	45833	66.3	0.3	20	1			mg/kg	25-FEB-97 L8849-79
CADMIUM_111	6020	45833	<2.	0.3	2.	1	UN		mg/kg	25-FEB-97 L8849-79
CHROMIUM_52	6020	45833	24.3	0.3	3.	1			mg/kg	25-FEB-97 L8849-79
LEAD_208	6020	45833	10.7	0.3	1.	1			mg/kg	27-FEB-97 L8849-79
MERCURY	7471	45835	0.355	0.2	0.2	1	*		mg/kg	25-FEB-97 L8849-79

LAS Laboratories, Inc.

FALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIA10SD01(01)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 64.75

Element	Method	Batch #	Value	MX	RD	DL	QA	Units	Applied	Lab ID
BARIUM SULFATE	6020	46097	31.3	0.04	0.5	1		mg/kg	07-MAR-97	L8849-128
ARSENIC_75	6020	45833	9.10	0.6	3.	1		mg/kg	25-FEB-97	L8849-83
BARIUM_135	6020	45833	59.4	0.3	20	1		mg/kg	25-FEB-97	L8849-83
CADMIUM_111	6020	45833	<2.	0.3	2.	1	UN	mg/kg	25-FEB-97	L8849-83
CHROMIUM_52	6020	45833	20.0	0.3	3.	1		mg/kg	25-FEB-97	L8849-83
LEAD_208	6020	45833	8.22	0.3	0.9	1		mg/kg	27-FEB-97	L8849-83
MERCURY	7471	45835	<0.2	0.2	0.2	1	U*	mg/kg	25-FEB-97	L8849-83

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK

Project Name: LIBERTY ISLAND

Project Desc:

Client Sample ID: 97BPXLIA10SD02(08)

Date Collected: 16-FEB-97

Matrix: Soil

Login Number: L8849

Date Received: 19-FEB-97

Percent Solids: 55.4

Element	Sample ID	Lab ID	Value	Unit	Method	Trace	Units	Date	Lab ID
BARIUM SULFATE	6020	46097	33.7	0.04	0.5	1	mg/kg	07-MAR-97	L8849-129
ARSENIC_75	6020	45833	11.4	0.7	4.	1	mg/kg	25-FEB-97	L8849-87
BARIUM_135	6020	45833	79.2	0.4	20	1	mg/kg	25-FEB-97	L8849-87
CADMIUM_111	6020	45833	<2.	0.4	2.	1	UN	25-FEB-97	L8849-87
CHROMIUM_52	6020	45833	27.0	0.4	4.	1	mg/kg	25-FEB-97	L8849-87
LEAD_208	6020	45833	11.8	0.4	1.	1	mg/kg	27-FEB-97	L8849-87
MERCURY	7471	45835	<0.2	0.2	0.2	1	U*	25-FEB-97	L8849-87

LAS Laboratories, Inc.

TALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIB8SD02 (08)
Date Collected: 16-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 71.24

Element	Method	Batch	Value	UCL	RD	Disp	Unit	Units	Analyzed	Lab ID
BARIUM SULFATE	6020	46097	21.0	0.04	0.5	1		mg/kg	07-MAR-97	L8849-130
ARSENIC_75	6020	45833	4.26	0.6	3.	1		mg/kg	25-FEB-97	L8849-97
BARIUM_135	6020	45833	48.2	0.3	10	1		mg/kg	25-FEB-97	L8849-97
CADMIUM_111	6020	45833	<1.	0.3	1.	1	UN	mg/kg	25-FEB-97	L8849-97
CHROMIUM_52	6020	45833	18.0	0.3	3.	1		mg/kg	25-FEB-97	L8849-97
LEAD_208	6020	45833	6.94	0.3	0.9	1		mg/kg	27-FEB-97	L8849-97
MERCURY	7471	45835	0.160	0.1	0.1	1	*	mg/kg	25-FEB-97	L8849-97

LAS Laboratories, Inc.

METALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
 Project Name: LIBERTY ISLAND
 Project Desc:

Client Sample ID: 97BPXLIB8SD01(01)
 Date Collected: 15-FEB-97
 Matrix: Soil

Login Number: L8849
 Date Received: 19-FEB-97
 Percent Solids: 71.56

Element	Method	Lab No	Value	MDL	MDL	MDL	Unit	Date Recd	Lab No
BARIUM SULFATE	6020	46097	30.1	0.04	0.5	1	mg/kg	07-MAR-97	L8849-131
ARSENIC_75	6020	45833	3.89	0.6	3.	1	mg/kg	25-FEB-97	L8849-101
BARIUM_135	6020	45833	81.0	0.3	10	1	mg/kg	25-FEB-97	L8849-101
CADMIUM_111	6020	45833	<1.	0.3	1.	1	UN	25-FEB-97	L8849-101
CHROMIUM_52	6020	45833	21.2	0.3	3.	1	mg/kg	25-FEB-97	L8849-101
LEAD_208	6020	45833	7.39	0.3	0.8	1	mg/kg	27-FEB-97	L8849-101
MERCURY	7471	45835	0.183	0.1	0.1	1	*	25-FEB-97	L8849-101

LAS Laboratories, Inc.

TALS DATA REPORT

Account Name: Montgomery Watson * Anchorage, AK
Project Name: LIBERTY ISLAND
Project Desc:

Client Sample ID: 97BPXLIC4SD01(01)
Date Collected: 15-FEB-97
Matrix: Soil

Login Number: L8849
Date Received: 19-FEB-97
Percent Solids: 80.59

Element	Method	Batch	Value	MDL	REL	DL	Qual	Units	Analyzed	Lab ID
BARIUM SULFATE	6020	46097	33.9	0.04	0.4	1		mg/kg	07-MAR-97	L8849-132
ARSENIC_75	6020	45833	4.02	0.5	2.	1		mg/kg	25-FEB-97	L8849-105
BARIUM_135	6020	45833	61.9	0.2	10	1		mg/kg	25-FEB-97	L8849-105
CADMIUM_111	6020	45833	<1.	0.2	1.	1	NU	mg/kg	25-FEB-97	L8849-105
CHROMIUM_52	6020	45833	16.0	0.2	2.	1		mg/kg	25-FEB-97	L8849-105
LEAD_208	6020	45833	6.37	0.2	0.7	1		mg/kg	27-FEB-97	L8849-105
MERCURY	7471	45835	0.130	0.1	0.1	1	*	mg/kg	25-FEB-97	L8849-105

LAS Laboratories, Inc.

METHOD BLANK DATA SUMMARY

Login/SDG Number: L8849

ANALYTE	BATCH ID	Date Analyzed	LIN ID	MB Result	MD	SDG	Units	DETAILED
Arsenic 75	45832	25-FEB-97	45832MB	<2.	0.4	2.	mg/kg	U
Barium 135	45832	25-FEB-97	45832MB	<10	0.2	10	mg/kg	U
Cadmium 111	45832	25-FEB-97	45832MB	<1.	0.2	1.	mg/kg	U
Chromium 52	45832	25-FEB-97	45832MB	<2.	0.2	2.	mg/kg	U
Lead 208	45832	27-FEB-97	45832MB	<0.6	0.2	0.6	mg/kg	U
Arsenic 75	45833	25-FEB-97	45833MB	<2.	0.4	2.	mg/kg	U
Barium 135	45833	25-FEB-97	45833MB	<10	0.2	10	mg/kg	U
Cadmium 111	45833	25-FEB-97	45833MB	<1.	0.2	1.	mg/kg	U
Chromium 52	45833	25-FEB-97	45833MB	<2.	0.2	2.	mg/kg	U
Lead 208	45833	25-FEB-97	45833MB	<0.6	0.2	0.6	mg/kg	U
Mercury	45834	25-FEB-97	45834MB	<0.1	0.1	0.1	mg/kg	U
Mercury	45835	25-FEB-97	45835MB	<0.1	0.1	0.1	mg/kg	U
Barium Sulfate	46096	07-MAR-97	46096MB	7.39	0.04	0.5	mg/kg	
Barium Sulfate	46097	07-MAR-97	46097MB	<0.5	0.04	0.5	mg/kg	U

RPT NAME: genmetqc2 TYPE (S=SDG, L=Login): L LIST: ANALYTICAL TRACE: N SOLIDS ADJUSTED: N UNITS: mg

LAS Laboratories, Inc.

DUPLICATE DATA SUMMARY

Login/SDG Number: L8849

Analyte	Batch ID	Date Analyzed	Client ID	Lab ID	Sample ID	RPD Result	RPD Result	Units	RPD	Date Data	RPD Limit
Arsenic 75	45832	25-FEB-97	97BPXLIB3SD01(01)	L8849-4	45832DUP	<3.	5.67	mg/kg		b	20
Barium 135	45832	25-FEB-97	97BPXLIB3SD01(01)	L8849-4	45832DUP	37.1	34.1	mg/kg	8.4		20
Cadmium 111	45832	25-FEB-97	97BPXLIB3SD01(01)	L8849-4	45832DUP	<1.	<1.	mg/kg		b	20
Chromium 52	45832	25-FEB-97	97BPXLIB3SD01(01)	L8849-4	45832DUP	12.2	13.4	mg/kg	9.0		20
Lead 208	45832	27-FEB-97	97BPXLIB3SD01(01)	L8849-4	45832DUP	4.82	5.06	mg/kg	4.8		20
Arsenic 75	45833	25-FEB-97	97BPXLIA4SD01(01)	L8849-55	45833DUP	3.32	3.21	mg/kg	3.3		20
Barium 135	45833	25-FEB-97	97BPXLIA4SD01(01)	L8849-55	45833DUP	38.2	35.5	mg/kg	7.4		20
Cadmium 111	45833	25-FEB-97	97BPXLIA4SD01(01)	L8849-55	45833DUP	<1.	<1.	mg/kg		b	20
Chromium 52	45833	25-FEB-97	97BPXLIA4SD01(01)	L8849-55	45833DUP	11.5	10.8	mg/kg	6.9		20
Lead 208	45833	27-FEB-97	97BPXLIA4SD01(01)	L8849-55	45833DUP	4.01	3.87	mg/kg	3.5		20
Mercury	45834	25-FEB-97	97BPXLIB3SD01(01)	L8849-4	45834DUP	1.35	0.547	mg/kg	84.6	*	20
Mercury	45835	25-FEB-97	97BPXLIA4SD01(01)	L8849-55	45835DUP	0.238	0.100	mg/kg	81.5	*	20
Barium Sulfate	46096	07-MAR-97	97BPXLIB3SD01(01)	L8849-108	46096DUP	19.7	17.6	mg/kg	9.7		20
Barium Sulfate	46097	07-MAR-97	97BPXLIA4SD01(01)	L8849-121	46097DUP	16.9	14.8	mg/kg	14.1		20

RPT NAME: genmetqc2 TYPE (S=SDG, L=Login): L LIST: ANALYTICAL TRACE: N SOLIDS ADJUSTED: N UNITS: mg

- * - Relative Percent Difference (RPD) for duplicate analysis exceeded acceptance limits.
- b - The RPD cannot be computed because the sample and/or duplicate concentration was below the RDL.

LAS Laboratories, Inc.

MATRIX SPIKE DATA SUMMARY

Login/SDG Number: L8849

ANALYTE	BATCH ID	Date Analyzed	Client ID	LAI ID	Sample ID	MS Result	EMP REGUL.	Known Value	Units	#	DATE	SC Number
Arsenic 75	45832	25-FEB-97	97BPXLIB3SD01(01)	L8849-4	45832MS	24.6	<3.	24.4	mg/kg	89		75-125
Barium 135	45832	25-FEB-97	97BPXLIB3SD01(01)	L8849-4	45832MS	164.	37.1	122.	mg/kg	104		75-125
Cadmium 111	45832	25-FEB-97	97BPXLIB3SD01(01)	L8849-4	45832MS	10.6	<1.	12.2	mg/kg	85		75-125
Chromium 52	45832	25-FEB-97	97BPXLIB3SD01(01)	L8849-4	45832MS	62.4	12.2	48.8	mg/kg	103		75-125
Lead 208	45832	27-FEB-97	97BPXLIB3SD01(01)	L8849-4	45832MS	31.2	4.82	27.1	mg/kg	108		75-125
Arsenic 75	45833	25-FEB-97	97BPXLIA4SD01(01)	L8849-55	45833MS	22.3	2.32	22.7	mg/kg	84		75-125
Barium 135	45833	25-FEB-97	97BPXLIA4SD01(01)	L8849-55	45833MS	157.	38.2	113.	mg/kg	105		75-125
Cadmium 111	45833	25-FEB-97	97BPXLIA4SD01(01)	L8849-55	45833MS	20.3	<1.	11.3	mg/kg	179	N	75-125
Chromium 52	45833	25-FEB-97	97BPXLIA4SD01(01)	L8849-55	45833MS	62.5	11.5	45.4	mg/kg	112		75-125
Lead 208	45833	27-FEB-97	97BPXLIA4SD01(01)	L8849-55	45833MS	26.4	4.01	22.7	mg/kg	99		75-125
Mercury	45834	25-FEB-97	97BPXLIB3SD01(01)	L8849-4	45834MS	1.05	1.35	0.679	mg/kg	-44	N	75-125
Mercury	45835	25-FEB-97	97BPXLIA4SD01(01)	L8849-55	45835MS	0.727	0.238	0.575	mg/kg	85		75-125
Barium Sulfate	46096	07-MAR-97	97BPXLIB3SD01(01)	L8849-108	46096MS	4730	19.7	18000	mg/kg	26	N	75-125
Barium Sulfate	46097	07-MAR-97	97BPXLIA4SD01(01)	L8849-121	46097MS	8980	16.9	12000	mg/kg	75		75-125

RPT NAME: genmetqc2 TYPE (S=SDG, L=Login): L LIST: ANALYTICAL TRACE: N SOLIDS ADJUSTED: N UNITS: mg

N - Matrix Spike/Matrix Spike Duplicate recovery exceeded acceptance limits.

LAS Laboratories, Inc.

LCS DATA SUMMARY

Login/SDG Number: L8849

Analyte	Batch ID	Date Analyzed	Lab ID	LCS Result	Recon Value	Units	Req.	Para. Qual.	DC Limits
Arsenic 75	45832	25-FEB-97	45832LCSS	349.	349.	mg/kg	100		49-149
Barium 135	45832	25-FEB-97	45832LCSS	99.1	111.	mg/kg	89		17-184.7
Cadmium 111	45832	25-FEB-97	45832LCSS	49.6	46.9	mg/kg	106		52-144
Chromium 52	45832	25-FEB-97	45832LCSS	130.	115.	mg/kg	113		54-141.7
Lead 208	45832	27-FEB-97	45832LCSS	51.3	52.4	mg/kg	98		-
Arsenic 75	45832	25-FEB-97	45832LCSW	0.0835	0.100	mg/l	84		80-120
Barium 135	45832	25-FEB-97	45832LCSW	0.494	0.500	mg/l	99		80-120
Cadmium 111	45832	25-FEB-97	45832LCSW	0.0432	0.0500	mg/l	86		80-120
Chromium 52	45832	25-FEB-97	45832LCSW	0.214	0.200	mg/l	107		80-120
Lead 208	45832	27-FEB-97	45832LCSW	92.5	0.100	mg/L	93		80-120
Arsenic 75	45833	25-FEB-97	45833LCSS	339.	349.	mg/kg	97		49-149
Barium 135	45833	25-FEB-97	45833LCSS	97.2	111.	mg/kg	88		17-184.7
Cadmium 111	45833	25-FEB-97	45833LCSS	48.7	46.9	mg/kg	104		52-144
Chromium 52	45833	25-FEB-97	45833LCSS	139.	115.	mg/kg	121		54-141.7
Lead 208	45833	27-FEB-97	45833LCSS	50.5	52.4	mg/kg	96		-
Arsenic 75	45833	25-FEB-97	45833LCSW	0.0814	0.100	mg/l	81		80-120
Barium 135	45833	25-FEB-97	45833LCSW	0.465	0.500	mg/l	93		80-120
Cadmium 111	45833	25-FEB-97	45833LCSW	0.0904	0.0500	mg/l	181	*	80-120
Chromium 52	45833	25-FEB-97	45833LCSW	0.217	0.200	mg/l	108		80-120
Lead 208	45833	27-FEB-97	45833LCSW	0.0930	0.100	mg/l	93		80-120
Mercury	45834	25-FEB-97	45834LCSS	13.6	13.1	mg/kg	104		48-156

RPT NAME: genmetqc2 TYPE (S=SDG, L=Login): L LIST: ANALYTICAL TRACE: N SOLIDS ADJUSTED: N UNITS: mg

LAS Laboratories, Inc.

LCS DATA SUMMARY

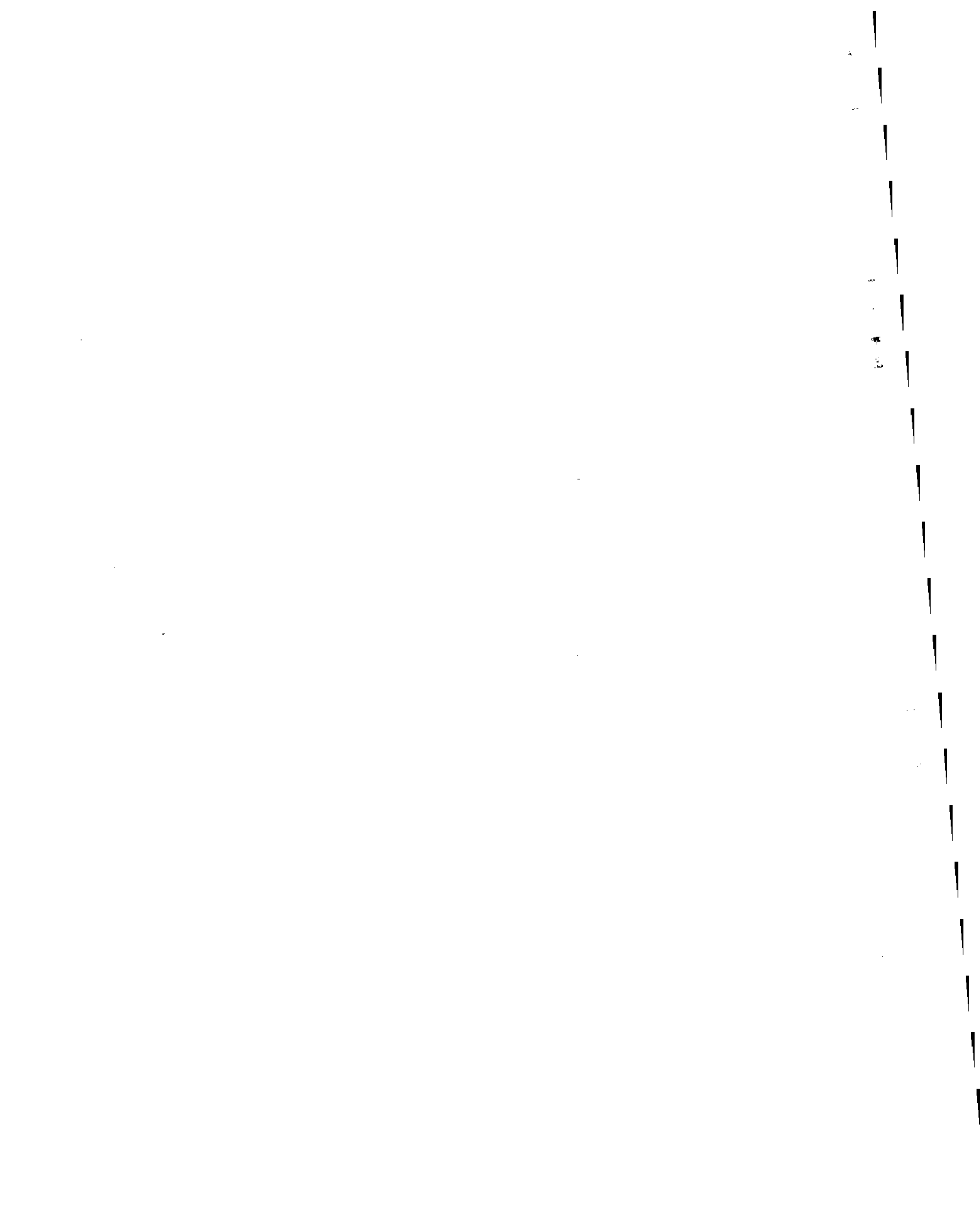
Login/SDG Number: L8849

Analyte	Batch ID	Date Analyzed	LAL ID	LCH Result	Known Value	Units	Rec	DATA	CC
Mercury	45834	25-FEB-97	45834LCSW	0.00115	0.00100	mg/l	115		80-120
Mercury	45835	25-FEB-97	45835LCSS	13.8	13.1	mg/kg	105		48-156
Mercury	45835	25-FEB-97	45835LCSW	0.00114	0.00100	mg/l	114		80-120
Barium Sulfate	46096	07-MAR-97	46096LCSS	7170	10100	mg/kg	71		-
Barium Sulfate	46097	07-MAR-97	46097LCSS	14200	16000	mg/kg	89		-

RPT NAME: genmetqc2 TYPE (S=SDG, L=Login): L LIST: ANALYTICAL TRACE: N SOLIDS ADJUSTED: N UNITS: mg

SAMPLE RESULTS FORMS AND QC SUMMARIES

EPA METHOD 8260 (Volatile Organics)



LAS LABORATORIESVOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIB3SD01(01)	LAL Sample ID:	L8849-1
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022097-8260-D1
Percent Moisture:	26.33	Preparation Dilution:	1.00

1,2-Dichloroethane-d4	95t	77-127
Toluene-d8	95t	84-120
Bromofluorobenzene	85t	78-125

Dichlorodifluoromethane	75-71-8	<6.8	6.8
Chloromethane	74-87-3	<6.8	6.8
Vinyl Chloride	75-01-4	<6.8	6.8
Bromomethane	74-83-9	<6.8	6.8
Chloroethane	75-00-3	<6.8	6.8
Trichlorofluoromethane	75-69-4	<6.8	6.8
Freon 113	76-13-1	<14.	14.
Acetone	67-64-1	35.	14.
1,1-Dichloroethane	75-35-4	<6.8	6.8
Carbon Disulfide	75-15-0	<6.8	6.8
Methylene Chloride	75-09-2	<6.8	6.8
trans-1,2-Dichloroethane	156-60-5	<6.8	6.8
Vinyl Acetate	108-05-4	<14.	14.
1,1-Dichloroethane	75-34-3	<6.8	6.8
2-Butanone	78-93-3	<14.	14.
2,2-Dichloropropane	594-20-7	<6.8	6.8
cis-1,2-Dichloroethane	156-59-2	<6.8	6.8
Chloroform	67-66-3	<6.8	6.8
Bromochloromethane	74-97-5	<6.8	6.8
1,1,1-Trichloroethane	71-55-6	<6.8	6.8
2-Chloroethylvinylether	110-75-8	<27.	27.
1,1-Dichloropropene	563-58-6	<6.8	6.8
Carbon tetrachloride	56-23-5	<6.8	6.8
1,2-Dichloroethane	107-06-2	<6.8	6.8
Benzene	71-43-2	<6.8	6.8
Trichloroethene	79-01-6	<6.8	6.8
1,2-Dichloropropane	78-87-5	<6.8	6.8
Bromodichloromethane	75-27-4	<6.8	6.8
Dibromomethane	74-95-3	<6.8	6.8
4-Methyl-2-Pentanone	108-10-1	<14.	14.
cis-1,3-Dichloropropene	10061-01-5	<6.8	6.8
Toluene	108-88-3	<6.8	6.8
trans-1,3-Dichloropropene	10061-02-6	<6.8	6.8
1,1,2-Trichloroethane	79-00-5	<6.8	6.8
2-Hexanone	591-78-6	<14.	14.
1,2-Dibromoethane	106-93-4	<6.8	6.8
3-Dichloropropane	142-28-9	<6.8	6.8
Tetrachloroethene	127-18-4	<6.8	6.8
Dibromochloromethane	124-48-1	<6.8	6.8
Chlorobenzene	108-90-7	<6.8	6.8
1,1,1,2-Tetrachloroethane	630-20-6	<6.8	6.8

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97EPXLIB3SD01(01)	LAL Sample ID:	L8849-1
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022097-8260-01
Percent Moisture:	26.33	Preparation Dilution:	1.00

Ethylbenzene	100-41-4	<6.8	6.8
m,p-Xylene	136777-61-2	<6.8	6.8
o-Xylene	95-47-6	<6.8	6.8
Styrene	100-42-5	<6.8	6.8
Bromoform	75-25-2	<6.8	6.8
Isopropylbenzene	98-82-8	<6.8	6.8
1,1,2,2-Tetrachloroethane	79-34-5	<6.8	6.8
1,2,3-Trichloropropane	96-18-4	<6.8	6.8
n-Propylbenzene	103-65-1	<6.8	6.8
Bromobenzene	108-86-1	<6.8	6.8
1,3,5-Trimethylbenzene	108-57-8	<6.8	6.8
2-Chlorotoluene	95-49-8	<6.8	6.8
4-Chlorotoluene	106-43-4	<6.8	6.8
tert-Butylbenzene	98-06-6	<6.8	6.8
1,2,4-Trimethylbenzene	95-63-6	<6.8	6.8
sec-Butylbenzene	135-98-8	<6.8	6.8
p-Isopropyltoluene	99-87-6	<6.8	6.8
1,3-Dichlorobenzene	541-73-1	<6.8	6.8
1,4-Dichlorobenzene	106-46-7	<6.8	6.8
n-Butylbenzene	104-51-8	<6.8	6.8
1,2-Dichlorobenzene	95-50-1	<6.8	6.8
1,2-Dibromo-3-chloropropane	96-12-8	<6.8	6.8
1,2,4-Trichlorobenzene	120-82-1	<6.8	6.8
Hexachlorobutadiene	87-68-3	<6.8	6.8
Naphthalene	91-20-3	<6.8	6.8
1,2,3-Trichlorobenzene	87-61-6	<6.8	6.8

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	L8849-13
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022097-8260-D1
Percent Moisture:	22.03	Preparation Dilution:	1.00

1,2-Dichloroethane-d4	93%	77-127
Toluene-d8	95%	84-120
Bromofluorobenzene	83%	78-125

Dichlorodifluoromethane	75-71-8	<6.4	6.4
Chloromethane	74-87-3	<6.4	6.4
Vinyl Chloride	75-01-4	<6.4	6.4
Bromomethane	74-83-9	<6.4	6.4
Chloroethane	75-00-3	<6.4	6.4
Trichlorofluoromethane	75-69-4	<6.4	6.4
neon 113	76-13-1	<13.	13.
acetone	67-64-1	42.	13.
1,1-Dichloroethane	75-35-4	<6.4	6.4
Carbon Disulfide	75-15-0	<6.4	6.4
Methylene Chloride	75-09-2	<6.4	6.4
trans-1,2-Dichloroethene	156-60-5	<6.4	6.4
Vinyl Acetate	108-05-4	<13.	13.
1,1-Dichloroethane	75-34-3	<6.4	6.4
2-Butanone	78-93-3	<13.	13.
2,2-Dichloropropane	594-20-7	<6.4	6.4
cis-1,2-Dichloroethene	156-59-2	<6.4	6.4
Chloroform	67-66-3	<6.4	6.4
Bromochloromethane	74-97-5	<6.4	6.4
1,1,1-Trichloroethane	71-55-6	<6.4	6.4
2-Chloroethylvinylether	110-75-8	<26.	26.
1,1-Dichloropropene	563-58-6	<6.4	6.4
Carbon tetrachloride	56-23-5	<6.4	6.4
1,2-Dichloroethane	107-06-2	<6.4	6.4
Benzene	71-43-2	<6.4	6.4
Trichloroethene	79-01-6	<6.4	6.4
1,2-Dichloropropane	78-87-5	<6.4	6.4
Bromodichloromethane	75-27-4	<6.4	6.4
Dibromomethane	74-95-3	<6.4	6.4
4-Methyl-2-Pentanone	108-10-1	<13.	13.
cis-1,3-Dichloropropene	10061-01-5	<6.4	6.4
Toluene	108-88-3	<6.4	6.4
trans-1,3-Dichloropropene	10061-02-6	<6.4	6.4
1,1,2-Trichloroethane	79-00-5	<6.4	6.4
Hexanone	591-78-6	<13.	13.
2-Dibromoethane	106-93-4	<6.4	6.4
1,3-Dichloropropene	142-28-9	<6.4	6.4
Tetrachloroethene	127-18-4	<6.4	6.4
Dibromochloromethane	124-48-1	<6.4	6.4
Chlorobenzene	108-90-7	<6.4	6.4
1,1,1,2-Tetrachloroethane	630-20-6	<6.4	6.4

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	L8849-13
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022097-8260-01
Percent Moisture:	22.03	Preparation Dilution:	1.00



Ethylbenzene	100-41-4	<6.4	6.4
m,p-Xylene	136777-61-2	<6.4	6.4
o-Xylene	95-47-6	<6.4	6.4
Styrene	100-42-5	<6.4	6.4
Bromoform	75-25-2	<6.4	6.4
Isopropylbenzene	98-82-8	<6.4	6.4
1,1,2,2-Tetrachloroethane	79-34-5	<6.4	6.4
1,2,3-Trichloropropane	96-18-4	<6.4	6.4
n-Propylbenzene	103-65-1	<6.4	6.4
Bromobenzene	108-86-1	<6.4	6.4
1,3,5-Trimethylbenzene	108-67-8	<6.4	6.4
2-Chlorotoluene	95-49-8	<6.4	6.4
4-Chlorotoluene	106-43-4	<6.4	6.4
tert-Butylbenzene	98-06-6	<6.4	6.4
1,2,4-Trimethylbenzene	95-63-6	<6.4	6.4
sec-Butylbenzene	135-98-8	<6.4	6.4
p-Isopropyltoluene	99-87-6	<6.4	6.4
1,3-Dichlorobenzene	541-73-1	<6.4	6.4
1,4-Dichlorobenzene	106-46-7	<6.4	6.4
n-Butylbenzene	104-51-8	<6.4	6.4
1,2-Dichlorobenzene	95-50-1	<6.4	6.4
1,2-Dibromo-3-chloropropane	96-12-8	<6.4	6.4
1,2,4-Trichlorobenzene	120-82-1	<6.4	6.4
Hexachlorobutadiene	87-68-3	<6.4	6.4
Naphthalene	91-20-3	<6.4	6.4
1,2,3-Trichlorobenzene	87-61-6	<6.4	6.4

LAS LABORATORIESVOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	978FKL1H10SD01(01)	LAL Sample ID:	L8849-17
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022097-8260-D1
Percent Moisture:	20.06	Preparation Dilution:	1.00

1,2-Dichloroethane-d4	102%	77-127
Toluene-d8	94%	84-120
Bromofluorobenzene	89%	78-125

Dichlorodifluoromethane	75-71-8	<6.3	6.3
Chloromethane	74-87-3	<6.3	6.3
Vinyl Chloride	75-01-4	<6.3	6.3
Bromomethane	74-83-9	<6.3	6.3
Chloroethane	75-00-3	<6.3	6.3
Trichlorofluoromethane	75-69-4	<6.3	6.3
Isoprene 113	76-13-1	<13.	13.
Acetone	67-64-1	24.	13.
1,1-Dichloroethane	75-35-4	<6.3	6.3
Carbon Disulfide	75-15-0	<6.3	6.3
Methylene Chloride	75-09-2	<6.3	6.3
trans-1,2-Dichloroethane	156-60-5	<6.3	6.3
Vinyl Acetate	108-05-4	<13.	13.
1,1-Dichloroethane	75-34-3	<6.3	6.3
2-Butanone	78-93-3	<13.	13.
2,2-Dichloropropane	594-20-7	<6.3	6.3
cis-1,2-Dichloroethane	156-59-2	<6.3	6.3
Chloroform	67-66-3	<6.3	6.3
Bromochloromethane	74-97-5	<6.3	6.3
1,1,1-Trichloroethane	71-55-6	<6.3	6.3
2-Chloroethylvinylether	110-75-8	<25.	25.
1,1-Dichloropropene	563-58-6	<6.3	6.3
Carbon tetrachloride	56-23-5	<6.3	6.3
1,2-Dichloroethane	107-06-2	<6.3	6.3
Benzene	71-43-2	<6.3	6.3
Trichloroethane	79-01-6	<6.3	6.3
1,2-Dichloropropane	78-87-5	<6.3	6.3
Bromodichloromethane	75-27-4	<6.3	6.3
Dibromomethane	74-95-3	<6.3	6.3
1-Methyl-2-Pentanone	108-10-1	<13.	13.
cis-1,3-Dichloropropene	10061-01-5	<6.3	6.3
Toluene	108-88-3	<6.3	6.3
trans-1,3-Dichloropropene	10061-02-6	<6.3	6.3
1,1,2-Trichloroethane	79-00-5	<6.3	6.3
Hexanone	591-78-6	<13.	13.
1,2-Dibromoethane	106-93-4	<6.3	6.3
1,3-Dichloropropane	142-28-9	<6.3	6.3
Tetrachloroethane	127-18-4	<6.3	6.3
Dibromochloromethane	124-48-1	<6.3	6.3
Chlorobenzene	108-90-7	<6.3	6.3
1,1,2-Tetrachloroethane	68-00-0	<6.3	6.3

LAS LABORATORIESVOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIB10SD01(01)	LAL Sample ID:	L8849-17
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022097-8260-D1
Percent Moisture:	20.06	Preparation Dilution:	1.00

Ethylbenzene	100-41-4	<6.3	6.3
m,p-Xylene	136777-61-2	<6.3	6.3
o-Xylene	95-47-6	<6.3	6.3
Styrene	100-42-5	<6.3	6.3
Bromoform	75-25-2	<6.3	6.3
Isopropylbenzene	98-82-8	<6.3	6.3
1,1,2,2-Tetrachloroethane	79-34-5	<6.3	6.3
1,2,3-Trichloropropane	96-18-4	<6.3	6.3
n-Propylbenzene	103-65-1	<6.3	6.3
Bromobenzene	108-86-1	<6.3	6.3
1,3,5-Trimethylbenzene	108-67-8	<6.3	6.3
2-Chlorotoluene	95-49-8	<6.3	6.3
4-Chlorotoluene	106-43-4	<6.3	6.3
tert-Butylbenzene	98-06-6	<6.3	6.3
1,2,4-Trimethylbenzene	95-63-6	<6.3	6.3
sec-Butylbenzene	135-98-8	<6.3	6.3
p-Isopropyltoluene	99-87-6	<6.3	6.3
1,3-Dichlorobenzene	541-73-1	<6.3	6.3
1,4-Dichlorobenzene	106-46-7	<6.3	6.3
n-Butylbenzene	104-51-8	<6.3	6.3
1,2-Dichlorobenzene	95-50-1	<6.3	6.3
1,2-Dibromo-3-chloropropane	96-12-8	<6.3	6.3
1,2,4-Trichlorobenzene	120-82-1	<6.3	6.3
Hexachlorobutadiene	87-68-3	<6.3	6.3
Naphthalene	91-20-3	<6.3	6.3
1,2,3-Trichlorobenzene	87-61-6	<6.3	6.3

LAS LABORATORIESVOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXL1810SD02(08)	LAL Sample ID:	L8849-21
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	O22097-8260-D1
Percent Moisture:	27.19	Preparation Dilution:	0.990

1,2-Dichloroethane-d4	91%	77-127
Toluene-d8	89%	84-120
Bromofluorobenzene	81%	78-125

Dichlorodifluoromethane	75-71-8	<6.8	6.8
Chloromethane	74-87-3	<6.8	6.8
Vinyl Chloride	75-01-4	<6.8	6.8
Bromomethane	74-83-9	<6.8	6.8
Chloroethane	75-00-3	<6.8	6.8
Trichlorofluoromethane	75-69-4	<6.8	6.8
neon 113	76-13-1	<14.	14.
acetone	67-64-1	84.	14.
1,1-Dichloroethene	75-35-4	<6.8	6.8
Carbon Disulfide	75-15-0	<6.8	6.8
Methylene Chloride	75-09-2	<6.8	6.8
trans-1,2-Dichloroethene	156-60-5	<6.8	6.8
Vinyl Acetate	108-05-4	<14.	14.
1,1-Dichloroethane	75-34-3	<6.8	6.8
2-Butanone	78-93-3	16.	14.
2,2-Dichloropropane	594-20-7	<6.8	6.8
cis-1,2-Dichloroethene	156-59-2	<6.8	6.8
Chloroform	67-66-3	<6.8	6.8
Bromochloromethane	74-97-5	<6.8	6.8
1,1,1-Trichloroethane	71-55-6	<6.8	6.8
2-Chloroethylvinylether	110-75-8	<27.	27.
1,1-Dichloropropane	563-58-6	<6.8	6.8
Carbon tetrachloride	56-23-5	<6.8	6.8
1,2-Dichloroethane	107-06-2	<6.8	6.8
Benzene	71-43-2	<6.8	6.8
Trichloroethene	79-01-6	<6.8	6.8
1,2-Dichloropropane	78-87-5	<6.8	6.8
Bromodichloromethane	75-27-4	<6.8	6.8
Dibromomethane	74-95-3	<6.8	6.8
4-Methyl-2-Pentanone	108-10-1	<14.	14.
cis-1,3-Dichloropropane	10061-01-5	<6.8	6.8
Toluene	108-88-3	<6.8	6.8
trans-1,3-Dichloropropane	10061-02-6	<6.8	6.8
1,1,2-Trichloroethane	79-00-5	<6.8	6.8
Hexanone	591-78-6	<14.	14.
2-Dibromoethane	106-93-4	<6.8	6.8
1,3-Dichloropropane	142-28-9	<6.8	6.8
Tetrachloroethene	127-18-4	<6.8	6.8
Dibromochloromethane	124-48-1	<6.8	6.8
Chlorobenzene	108-90-7	<6.8	6.8
1,1,1,2-Tetrachloroethane	630-20-4	<6.8	6.8

LAS LABORATORIESVOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BFXLIB10SD02(08)	LAL Sample ID:	LB849-21
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022097-8260-D1
Percent Moisture:	27.19	Preparation Dilution:	0.990

Ethylbenzene	100-41-4	<6.8	6.8
m,p-Xylene	136777-61-2	<6.8	6.8
o-Xylene	95-47-6	<6.8	6.8
Styrene	100-42-5	<6.8	6.8
Bromoform	75-25-2	<6.8	6.8
Isopropylbenzene	98-82-8	<6.8	6.8
1,1,2,2-Tetrachloroethane	79-34-5	<6.8	6.8
1,2,3-Trichloropropane	96-18-4	<6.8	6.8
n-Propylbenzene	103-65-1	<6.8	6.8
Bromobenzene	108-86-1	<6.8	6.8
1,3,5-Trimethylbenzene	108-67-8	<6.8	6.8
2-Chlorotoluene	95-49-8	<6.8	6.8
4-Chlorotoluene	106-43-4	<6.8	6.8
tert-Butylbenzene	98-06-6	<6.8	6.8
1,2,4-Trimethylbenzene	95-63-6	<6.8	6.8
sec-Butylbenzene	135-98-8	<6.8	6.8
p-Isopropyltoluene	99-87-6	<6.8	6.8
1,3-Dichlorobenzene	541-73-1	<6.8	6.8
1,4-Dichlorobenzene	106-46-7	<6.8	6.8
n-Butylbenzene	104-51-8	<6.8	6.8
1,2-Dichlorobenzene	95-50-1	<6.8	6.8
1,2-Dibromo-3-chloropropane	96-12-8	<6.8	6.8
1,2,4-Trichlorobenzene	120-82-1	<6.8	6.8
Hexachlorobutadiene	87-68-3	<6.8	6.8
Naphthalene	91-20-3	<6.8	6.8
1,2,3-Trichlorobenzene	87-61-6	<6.8	6.8

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97HFILIR3SD02(08)	LAL Sample ID:	L8849-5
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021997-8260-D1
Percent Moisture:	18.83	Preparation Dilution:	0.990

1,2-Dichloroethane-d4	101%	77-127
Toluene-d8	96%	84-120
Bromofluorobenzene	81%	78-125

Dichlorodifluoromethane	75-71-8	<6.1	6.1
Chloromethane	74-87-3	<6.1	6.1
Vinyl Chloride	75-01-4	<6.1	6.1
Bromomethane	74-83-9	<6.1	6.1
Chloroethane	75-00-3	<6.1	6.1
Trichlorofluoromethane	75-69-4	<6.1	6.1
neon 113	76-13-1	<12.	12.
etone	67-64-1	18.	12.
1,1-Dichloroethane	75-35-4	<6.1	6.1
Carbon Disulfide	75-15-0	<6.1	6.1
Methylene Chloride	75-09-2	<6.1	6.1
trans-1,2-Dichloroethane	156-60-5	<6.1	6.1
Vinyl Acetate	108-05-4	<12.	12.
1,1-Dichloroethane	75-34-3	<6.1	6.1
2-Butanone	78-93-3	<12.	12.
2,2-Dichloropropane	594-20-7	<6.1	6.1
cis-1,2-Dichloroethane	156-59-2	<6.1	6.1
Chloroform	67-66-3	<6.1	6.1
Bromochloromethane	74-97-5	<6.1	6.1
1,1,1-Trichloroethane	71-55-6	<6.1	6.1
2-Chloroethylvinylether	110-75-8	<24.	24.
1,1-Dichloropropane	563-58-6	<6.1	6.1
Carbon tetrachloride	56-23-5	<6.1	6.1
1,2-Dichloroethane	107-06-2	<6.1	6.1
Benzene	71-43-2	<6.1	6.1
Trichloroethane	79-01-6	<6.1	6.1
1,2-Dichloropropane	78-87-5	<6.1	6.1
Bromodichloromethane	75-27-4	<6.1	6.1
Dibromomethane	74-95-3	<6.1	6.1
4-Methyl-2-Pentanone	108-10-1	<12.	12.
cis-1,3-Dichloropropene	10061-01-5	<6.1	6.1
Toluene	108-88-3	<6.1	6.1
trans-1,3-Dichloropropene	10061-02-6	<6.1	6.1
1,1,2-Trichloroethane	79-00-5	<6.1	6.1
2-Hexanone	591-78-6	<12.	12.
1,2-Dibromoethane	106-93-4	<6.1	6.1
1,3-Dichloropropane	142-28-9	<6.1	6.1
Tetrachloroethane	127-18-4	<6.1	6.1
Dibromochloromethane	124-46-1	<6.1	6.1
Chlorobenzene	108-90-7	<6.1	6.1
1,1,1,2-Tetrachloroethane	630-20-6	<6.1	6.1

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPLIB3SD02(08)	LAL Sample ID:	L8849-5
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	021997-8260-D1
Percent Moisture:	18.83	Preparation Dilution:	0.990



Ethylbenzene	100-41-4	<6.1	6.1
m,p-Xylene	136777-61-2	<6.1	6.1
o-Xylene	95-47-6	<6.1	6.1
Styrene	100-42-5	<6.1	6.1
Bromoform	75-25-2	<6.1	6.1
Isopropylbenzene	98-82-8	<6.1	6.1
1,1,2,2-Tetrachloroethane	79-34-5	<6.1	6.1
1,2,3-Trichloropropane	96-18-4	<6.1	6.1
n-Propylbenzene	103-65-1	<6.1	6.1
Bromobenzene	108-86-1	<6.1	6.1
1,3,5-Trimethylbenzene	108-67-8	<6.1	6.1
2-Chlorotoluene	95-49-8	<6.1	6.1
4-Chlorotoluene	106-43-4	<6.1	6.1
tert-Butylbenzene	98-06-6	<6.1	6.1
1,2,4-Trimethylbenzene	95-63-6	<6.1	6.1
sec-Butylbenzene	135-98-8	<6.1	6.1
p-Isopropyltoluene	99-87-6	<6.1	6.1
1,3-Dichlorobenzene	541-73-1	<6.1	6.1
1,4-Dichlorobenzene	106-46-7	<6.1	6.1
n-Butylbenzene	104-51-8	<6.1	6.1
1,2-Dichlorobenzene	95-50-1	<6.1	6.1
1,2-Dibromo-3-chloropropane	96-12-8	<6.1	6.1
1,2,4-Trichlorobenzene	120-82-1	<6.1	6.1
Hexachlorobutadiene	87-68-3	<6.1	6.1
Naphthalene	91-20-3	<6.1	6.1
1,2,3-Trichlorobenzene	87-61-6	<6.1	6.1

LAS LABORATORIES

VLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	978PILIB6SD01(01)	LAL Sample ID:	L8849-9
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022097-8260-D1
Percent Moisture:	32.2	Preparation Dilution:	1.00

1,2-Dichloroethane-d4	89%	77-127
Toluene-d8	94%	84-120
Bromofluorobenzene	82%	78-125

Dichlorodifluoromethane	75-71-8	<7.4	7.4
Chloromethane	74-87-3	<7.4	7.4
Vinyl Chloride	75-01-4	<7.4	7.4
Bromomethane	74-83-9	<7.4	7.4
Chloroethane	75-00-3	<7.4	7.4
Trichlorofluoromethane	75-69-4	<7.4	7.4
Freon 113	76-13-1	<15.	15.
Acetone	67-64-1	160	15.
1-Dichloroethene	75-35-4	<7.4	7.4
Carbon Disulfide	75-15-0	<7.4	7.4
Methylene Chloride	75-09-2	<7.4	7.4
trans-1,2-Dichloroethene	156-60-5	<7.4	7.4
Vinyl Acetate	108-05-4	<15.	15.
1,1-Dichloroethane	75-34-3	<7.4	7.4
2-Butanone	78-93-3	23.	15.
2,2-Dichloropropane	594-20-7	<7.4	7.4
cis-1,2-Dichloroethene	156-59-2	<7.4	7.4
Chloroform	67-66-3	<7.4	7.4
Bromochloromethane	74-97-5	<7.4	7.4
1,1,1-Trichloroethane	71-55-6	<7.4	7.4
2-Chloroethylvinylether	110-75-8	<29.	29.
1,1-Dichloropropene	563-58-6	<7.4	7.4
Carbon tetrachloride	56-23-5	<7.4	7.4
1,2-Dichloroethane	107-06-2	<7.4	7.4
Benzene	71-43-2	<7.4	7.4
Trichloroethene	79-01-6	<7.4	7.4
1,2-Dichloropropane	78-87-5	<7.4	7.4
Bromodichloromethane	75-27-4	<7.4	7.4
Dibromomethane	74-95-3	<7.4	7.4
4-Methyl-2-Pentanone	108-10-1	<15.	15.
cis-1,3-Dichloropropene	10061-01-5	<7.4	7.4
Toluene	108-88-3	<7.4	7.4
trans-1,3-Dichloropropene	10061-02-6	<7.4	7.4
1,1,2-Trichloroethane	79-00-5	<7.4	7.4
2-Hexanone	591-78-6	<15.	15.
1,2-Dibromoethane	106-93-4	<7.4	7.4
1,3-Dichloropropene	142-28-9	<7.4	7.4
trichloroethene	127-18-4	<7.4	7.4
Dibromochloromethane	124-48-1	<7.4	7.4
Chlorobenzene	108-90-7	<7.4	7.4
1,1,1,2-Tetrachloroethane	630-20-6	<7.4	7.4

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIB6SD01(01)	LAL Sample ID:	L8849-9
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022097-8260-D1
Percent Moisture:	32.2	Preparation Dilution:	1.00



Ethylbenzene	100-41-4	<7.4	7.4
m,p-Xylene	136777-61-2	<7.4	7.4
o-Xylene	95-47-6	<7.4	7.4
Styrene	100-42-5	<7.4	7.4
Bromoform	75-28-2	<7.4	7.4
Isopropylbenzene	98-82-8	<7.4	7.4
1,1,2,2-Tetrachloroethane	79-34-5	<7.4	7.4
1,2,3-Trichloropropane	96-18-4	<7.4	7.4
n-Propylbenzene	103-65-1	<7.4	7.4
Bromobenzene	108-86-1	<7.4	7.4
1,3,5-Trimethylbenzene	108-67-8	<7.4	7.4
2-Chlorotoluene	95-49-8	<7.4	7.4
4-Chlorotoluene	106-43-4	<7.4	7.4
tert-Butyl benzene	98-06-6	<7.4	7.4
1,2,4-Trichlorobenzene	95-63-6	<7.4	7.4
sec-Butyl benzene	135-98-8	<7.4	7.4
p-Isopropyl toluene	99-87-6	<7.4	7.4
1,3-Dichlorobenzene	541-73-1	<7.4	7.4
1,4-Dichlorobenzene	106-46-7	<7.4	7.4
n-Butylbenzene	104-51-8	<7.4	7.4
1,2-Dichlorobenzene	95-50-1	<7.4	7.4
1,2-Dibromo-3-chloropropane	96-12-8	<7.4	7.4
1,2,4-Trichlorobenzene	120-82-1	<7.4	7.4
Hexachlorobutadiene	87-68-3	<7.4	7.4
Naphthalene	91-20-3	<7.4	7.4
1,2,3-Trichlorobenzene	87-61-6	<7.4	7.4

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BFXLIII1SD02(08)	LAL Sample ID:	L8849-33
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	21.34	Preparation Dilution:	0.980

Compound	Recovery	Reference
1,2-Dichloroethane-d4	95%	77-127
Toluene-d8	97%	84-120
Bromofluorobenzene	86%	78-125

Compound	Reference	Result ug/kg	Limit ug/kg	Notes
Dichlorodifluoromethane	75-71-8	<6.2	6.2	
Chloromethane	74-87-3	<6.2	6.2	
Vinyl Chloride	75-01-4	<6.2	6.2	
Bromomethane	74-83-9	<6.2	6.2	
Chloroethane	75-00-3	<6.2	6.2	
Trichlorofluoromethane	75-69-4	<6.2	6.2	
Freon 113	76-13-1	<12.	12.	
acetone	67-64-1	250	12.	E
1,1-Dichloroethene	75-35-4	<6.2	6.2	
Carbon Disulfide	75-15-0	<6.2	6.2	
Methylene Chloride	75-09-2	<6.2	6.2	
trans-1,2-Dichloroethene	156-60-5	<6.2	6.2	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.2	6.2	
2-Butanone	78-93-3	53.	12.	
2,2-Dichloropropane	594-20-7	<6.2	6.2	
cis-1,2-Dichloroethene	156-59-2	<6.2	6.2	
Chloroform	67-66-3	<6.2	6.2	
Bromochloromethane	74-97-5	<6.2	6.2	
1,1,1-Trichloroethane	71-55-6	<6.2	6.2	
2-Chloroethylvinylether	110-75-8	<25.	25.	
1,1-Dichloropropene	563-58-6	<6.2	6.2	
Carbon tetrachloride	56-23-5	<6.2	6.2	
1,2-Dichloroethane	107-06-2	<6.2	6.2	
Benzene	71-43-2	<6.2	6.2	
Trichloroethene	79-01-6	<6.2	6.2	
1,2-Dichloropropane	78-87-5	<6.2	6.2	
Bromodichloromethane	75-27-4	<6.2	6.2	
Dibromomethane	74-95-3	<6.2	6.2	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.2	6.2	
Toluene	108-88-3	<6.2	6.2	
trans-1,3-Dichloropropene	10061-02-6	<6.2	6.2	
1,1,2-Trichloroethane	79-00-5	<6.2	6.2	
2-Hexanone	591-78-6	<12.	12.	
1,2-Dibromoethane	106-93-4	<6.2	6.2	
1,3-Dichloropropane	142-28-9	<6.2	6.2	
Tetrachloroethene	127-18-4	<6.2	6.2	
Dibromochloromethane	124-48-1	<6.2	6.2	
Chlorobenzene	108-90-7	<6.2	6.2	
1,1,1,2-Tetrachloroethane	630-20-6	<6.2	6.2	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIISD02(08)	LAL Sample ID:	L8849-33
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	21.34	Preparation Dilution:	0.980

CONSTITUENT	DATA NO.	RESULT ug/kg	POP ug/kg	DATA QUALIFIED
Ethylbenzene	100-41-4	<6.2	6.2	
m,p-Xylene	136777-61-2	<6.2	6.2	
o-Xylene	95-47-6	<6.2	6.2	
Styrene	100-42-5	<6.2	6.2	
Bromoform	75-25-2	<6.2	6.2	
Isopropylbenzene	98-82-8	<6.2	6.2	
1,1,2,2-Tetrachloroethane	79-34-5	<6.2	6.2	
1,2,3-Trichloropropane	96-18-4	<6.2	6.2	
n-Propylbenzene	103-65-1	<6.2	6.2	
Bromobenzene	108-86-1	<6.2	6.2	
1,3,5-Trimethylbenzene	108-67-8	<6.2	6.2	
2-Chlorotoluene	95-49-8	<6.2	6.2	
4-Chlorotoluene	106-43-4	<6.2	6.2	
tert-Butylbenzene	98-06-6	<6.2	6.2	
1,2,4-Trimethylbenzene	95-63-6	<6.2	6.2	
sec-Butylbenzene	135-98-8	<6.2	6.2	
p-Isopropyltoluene	99-87-6	<6.2	6.2	
1,3-Dichlorobenzene	541-73-1	<6.2	6.2	
1,4-Dichlorobenzene	106-46-7	<6.2	6.2	
n-Butylbenzene	104-51-8	<6.2	6.2	
1,2-Dichlorobenzene	95-50-1	<6.2	6.2	
1,2-Dibromo-3-chloropropane	96-12-8	<6.2	6.2	
1,2,4-Trichlorobenzene	120-82-1	<6.2	6.2	
Hexachlorobutadiene	87-68-3	<6.2	6.2	
Naphthalene	91-20-3	<6.2	6.2	
1,2,3-Trichlorobenzene	87-61-6	<6.2	6.2	

AS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIC2SD01(01)	LAL Sample ID:	L8849-37
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	26.72	Preparation Dilution:	0.990

Compound	Recovery	GC Range
1,2-Dichloroethane-d4	90%	77-127
Toluene-d8	97%	84-120
Bromofluorobenzene	79%	78-125

Compound	GC Range	Concentration (ng/kg)	Limit (ng/kg)	Qualitative
Dichlorodifluoromethane	75-71-8	<6.8	6.8	
Chloromethane	74-87-3	<6.8	6.8	
Vinyl Chloride	75-01-4	<6.8	6.8	
Bromomethane	74-83-9	<6.8	6.8	
Chloroethane	75-00-3	<6.8	6.8	
Trichlorofluoromethane	75-69-4	<6.8	6.8	
neon 113	76-13-1	<14.	14.	
acetone	67-64-1	120	14.	
1,1-Dichloroethene	75-35-4	<6.8	6.8	
Carbon Disulfide	75-15-0	<6.8	6.8	
Methylene Chloride	75-09-2	<6.8	6.8	
trans-1,2-Dichloroethene	156-60-5	<6.8	6.8	
Vinyl Acetate	108-05-4	<14.	14.	
1,1-Dichloroethane	75-34-3	<6.8	6.8	
2-Butanone	78-93-3	20.	14.	
2,2-Dichloropropane	594-20-7	<6.8	6.8	
cis-1,2-Dichloroethene	156-59-2	<6.8	6.8	
Chloroform	67-66-3	<6.8	6.8	
Bromochloromethane	74-97-5	<6.8	6.8	
1,1,1-Trichloroethane	71-55-6	<6.8	6.8	
2-Chloroethylvinylether	110-75-8	<27.	27.	
1,1-Dichloropropene	563-58-6	<6.8	6.8	
Carbon tetrachloride	56-23-5	<6.8	6.8	
1,2-Dichloroethane	107-06-2	<6.8	6.8	
Benzene	71-43-2	<6.8	6.8	
Trichloroethene	79-01-6	<6.8	6.8	
1,2-Dichloropropane	78-87-5	<6.8	6.8	
Bromodichloromethane	75-27-4	<6.8	6.8	
Dibromomethane	74-95-3	<6.8	6.8	
4-Methyl-2-Pentanone	108-10-1	<14.	14.	
cis-1,3-Dichloropropene	10061-01-5	<6.8	6.8	
Toluene	108-88-3	<6.8	6.8	
trans-1,3-Dichloropropene	10061-02-6	<6.8	6.8	
1,1,2-Trichloroethane	79-00-5	<6.8	6.8	
2-Hexanone	591-78-6	<14.	14.	
1,2-Dibromoethane	106-93-4	<6.8	6.8	
1,3-Dichloropropane	142-28-9	<6.8	6.8	
Tetrachloroethene	127-18-4	<6.8	6.8	
Dibromochloromethane	124-48-1	<6.8	6.8	
Chlorobenzene	108-90-7	<6.8	6.8	
1,1,1,2-Tetrachloroethane	630-20-6	<6.8	6.8	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID: 97BPXLIC2SD01(01)	LAL Sample ID: L8849-37
Date Collected: 15-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 21-FEB-97	Analytical Dilution: 1
Matrix: Soil	Analytical Batch ID: 022197-8260-D1
Percent Moisture: 26.72	Preparation Dilution: 0.990

CONSTITUENT	CAS NO.	RESULT	UNIT
Ethylbenzene	100-41-4	<6.8	6.8
m,p-Xylene	136777-61-2	<6.8	6.8
o-Xylene	95-47-6	<6.8	6.8
Styrene	100-42-5	<6.8	6.8
Bromoform	75-25-2	<6.8	6.8
Isopropylbenzene	98-82-8	<6.8	6.8
1,1,2,2-Tetrachloroethane	79-34-5	<6.8	6.8
1,2,3-Trichloropropane	96-18-4	<6.8	6.8
n-Propylbenzene	103-65-1	<6.8	6.8
Bromobenzene	108-86-1	<6.8	6.8
1,3,5-Trimethylbenzene	108-67-8	<6.8	6.8
2-Chlorotoluene	95-49-8	<6.8	6.8
4-Chlorotoluene	106-43-4	<6.8	6.8
tert-Butylbenzene	98-06-6	<6.8	6.8
1,2,4-Trimethylbenzene	95-63-6	<6.8	6.8
sec-Butylbenzene	135-98-8	<6.8	6.8
p-Isopropyltoluene	99-87-6	<6.8	6.8
1,3-Dichlorobenzene	541-73-1	<6.8	6.8
1,4-Dichlorobenzene	106-46-7	<6.8	6.8
n-Butylbenzene	104-51-8	<6.8	6.8
1,2-Dichlorobenzene	95-50-1	<6.8	6.8
1,2-Dibromo-3-chloropropane	96-12-8	<6.8	6.8
1,2,4-Trichlorobenzene	120-82-1	<6.8	6.8
Hexachlorobutadiene	87-68-3	<6.8	6.8
Naphthalene	91-20-3	<6.8	6.8
1,2,3-Trichlorobenzene	87-61-6	<6.8	6.8

AS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIC2SD02(08)	LAL Sample ID:	L8849-41
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	19.74	Preparation Dilution:	1.00

CONCENTRATION	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	94%	77-127
Toluene-d8	97%	84-120
Bromofluorobenzene	86%	78-125

CONSTITUENT	GC RANGE	RESULT ng/kg	LOD ng/kg	DATA QUALIFIER(S)
Dichlorodifluoromethane	75-71-8	<6.2	6.2	
Chloromethane	74-87-3	<6.2	6.2	
Vinyl Chloride	75-01-4	<6.2	6.2	
Bromomethane	74-83-9	<6.2	6.2	
Chloroethane	75-00-3	<6.2	6.2	
Trichlorofluoromethane	75-69-4	<6.2	6.2	
Acetone 113	76-13-1	<12.	12.	
Acetone	67-64-1	28.	12.	
1,1-Dichloroethene	75-35-4	<6.2	6.2	
Carbon Disulfide	75-15-0	<6.2	6.2	
Methylene Chloride	75-09-2	<6.2	6.2	
trans-1,2-Dichloroethene	156-60-5	<6.2	6.2	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.2	6.2	
2-Butanone	78-93-3	<12.	12.	
2,2-Dichloropropane	594-20-7	<6.2	6.2	
cis-1,2-Dichloroethene	156-59-2	<6.2	6.2	
Chloroform	67-66-3	<6.2	6.2	
Bromochloromethane	74-97-5	<6.2	6.2	
1,1,1-Trichloroethane	71-55-6	<6.2	6.2	
2-Chloroethylvinylether	110-75-8	<25.	25.	
1,1-Dichloropropene	563-58-6	<6.2	6.2	
Carbon tetrachloride	56-23-5	<6.2	6.2	
1,2-Dichloroethane	107-06-2	<6.2	6.2	
Benzene	71-43-2	<6.2	6.2	
Trichloroethene	79-01-6	<6.2	6.2	
1,2-Dichloropropane	78-87-5	<6.2	6.2	
Bromodichloromethane	75-27-4	<6.2	6.2	
Dibromomethane	74-95-3	<6.2	6.2	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.2	6.2	
Toluene	108-88-3	<6.2	6.2	
trans-1,3-Dichloropropene	10061-02-6	<6.2	6.2	
1,1,2-Trichloroethane	79-00-5	<6.2	6.2	
Hexanone	591-78-6	<12.	12.	
1,2-Dibromoethane	106-93-4	<6.2	6.2	
1,3-Dichloropropane	142-28-9	<6.2	6.2	
Tetrachloroethene	127-18-4	<6.2	6.2	
Dibromochloromethane	124-48-1	<6.2	6.2	
Chlorobenzene	108-90-7	<6.2	6.2	
1,1,1,2-Tetrachloroethane	630-20-6	<6.2	6.2	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIC2SD02(08)	LAL Sample ID:	L8849-41
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	19.74	Preparation Dilution:	1.00

CONCENTRATION	CONCENTRATION	RESULT	UNIT	DATE
				QUALITY (P/P)
Ethylbenzene	100-41-4	<6.2	6.2	
m,p-Xylene	136777-61-2	<6.2	6.2	
o-Xylene	95-47-6	<6.2	6.2	
Styrene	100-42-5	<6.2	6.2	
Bromoform	75-25-2	<6.2	6.2	
Isopropylbenzene	98-82-8	<6.2	6.2	
1,1,2,2-Tetrachloroethane	79-34-5	<6.2	6.2	
1,2,3-Trichloropropane	96-18-4	<6.2	6.2	
n-Propylbenzene	103-65-1	<6.2	6.2	
Bromobenzene	108-86-1	<6.2	6.2	
1,3,5-Trimethylbenzene	108-67-8	<6.2	6.2	
2-Chlorotoluene	95-49-8	<6.2	6.2	
4-Chlorotoluene	106-43-4	<6.2	6.2	
tert-Butylbenzene	98-06-6	<6.2	6.2	
1,2,4-Trimethylbenzene	95-63-6	<6.2	6.2	
sec-Butylbenzene	135-98-8	<6.2	6.2	
p-Isopropyltoluene	99-87-6	<6.2	6.2	
1,3-Dichlorobenzene	541-73-1	<6.2	6.2	
1,4-Dichlorobenzene	106-46-7	<6.2	6.2	
n-Butylbenzene	104-51-8	<6.2	6.2	
1,2-Dichlorobenzene	95-50-1	<6.2	6.2	
1,2-Dibromo-3-chloropropane	96-12-8	<6.2	6.2	
1,2,4-Trichlorobenzene	120-82-1	<6.2	6.2	
Hexachlorobutadiene	87-68-3	<6.2	6.2	
Naphthalene	91-20-3	<6.2	6.2	
1,2,3-Trichlorobenzene	87-61-6	<6.2	6.2	

AS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIC2SD61(08)	LAL Sample ID:	L8849-45
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	19.23	Preparation Dilution:	1.00

SUBSTRATE	RECOVERY	CONCENTRATION
1,2-Dichloroethane-d4	94%	77-127
Toluene-d8	96%	84-120
Bromofluorobenzene	86%	78-125

CONCENTRATION	DATE	RESULT	PCB	DATA
		ug/kg	ug/kg	QUALITY (%)
Dichlorodifluoromethane	75-71-8	<6.2	6.2	
Chloromethane	74-87-3	<6.2	6.2	
Vinyl Chloride	75-01-4	<6.2	6.2	
Bromomethane	74-83-9	<6.2	6.2	
Chloroethane	75-00-3	<6.2	6.2	
Trichlorofluoromethane	75-69-4	<6.2	6.2	
Acetone	76-13-1	<12.	12.	
Acetone	67-64-1	34.	12.	
1,1-Dichloroethene	75-35-4	<6.2	6.2	
Carbon Disulfide	75-15-0	<6.2	6.2	
Methylene Chloride	75-09-2	<6.2	6.2	
trans-1,2-Dichloroethene	156-60-5	<6.2	6.2	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.2	6.2	
2-Butanone	78-93-3	<12.	12.	
2,2-Dichloropropane	594-20-7	<6.2	6.2	
cis-1,2-Dichloroethene	156-59-2	<6.2	6.2	
Chloroform	67-66-3	<6.2	6.2	
Bromochloromethane	74-97-5	<6.2	6.2	
1,1,1-Trichloroethane	71-55-6	<6.2	6.2	
2-Chloroethylvinylether	110-75-8	<25.	25.	
1,1-Dichloropropene	563-58-6	<6.2	6.2	
Carbon tetrachloride	56-23-5	<6.2	6.2	
1,2-Dichloroethane	107-06-2	<6.2	6.2	
Benzene	71-43-2	<6.2	6.2	
Trichloroethene	79-01-6	<6.2	6.2	
1,2-Dichloropropane	78-87-5	<6.2	6.2	
Bromodichloromethane	75-27-4	<6.2	6.2	
Dibromomethane	74-95-3	<6.2	6.2	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.2	6.2	
Toluene	108-88-3	<6.2	6.2	
trans-1,3-Dichloropropene	10061-02-6	<6.2	6.2	
1,1,2-Trichloroethane	79-00-5	<6.2	6.2	
Hexanone	591-78-6	<12.	12.	
1,2-Dibromoethane	106-93-4	<6.2	6.2	
1,3-Dichloropropane	142-28-9	<6.2	6.2	
Tetrachloroethene	127-18-4	<6.2	6.2	
Dibromochloromethane	124-48-1	<6.2	6.2	
Chlorobenzene	108-90-7	<6.2	6.2	
1,1,1,2-Tetrachloroethane	630-20-6	<6.2	6.2	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIC2SD61(08)	LAL Sample ID:	L8949-45
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	19.23	Preparation Dilution:	1.00

CONSTITUENT	LAB #	RESULT	UNIT	DATA QUALIFIER (S)
Ethylbenzene	100-41-4	<6.2	6.2	
m,p-Xylene	136777-61-2	<6.2	6.2	
o-Xylene	95-47-6	<6.2	6.2	
Styrene	100-42-5	<6.2	6.2	
Bromoform	75-25-2	<6.2	6.2	
Isopropylbenzene	98-82-8	<6.2	6.2	
1,1,2,2-Tetrachloroethane	79-34-5	<6.2	6.2	
1,2,3-Trichloropropane	96-18-4	<6.2	6.2	
n-Propylbenzene	103-65-1	<6.2	6.2	
Bromobenzene	108-86-1	<6.2	6.2	
1,3,5-Trimethylbenzene	108-67-8	<6.2	6.2	
2-Chlorotoluene	95-49-8	<6.2	6.2	
4-Chlorotoluene	106-43-4	<6.2	6.2	
tert-Butylbenzene	98-06-6	<6.2	6.2	
1,2,4-Trimethylbenzene	95-63-6	<6.2	6.2	
sec-Butylbenzene	135-98-8	<6.2	6.2	
p-Isopropyltoluene	99-87-6	<6.2	6.2	
1,3-Dichlorobenzene	541-73-1	<6.2	6.2	
1,4-Dichlorobenzene	106-46-7	<6.2	6.2	
n-Butylbenzene	104-51-8	<6.2	6.2	
1,2-Dichlorobenzene	95-50-1	<6.2	6.2	
1,2-Dibromo-3-chloropropane	96-12-8	<6.2	6.2	
1,2,4-Trichlorobenzene	120-82-1	<6.2	6.2	
Hexachlorobutadiene	87-68-3	<6.2	6.2	
Naphthalene	91-20-3	<6.2	6.2	
1,2,3-Trichlorobenzene	87-61-6	<6.2	6.2	

AS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIC4SD02(08)	LAL Sample ID:	L8849-49
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	23.85	Preparation Dilution:	1.00

SURROGATE	RECOVERY	REPORT NO.
1,2-Dichloroethane-d4	94%	77-127
Toluene-d8	98%	84-120
Bromofluorobenzene	85%	78-125

COMPOUND	CAS NO.	RESULT ug/kg	PCB ug/kg	DATE QUALIFIED BY
Dichlorodifluoromethane	75-71-8	<6.6	6.6	
Chloromethane	74-87-3	<6.6	6.6	
Vinyl Chloride	75-01-4	<6.6	6.6	
Bromomethane	74-83-9	<6.6	6.6	
Chloroethane	75-00-3	<6.6	6.6	
Trichlorofluoromethane	75-69-4	<6.6	6.6	
neon 113	76-13-1	<13.	13.	
acetone	67-64-1	25.	13.	
1,1-Dichloroethene	75-35-4	<6.6	6.6	
Carbon Disulfide	75-15-0	<6.6	6.6	
Methylene Chloride	75-09-2	<6.6	6.6	
trans-1,2-Dichloroethene	156-60-5	<6.6	6.6	
Vinyl Acetate	108-05-4	<13.	13.	
1,1-Dichloroethane	75-34-3	<6.6	6.6	
2-Butanone	78-93-3	<13.	13.	
2,2-Dichloropropane	594-20-7	<6.6	6.6	
cis-1,2-Dichloroethene	156-59-2	<6.6	6.6	
Chloroform	67-66-3	<6.6	6.6	
Bromochloromethane	74-97-5	<6.6	6.6	
1,1,1-Trichloroethane	71-55-6	<6.6	6.6	
2-Chloroethylvinylether	110-75-8	<26.	26.	
1,1-Dichloropropene	563-58-6	<6.6	6.6	
Carbon tetrachloride	56-23-5	<6.6	6.6	
1,2-Dichloroethane	107-06-2	<6.6	6.6	
Benzene	71-43-2	<6.6	6.6	
Trichloroethene	79-01-6	<6.6	6.6	
1,2-Dichloropropane	78-87-5	<6.6	6.6	
Bromodichloromethane	75-27-4	<6.6	6.6	
Dibromomethane	74-95-3	<6.6	6.6	
4-Methyl-2-Pentanone	108-10-1	<13.	13.	
cis-1,3-Dichloropropene	10061-01-5	<6.6	6.6	
Toluene	108-88-3	<6.6	6.6	
trans-1,3-Dichloropropene	10061-02-6	<6.6	6.6	
1,1,2-Trichloroethane	79-00-5	<6.6	6.6	
-Hexanone	591-78-6	<13.	13.	
,2-Dibromoethane	106-93-4	<6.6	6.6	
1,3-Dichloropropane	142-28-9	<6.6	6.6	
Tetrachloroethene	127-18-4	<6.6	6.6	
Dibromochloromethane	124-48-1	<6.6	6.6	
Chlorobenzene	108-90-7	<6.6	6.6	
1,1,1,2-Tetrachloroethane	630-20-6	<6.6	6.6	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPKLIC4SD02(08)	LAL Sample ID:	L8849-49
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	23.85	Preparation Dilution:	1.00

CONCENTRATION	ORG. NO.	RESULT	PPM	DATA QUALIFIER (S)
Ethylbenzene	100-41-4	<6.6	6.6	
m,p-Xylene	136777-61-2	<6.6	6.6	
o-Xylene	95-47-6	<6.6	6.6	
Styrene	100-42-5	<6.6	6.6	
Bromoform	75-25-2	<6.6	6.6	
Isopropylbenzene	98-82-8	<6.6	6.6	
1,1,2,2-Tetrachloroethane	79-34-5	<6.6	6.6	
1,2,3-Trichloropropane	96-18-4	<6.6	6.6	
n-Propylbenzene	103-65-1	<6.6	6.6	
Bromobenzene	108-86-1	<6.6	6.6	
1,3,5-Trimethylbenzene	108-67-8	<6.6	6.6	
2-Chlorotoluene	95-49-8	<6.6	6.6	
4-Chlorotoluene	106-43-4	<6.6	6.6	
tert-Butylbenzene	98-06-6	<6.6	6.6	
1,2,4-Trimethylbenzene	95-63-6	<6.6	6.6	
sec-Butylbenzene	135-98-8	<6.6	6.6	
p-Isopropyltoluene	99-87-6	<6.6	6.6	
1,3-Dichlorobenzene	541-73-1	<6.6	6.6	
1,4-Dichlorobenzene	106-46-7	<6.6	6.6	
n-Butylbenzene	104-51-8	<6.6	6.6	
1,2-Dichlorobenzene	95-50-1	<6.6	6.6	
1,2-Dibromo-3-chloropropane	96-12-8	<6.6	6.6	
1,2,4-Trichlorobenzene	120-82-1	<6.6	6.6	
Hexachlorobutadiene	87-68-3	<6.6	6.6	
Naphthalene	91-20-3	<6.6	6.6	
1,2,3-Trichlorobenzene	87-61-6	<6.6	6.6	

AS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA4SD02(08)	LAL Sample ID:	L8849-56
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	18.66	Preparation Dilution:	0.990

CONCENTRATION	RECOVERY	CONCENTRATION
1,2-Dichloroethane-d4	97%	77-127
Toluene-d8	96%	84-120
Bromofluorobenzene	83%	78-125

CONCENTRATION	CONC. NO.	RECOVERY	CONC.	DATE
		ng/kg	ng/kg	QUAL. ANALYSIS
Dichlorodifluoromethane	75-71-8	<6.1	6.1	
Chloromethane	74-87-3	<6.1	6.1	
Vinyl Chloride	75-01-4	<6.1	6.1	
Bromomethane	74-83-9	<6.1	6.1	
Chloroethane	75-00-3	<6.1	6.1	
Trichlorofluoromethane	75-69-4	<6.1	6.1	
Freon 113	76-13-1	<12.	12.	
Acetone	67-64-1	<12.	12.	
1,1-Dichloroethene	75-35-4	<6.1	6.1	
Carbon Disulfide	75-15-0	<6.1	6.1	
Methylene Chloride	75-09-2	<6.1	6.1	
trans-1,2-Dichloroethene	156-60-5	<6.1	6.1	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.1	6.1	
2-Butanone	78-93-3	<12.	12.	
2,2-Dichloropropane	594-20-7	<6.1	6.1	
cis-1,2-Dichloroethene	156-59-2	<6.1	6.1	
Chloroform	67-66-3	<6.1	6.1	
Bromochloromethane	74-97-5	<6.1	6.1	
1,1,1-Trichloroethane	71-55-6	<6.1	6.1	
2-Chloroethylvinylether	110-75-8	<24.	24.	
1,1-Dichloropropene	563-58-6	<6.1	6.1	
Carbon tetrachloride	56-23-5	<6.1	6.1	
1,2-Dichloroethane	107-06-2	<6.1	6.1	
Benzene	71-43-2	<6.1	6.1	
Trichloroethene	79-01-6	<6.1	6.1	
1,2-Dichloropropane	78-87-5	<6.1	6.1	
Bromodichloromethane	75-27-4	<6.1	6.1	
Dibromomethane	74-95-3	<6.1	6.1	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.1	6.1	
Toluene	108-88-3	<6.1	6.1	
trans-1,3-Dichloropropene	10061-02-6	<6.1	6.1	
1,1,2-Trichloroethane	79-00-5	<6.1	6.1	
?-Hexanone	591-78-6	<12.	12.	
1,2-Dibromoethane	106-93-4	<6.1	6.1	
1,3-Dichloropropane	142-28-9	<6.1	6.1	
Tetrachloroethene	127-18-4	<6.1	6.1	
Dibromochloromethane	124-48-1	<6.1	6.1	
Chlorobenzene	108-90-7	<6.1	6.1	
1,1,1,2-Tetrachloroethane	630-20-6	<6.1	6.1	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA4SD02(08)	LAL Sample ID:	L8849-56
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	18.66	Preparation Dilution:	0.990

COMPOUND	DATA	RESULT	DATA
	CONC. (PPM)	CONC. (PPM)	QUAL. (Y/N)
Ethylbenzene	100-41-4	<6.1	6.1
m,p-Xylene	136777-61-2	<6.1	6.1
o-Xylene	95-47-6	<6.1	6.1
Styrene	100-42-5	<6.1	6.1
Bromoform	75-25-2	<6.1	6.1
Isopropylbenzene	98-82-8	<6.1	6.1
1,1,2,2-Tetrachloroethane	79-34-5	<6.1	6.1
1,2,3-Trichloropropane	96-18-4	<6.1	6.1
n-Propylbenzene	103-65-1	<6.1	6.1
Bromobenzene	108-86-1	<6.1	6.1
1,3,5-Trimethylbenzene	108-67-8	<6.1	6.1
2-Chlorotoluene	95-49-8	<6.1	6.1
4-Chlorotoluene	106-43-4	<6.1	6.1
tert-Butylbenzene	98-06-6	<6.1	6.1
1,2,4-Trimethylbenzene	95-63-6	<6.1	6.1
sec-Butylbenzene	135-98-8	<6.1	6.1
p-Isopropyltoluene	99-87-6	<6.1	6.1
1,3-Dichlorobenzene	541-73-1	<6.1	6.1
1,4-Dichlorobenzene	106-46-7	<6.1	6.1
n-Butylbenzene	104-51-8	<6.1	6.1
1,2-Dichlorobenzene	95-50-1	<6.1	6.1
1,2-Dibromo-3-chloropropane	96-12-8	<6.1	6.1
1,2,4-Trichlorobenzene	120-82-1	<6.1	6.1
Hexachlorobutadiene	87-68-3	<6.1	6.1
Naphthalene	91-20-3	<6.1	6.1
1,2,3-Trichlorobenzene	87-61-6	<6.1	6.1

VAS LABORATORIES

PIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45925LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Percent Moisture:	N/A	Analytical Batch ID:	022197-8260-D1
		Preparation Dilution:	0.990

RECOVERY	RECOVERY	GC INJECTION
1,2-Dichloroethane-d4	95%	77-127
Toluene-d8	101%	84-120
Bromofluorobenzene	100%	78-125

CONSTITUENT	GC INJ.	RESULT ug/kg	REL. ug/kg	DATA QUALITY (1-5)
Dichlorodifluoromethane	75-71-8	65.	5.0	
Chloromethane	74-87-3	58.	5.0	
Vinyl Chloride	75-01-4	60.	5.0	
Bromomethane	74-83-9	55.	5.0	
Chloroethane	75-00-3	60.	5.0	
Trichlorofluoromethane	75-69-4	47.	5.0	
Neon 113	76-13-1	41.	9.9	
acetone	67-64-1	140	9.9	
1,1-Dichloroethene	75-35-4	52.	5.0	
Carbon Disulfide	75-15-0	42.	5.0	
Methylene Chloride	75-09-2	54.	5.0	
trans-1,2-Dichloroethene	156-60-5	50.	5.0	
Vinyl Acetate	108-05-4	34.	9.9	
1,1-Dichloroethane	75-34-3	57.	5.0	
2-Butanone	78-93-3	54.	9.9	
2,2-Dichloropropane	594-20-7	52.	5.0	
cis-1,2-Dichloroethene	156-59-2	60.	5.0	
Chloroform	67-66-3	56.	5.0	
Bromochloromethane	74-97-5	56.	5.0	
1,1,1-Trichloroethane	71-55-6	54.	5.0	
2-Chloroethylvinylether	110-75-8	240	20.	
1,1-Dichloropropene	563-58-6	49.	5.0	
Carbon tetrachloride	56-23-5	47.	5.0	
1,2-Dichloroethane	107-06-2	48.	5.0	
Benzene	71-43-2	54.	5.0	
Trichloroethene	79-01-6	62.	5.0	
1,2-Dichloropropane	78-87-5	54.	5.0	
Bromodichloromethane	75-27-4	51.	5.0	
Dibromomethane	74-95-3	51.	5.0	
4-Methyl-2-Pentanone	108-10-1	45.	9.9	
cis-1,3-Dichloropropene	10061-01-5	50.	5.0	
Toluene	108-88-3	54.	5.0	
trans-1,3-Dichloropropene	10061-02-6	50.	5.0	
1,1,2-Trichloroethane	79-00-5	54.	5.0	
2-Hexanone	591-78-6	54.	9.9	
2-Dibromoethane	106-93-4	52.	5.0	
1,3-Dichloropropene	142-28-9	50.	5.0	
Tetrachloroethene	127-18-4	47.	5.0	
Dibromochloromethane	124-48-1	46.	5.0	
Chlorobenzene	108-90-7	49.	5.0	
1,1,1,2-Tetrachloroethane	630-20-6	48.	5.0	

LAS LABORATORIES

SPIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45925LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
		Analytical Batch ID:	022197-8260-D1
Percent Moisture:	N/A	Preparation Dilution:	0.990

COMPOUND	LAB ID	CONC. (PPM)	REMARKS
Ethylbenzene	100-41-4	52.	5.0
m,p-Xylene	136777-61-2	62.	5.0
o-Xylene	95-47-6	32.	5.0
Styrene	100-42-5	24.	5.0
Bromoform	75-25-2	43.	5.0
Isopropylbenzene	98-82-8	46.	5.0
1,1,2,2-Tetrachloroethane	79-34-5	30.	5.0
1,2,3-Trichloropropane	96-18-4	46.	5.0
n-Propylbenzene	103-65-1	47.	5.0
Bromobenzene	108-86-1	43.	5.0
1,3,5-Trimethylbenzene	108-67-8	47.	5.0
2-Chlorotoluene	95-49-8	42.	5.0
4-Chlorotoluene	106-43-4	43.	5.0
tert-Butylbenzene	98-06-6	52.	5.0
1,2,4-Trimethylbenzene	95-63-6	47.	5.0
sec-Butylbenzene	135-98-8	46.	5.0
p-Isopropyltoluene	99-87-6	47.	5.0
1,3-Dichlorobenzene	541-73-1	45.	5.0
1,4-Dichlorobenzene	106-46-7	44.	5.0
n-Butylbenzene	104-51-8	47.	5.0
1,2-Dichlorobenzene	95-50-1	44.	5.0
1,2-Dibromo-3-chloropropane	96-12-8	28.	5.0
1,2,4-Trichlorobenzene	120-82-1	44.	5.0
Hexachlorobutadiene	87-68-3	37.	5.0
Naphthalene	91-20-3	46.	5.0
1,2,3-Trichlorobenzene	87-61-6	43.	5.0

AS LABORATORIES

VOLATILE ORGANICS BY GC/MS

Client Sample ID: Method Blank	LAL Sample ID: 45925MB
Date Collected: N/A	Date Received: N/A
Date Analyzed: 21-FEB-97	Analytical Dilution: 1
	Analytical Batch ID: 022197-8260-D1
Percent Moisture: N/A	Preparation Dilution: 1.00

Compound	Recovery	GC Limits
1,2-Dichloroethane-d4	97%	77-127
Toluene-d8	101%	84-120
Bromofluorobenzene	99%	78-125

Compound	Retention Time	Concentration (ng/kg)	Limit (ng/kg)	Qualifier
Dichlorodifluoromethane	75-71-8	<5.0	5.0	
Chloromethane	74-87-3	<5.0	5.0	
Vinyl Chloride	75-01-4	<5.0	5.0	
Bromomethane	74-83-9	<5.0	5.0	
Chloroethane	75-00-3	<5.0	5.0	
Trichlorofluoromethane	75-69-4	<5.0	5.0	
Freon 113	76-13-1	<10.	10.	
Acetone	67-64-1	<10.	10.	
1,1-Dichloroethene	75-35-4	<5.0	5.0	
Carbon Disulfide	75-15-0	<5.0	5.0	
Methylene Chloride	75-09-2	<5.0	5.0	
trans-1,2-Dichloroethene	156-60-5	<5.0	5.0	
Vinyl Acetate	108-05-4	<10.	10.	
1,1-Dichloroethane	75-34-3	<5.0	5.0	
2-Butanone	78-93-3	<10.	10.	
2,2-Dichloropropane	594-20-7	<5.0	5.0	
cis-1,2-Dichloroethene	156-59-2	<5.0	5.0	
Chloroform	67-66-3	<5.0	5.0	
Bromochloromethane	74-97-5	<5.0	5.0	
1,1,1-Trichloroethane	71-55-6	<5.0	5.0	
2-Chloroethylvinylether	110-75-8	<20.	20.	
1,1-Dichloropropene	563-58-6	<5.0	5.0	
Carbon tetrachloride	56-23-5	<5.0	5.0	
1,2-Dichloroethane	107-06-2	<5.0	5.0	
Benzene	71-43-2	<5.0	5.0	
Trichloroethene	79-01-6	<5.0	5.0	
1,2-Dichloropropane	78-87-5	<5.0	5.0	
Bromodichloromethane	75-27-4	<5.0	5.0	
Dibromomethane	74-95-3	<5.0	5.0	
4-Methyl-2-Pentanone	108-10-1	<10.	10.	
cis-1,3-Dichloropropene	10061-01-5	<5.0	5.0	
Toluene	108-88-3	<5.0	5.0	
trans-1,3-Dichloropropene	10061-02-6	<5.0	5.0	
1,1,2-Trichloroethane	79-00-5	<5.0	5.0	
2-Hexanone	591-78-6	<10.	10.	
2-Dibromoethane	106-93-4	<5.0	5.0	
1,3-Dichloropropane	142-28-9	<5.0	5.0	
Tetrachloroethene	127-18-4	<5.0	5.0	
Dibromochloromethane	124-48-1	<5.0	5.0	
Chlorobenzene	108-90-7	<5.0	5.0	
1,1,1,2-Tetrachloroethane	630-20-6	<5.0	5.0	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS

Client Sample ID: Method Blank
Date Collected: N/A
Date Analyzed: 21-FEB-97
Percent Moisture: N/A

LAL Sample ID: 45925MB
Date Received: N/A
Analytical Dilution: 1
Analytical Batch ID: 022197-8260-D1
Preparation Dilution: 1.00

CONSTITUENT	LAB NO.	RESULT (µg/kg)	POL (µg/kg)	DATA QUALITY (6)
Ethylbenzene	100-41-4	<5.0	5.0	
m,p-Xylene	136777-61-2	<5.0	5.0	
o-Xylene	95-47-6	<5.0	5.0	
Styrene	100-42-5	<5.0	5.0	
Bromoform	75-25-2	<5.0	5.0	
Isopropylbenzene	98-82-8	<5.0	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	<5.0	5.0	
1,2,3-Trichloropropane	96-18-4	<5.0	5.0	
n-Propylbenzene	103-65-1	<5.0	5.0	
Bromobenzene	108-86-1	<5.0	5.0	
1,3,5-Trimethylbenzene	108-67-8	<5.0	5.0	
2-Chlorotoluene	95-49-8	<5.0	5.0	
4-Chlorotoluene	106-43-4	<5.0	5.0	
tert-Butylbenzene	98-06-6	<5.0	5.0	
1,2,4-Trimethylbenzene	95-63-6	<5.0	5.0	
sec-Butylbenzene	135-98-8	<5.0	5.0	
p-Isopropyltoluene	99-87-6	<5.0	5.0	
1,3-Dichlorobenzene	541-73-1	<5.0	5.0	
1,4-Dichlorobenzene	106-46-7	<5.0	5.0	
n-Butylbenzene	104-51-8	<5.0	5.0	
1,2-Dichlorobenzene	95-50-1	<5.0	5.0	
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	5.0	
1,2,4-Trichlorobenzene	120-82-1	<5.0	5.0	
Hexachlorobutadiene	87-68-3	<5.0	5.0	
Naphthalene	91-20-3	<5.0	5.0	
1,2,3-Trichlorobenzene	87-61-6	<5.0	5.0	

AS LABORATORIES

MS DATA SUMMARY
VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45925LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Analytical Dilution:	1
Percent Moisture:	N/A	Analytical Batch ID:	022197-8260-D1
		Preparation Dilution:	0.990

Spiked	Recovery	QC Limits
1,2-Dichloroethane-d4	95%	77-127
Toluene-d8	101%	84-120
Bromofluorobenzene	100%	78-125

Constituent	Spike Added ug/kg	LCS Concentration ug/kg	LCS Recovery	QC Limits
1,1-Dichloroethene	49.5	51.8	105	54-138
Benzene	49.5	54.0	109	70-130
Trichloroethene	49.5	61.6	124	57-132
Toluene	49.5	54.3	110	71-129
Chlorobenzene	49.5	49.5	100	72-128

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXIA4SD01(01)	LAL Sample ID:	L8849-53
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	17.13	Preparation Dilution:	0.980

CONSTITUENT	CAS NO	RESULT ug/g	FOR ug/g	DATA QUALIFIER(S)
Dichlorodifluoromethane	75-71-8	<5.9	5.9	
Chloromethane	74-87-3	<5.9	5.9	
Vinyl Chloride	75-01-4	<5.9	5.9	
Bromomethane	74-83-9	<5.9	5.9	
Chloroethane	75-00-3	<5.9	5.9	
Trichlorofluoromethane	75-69-4	<5.9	5.9	
Freon 113	76-13-1	<12.	12.	
Acetone	67-64-1	<12.	12.	
1,1-Dichloroethene	75-35-4	<5.9	5.9	
Carbon Disulfide	75-15-0	<5.9	5.9	
Methylene Chloride	75-09-2	<5.9	5.9	
trans-1,2-Dichloroethene	156-60-5	<5.9	5.9	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<5.9	5.9	
2-Butanone	78-93-3	<12.	12.	
2,2-Dichloropropane	594-20-7	<5.9	5.9	
cis-1,2-Dichloroethene	156-59-2	<5.9	5.9	
Chloroform	67-66-3	<5.9	5.9	
Bromochloromethane	74-97-5	<5.9	5.9	
1,1,1-Trichloroethane	71-55-6	<5.9	5.9	
2-Chloroethylvinylether	110-75-8	<24.	24.	
1,1-Dichloropropene	563-58-6	<5.9	5.9	
Carbon tetrachloride	56-23-5	<5.9	5.9	
1,2-Dichloroethane	107-06-2	<5.9	5.9	
Benzene	71-43-2	<5.9	5.9	
Trichloroethene	79-01-6	<5.9	5.9	
1,2-Dichloropropane	78-87-5	<5.9	5.9	
Bromodichloromethane	75-27-4	<5.9	5.9	
Dibromomethane	74-95-3	<5.9	5.9	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<5.9	5.9	
Toluene	108-88-3	<5.9	5.9	
trans-1,3-Dichloropropene	10061-02-6	<5.9	5.9	
1,1,2-Trichloroethane	79-00-5	<5.9	5.9	
2-Hexanone	591-78-6	<12.	12.	
1,2-Dibromoethane	106-93-4	<5.9	5.9	
1,3-Dichloropropane	142-28-9	<5.9	5.9	
Tetrachloroethene	127-18-4	<5.9	5.9	
Dibromochloromethane	124-48-1	<5.9	5.9	
Chlorobenzene	108-90-7	<5.9	5.9	
1,1,1,2-Tetrachloroethane	630-20-6	<5.9	5.9	
Ethylbenzene	100-41-4	<5.9	5.9	
m,p-Xylene	136777-61-2	<5.9	5.9	
o-Xylene	95-47-6	<5.9	5.9	

AS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA4SD01(01)	LAL Sample ID:	L8849-53
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	17.13	Preparation Dilution:	0.980

CONSTITUENT	CAS NO.	RESULTS ug/kg	REL ug/kg	DATA QUALIFIER(S)
Styrene	100-42-5	<5.9	5.9	
Bromoform	75-25-2	<5.9	5.9	
Isopropylbenzene	98-82-8	<5.9	5.9	
1,1,2,2-Tetrachloroethane	79-34-5	<5.9	5.9	
1,2,3-Trichloropropane	96-18-4	<5.9	5.9	
n-Propylbenzene	103-65-1	<5.9	5.9	
Bromobenzene	108-86-1	<5.9	5.9	
1,3,5-Trimethylbenzene	108-67-8	<5.9	5.9	
2-Chlorotoluene	95-49-8	<5.9	5.9	
4-Chlorotoluene	106-43-4	<5.9	5.9	
tert-Butylbenzene	98-06-6	<5.9	5.9	
1,2,4-Trimethylbenzene	95-63-6	<5.9	5.9	
sec-Butylbenzene	135-98-8	<5.9	5.9	
Isopropyltoluene	99-87-6	<5.9	5.9	
1,3-Dichlorobenzene	541-73-1	<5.9	5.9	
1,4-Dichlorobenzene	106-46-7	<5.9	5.9	
n-Butylbenzene	104-51-8	<5.9	5.9	
1,2-Dichlorobenzene	95-50-1	<5.9	5.9	
1,2-Dibromo-3-chloropropane	96-12-8	<5.9	5.9	
1,2,4-Trichlorobenzene	120-82-1	<5.9	5.9	
Hexachlorobutadiene	87-68-3	<5.9	5.9	
Naphthalene	91-20-3	<5.9	5.9	
1,2,3-Trichlorobenzene	87-61-6	<5.9	5.9	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID: 97BPXLIA4SD01(01)	LAL Sample ID: L8849-53
Date Collected: 16-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 24-FEB-97	Analytical Dilution: 1
Matrix: Soil	Analytical Batch ID: 022497-8260-D1
Percent Moisture: 17.13	Preparation Dilution: 0.980

SURROGATE	RECOVERY	CONCENTRATION
1,2-Dichloroethane-d4	96%	77-127
Toluene-d8	96%	84-120
Bromofluorobenzene	89%	78-125

CONSTITUENT	CAS NO.	RESULT NG/LG	FOR SD/LG	DATA QUANTITY PER L
Dichlorodifluoromethane	75-71-8	<5.9		5.9
Chloromethane	74-87-3	<5.9		5.9
Vinyl Chloride	75-01-4	<5.9		5.9
Bromomethane	74-83-9	<5.9		5.9
Chloroethane	75-00-3	<5.9		5.9
Trichlorofluoromethane	75-69-4	<5.9		5.9
Freon 113	76-13-1	<12.		12.
Acetone	67-64-1	30.		12.
1,1-Dichloroethene	75-35-4	<5.9		5.9
Carbon Disulfide	75-15-0	<5.9		5.9
Methylene Chloride	75-09-2	<5.9		5.9
trans-1,2-Dichloroethene	156-60-5	<5.9		5.9
Vinyl Acetate	108-05-4	<12.		12.
1,1-Dichloroethane	75-34-3	<5.9		5.9
2-Butanone	78-93-3	<12.		12.
2,2-Dichloropropane	594-20-7	<5.9		5.9
cis-1,2-Dichloroethene	156-59-2	<5.9		5.9
Chloroform	67-66-3	<5.9		5.9
Bromochloromethane	74-97-5	<5.9		5.9
1,1,1-Trichloroethane	71-55-6	<5.9		5.9
2-Chloroethylvinylether	110-75-8	<24.		24.
1,1-Dichloropropene	563-58-6	<5.9		5.9
Carbon tetrachloride	56-23-5	<5.9		5.9
1,2-Dichloroethane	107-06-2	<5.9		5.9
Benzene	71-43-2	<5.9		5.9
Trichloroethene	79-01-6	<5.9		5.9
1,2-Dichloropropane	78-87-5	<5.9		5.9
Bromodichloromethane	75-27-4	<5.9		5.9
Dibromomethane	74-95-3	<5.9		5.9
4-Methyl-2-Pentanone	108-10-1	<12.		12.
cis-1,3-Dichloropropene	10061-01-5	<5.9		5.9
Toluene	108-88-3	<5.9		5.9
trans-1,3-Dichloropropene	10061-02-6	<5.9		5.9
1,1,2-Trichloroethane	79-00-5	<5.9		5.9
2-Hexanone	591-78-6	<12.		12.
1,2-Dibromoethane	106-93-4	<5.9		5.9
1,3-Dichloropropane	142-28-9	<5.9		5.9
Tetrachloroethene	127-18-4	<5.9		5.9
Dibromochloromethane	124-48-1	<5.9		5.9
Chlorobenzene	108-90-7	<5.9		5.9
1,1,1,2-Tetrachloroethane	630-20-6	<5.9		5.9

AS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA4SD01(01)	LAL Sample ID:	L8849-53
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	17.13	Preparation Dilution:	0.980

COMPOUND	CAS NO.	RESULT	CONC.	DATA QUALIFIER(S)
		ng/kg	ng/kg	
Ethylbenzene	100-41-4	<5.9	5.9	
m,p-Xylene	136777-61-2	<5.9	5.9	
o-Xylene	95-47-6	<5.9	5.9	
Styrene	100-42-5	<5.9	5.9	
Bromoform	75-25-2	<5.9	5.9	
Isopropylbenzene	98-82-8	<5.9	5.9	
1,1,2,2-Tetrachloroethane	79-34-5	<5.9	5.9	
1,2,3-Trichloropropane	96-18-4	<5.9	5.9	
n-Propylbenzene	103-65-1	<5.9	5.9	
Bromobenzene	108-86-1	<5.9	5.9	
1,3,5-Trimethylbenzene	108-67-8	<5.9	5.9	
2-Chlorotoluene	95-49-8	<5.9	5.9	
o-Chlorotoluene	106-43-4	<5.9	5.9	
tert-Butylbenzene	98-06-6	<5.9	5.9	
1,2,4-Trimethylbenzene	95-63-6	<5.9	5.9	
sec-Butylbenzene	135-98-8	<5.9	5.9	
p-Isopropyltoluene	99-87-6	<5.9	5.9	
1,3-Dichlorobenzene	541-73-1	<5.9	5.9	
1,4-Dichlorobenzene	106-46-7	<5.9	5.9	
n-Butylbenzene	104-51-8	<5.9	5.9	
1,2-Dichlorobenzene	95-50-1	<5.9	5.9	
1,2-Dibromo-3-chloropropane	96-12-8	<5.9	5.9	
1,2,4-Trichlorobenzene	120-82-1	<5.9	5.9	
Hexachlorobutadiene	87-68-3	<5.9	5.9	
Naphthalene	91-20-3	<5.9	5.9	
1,2,3-Trichlorobenzene	87-61-6	<5.9	5.9	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID: 97HPXLIA6SD01(01)	LAL Sample ID: L8849-60
Date Collected: 16-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 22-FEB-97	Analytical Dilution: 1
Matrix: Soil	Analytical Batch ID: 022197-8260-D1
Percent Moisture: 42.88	Preparation Dilution: 0.980

SURROGATE	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	100%	77-127
Toluene-d8	92%	84-120
Bromofluorobenzene	72% *	78-125

CONSTITUENT	CAS NO.	RESULT ug/kg	PCB ug/kg	DATA QUALIFIER(S)
Dichlorodifluoromethane	75-71-8	<8.6	8.6	
Chloromethane	74-87-3	<8.6	8.6	
Vinyl Chloride	75-01-4	<8.6	8.6	
Bromomethane	74-83-9	<8.6	8.6	
Chloroethane	75-00-3	<8.6	8.6	
Trichlorofluoromethane	75-69-4	<8.6	8.6	
Freon 113	76-13-1	<17.	17.	
Acetone	67-64-1	73.	17.	
1,1-Dichloroethene	75-35-4	<8.6	8.6	
Carbon Disulfide	75-15-0	<8.6	8.6	
Methylene Chloride	75-09-2	<8.6	8.6	
trans-1,2-Dichloroethene	156-60-5	<8.6	8.6	
Vinyl Acetate	108-05-4	<17.	17.	
1,1-Dichloroethane	75-34-3	<8.6	8.6	
2-Butanone	78-93-3	<17.	17.	
2,2-Dichloropropane	594-20-7	<8.6	8.6	
cis-1,2-Dichloroethene	156-59-2	<8.6	8.6	
Chloroform	67-66-3	<8.6	8.6	
Bromochloromethane	74-97-5	<8.6	8.6	
1,1,1-Trichloroethane	71-55-6	<8.6	8.6	
2-Chloroethylvinylether	110-75-8	<34.	34.	
1,1-Dichloropropene	563-58-6	<8.6	8.6	
Carbon tetrachloride	56-23-5	<8.6	8.6	
1,2-Dichloroethane	107-06-2	<8.6	8.6	
Benzene	71-43-2	<8.6	8.6	
Trichloroethene	79-01-6	<8.6	8.6	
1,2-Dichloropropane	78-87-5	<8.6	8.6	
Bromodichloromethane	75-27-4	<8.6	8.6	
Dibromomethane	74-95-3	<8.6	8.6	
4-Methyl-2-Pentanone	108-10-1	<17.	17.	
cis-1,3-Dichloropropene	10061-01-5	<8.6	8.6	
Toluene	108-88-3	<8.6	8.6	
trans-1,3-Dichloropropene	10061-02-6	<8.6	8.6	
1,1,2-Trichloroethane	79-00-5	<8.6	8.6	
2-Hexanone	591-78-6	<17.	17.	
1,2-Dibromoethane	106-93-4	<8.6	8.6	
1,3-Dichloropropane	142-28-9	<8.6	8.6	
Tetrachloroethene	127-18-4	<8.6	8.6	
Dibromochloromethane	124-48-1	<8.6	8.6	
Chlorobenzene	108-90-7	<8.6	8.6	
1,1,1,2-Tetrachloroethane	630-20-6	<8.6	8.6	

AS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA6SD01(01)	LAL Sample ID:	L8849-60
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	42.88	Preparation Dilution:	0.980

CONCENTRATION	CAS NO.	RESULT mg/kg	TOX mg/kg	DATA QUALIFIER (S)
Ethylbenzene	100-41-4	<8.6	8.6	
m,p-Xylene	136777-61-2	<8.6	8.6	
o-Xylene	95-47-6	<8.6	8.6	
Styrene	100-42-5	<8.6	8.6	
Bromoform	75-25-2	<8.6	8.6	
Isopropylbenzene	98-82-8	<8.6	8.6	
1,1,2,2-Tetrachloroethane	79-34-5	<8.6	8.6	
1,2,3-Trichloropropane	96-18-4	<8.6	8.6	
n-Propylbenzene	103-65-1	<8.6	8.6	
Bromobenzene	108-86-1	<8.6	8.6	
1,3,5-Trimethylbenzene	108-67-8	<8.6	8.6	
2-Chlorotoluene	95-49-8	<8.6	8.6	
-Chlorotoluene	106-43-4	<8.6	8.6	
tert-Butylbenzene	98-06-6	<8.6	8.6	
1,2,4-Trimethylbenzene	95-63-6	<8.6	8.6	
sec-Butylbenzene	135-98-8	<8.6	8.6	
p-Isopropyltoluene	99-87-6	<8.6	8.6	
1,3-Dichlorobenzene	541-73-1	<8.6	8.6	
1,4-Dichlorobenzene	106-46-7	<8.6	8.6	
n-Butylbenzene	104-51-8	<8.6	8.6	
1,2-Dichlorobenzene	95-50-1	<8.6	8.6	
1,2-Dibromo-3-chloropropane	96-12-8	<8.6	8.6	
1,2,4-Trichlorobenzene	120-82-1	<8.6	8.6	
Hexachlorobutadiene	87-68-3	<8.6	8.6	
Naphthalene	91-20-3	<8.6	8.6	
1,2,3-Trichlorobenzene	87-61-6	<8.6	8.6	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA6SD01(01)	LAL Sample ID:	L8849-60
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	42.88	Preparation Dilution:	0.980

COMPOUND	RECOVERY	CONCENTRATION
1,2-Dichloroethane-d4	96%	77-127
Toluene-d8	94%	84-120
Bromofluorobenzene	78%	78-125

COMPOUND	CONC. (ug)	RESULT (ug/kg)	LOD (ug/kg)	DATA QUALITY (S)
Dichlorodifluoromethane	75-71-8	<8.6	8.6	
Chloromethane	74-87-3	<8.6	8.6	
Vinyl Chloride	75-01-4	<8.6	8.6	
Bromomethane	74-83-9	<8.6	8.6	
Chloroethane	75-00-3	<8.6	8.6	
Trichlorofluoromethane	75-69-4	<8.6	8.6	
Freon 113	76-13-1	<17.	17.	
Acetone	67-64-1	53.	17.	
1,1-Dichloroethane	75-35-4	<8.6	8.6	
Carbon Disulfide	75-15-0	<8.6	8.6	
Methylene Chloride	75-09-2	<8.6	8.6	
trans-1,2-Dichloroethene	156-60-5	<8.6	8.6	
Vinyl Acetate	108-05-4	<17.	17.	
1,1-Dichloroethane	75-34-3	<8.6	8.6	
2-Butanone	78-93-3	<17.	17.	
2,2-Dichloropropane	594-20-7	<8.6	8.6	
cis-1,2-Dichloroethene	156-59-2	<8.6	8.6	
Chloroform	67-66-3	<8.6	8.6	
Bromo-chloromethane	74-97-5	<8.6	8.6	
1,1,1-Trichloroethane	71-55-6	<8.6	8.6	
2-Chloroethylvinylether	110-75-8	<34.	34.	
1,1-Dichloropropene	563-58-6	<8.6	8.6	
Carbon tetrachloride	56-23-5	<8.6	8.6	
1,2-Dichloroethane	107-06-2	<8.6	8.6	
Benzene	71-43-2	<8.6	8.6	
Trichloroethene	79-01-6	<8.6	8.6	
1,2-Dichloropropane	78-87-5	<8.6	8.6	
Bromodichloromethane	75-27-4	<8.6	8.6	
Dibromomethane	74-95-3	<8.6	8.6	
4-Methyl-2-Pentanone	108-10-1	<17.	17.	
cis-1,3-Dichloropropene	10061-01-5	<8.6	8.6	
Toluene	108-88-3	<8.6	8.6	
trans-1,3-Dichloropropene	10061-02-6	<8.6	8.6	
1,1,2-Trichloroethane	79-00-5	<8.6	8.6	
2-Hexanone	591-78-6	<17.	17.	
1,2-Dibromoethane	106-93-4	<8.6	8.6	
1,3-Dichloropropane	142-28-9	<8.6	8.6	
Tetrachloroethene	127-18-4	<8.6	8.6	
Dibromochloromethane	124-48-1	<8.6	8.6	
Chlorobenzene	108-90-7	<8.6	8.6	
1,1,1,2-Tetrachloroethane	630-20-6	<8.6	8.6	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA6SD01(01)	LAL Sample ID:	L8849-60
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	42.88	Preparation Dilution:	0.980

CONCENTRATION	CONC. NO.	RESULT	PPM	DATA QUALITY INDEX
		ug/kg	ug/kg	
Ethylbenzene	100-41-4	<8.6	8.6	
m,p-Xylene	136777-61-2	<8.6	8.6	
o-Xylene	95-47-6	<8.6	8.6	
Styrene	100-42-5	<8.6	8.6	
Bromoform	75-25-2	<8.6	8.6	
Isopropylbenzene	98-82-8	<8.6	8.6	
1,1,2,2-Tetrachloroethane	79-34-5	<8.6	8.6	
1,2,3-Trichloropropane	96-18-4	<8.6	8.6	
n-Propylbenzene	103-65-1	<8.6	8.6	
Bromobenzene	108-86-1	<8.6	8.6	
1,3,5-Trimethylbenzene	108-67-8	<8.6	8.6	
2-Chlorotoluene	95-49-8	<8.6	8.6	
o-Chlorotoluene	106-43-4	<8.6	8.6	
tert-Butylbenzene	98-06-6	<8.6	8.6	
1,2,4-Trimethylbenzene	95-63-6	<8.6	8.6	
sec-Butylbenzene	135-98-8	<8.6	8.6	
p-Isopropyltoluene	99-87-6	<8.6	8.6	
1,3-Dichlorobenzene	541-73-1	<8.6	8.6	
1,4-Dichlorobenzene	106-46-7	<8.6	8.6	
n-Butylbenzene	104-51-8	<8.6	8.6	
1,2-Dichlorobenzene	95-50-1	<8.6	8.6	
1,2-Dibromo-3-chloropropane	96-12-8	<8.6	8.6	
1,2,4-Trichlorobenzene	120-82-1	<8.6	8.6	
Hexachlorobutadiene	87-68-3	<8.6	8.6	
Naphthalene	91-20-3	<8.6	8.6	
1,2,3-Trichlorobenzene	87-61-6	<8.6	8.6	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA6SD02(08)	LAL Sample ID:	L8849-64
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	O22197-8260-D1
Percent Moisture:	28.62	Preparation Dilution:	1.00

SUBSTITUTE	SECURITY	DATE
1,2-Dichloroethane-d4	102%	77-127
Toluene-d8	86%	84-120
Bromofluorobenzene	71% *	78-125

CONSTITUENT	CAS NO.	RESULT ug/kg	UCL ug/kg	DATA QUALIFIED (S)
Dichlorodifluoromethane	75-71-8	<7.0	7.0	
Chloromethane	74-87-3	<7.0	7.0	
Vinyl Chloride	75-01-4	<7.0	7.0	
Bromomethane	74-83-9	<7.0	7.0	
Chloroethane	75-00-3	<7.0	7.0	
Trichlorofluoromethane	75-69-4	<7.0	7.0	
Freon 113	76-13-1	<14.	14.	
Acetone	67-64-1	280	14.	
1,1-Dichloroethene	75-35-4	<7.0	7.0	
Carbon Disulfide	75-15-0	20.	7.0	
Methylene Chloride	75-09-2	<7.0	7.0	
trans-1,2-Dichloroethene	156-60-5	<7.0	7.0	
Vinyl Acetate	108-05-4	<14.	14.	
1,1-Dichloroethane	75-34-3	<7.0	7.0	
2-Butanone	78-93-3	61.	14.	
2,2-Dichloropropane	594-20-7	<7.0	7.0	
cis-1,2-Dichloroethene	156-59-2	<7.0	7.0	
Chloroform	67-66-3	<7.0	7.0	
Bromochloromethane	74-97-5	<7.0	7.0	
1,1,1-Trichloroethane	71-55-6	<7.0	7.0	
2-Chloroethylvinylether	110-75-8	<28.	28.	
1,1-Dichloropropene	563-58-6	<7.0	7.0	
Carbon tetrachloride	56-23-5	<7.0	7.0	
1,2-Dichloroethane	107-06-2	<7.0	7.0	
Benzene	71-43-2	<7.0	7.0	
Trichloroethene	79-01-6	<7.0	7.0	
1,2-Dichloropropane	78-87-5	<7.0	7.0	
Bromodichloromethane	75-27-4	<7.0	7.0	
Dibromomethane	74-95-3	<7.0	7.0	
4-Methyl-2-Pentanone	108-10-1	<14.	14.	
cis-1,3-Dichloropropene	10061-01-5	<7.0	7.0	
Toluene	108-88-3	<7.0	7.0	
trans-1,3-Dichloropropene	10061-02-6	<7.0	7.0	
1,1,2-Trichloroethane	79-00-5	<7.0	7.0	
2-Hexanone	591-78-6	<14.	14.	
1,2-Dibromoethane	106-93-4	<7.0	7.0	
1,3-Dichloropropane	142-28-9	<7.0	7.0	
Tetrachloroethene	127-18-4	<7.0	7.0	
Dibromochloromethane	124-48-1	<7.0	7.0	
Chlorobenzene	108-90-7	<7.0	7.0	
1,1,1,2-Tetrachloroethane	630-20-6	<7.0	7.0	

AS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA6SD02(08)	LAL Sample ID:	L8849-64
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	28.62	Preparation Dilution:	1.00

CONCENTRATION	CAS NO.	UNIT	CONCENTRATION	DATA QUALITY (S)
		ug/kg	ug/kg	
Ethylbenzene	100-41-4	<7.0	7.0	
m,p-Xylene	136777-61-2	<7.0	7.0	
o-Xylene	95-47-6	<7.0	7.0	
Styrene	100-42-5	<7.0	7.0	
Bromoform	75-25-2	<7.0	7.0	
Isopropylbenzene	98-82-8	<7.0	7.0	
1,1,2,2-Tetrachloroethane	79-34-5	<7.0	7.0	
1,2,3-Trichloropropane	96-18-4	<7.0	7.0	
n-Propylbenzene	103-65-1	<7.0	7.0	
Bromobenzene	108-86-1	<7.0	7.0	
1,3,5-Trimethylbenzene	108-67-8	<7.0	7.0	
2-Chlorotoluene	95-49-8	<7.0	7.0	
o-Chlorotoluene	106-43-4	<7.0	7.0	
tert-Butylbenzene	98-06-6	<7.0	7.0	
1,2,4-Trimethylbenzene	95-63-6	<7.0	7.0	
sec-Butylbenzene	135-98-8	<7.0	7.0	
p-Isopropyltoluene	99-87-6	<7.0	7.0	
1,3-Dichlorobenzene	541-73-1	<7.0	7.0	
1,4-Dichlorobenzene	106-46-7	<7.0	7.0	
n-Butylbenzene	104-51-8	<7.0	7.0	
1,2-Dichlorobenzene	95-50-1	<7.0	7.0	
1,2-Dibromo-3-chloropropane	96-12-8	<7.0	7.0	
1,2,4-Trichlorobenzene	120-82-1	<7.0	7.0	
Hexachlorobutadiene	87-68-3	<7.0	7.0	
Naphthalene	91-20-3	<7.0	7.0	
1,2,3-Trichlorobenzene	87-61-6	<7.0	7.0	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA6SD02(08)	LAL Sample ID:	L8849-64
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	28.62	Preparation Dilution:	0.980

CONCENTRATION	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	98%	77-127
Toluene-d8	95%	84-120
Bromofluorobenzene	81%	78-125

CONSTITUENT	CAS NO	RECOVERY %/kg	POS %/kg	DATA QUALITY INDEX
Dichlorodifluoromethane	75-71-8	<6.9	6.9	
Chloromethane	74-87-3	<6.9	6.9	
Vinyl Chloride	75-01-4	<6.9	6.9	
Bromomethane	74-83-9	<6.9	6.9	
Chloroethane	75-00-3	<6.9	6.9	
Trichlorofluoromethane	75-69-4	<6.9	6.9	
Freon 113	76-13-1	<14.	14.	
Acetone	67-64-1	320	14.	I
1,1-Dichloroethene	75-35-4	<6.9	6.9	
Carbon Disulfide	75-15-0	14.	6.9	
Methylene Chloride	75-09-2	<6.9	6.9	
trans-1,2-Dichloroethene	156-60-5	<6.9	6.9	
Vinyl Acetate	108-05-4	<14.	14.	
1,1-Dichloroethane	75-34-3	<6.9	6.9	
2-Butanone	78-93-3	71.	14.	
2,2-Dichloropropane	594-20-7	<6.9	6.9	
cis-1,2-Dichloroethene	156-59-2	<6.9	6.9	
Chloroform	67-66-3	<6.9	6.9	
Bromochloromethane	74-97-5	<6.9	6.9	
1,1,1-Trichloroethane	71-55-6	<6.9	6.9	
2-Chloroethylvinylether	110-75-8	<27.	27.	
1,1-Dichloropropene	563-58-6	<6.9	6.9	
Carbon tetrachloride	56-23-5	<6.9	6.9	
1,2-Dichloroethane	107-06-2	<6.9	6.9	
Benzene	71-43-2	<6.9	6.9	
Trichloroethene	79-01-6	<6.9	6.9	
1,2-Dichloropropane	78-87-5	<6.9	6.9	
Bromodichloromethane	75-27-4	<6.9	6.9	
Dibromomethane	74-95-3	<6.9	6.9	
4-Methyl-2-Pentanone	108-10-1	<14.	14.	
cis-1,3-Dichloropropene	10061-01-5	<6.9	6.9	
Toluene	108-88-3	<6.9	6.9	
trans-1,3-Dichloropropene	10061-02-6	<6.9	6.9	
1,1,2-Trichloroethane	79-00-5	<6.9	6.9	
2-Hexanone	591-78-6	<14.	14.	
1,2-Dibromoethane	106-93-4	<6.9	6.9	
1,3-Dichloropropane	142-28-9	<6.9	6.9	
Tetrachloroethene	127-18-4	<6.9	6.9	
Dibromochloromethane	124-48-1	<6.9	6.9	
Chlorobenzene	108-90-7	<6.9	6.9	
1,1,1,2-Tetrachloroethane	630-20-6	<6.9	6.9	

AS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA6SD02(08)	LAL Sample ID:	L8849-64
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	O22497-8260-D1
Percent Moisture:	28.62	Preparation Dilution:	0.980

COMPOUNDS	CAS NO	RESULT	UCL	DATA QUALIFIER(S)
		MS/MS	MS/MS	
Ethylbenzene	100-41-4	<6.9	6.9	
m,p-Xylene	136777-61-2	<6.9	6.9	
o-Xylene	95-47-6	<6.9	6.9	
Styrene	100-42-5	<6.9	6.9	
Bromoform	75-25-2	<6.9	6.9	
Isopropylbenzene	98-82-8	<6.9	6.9	
1,1,2,2-Tetrachloroethane	79-34-5	<6.9	6.9	
1,2,3-Trichloropropane	96-18-4	<6.9	6.9	
n-Propylbenzene	103-65-1	<6.9	6.9	
Bromobenzene	108-86-1	<6.9	6.9	
1,3,5-Trimethylbenzene	108-67-8	<6.9	6.9	
2-Chlorotoluene	95-49-8	<6.9	6.9	
-Chlorotoluene	106-43-4	<6.9	6.9	
tert-Butylbenzene	98-06-6	<6.9	6.9	
1,2,4-Trimethylbenzene	95-63-6	<6.9	6.9	
sec-Butylbenzene	135-98-8	<6.9	6.9	
p-Isopropyltoluene	99-87-6	<6.9	6.9	
1,3-Dichlorobenzene	541-73-1	<6.9	6.9	
1,4-Dichlorobenzene	106-46-7	<6.9	6.9	
n-Butylbenzene	104-51-8	<6.9	6.9	
1,2-Dichlorobenzene	95-50-1	<6.9	6.9	
1,2-Dibromo-3-chloropropane	96-12-8	<6.9	6.9	
1,2,4-Trichlorobenzene	120-82-1	<6.9	6.9	
Hexachlorobutadiene	87-68-3	<6.9	6.9	
Naphthalene	91-20-3	<6.9	6.9	
1,2,3-Trichlorobenzene	87-61-6	<6.9	6.9	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	978PXLIAGSD62(08)	LAL Sample ID:	L8849-68
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	32.07	Preparation Dilution:	0.990

COMPONENT	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	105%	77-127
Toluene-d8	90%	84-120
Bromofluorobenzene	77% *	78-125

COMPONENT	CAN. NO.	RESULT ug/kg	POS. ug/kg	DATA QUALITY (1-5)
Dichlorodifluoromethane	75-71-8	<7.3	7.3	
Chloromethane	74-87-3	<7.3	7.3	
Vinyl Chloride	75-01-4	<7.3	7.3	
Bromomethane	74-83-9	<7.3	7.3	
Chloroethane	75-00-3	<7.3	7.3	
Trichlorofluoromethane	75-69-4	<7.3	7.3	
Freon 113	76-13-1	<15.	15.	
Acetone	67-64-1	230	15.	
1,1-Dichloroethene	75-35-4	<7.3	7.3	
Carbon Disulfide	75-15-0	17.	7.3	
Methylene Chloride	75-09-2	<7.3	7.3	
trans-1,2-Dichloroethene	156-60-5	<7.3	7.3	
Vinyl Acetate	108-05-4	<15.	15.	
1,1-Dichloroethane	75-34-3	<7.3	7.3	
2-Butanone	78-93-3	52.	15.	
2,2-Dichloropropane	594-20-7	<7.3	7.3	
cis-1,2-Dichloroethene	156-59-2	<7.3	7.3	
Chloroform	67-66-3	<7.3	7.3	
Bromochloromethane	74-97-5	<7.3	7.3	
1,1,1-Trichloroethane	71-55-6	<7.3	7.3	
2-Chloroethylvinylether	110-75-8	<29.	29.	
1,1-Dichloropropene	563-58-6	<7.3	7.3	
Carbon tetrachloride	56-23-5	<7.3	7.3	
1,2-Dichloroethane	107-06-2	<7.3	7.3	
Benzene	71-43-2	<7.3	7.3	
Trichloroethene	79-01-6	<7.3	7.3	
1,2-Dichloropropane	78-87-5	<7.3	7.3	
Bromodichloromethane	75-27-4	<7.3	7.3	
Dibromomethane	74-95-3	<7.3	7.3	
4-Methyl-2-Pentanone	108-10-1	<15.	15.	
cis-1,3-Dichloropropene	10061-01-5	<7.3	7.3	
Toluene	108-88-3	<7.3	7.3	
trans-1,3-Dichloropropene	10061-02-6	<7.3	7.3	
1,1,2-Trichloroethane	79-00-5	<7.3	7.3	
2-Hexanone	591-78-6	<15.	15.	
1,2-Dibromoethane	106-93-4	<7.3	7.3	
1,3-Dichloropropane	142-28-9	<7.3	7.3	
Tetrachloroethene	127-18-4	<7.3	7.3	
Dibromochloromethane	124-48-1	<7.3	7.3	
Chlorobenzene	108-90-7	<7.3	7.3	
1,1,1,2-Tetrachloroethane	630-20-6	<7.3	7.3	

AS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA6SD62(08)	LAL Sample ID:	L8849-68
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	32.07	Preparation Dilution:	0.990

Component	Retention Time (min)	Concentration (ppm)	Response	Quality Factor (QF)
Ethylbenzene	100-41-4	<7.3	7.3	
m,p-Xylene	136777-61-2	<7.3	7.3	
o-Xylene	95-47-6	<7.3	7.3	
Styrene	100-42-5	<7.3	7.3	
Bromoform	75-25-2	<7.3	7.3	
Isopropylbenzene	98-82-8	<7.3	7.3	
1,1,2,2-Tetrachloroethane	79-34-5	<7.3	7.3	
1,2,3-Trichloropropane	96-18-4	<7.3	7.3	
n-Propylbenzene	103-65-1	<7.3	7.3	
Bromobenzene	108-86-1	<7.3	7.3	
1,3,5-Trimethylbenzene	108-67-8	<7.3	7.3	
2-Chlorotoluene	95-49-8	<7.3	7.3	
o-Chlorotoluene	106-43-4	<7.3	7.3	
tert-Butylbenzene	98-06-6	<7.3	7.3	
1,2,4-Trimethylbenzene	95-63-6	<7.3	7.3	
sec-Butylbenzene	135-98-8	<7.3	7.3	
p-Isopropyltoluene	99-87-6	<7.3	7.3	
1,3-Dichlorobenzene	541-73-1	<7.3	7.3	
1,4-Dichlorobenzene	106-46-7	<7.3	7.3	
n-Butylbenzene	104-51-8	<7.3	7.3	
1,2-Dichlorobenzene	95-50-1	<7.3	7.3	
1,2-Dibromo-3-chloropropane	96-12-8	<7.3	7.3	
1,2,4-Trichlorobenzene	120-82-1	<7.3	7.3	
Hexachlorobutadiene	87-68-3	<7.3	7.3	
Naphthalene	91-20-3	<7.3	7.3	
1,2,3-Trichlorobenzene	87-61-6	<7.3	7.3	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA6SD62(08)	LAL Sample ID:	L8849-68
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	32.07	Preparation Dilution:	1.00

SURROGATE	RECOVERY	REFERENCE
1,2-Dichloroethane-d4	97%	77-127
Toluene-d8	94%	84-120
Bromofluorobenzene	79%	78-125

CONSTITUENT	LAB NO	RESULT ug/kg	LOD ug/kg	DEQ CRITERION (ug)
Dichlorodifluoromethane	75-71-8	<7.4	7.4	
Chloromethane	74-87-3	<7.4	7.4	
Vinyl Chloride	75-01-4	<7.4	7.4	
Bromomethane	74-83-9	<7.4	7.4	
Chloroethane	75-00-3	<7.4	7.4	
Trichlorofluoromethane	75-69-4	<7.4	7.4	
Freon 113	76-13-1	<15.	15.	
Acetone	67-64-1	320	15.	K
1,1-Dichloroethene	75-35-4	<7.4	7.4	
Carbon Disulfide	75-15-0	8.7	7.4	
Methylene Chloride	75-09-2	<7.4	7.4	
trans-1,2-Dichloroethene	156-60-5	<7.4	7.4	
Vinyl Acetate	108-05-4	<15.	15.	
1,1-Dichloroethane	75-34-3	<7.4	7.4	
2-Butanone	78-93-3	69.	15.	
2,2-Dichloropropane	594-20-7	<7.4	7.4	
cis-1,2-Dichloroethene	156-59-2	<7.4	7.4	
Chloroform	67-66-3	<7.4	7.4	
Bromochloromethane	74-97-5	<7.4	7.4	
1,1,1-Trichloroethane	71-55-6	<7.4	7.4	
2-Chloroethylvinylether	110-75-8	<29.	29.	
1,1-Dichloropropene	563-58-6	<7.4	7.4	
Carbon tetrachloride	56-23-5	<7.4	7.4	
1,2-Dichloroethane	107-06-2	<7.4	7.4	
Benzene	71-43-2	<7.4	7.4	
Trichloroethene	79-01-6	<7.4	7.4	
1,2-Dichloropropane	78-87-5	<7.4	7.4	
Bromodichloromethane	75-27-4	<7.4	7.4	
Dibromomethane	74-95-3	<7.4	7.4	
4-Methyl-2-Pentanone	108-10-1	<15.	15.	
cis-1,3-Dichloropropene	10061-01-5	<7.4	7.4	
Toluene	108-88-3	<7.4	7.4	
trans-1,3-Dichloropropene	10061-02-6	<7.4	7.4	
1,1,2-Trichloroethane	79-00-5	<7.4	7.4	
2-Hexanone	591-78-6	<15.	15.	
1,2-Dibromoethane	106-93-4	<7.4	7.4	
1,3-Dichloropropane	142-28-9	<7.4	7.4	
Tetrachloroethene	127-18-4	<7.4	7.4	
Dibromochloromethane	124-48-1	<7.4	7.4	
Chlorobenzene	108-90-7	<7.4	7.4	
1,1,1,2-Tetrachloroethane	630-20-6	<7.4	7.4	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA6SD62(08)	LAL Sample ID:	L8849-68
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	32.07	Preparation Dilution:	1.00

COMPOUND	CONC. (PPM)	REF. NO.	CONC. (PPM)	DATA QUALIFIER (S)
Ethylbenzene		100-41-4	<7.4	7.4
m,p-Xylene		136777-61-2	<7.4	7.4
o-Xylene		95-47-6	<7.4	7.4
Styrene		100-42-5	<7.4	7.4
Bromoform		75-25-2	<7.4	7.4
Isopropylbenzene		98-82-8	<7.4	7.4
1,1,2,2-Tetrachloroethane		79-34-5	<7.4	7.4
1,2,3-Trichloropropane		96-18-4	<7.4	7.4
n-Propylbenzene		103-65-1	<7.4	7.4
Bromobenzene		108-86-1	<7.4	7.4
1,3,5-Trimethylbenzene		108-67-8	<7.4	7.4
2-Chlorotoluene		95-49-8	<7.4	7.4
4-Chlorotoluene		106-43-4	<7.4	7.4
tert-Butylbenzene		98-06-6	<7.4	7.4
1,2,4-Trimethylbenzene		95-63-6	<7.4	7.4
sec-Butylbenzene		135-98-8	<7.4	7.4
p-Isopropyltoluene		99-87-6	<7.4	7.4
1,3-Dichlorobenzene		541-73-1	<7.4	7.4
1,4-Dichlorobenzene		106-46-7	<7.4	7.4
n-Butylbenzene		104-51-8	<7.4	7.4
1,2-Dichlorobenzene		95-50-1	<7.4	7.4
1,2-Dibromo-3-chloropropane		96-12-8	<7.4	7.4
1,2,4-Trichlorobenzene		120-82-1	<7.4	7.4
Hexachlorobutadiene		87-68-3	<7.4	7.4
Naphthalene		91-20-3	<7.4	7.4
1,2,3-Trichlorobenzene		87-61-6	<7.4	7.4

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLI8SD02(08)	LAL Sample ID:	L8849-72
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	26.69	Preparation Dilution:	1.00

SUBSTITUTE	RECOVERY	Q.C. RANGE
1,2-Dichloroethane-d4	93%	77-127
Toluene-d8	94%	84-120
Bromofluorobenzene	79%	78-125

CONSTITUENT	CAN NO.	RESULT mg/kg	COL mg/kg	DATA QUALIFIER(S)
Dichlorodifluoromethane	75-71-8	<6.8	6.8	
Chloromethane	74-87-3	<6.8	6.8	
Vinyl Chloride	75-01-4	<6.8	6.8	
Bromomethane	74-83-9	<6.8	6.8	
Chloroethane	75-00-3	<6.8	6.8	
Trichlorofluoromethane	75-69-4	<6.8	6.8	
Freon 113	76-13-1	<14.	14.	
Acetone	67-64-1	51.	14.	
1,1-Dichloroethene	75-35-4	<6.8	6.8	
Carbon Disulfide	75-15-0	<6.8	6.8	
Methylene Chloride	75-09-2	<6.8	6.8	
trans-1,2-Dichloroethene	156-60-5	<6.8	6.8	
Vinyl Acetate	108-05-4	<14.	14.	
1,1-Dichloroethane	75-34-3	<6.8	6.8	
2-Butanone	78-93-3	<14.	14.	
2,2-Dichloropropane	594-20-7	<6.8	6.8	
cis-1,2-Dichloroethene	156-59-2	<6.8	6.8	
Chloroform	67-66-3	<6.8	6.8	
Bromochloromethane	74-97-5	<6.8	6.8	
1,1,1-Trichloroethane	71-55-6	<6.8	6.8	
2-Chloroethylvinylether	110-75-8	<27.	27.	
1,1-Dichloropropene	563-58-6	<6.8	6.8	
Carbon tetrachloride	56-23-5	<6.8	6.8	
1,2-Dichloroethane	107-06-2	<6.8	6.8	
Benzene	71-43-2	<6.8	6.8	
Trichloroethane	79-01-6	<6.8	6.8	
1,2-Dichloropropane	78-87-5	<6.8	6.8	
Bromodichloromethane	75-27-4	<6.8	6.8	
Dibromomethane	74-95-3	<6.8	6.8	
4-Methyl-2-Pentanone	108-10-1	<14.	14.	
cis-1,3-Dichloropropene	10061-01-5	<6.8	6.8	
Toluene	108-88-3	<6.8	6.8	
trans-1,3-Dichloropropene	10061-02-6	<6.8	6.8	
1,1,2-Trichloroethane	79-00-5	<6.8	6.8	
2-Hexanone	591-78-6	<14.	14.	
1,2-Dibromoethane	106-93-4	<6.8	6.8	
1,3-Dichloropropane	142-28-9	<6.8	6.8	
Tetrachloroethene	127-18-4	<6.8	6.8	
Dibromochloromethane	124-48-1	<6.8	6.8	
Chlorobenzene	108-90-7	<6.8	6.8	
1,1,1,2-Tetrachloroethane	630-20-6	<6.8	6.8	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIABSD02(08)	LAL Sample ID:	L8849-72
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	26.69	Preparation Dilution:	1.00

Compound	Lab No.	Result ug/kg	Ref. ug/kg	DATA QUALITY(S)
Ethylbenzene	100-41-4	<6.8	6.8	
m,p-Xylene	136777-61-2	<6.8	6.8	
o-Xylene	95-47-6	<6.8	6.8	
Styrene	100-42-5	<6.8	6.8	
Bromoform	75-25-2	<6.8	6.8	
Isopropylbenzene	98-82-8	<6.8	6.8	
1,1,2,2-Tetrachloroethane	79-34-5	<6.8	6.8	
1,2,3-Trichloropropane	96-18-4	<6.8	6.8	
n-Propylbenzene	103-65-1	<6.8	6.8	
Bromobenzene	108-86-1	<6.8	6.8	
1,3,5-Trimethylbenzene	108-67-8	<6.8	6.8	
2-Chlorotoluene	95-49-8	<6.8	6.8	
4-Chlorotoluene	106-43-4	<6.8	6.8	
tert-Butylbenzene	98-06-6	<6.8	6.8	
1,2,4-Trimethylbenzene	95-63-6	<6.8	6.8	
sec-Butylbenzene	135-98-8	<6.8	6.8	
p-Isopropyltoluene	99-87-6	<6.8	6.8	
1,3-Dichlorobenzene	541-73-1	<6.8	6.8	
1,4-Dichlorobenzene	106-46-7	<6.8	6.8	
n-Butylbenzene	104-51-8	<6.8	6.8	
1,2-Dichlorobenzene	95-50-1	<6.8	6.8	
1,2-Dibromo-3-chloropropane	96-12-8	<6.8	6.8	
1,2,4-Trichlorobenzene	120-82-1	<6.8	6.8	
Hexachlorobutadiene	87-68-3	<6.8	6.8	
Naphthalene	91-20-3	<6.8	6.8	
1,2,3-Trichlorobenzene	87-61-6	<6.8	6.8	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIASD01(01)	LAL Sample ID:	L8849-76
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	38.38	Preparation Dilution:	1.00

SUBSTRATE	RECOVERY	QC SAMPLE
1,2-Dichloroethane-d4	62% *	77-127
Toluene-d8	88%	84-120
Bromofluorobenzene	63% *	78-125

CONSTITUENT	Q.C. NO.	RESULT µg/kg	Q.C. µg/kg	DATA QUALITY INDEX
Dichlorodifluoromethane	75-71-8	<8.1	8.1	
Chloromethane	74-87-3	<8.1	8.1	
Vinyl Chloride	75-01-4	<8.1	8.1	
Bromomethane	74-83-9	<8.1	8.1	
Chloroethane	75-00-3	<8.1	8.1	
Trichlorofluoromethane	75-69-4	<8.1	8.1	
Freon 113	76-13-1	<16.	16.	
Acetone	67-64-1	<16.	16.	
1,1-Dichloroethene	75-35-4	<8.1	8.1	
Carbon Disulfide	75-15-0	27.	8.1	
Methylene Chloride	75-09-2	<8.1	8.1	
trans-1,2-Dichloroethene	156-60-5	<8.1	8.1	
Vinyl Acetate	108-05-4	<16.	16.	
1,1-Dichloroethane	75-34-3	<8.1	8.1	
2-Butanone	78-93-3	<16.	16.	
2,2-Dichloropropane	594-20-7	<8.1	8.1	
cis-1,2-Dichloroethene	156-59-2	<8.1	8.1	
Chloroform	67-66-3	<8.1	8.1	
Bromochloromethane	74-97-5	<8.1	8.1	
1,1,1-Trichloroethane	71-55-6	<8.1	8.1	
2-Chloroethylvinylether	110-75-8	<32.	32.	
1,1-Dichloropropene	563-58-6	<8.1	8.1	
Carbon tetrachloride	56-23-5	<8.1	8.1	
1,2-Dichloroethane	107-06-2	<8.1	8.1	
Benzene	71-43-2	<8.1	8.1	
Trichloroethene	79-01-6	<8.1	8.1	
1,2-Dichloropropane	78-87-5	<8.1	8.1	
Bromodichloromethane	75-27-4	<8.1	8.1	
Dibromomethane	74-95-3	<8.1	8.1	
4-Methyl-2-Pentanone	108-10-1	<16.	16.	
cis-1,3-Dichloropropene	10061-01-5	<8.1	8.1	
Toluene	108-88-3	<8.1	8.1	
trans-1,3-Dichloropropene	10061-02-6	<8.1	8.1	
1,1,2-Trichloroethane	79-00-5	<8.1	8.1	
2-Hexanone	591-78-6	<16.	16.	
1,2-Dibromoethane	106-93-4	<8.1	8.1	
1,3-Dichloropropane	142-28-9	<8.1	8.1	
Tetrachloroethene	127-18-4	<8.1	8.1	
Dibromochloromethane	124-48-1	<8.1	8.1	
Chlorobenzene	108-90-7	<8.1	8.1	
1,1,1,2-Tetrachloroethane	630-20-6	<8.1	8.1	

LAS LABORATORIES

VLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIASSD01(01)	LAL Sample ID:	L8849-76
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022197-8260-D1
Percent Moisture:	38.38	Preparation Dilution:	1.00

CONSTITUENT	SMILES	CONCENTRATION	UNIT	DATA QUALIFIER(S)
Ethylbenzene	100-41-4	<8.1		8.1
m,p-Xylene	136777-61-2	<8.1		8.1
o-Xylene	95-47-6	<8.1		8.1
Styrene	100-42-5	<8.1		8.1
Bromoform	75-25-2	<8.1		8.1
Isopropylbenzene	98-82-8	<8.1		8.1
1,1,2,2-Tetrachloroethane	79-34-5	<8.1		8.1
1,2,3-Trichloropropane	96-18-4	<8.1		8.1
n-Propylbenzene	103-65-1	<8.1		8.1
Bromobenzene	108-86-1	<8.1		8.1
1,3,5-Trimethylbenzene	108-67-8	<8.1		8.1
2-Chlorotoluene	95-49-8	<8.1		8.1
4-Chlorotoluene	106-43-4	<8.1		8.1
tert-Butylbenzene	98-06-6	<8.1		8.1
2,4-Trimethylbenzene	95-63-6	<8.1		8.1
sec-Butylbenzene	135-98-8	<8.1		8.1
p-Isopropyltoluene	99-87-6	<8.1		8.1
1,3-Dichlorobenzene	541-73-1	<8.1		8.1
1,4-Dichlorobenzene	106-46-7	<8.1		8.1
n-Butylbenzene	104-51-8	<8.1		8.1
1,2-Dichlorobenzene	95-50-1	<8.1		8.1
1,2-Dibromo-3-chloropropane	96-12-8	<8.1		8.1
1,2,4-Trichlorobenzene	120-82-1	<8.1		8.1
Hexachlorobutadiene	87-68-3	<8.1		8.1
Naphthalene	91-20-3	<8.1		8.1
1,2,3-Trichlorobenzene	87-61-6	<8.1		8.1

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIASD01(01)	LAL Sample ID:	L8849-76
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	38.38	Preparation Dilution:	0.990

COMPOUND	RECOVERY	GC INJECT
1,2-Dichloroethane-d4	95%	77-127
Toluene-d8	93%	84-120
Bromofluorobenzene	71% *	78-125

COMPOUND	GC INJECT	RESULT mg/kg	PCB ug/kg	DATA QUALITY FLAG (S)
Dichlorodifluoromethane	75-71-8	<8.0	8.0	
Chloromethane	74-87-3	<8.0	8.0	
Vinyl Chloride	75-01-4	<8.0	8.0	
Bromomethane	74-83-9	<8.0	8.0	
Chloroethane	75-00-3	<8.0	8.0	
Trichlorofluoromethane	75-69-4	<8.0	8.0	
Freon 113	76-13-1	<16.	16.	
Acetone	67-64-1	67.	16.	
1,1-Dichloroethene	75-35-4	<8.0	8.0	
Carbon Disulfide	75-15-0	18.	8.0	
Methylene Chloride	75-09-2	<8.0	8.0	
trans-1,2-Dichloroethene	156-60-5	<8.0	8.0	
Vinyl Acetate	108-05-4	<16.	16.	
1,1-Dichloroethane	75-34-3	<8.0	8.0	
2-Butanone	78-93-3	<16.	16.	
2,2-Dichloropropane	594-20-7	<8.0	8.0	
cis-1,2-Dichloroethene	156-59-2	<8.0	8.0	
Chloroform	67-66-3	<8.0	8.0	
Bromochloromethane	74-97-5	<8.0	8.0	
1,1,1-Trichloroethane	71-55-6	<8.0	8.0	
2-Chloroethylvinylether	110-75-8	<32.	32.	
1,1-Dichloropropene	563-58-6	<8.0	8.0	
Carbon tetrachloride	56-23-5	<8.0	8.0	
1,2-Dichloroethane	107-06-2	<8.0	8.0	
Benzene	71-43-2	<8.0	8.0	
Trichloroethene	79-01-6	<8.0	8.0	
1,2-Dichloropropane	78-87-5	<8.0	8.0	
Bromodichloromethane	75-27-4	<8.0	8.0	
Dibromomethane	74-95-3	<8.0	8.0	
4-Methyl-2-Pentanone	108-10-1	<16.	16.	
cis-1,3-Dichloropropene	10061-01-5	<8.0	8.0	
Toluene	108-88-3	<8.0	8.0	
trans-1,3-Dichloropropene	10061-02-6	<8.0	8.0	
1,1,2-Trichloroethane	79-00-5	<8.0	8.0	
2-Hexanone	591-78-6	<16.	16.	
1,2-Dibromoethane	106-93-4	<8.0	8.0	
1,3-Dichloropropane	142-28-9	<8.0	8.0	
Tetrachloroethene	127-18-4	<8.0	8.0	
Dibromochloromethane	124-48-1	<8.0	8.0	
Chlorobenzene	108-90-7	<8.0	8.0	
1,1,1,2-Tetrachloroethane	630-20-6	<8.0	8.0	

LAS LABORATORIES

OLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID: 97BPXLIASD01(01)
Date Collected: 16-FEB-97
Date Analyzed: 24-FEB-97
Matrix: Soil
Percent Moisture: 38.38

LAL Sample ID: L8849-76
Date Received: 19-FEB-97
Analytical Dilution: 1
Analytical Batch ID: 022497-8260-D1
Preparation Dilution: 0.990

CONSTITUENT	CAS NO.	RESULT mg/kg	REL. mg/kg	DATA QUALITY (S)
Ethylbenzene	100-41-4	<8.0	8.0	
m,p-Xylene	136777-61-2	<8.0	8.0	
o-Xylene	95-47-6	<8.0	8.0	
Styrene	100-42-5	<8.0	8.0	
Bromoform	75-25-2	<8.0	8.0	
Isopropylbenzene	98-82-8	<8.0	8.0	
1,1,2,2-Tetrachloroethane	79-34-5	<8.0	8.0	
1,2,3-Trichloropropane	96-18-4	<8.0	8.0	
n-Propylbenzene	103-65-1	<8.0	8.0	
Bromobenzene	108-86-1	<8.0	8.0	
1,3,5-Trimethylbenzene	108-67-8	<8.0	8.0	
2-Chlorotoluene	95-49-8	<8.0	8.0	
4-Chlorotoluene	106-43-4	<8.0	8.0	
tert-Butylbenzene	98-06-6	<8.0	8.0	
1,2,4-Trimethylbenzene	95-63-6	<8.0	8.0	
sec-Butylbenzene	135-98-8	<8.0	8.0	
p-Isopropyltoluene	99-87-6	<8.0	8.0	
1,3-Dichlorobenzene	541-73-1	<8.0	8.0	
1,4-Dichlorobenzene	106-46-7	<8.0	8.0	
n-Butylbenzene	104-51-8	<8.0	8.0	
1,2-Dichlorobenzene	95-50-1	<8.0	8.0	
1,2-Dibromo-3-chloropropane	96-12-8	<8.0	8.0	
1,2,4-Trichlorobenzene	120-82-1	<8.0	8.0	
Hexachlorobutadiene	87-68-3	<8.0	8.0	
Naphthalene	91-20-3	<8.0	8.0	
1,2,3-Trichlorobenzene	87-61-6	<8.0	8.0	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID: 97BPXLI10SD01(01)	LAL Sample ID: L8849-80
Date Collected: 16-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 24-FEB-97	Analytical Dilution: 1
Matrix: Soil	Analytical Batch ID: 022497-8260-D1
Percent Moisture: 35.25	Preparation Dilution: 0.990

SUBSTRATE	RECOVERY	CC RANGE
1,2-Dichloroethane-d4	97%	77-127
Toluene-d8	94%	84-120
Bromofluorobenzene	83%	78-125

CONSTITUENT	CAS NO.	REPROD CO/20	FOC CO/20	DATA QUALITY (1-5)
Dichlorodifluoromethane	75-71-8	<7.6	7.6	
Chloromethane	74-87-3	<7.6	7.6	
Vinyl Chloride	75-01-4	<7.6	7.6	
Bromomethane	74-83-9	<7.6	7.6	
Chloroethane	75-00-3	<7.6	7.6	
Trichlorofluoromethane	75-69-4	<7.6	7.6	
Freon 113	76-13-1	<15.	15.	
Acetone	67-64-1	62.	15.	
1,1-Dichloroethene	75-35-4	<7.6	7.6	
Carbon Disulfide	75-15-0	<7.6	7.6	
Methylene Chloride	75-09-2	<7.6	7.6	
trans-1,2-Dichloroethene	156-60-5	<7.6	7.6	
Vinyl Acetate	108-05-4	<15.	15.	
1,1-Dichloroethane	75-34-3	<7.6	7.6	
2-Butanone	78-93-3	<15.	15.	
2,2-Dichloropropane	594-20-7	<7.6	7.6	
cis-1,2-Dichloroethene	156-59-2	<7.6	7.6	
Chloroform	67-66-3	<7.6	7.6	
Bromochloromethane	74-97-5	<7.6	7.6	
1,1,1-Trichloroethane	71-55-6	<7.6	7.6	
2-Chloroethylvinylether	110-75-8	<31.	31.	
1,1-Dichloropropene	563-58-6	<7.6	7.6	
Carbon tetrachloride	56-23-5	<7.6	7.6	
1,2-Dichloroethane	107-06-2	<7.6	7.6	
Benzene	71-43-2	<7.6	7.6	
Trichloroethene	79-01-6	<7.6	7.6	
1,2-Dichloropropane	78-87-5	<7.6	7.6	
Bromodichloromethane	75-27-4	<7.6	7.6	
Dibromomethane	74-95-3	<7.6	7.6	
4-Methyl-2-Pentanone	108-10-1	<15.	15.	
cis-1,3-Dichloropropene	10061-01-5	<7.6	7.6	
Toluene	108-88-3	<7.6	7.6	
trans-1,3-Dichloropropene	10061-02-6	<7.6	7.6	
1,1,2-Trichloroethane	79-00-5	<7.6	7.6	
2-Hexanone	591-78-6	<15.	15.	
1,2-Dibromoethane	106-93-4	<7.6	7.6	
1,3-Dichloropropane	142-28-9	<7.6	7.6	
Tetrachloroethene	127-18-4	<7.6	7.6	
Dibromochloromethane	124-48-1	<7.6	7.6	
Chlorobenzene	108-90-7	<7.6	7.6	
1,1,1,2-Tetrachloroethane	630-20-6	<7.6	7.6	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPKLIA10SD01(01)	LAL Sample ID:	L8849-80
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	35.25	Preparation Dilution:	0.990

CONSTITUENT	CAS NO.	RESULT	UNIT	DATA QUALIFIER(S)
Ethylbenzene	100-41-4	<7.6	7.6	
m,p-Xylene	136777-61-2	<7.6	7.6	
o-Xylene	95-47-6	<7.6	7.6	
Styrene	100-42-5	<7.6	7.6	
Bromoform	75-25-2	<7.6	7.6	
Isopropylbenzene	98-82-8	<7.6	7.6	
1,1,2,2-Tetrachloroethane	79-34-5	<7.6	7.6	
1,2,3-Trichloropropane	96-18-4	<7.6	7.6	
n-Propylbenzene	103-65-1	<7.6	7.6	
Bromobenzene	108-86-1	<7.6	7.6	
1,3,5-Trimethylbenzene	108-67-8	<7.6	7.6	
2-Chlorotoluene	95-49-8	<7.6	7.6	
4-Chlorotoluene	106-43-4	<7.6	7.6	
tert-Butylbenzene	98-06-6	<7.6	7.6	
1,2,4-Trimethylbenzene	95-63-6	<7.6	7.6	
sec-Butylbenzene	135-98-8	<7.6	7.6	
p-Isopropyltoluene	99-87-6	<7.6	7.6	
1,3-Dichlorobenzene	541-73-1	<7.6	7.6	
1,4-Dichlorobenzene	106-46-7	<7.6	7.6	
n-Butylbenzene	104-51-8	<7.6	7.6	
1,2-Dichlorobenzene	95-50-1	<7.6	7.6	
1,2-Dibromo-3-chloropropane	96-12-8	<7.6	7.6	
1,2,4-Trichlorobenzene	120-82-1	<7.6	7.6	
Hexachlorobutadiene	87-68-3	<7.6	7.6	
Naphthalene	91-20-3	<7.6	7.6	
1,2,3-Trichlorobenzene	87-61-6	<7.6	7.6	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID: 97BPLITE21697	LAL Sample ID: L8849-88
Date Collected: 16-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 25-FEB-97	Analytical Dilution: 1
Matrix: Soil	Analytical Batch ID: 022497-8260-D1
Percent Moisture: N/A	Preparation Dilution: 1.00

SUBSTANCE	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	98%	77-127
Toluene-d8	91%	84-120
Bromofluorobenzene	89%	78-125

CONSTITUENT	GC RANGE	RESULT	PCB	DATA QUALIFIER (S)
		ug/kg	ug/kg	
Dichlorodifluoromethane	75-71-8	<5.0	5.0	
Chloromethane	74-87-3	<5.0	5.0	
Vinyl Chloride	75-01-4	<5.0	5.0	
Bromomethane	74-83-9	<5.0	5.0	
Chloroethane	75-00-3	<5.0	5.0	
Trichlorofluoromethane	75-69-4	<5.0	5.0	
Freon 113	76-13-1	<10.	10.	
Acetone	67-64-1	25.	10.	
1,1-Dichloroethene	75-35-4	<5.0	5.0	
Carbon Disulfide	75-15-0	<5.0	5.0	
Methylene Chloride	75-09-2	<5.0	5.0	
trans-1,2-Dichloroethene	156-60-5	<5.0	5.0	
Vinyl Acetate	108-05-4	<10.	10.	
1,1-Dichloroethane	75-34-3	<5.0	5.0	
2-Butanone	78-93-3	17.	10.	
2,2-Dichloropropane	594-20-7	<5.0	5.0	
cis-1,2-Dichloroethene	156-59-2	<5.0	5.0	
Chloroform	67-66-3	<5.0	5.0	
Bromochloromethane	74-97-5	<5.0	5.0	
1,1,1-Trichloroethane	71-55-6	<5.0	5.0	
2-Chloroethylvinylether	110-75-8	<20.	20.	
1,1-Dichloropropene	563-58-6	<5.0	5.0	
Carbon tetrachloride	56-23-5	<5.0	5.0	
1,2-Dichloroethane	107-06-2	<5.0	5.0	
Benzene	71-43-2	<5.0	5.0	
Trichloroethene	79-01-6	<5.0	5.0	
1,2-Dichloropropane	78-87-5	<5.0	5.0	
Bromodichloromethane	75-27-4	<5.0	5.0	
Dibromomethane	74-95-3	<5.0	5.0	
4-Methyl-2-Pentanone	108-10-1	<10.	10.	
cis-1,3-Dichloropropene	10061-01-5	<5.0	5.0	
Toluene	108-88-3	<5.0	5.0	
trans-1,3-Dichloropropene	10061-02-6	<5.0	5.0	
1,1,2-Trichloroethane	79-00-5	<5.0	5.0	
2-Hexanone	591-78-6	<10.	10.	
1,2-Dibromoethane	106-93-4	<5.0	5.0	
1,3-Dichloropropane	142-28-9	<5.0	5.0	
Tetrachloroethene	127-18-4	<5.0	5.0	
Dibromochloromethane	124-48-1	<5.0	5.0	
Chlorobenzene	108-90-7	<5.0	5.0	
1,1,1,2-Tetrachloroethane	630-20-6	<5.0	5.0	

LAS LABORATORIES

VLATILE ORGANICS BY GC/MS
 .260 VOLATILES

Client Sample ID: 97BPXLITH21697
 Date Collected: 16-FEB-97
 Date Analyzed: 25-FEB-97
 Matrix: Soil
 Percent Moisture: N/A

LAL Sample ID: L8849-88
 Date Received: 19-FEB-97
 Analytical Dilution: 1
 Analytical Batch ID: 022497-8260-D1
 Preparation Dilution: 1.00

CONSTITUENT	CAS NO	RESULT mg/kg	LOD mg/kg	DATA QUALIFIER(S)
Ethylbenzene	100-41-4	<5.0	5.0	
m,p-Xylene	136777-61-2	<5.0	5.0	
o-Xylene	95-47-6	<5.0	5.0	
Styrene	100-42-5	<5.0	5.0	
Bromoform	75-25-2	<5.0	5.0	
Isopropylbenzene	98-82-8	<5.0	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	<5.0	5.0	
1,2,3-Trichloropropane	96-18-4	<5.0	5.0	
n-Propylbenzene	103-65-1	<5.0	5.0	
Bromobenzene	108-86-1	<5.0	5.0	
1,3,5-Trimethylbenzene	108-67-8	<5.0	5.0	
2-Chlorotoluene	95-49-8	<5.0	5.0	
4-Chlorotoluene	106-43-4	<5.0	5.0	
tert-Butylbenzene	98-06-6	<5.0	5.0	
2,4-Trimethylbenzene	95-63-6	<5.0	5.0	
sec-Butylbenzene	135-98-8	<5.0	5.0	
p-Isopropyltoluene	99-87-6	<5.0	5.0	
1,3-Dichlorobenzene	541-73-1	<5.0	5.0	
1,4-Dichlorobenzene	106-46-7	<5.0	5.0	
n-Butylbenzene	104-51-8	<5.0	5.0	
1,2-Dichlorobenzene	95-50-1	<5.0	5.0	
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	5.0	
1,2,4-Trichlorobenzene	120-82-1	<5.0	5.0	
Hexachlorobutadiene	87-68-3	<5.0	5.0	
Naphthalene	91-20-3	<5.0	5.0	
1,2,3-Trichlorobenzene	87-61-6	<5.0	5.0	

LAS LABORATORIES

SPIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	46007LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
		Analytical Batch ID:	022497-8260-D1
Percent Moisture:	N/A	Preparation Dilution:	0.990

SURROGATE	RECOVERY	CONCENTRATION
1,2-Dichloroethane-d4	97%	77-127
Toluene-d8	100%	84-120
Bromofluorobenzene	99%	78-125

COMPOUND	CAS NO	RESULT µg/kg	LOD µg/kg	DATA QUALITY
Dichlorodifluoromethane	75-71-8	46.	5.0	
Chloromethane	74-87-3	46.	5.0	
Vinyl Chloride	75-01-4	51.	5.0	
Bromomethane	74-83-9	52.	5.0	
Chloroethane	75-00-3	53.	5.0	
Trichlorofluoromethane	75-69-4	54.	5.0	
Freon 113	76-13-1	42.	9.9	
Acetone	67-64-1	120	9.9	
1,1-Dichloroethene	75-35-4	47.	5.0	
Carbon Disulfide	75-15-0	38.	5.0	
Methylene Chloride	75-09-2	50.	5.0	
trans-1,2-Dichloroethene	156-60-5	46.	5.0	
Vinyl Acetate	108-05-4	40.	9.9	
1,1-Dichloroethane	75-34-3	52.	5.0	
2-Butanone	78-93-3	47.	9.9	
2,2-Dichloropropane	594-20-7	51.	5.0	
cis-1,2-Dichloroethene	156-59-2	56.	5.0	
Chloroform	67-66-3	52.	5.0	
Bromochloromethane	74-97-5	53.	5.0	
1,1,1-Trichloroethane	71-55-6	51.	5.0	
2-Chloroethylvinylether	110-75-8	220	20.	
1,1-Dichloropropene	563-58-6	46.	5.0	
Carbon tetrachloride	56-23-5	47.	5.0	
1,2-Dichloroethane	107-06-2	49.	5.0	
Benzene	71-43-2	51.	5.0	
Trichloroethene	79-01-6	59.	5.0	
1,2-Dichloropropane	78-87-5	50.	5.0	
Bromodichloromethane	75-27-4	49.	5.0	
Dibromomethane	74-95-3	49.	5.0	
4-Methyl-2-Pentanone	108-10-1	42.	9.9	
cis-1,3-Dichloropropene	10061-01-5	48.	5.0	
Toluene	108-88-3	51.	5.0	
trans-1,3-Dichloropropene	10061-02-6	48.	5.0	
1,1,2-Trichloroethane	79-00-5	51.	5.0	
2-Hexanone	591-78-6	20.	9.9	
1,2-Dibromoethane	106-93-4	50.	5.0	
1,3-Dichloropropane	142-28-9	49.	5.0	
Tetrachloroethene	127-18-4	46.	5.0	
Dibromochloromethane	124-48-1	47.	5.0	
Chlorobenzene	108-90-7	48.	5.0	
1,1,1,2-Tetrachloroethane	630-20-6	49.	5.0	

LAS LABORATORIES

SPIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	46007LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Percent Moisture:	N/A	Analytical Batch ID:	022497-8260-D1
		Preparation Dilution:	0.990

CONSTITUENT	LAB ID	RESULT NG/KG	LOD NG/KG	DATA QUALITY (S)
Ethylbenzene	100-41-4	32.	5.0	
m,p-Xylene	136777-61-2	31.	5.0	
o-Xylene	95-47-6	15.	5.0	
Styrene	100-42-5	15.	5.0	
Bromoform	75-25-2	41.	5.0	
Isopropylbenzene	98-82-8	41.	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	27.	5.0	
1,2,3-Trichloropropane	96-18-4	43.	5.0	
n-Propylbenzene	103-65-1	44.	5.0	
Bromobenzene	108-86-1	18.	5.0	
1,3,5-Trimethylbenzene	108-67-8	46.	5.0	
2-Chlorotoluene	95-49-8	18.	5.0	
4-Chlorotoluene	106-43-4	39.	5.0	
tert-Butylbenzene	98-06-6	50.	5.0	
1,2,4-Trimethylbenzene	95-63-6	45.	5.0	
sec-Butylbenzene	135-98-8	43.	5.0	
p-Isopropyltoluene	99-87-6	44.	5.0	
1,3-Dichlorobenzene	541-73-1	43.	5.0	
1,4-Dichlorobenzene	106-46-7	42.	5.0	
n-Butylbenzene	104-51-8	43.	5.0	
1,2-Dichlorobenzene	95-50-1	42.	5.0	
1,2-Dibromo-3-chloropropane	96-12-8	19.	5.0	
1,2,4-Trichlorobenzene	120-82-1	42.	5.0	
Hexachlorobutadiene	87-68-3	34.	5.0	
Naphthalene	91-20-3	43.	5.0	
1,2,3-Trichlorobenzene	87-61-6	42.	5.0	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Method Blank	LAL Sample ID:	46007MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Percent Moisture:	N/A	Analytical Batch ID:	022497-8260-D1
		Preparation Dilution:	1.00

SUBSTITUTE	RECOVERY	GC VALUES
1,2-Dichloroethane-d4	96%	77-127
Toluene-d8	99%	84-120
Bromofluorobenzene	95%	78-125

CONSTITUENT	GC NO	RESULT ug/kg	MDL ug/kg	DATE QUANTIFIED
Dichlorodifluoromethane	75-71-8	<5.0	5.0	
Chloromethane	74-87-3	<5.0	5.0	
Vinyl Chloride	75-01-4	<5.0	5.0	
Bromomethane	74-83-9	<5.0	5.0	
Chloroethane	75-00-3	<5.0	5.0	
Trichlorofluoromethane	75-69-4	<5.0	5.0	
Freon 113	76-13-1	<10.	10.	
Acetone	67-64-1	<10.	10.	
1,1-Dichloroethene	75-35-4	<5.0	5.0	
Carbon Disulfide	75-15-0	<5.0	5.0	
Methylene Chloride	75-09-2	<5.0	5.0	
trans-1,2-Dichloroethene	156-60-5	<5.0	5.0	
Vinyl Acetate	108-05-4	<10.	10.	
1,1-Dichloroethane	75-34-3	<5.0	5.0	
2-Butanone	78-93-3	<10.	10.	
2,2-Dichloropropane	594-20-7	<5.0	5.0	
cis-1,2-Dichloroethene	156-59-2	<5.0	5.0	
Chloroform	67-66-3	<5.0	5.0	
Bromochloromethane	74-97-5	<5.0	5.0	
1,1,1-Trichloroethane	71-55-6	<5.0	5.0	
2-Chloroethylvinylether	110-75-8	<20.	20.	
1,1-Dichloropropene	563-58-6	<5.0	5.0	
Carbon tetrachloride	56-23-5	<5.0	5.0	
1,2-Dichloroethane	107-06-2	<5.0	5.0	
Benzene	71-43-2	<5.0	5.0	
Trichloroethene	79-01-6	<5.0	5.0	
1,2-Dichloropropane	78-87-5	<5.0	5.0	
Bromodichloromethane	75-27-4	<5.0	5.0	
Dibromomethane	74-95-3	<5.0	5.0	
4-Methyl-2-Pentanone	108-10-1	<10.	10.	
cis-1,3-Dichloropropene	10061-01-5	<5.0	5.0	
Toluene	108-88-3	<5.0	5.0	
trans-1,3-Dichloropropene	10061-02-6	<5.0	5.0	
1,1,2-Trichloroethane	79-00-5	<5.0	5.0	
2-Hexanone	591-78-6	<10.	10.	
1,2-Dibromoethane	106-93-4	<5.0	5.0	
1,3-Dichloropropane	142-28-9	<5.0	5.0	
Tetrachloroethene	127-18-4	<5.0	5.0	
Dibromochloromethane	124-48-1	<5.0	5.0	
Chlorobenzene	108-90-7	<5.0	5.0	
1,1,1,2-Tetrachloroethane	630-20-6	<5.0	5.0	

LAS LABORATORIES

LATILE ORGANICS BY GC/MS

Client Sample ID:	Method Blank	LAL Sample ID:	46007MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Percent Moisture:	N/A	Analytical Batch ID:	022497-8260-D1
		Preparation Dilution:	1.00

CONSTITUENT	CAS NO	RESULT ug/kg	LOD ug/kg	DATA MULTIPLIER (x)
Ethylbenzene	100-41-4	<5.0	5.0	
m,p-Xylene	136777-61-2	<5.0	5.0	
o-Xylene	95-47-6	<5.0	5.0	
Styrene	100-42-5	<5.0	5.0	
Bromoform	75-25-2	<5.0	5.0	
Isopropylbenzene	98-82-8	<5.0	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	<5.0	5.0	
1,2,3-Trichloropropane	96-18-4	<5.0	5.0	
n-Propylbenzene	103-65-1	<5.0	5.0	
Bromobenzene	108-86-1	<5.0	5.0	
1,3,5-Trimethylbenzene	108-67-8	<5.0	5.0	
2-Chlorotoluene	95-49-8	<5.0	5.0	
4-Chlorotoluene	106-43-4	<5.0	5.0	
tert-Butylbenzene	98-06-6	<5.0	5.0	
2,4-Trimethylbenzene	95-63-6	<5.0	5.0	
sec-Butylbenzene	135-98-8	<5.0	5.0	
p-Isopropyltoluene	99-87-6	<5.0	5.0	
1,3-Dichlorobenzene	541-73-1	<5.0	5.0	
1,4-Dichlorobenzene	106-46-7	<5.0	5.0	
n-Butylbenzene	104-51-8	<5.0	5.0	
1,2-Dichlorobenzene	95-50-1	<5.0	5.0	
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	5.0	
1,2,4-Trichlorobenzene	120-82-1	<5.0	5.0	
Hexachlorobutadiene	87-68-3	<5.0	5.0	
Naphthalene	91-20-3	<5.0	5.0	
1,2,3-Trichlorobenzene	87-61-6	<5.0	5.0	

LAS LABORATORIES

SPIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID: 97BPXLIA4SD01(01)
Date Collected: 16-FEB-97
Date Analyzed: 24-FEB-97
Percent Moisture: 17.13

LAL Sample ID: 46007MS
Date Received: 19-FEB-97
Analytical Dilution: 1
Analytical Batch ID: 022197-8260-D1
Preparation Dilution: 0.980

SURROGATE	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	91%	77-127
Toluene-d8	98%	84-120
Bromofluorobenzene	91%	78-125

CONSTITUENT	GC RANGE	RESULT UG/KG	LOD UG/KG	DATA QUALIFIED (Y/N)
Dichlorodifluoromethane	75-71-8	56.	5.9	
Chloromethane	74-87-3	51.	5.9	
Vinyl Chloride	75-01-4	57.	5.9	
Bromomethane	74-83-9	58.	5.9	
Chloroethane	75-00-3	60.	5.9	
Trichlorofluoromethane	75-69-4	74.	5.9	
Freon 113	76-13-1	49.	12.	
Acetone	67-64-1	64.	12.	
1,1-Dichloroethene	75-35-4	57.	5.9	
Carbon Disulfide	75-15-0	42.	5.9	
Methylene Chloride	75-09-2	58.	5.9	
trans-1,2-Dichloroethene	156-60-5	49.	5.9	
Vinyl Acetate	108-05-4	41.	12.	
1,1-Dichloroethane	75-34-3	57.	5.9	
2-Butanone	78-93-3	47.	12.	
2,2-Dichloropropane	594-20-7	59.	5.9	
cis-1,2-Dichloroethene	156-59-2	61.	5.9	
Chloroform	67-66-3	57.	5.9	
Bromochloromethane	74-97-5	57.	5.9	
1,1,1-Trichloroethane	71-55-6	56.	5.9	
2-Chloroethylvinylether	110-75-8	230	24.	
1,1-Dichloropropene	563-58-6	51.	5.9	
Carbon tetrachloride	56-23-5	53.	5.9	
1,2-Dichloroethane	107-06-2	54.	5.9	
Benzene	71-43-2	57.	5.9	
Trichloroethene	79-01-6	60.	5.9	
1,2-Dichloropropane	78-87-5	56.	5.9	
Bromodichloromethane	75-27-4	55.	5.9	
Dibromomethane	74-95-3	53.	5.9	
4-Methyl-2-Pentanone	108-10-1	42.	12.	
cis-1,3-Dichloropropene	10061-01-5	52.	5.9	
Toluene	108-88-3	57.	5.9	
trans-1,3-Dichloropropene	10061-02-6	50.	5.9	
1,1,2-Trichloroethane	79-00-5	56.	5.9	
2-Hexanone	591-78-6	17.	12.	
1,2-Dibromoethane	106-93-4	52.	5.9	
1,3-Dichloropropane	142-28-9	54.	5.9	
Tetrachloroethene	127-18-4	52.	5.9	
Dibromochloromethane	124-48-1	53.	5.9	
Chlorobenzene	108-90-7	54.	5.9	
1,1,1,2-Tetrachloroethane	630-20-6	56.	5.9	

LAS LABORATORIES

SPIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID: 97BPXLI4SD01(01)
Date Collected: 16-FEB-97
Date Analyzed: 24-FEB-97
Percent Moisture: 17.13

LAL Sample ID: 46007MS
Date Received: 19-FEB-97
Analytical Dilution: 1
Analytical Batch ID: 022197-8260-D1
Preparation Dilution: 0.980

CONSTITUENT	CAS NO.	RESULT ug/kg	POC ug/kg	DATA QUALITY (1-5)
Ethylbenzene	100-41-4	56.	5.9	
m,p-Xylene	136777-61-2	120	5.9	
o-Xylene	95-47-6	59.	5.9	
Styrene	100-42-5	55.	5.9	
Bromoform	75-25-2	49.	5.9	
Isopropylbenzene	98-82-8	52.	5.9	
1,1,2,2-Tetrachloroethane	79-34-5	40.	5.9	
1,2,3-Trichloropropane	96-18-4	51.	5.9	
n-Propylbenzene	103-65-1	54.	5.9	
Bromobenzene	108-86-1	51.	5.9	
1,3,5-Trimethylbenzene	108-67-8	57.	5.9	
2-Chlorotoluene	95-49-8	26.	5.9	
4-Chlorotoluene	106-43-4	48.	5.9	
tert-Butylbenzene	98-06-6	61.	5.9	
2,4-Trimethylbenzene	95-63-6	55.	5.9	
sec-Butylbenzene	135-98-8	52.	5.9	
p-Isopropyltoluene	99-87-6	53.	5.9	
1,3-Dichlorobenzene	541-73-1	49.	5.9	
1,4-Dichlorobenzene	106-46-7	48.	5.9	
n-Butylbenzene	104-51-8	46.	5.9	
1,2-Dichlorobenzene	95-50-1	50.	5.9	
1,2-Dibromo-3-chloropropane	96-12-8	21.	5.9	
1,2,4-Trichlorobenzene	120-82-1	40.	5.9	
Hexachlorobutadiene	87-68-3	32.	5.9	
Naphthalene	91-20-3	42.	5.9	
1,2,3-Trichlorobenzene	87-61-6	40.	5.9	

LAS LABORATORIES

SPIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLI4SD01(01)	LAL Sample ID:	46007MS
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
		Analytical Batch ID:	022497-8260-D1
Percent Moisture:	17.13	Preparation Dilution:	0.980

COMPOUND	RECOVERY	SP. LIMIT
1,2-Dichloroethane-d4	91%	77-127
Toluene-d8	98%	84-120
Bromofluorobenzene	91%	78-125

COMPOUND	QAC NO.	RESULT ng/kg	POB ng/kg	QAC QUALITY INDEX
Dichlorodifluoromethane	75-71-8	56.	5.9	
Chloromethane	74-87-3	51.	5.9	
Vinyl Chloride	75-01-4	57.	5.9	
Bromomethane	74-83-9	58.	5.9	
Chloroethane	75-00-3	60.	5.9	
Trichlorofluoromethane	75-69-4	74.	5.9	
Freon 113	76-13-1	49.	12.	
Acetone	67-64-1	64.	12.	
1,1-Dichloroethene	75-35-4	57.	5.9	
Carbon Disulfide	75-15-0	42.	5.9	
Methylene Chloride	75-09-2	58.	5.9	
trans-1,2-Dichloroethene	156-60-5	49.	5.9	
Vinyl Acetate	108-05-4	41.	12.	
1,1-Dichloroethane	75-34-3	57.	5.9	
2-Butanone	78-93-3	47.	12.	
2,2-Dichloropropane	594-20-7	59.	5.9	
cis-1,2-Dichloroethene	156-59-2	61.	5.9	
Chloroform	67-66-3	57.	5.9	
Bromochloromethane	74-97-5	57.	5.9	
1,1,1-Trichloroethane	71-55-6	56.	5.9	
2-Chloroethylvinylether	110-75-8	230	24.	
1,1-Dichloropropene	563-58-6	51.	5.9	
Carbon tetrachloride	56-23-5	53.	5.9	
1,2-Dichloroethane	107-06-2	54.	5.9	
Benzene	71-43-2	57.	5.9	
Trichloroethene	79-01-6	60.	5.9	
1,2-Dichloropropane	78-87-5	56.	5.9	
Bromodichloromethane	75-27-4	55.	5.9	
Dibromomethane	74-95-3	53.	5.9	
4-Methyl-2-Pentanone	108-10-1	42.	12.	
cis-1,3-Dichloropropene	10061-01-5	52.	5.9	
Toluene	108-88-3	57.	5.9	
trans-1,3-Dichloropropene	10061-02-6	50.	5.9	
1,1,2-Trichloroethane	79-00-5	56.	5.9	
2-Hexanone	591-78-6	17.	12.	
1,2-Dibromoethane	106-93-4	52.	5.9	
1,3-Dichloropropane	142-28-9	54.	5.9	
Tetrachloroethene	127-18-4	52.	5.9	
Dibromochloromethane	124-48-1	53.	5.9	
Chlorobenzene	108-90-7	54.	5.9	
1,1,1,2-Tetrachloroethane	630-20-6	56.	5.9	

LAS LABORATORIES

COPIED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID: 97BPXLIA4SD01(01)
Date Collected: 16-FEB-97
Date Analyzed: 24-FEB-97

Percent Moisture: 17.13

LAL Sample ID: 46007MS
Date Received: 19-FEB-97
Analytical Dilution: 1
Analytical Batch ID: 022497-8260-D1
Preparation Dilution: 0.980

CONSTITUENT	LAB NO.	RESULT MG/KG	PKL MG/KG	DATA QUALIFIER(S)
Ethylbenzene	100-41-4	56.	5.9	
m,p-Xylene	136777-61-2	120	5.9	
o-Xylene	95-47-6	59.	5.9	
Styrene	100-42-5	55.	5.9	
Bromoform	75-25-2	49.	5.9	
Isopropylbenzene	98-82-8	52.	5.9	
1,1,2,2-Tetrachloroethane	79-34-5	40.	5.9	
1,2,3-Trichloropropane	96-18-4	51.	5.9	
n-Propylbenzene	103-65-1	54.	5.9	
Bromobenzene	108-86-1	51.	5.9	
1,3,5-Trimethylbenzene	108-67-8	57.	5.9	
2-Chlorotoluene	95-49-8	26.	5.9	
4-Chlorotoluene	106-43-4	48.	5.9	
tert-Butylbenzene	98-06-6	61.	5.9	
2,4-Trimethylbenzene	95-63-6	55.	5.9	
sec-Butylbenzene	135-98-8	52.	5.9	
p-Isopropyltoluene	99-87-6	53.	5.9	
1,3-Dichlorobenzene	541-73-1	49.	5.9	
1,4-Dichlorobenzene	106-46-7	48.	5.9	
n-Butylbenzene	104-51-8	46.	5.9	
1,2-Dichlorobenzene	95-50-1	50.	5.9	
1,2-Dibromo-3-chloropropane	96-12-8	21.	5.9	
1,2,4-Trichlorobenzene	120-82-1	40.	5.9	
Hexachlorobutadiene	87-68-3	32.	5.9	
Naphthalene	91-20-3	42.	5.9	
1,2,3-Trichlorobenzene	87-61-6	40.	5.9	

LAS LABORATORIES

SPIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID: 97BPXLIA4SD01(01)
Date Collected: 16-FEB-97
Date Analyzed: 24-FEB-97
Percent Moisture: 17.13

LAL Sample ID: 46007MSD
Date Received: 19-FEB-97
Analytical Dilution: 1
Analytical Batch ID: 022197-8260-D1
Preparation Dilution: 0.990

SUBSTRATE	RECOVERY	QC RANGE
1,2-Dichloroethane-d4	94%	77-127
Toluene-d8	99%	84-120
Bromofluorobenzene	89%	78-125

CONSTITUENT	CAS NO.	RESULT µg/Kg	QTY µg/Kg	DATA QUALIFIER(S)
Dichlorodifluoromethane	75-71-8	56.	6.0	
Chloromethane	74-87-3	53.	6.0	
Vinyl Chloride	75-01-4	59.	6.0	
Bromomethane	74-83-9	57.	6.0	
Chloroethane	75-00-3	66.	6.0	
Trichlorofluoromethane	75-69-4	74.	6.0	
Freon 113	76-13-1	48.	12.	
Acetone	67-64-1	71.	12.	
1,1-Dichloroethene	75-35-4	54.	6.0	
Carbon Disulfide	75-15-0	40.	6.0	
Methylene Chloride	75-09-2	57.	6.0	
trans-1,2-Dichloroethene	156-60-5	48.	6.0	
Vinyl Acetate	108-05-4	33.	12.	
1,1-Dichloroethane	75-34-3	57.	6.0	
2-Butanone	78-93-3	52.	12.	
2,2-Dichloropropane	594-20-7	58.	6.0	
cis-1,2-Dichloroethene	156-59-2	60.	6.0	
Chloroform	67-66-3	57.	6.0	
Bromochloromethane	74-97-5	58.	6.0	
1,1,1-Trichloroethane	71-55-6	57.	6.0	
2-Chloroethylvinylether	110-75-8	230	24.	
1,1-Dichloropropene	563-58-6	52.	6.0	
Carbon tetrachloride	56-23-5	54.	6.0	
1,2-Dichloroethane	107-06-2	56.	6.0	
Benzene	71-43-2	58.	6.0	
Trichloroethene	79-01-6	60.	6.0	
1,2-Dichloropropane	78-87-5	57.	6.0	
Bromodichloromethane	75-27-4	56.	6.0	
Dibromomethane	74-95-3	55.	6.0	
4-Methyl-2-Pentanone	108-10-1	47.	12.	
cis-1,3-Dichloropropene	10061-01-5	50.	6.0	
Toluene	108-88-3	59.	6.0	
trans-1,3-Dichloropropene	10061-02-6	49.	6.0	
1,1,2-Trichloroethane	79-00-5	58.	6.0	
2-Hexanone	591-78-6	20.	12.	
1,2-Dibromoethane	106-93-4	54.	6.0	
1,3-Dichloropropane	142-28-9	56.	6.0	
Tetrachloroethene	127-18-4	53.	6.0	
Dibromochloromethane	124-48-1	53.	6.0	
Chlorobenzene	108-90-7	54.	6.0	
1,1,1,2-Tetrachloroethane	630-20-6	58.	6.0	

LAS LABORATORIES

SPIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID: 97BPXLIA4SD01(01)
Date Collected: 16-FEB-97
Date Analyzed: 24-FEB-97

Percent Moisture: 17.13

LAL Sample ID: 46007MSD
Date Received: 19-FEB-97
Analytical Dilution: 1
Analytical Batch ID: 022197-8260-D1
Preparation Dilution: 0.990

CONSTITUENT	CAS NO.	RESULT	LOD	DATA QUALIFIER(S)
		ug/kg	ug/kg	
Ethylbenzene	100-41-4	38.	6.0	
m,p-Xylene	136777-61-2	42.	6.0	
o-Xylene	95-47-6	60.	6.0	
Styrene	100-42-5	50.	6.0	
Bromoform	75-25-2	54.	6.0	
Isopropylbenzene	98-82-8	56.	6.0	
1,1,2,2-Tetrachloroethane	79-34-5	47.	6.0	
1,2,3-Trichloropropane	96-18-4	59.	6.0	
n-Propylbenzene	103-65-1	56.	6.0	
Bromobenzene	108-86-1	54.	6.0	
1,3,5-Trimethylbenzene	108-67-8	61.	6.0	
2-Chlorotoluene	95-49-8	30.	6.0	
4-Chlorotoluene	106-43-4	50.	6.0	
tert-Butylbenzene	98-06-6	67.	6.0	
2,4-Trimethylbenzene	95-63-6	58.	6.0	
sec-Butylbenzene	135-98-8	57.	6.0	
p-Isopropyltoluene	99-87-6	57.	6.0	
1,3-Dichlorobenzene	541-73-1	50.	6.0	
1,4-Dichlorobenzene	106-46-7	49.	6.0	
n-Butylbenzene	104-51-8	49.	6.0	
1,2-Dichlorobenzene	95-50-1	52.	6.0	
1,2-Dibromo-3-chloropropane	96-12-8	30.	6.0	
1,2,4-Trichlorobenzene	120-82-1	41.	6.0	
Hexachlorobutadiene	87-68-3	37.	6.0	
Naphthalene	91-20-3	44.	6.0	
1,2,3-Trichlorobenzene	87-61-6	42.	6.0	

LAS LABORATORIES

SPIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID: 97BPXLIA4SD01(01)	LAL Sample ID: 46007MSD
Date Collected: 16-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 24-FEB-97	Analytical Dilution: 1
Percent Moisture: 17.13	Analytical Batch ID: O22497-8260-B1
	Preparation Dilution: 0.990

COMPOUND	RECOVERY	QS RANGE
1,2-Dichloroethane-d4	94%	77-127
Toluene-d8	99%	84-120
Bromofluorobenzene	89%	78-125

COMPOUND	Q.S. NO.	RESULT ug/kg	Q.S. ug/kg	DATA QUALIFIER(S)
Dichlorodifluoromethane	75-71-8	56.	6.0	
Chloromethane	74-87-3	53.	6.0	
Vinyl Chloride	75-01-4	59.	6.0	
Bromomethane	74-83-9	57.	6.0	
Chloroethane	75-00-3	66.	6.0	
Trichlorofluoromethane	75-69-4	74.	6.0	
Freon 113	76-13-1	48.	12.	
Acetone	67-64-1	71.	12.	
1,1-Dichloroethene	75-35-4	54.	6.0	
Carbon Disulfide	75-15-0	40.	6.0	
Methylene Chloride	75-09-2	57.	6.0	
trans-1,2-Dichloroethene	156-60-5	48.	6.0	
Vinyl Acetate	108-05-4	33.	12.	
1,1-Dichloroethane	75-34-3	57.	6.0	
2-Butanone	78-93-3	52.	12.	
2,2-Dichloropropane	594-20-7	58.	6.0	
cis-1,2-Dichloroethene	156-59-2	60.	6.0	
Chloroform	67-66-3	57.	6.0	
Bromochloromethane	74-97-5	58.	6.0	
1,1,1-Trichloroethane	71-55-6	57.	6.0	
2-Chloroethylvinylether	110-75-8	230	24.	
1,1-Dichloropropene	563-58-6	52.	6.0	
Carbon tetrachloride	56-23-5	54.	6.0	
1,2-Dichloroethane	107-06-2	56.	6.0	
Benzene	71-43-2	58.	6.0	
Trichloroethene	79-01-6	60.	6.0	
1,2-Dichloropropane	78-87-5	57.	6.0	
Bromodichloromethane	75-27-4	56.	6.0	
Dibromomethane	74-95-3	55.	6.0	
4-Methyl-2-Pentanone	108-10-1	47.	12.	
cis-1,3-Dichloropropene	10061-01-5	50.	6.0	
Toluene	108-88-3	59.	6.0	
trans-1,3-Dichloropropene	10061-02-6	49.	6.0	
1,1,2-Trichloroethane	79-00-5	58.	6.0	
2-Hexanone	591-78-6	20.	12.	
1,2-Dibromoethane	106-93-4	54.	6.0	
1,3-Dichloropropane	142-28-9	56.	6.0	
Tetrachloroethene	127-18-4	53.	6.0	
Dibromochloromethane	124-48-1	53.	6.0	
Chlorobenzene	108-90-7	54.	6.0	
1,1,1,2-Tetrachloroethane	630-20-6	58.	6.0	

LAS LABORATORIES

SPIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIA4SD01(01)	LAL Sample ID:	46007MSD
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
		Analytical Batch ID:	022497-8260-D1
Percent Moisture:	17.13	Preparation Dilution:	0.990

CONSTITUENT	CAS NO	RESULT PPM	CONC. PPM	DATA QUALITY FLAG(S)
Ethylbenzene	100-41-4	38.	6.0	
m,p-Xylene	136777-61-2	42.	6.0	
o-Xylene	95-47-6	60.	6.0	
Styrene	100-42-5	50.	6.0	
Bromoform	75-25-2	54.	6.0	
Isopropylbenzene	98-82-8	56.	6.0	
1,1,2,2-Tetrachloroethane	79-34-5	47.	6.0	
1,2,3-Trichloropropane	96-18-4	59.	6.0	
n-Propylbenzene	103-65-1	56.	6.0	
Bromobenzene	108-86-1	54.	6.0	
1,3,5-Trimethylbenzene	108-67-8	61.	6.0	
2-Chlorotoluene	95-49-8	30.	6.0	
4-Chlorotoluene	106-43-4	50.	6.0	
tert-Butylbenzene	98-06-6	67.	6.0	
1,2,4-Trimethylbenzene	95-63-6	58.	6.0	
sec-Butylbenzene	135-98-8	57.	6.0	
p-Isopropyltoluene	99-87-6	57.	6.0	
1,3-Dichlorobenzene	541-73-1	50.	6.0	
1,4-Dichlorobenzene	106-46-7	49.	6.0	
n-Butylbenzene	104-51-8	49.	6.0	
1,2-Dichlorobenzene	95-50-1	52.	6.0	
1,2-Dibromo-3-chloropropane	96-12-8	30.	6.0	
1,2,4-Trichlorobenzene	120-82-1	41.	6.0	
Hexachlorobutadiene	87-68-3	37.	6.0	
Naphthalene	91-20-3	44.	6.0	
1,2,3-Trichlorobenzene	87-61-6	42.	6.0	

LAS LABORATORIES

LCS DATA SUMMARY
VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	46007LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
Percent Moisture:	N/A	Analytical Batch ID:	022497-8260-D1
		Preparation Dilution:	0.990

CONCENTRATION	RECOVERY	GC LIMITS
1,2-Dichloroethane-d4	97%	77-127
Toluene-d8	100%	84-120
Bromofluorobenzene	99%	78-125

Constituent	Spiked Conc µg/g	GC Concentration µg/g	GC Recovery	GC Limits
1,1-Dichloroethene	49.5	47.3	96	54-138
Benzene	49.5	50.9	103	70-130
Trichloroethene	49.5	58.6	118	57-132
Toluene	49.5	51.1	103	71-129
Chlorobenzene	49.5	48.1	97	72-128

LAS LABORATORIES

MATRIX SPIKE DATA SUMMARY
VOLATILE ORGANICS BY GC/MS

Client Sample ID: 97BPXLI4SD01(01)
Date Collected: 16-FEB-97
Date Analyzed: 24-FEB-97
Percent Moisture: 17.13

LAL Sample ID: 46007MS
Date Received: 19-FEB-97
Analytical Dilution: 1
Analytical Batch ID: 022197-8260-D1
Preparation Dilution: 0.980

SUBSTITUTE	RECOVERY	REFERENCE
1,2-Dichloroethane-d4	91%	77-127
Toluene-d8	98%	84-120
Bromofluorobenzene	91%	78-125

SUBSTITUTE	RECOVERY	RECOVERY	RECOVERY	RECOVERY	REFERENCE
					REFERENCE
1,1-Dichloroethene	59.1	0.000	56.6	96	54-138
Benzene	59.1	0.000	57.5	97	70-130
Trichloroethene	59.1	0.000	60.4	102	57-132
Toluene	59.1	0.000	56.9	96	71-129
Chlorobenzene	59.1	0.000	54.1	91	72-128

LAS LABORATORIES

MATRIX SPIKE DATA SUMMARY
VOLATILE ORGANICS BY GC/MS

Client Sample ID: 97BPXLI4SD01(01)
Date Collected: 16-FEB-97
Date Analyzed: 24-FEB-97
Percent Moisture: 17.13

LAL Sample ID: 46007MS
Date Received: 19-FEB-97
Analytical Dilution: 1
Analytical Batch ID: 022197-8260-D1
Preparation Dilution: 0.980

SURROGATE	RECOVERY	CONCENTRATION
1,2-Dichloroethane-d4	91%	77-127
Toluene-d8	98%	84-120
Bromofluorobenzene	91%	78-125

Component	Spiked Concentration (ppb)	Sample Concentration (ppb)	Recovery (%)	Reference Range
1,1-Dichloroethene	59.1	0.000	56.6	96 54-138
Benzene	59.1	0.000	57.5	97 70-130
Trichloroethene	59.1	0.000	60.4	102 57-132
Toluene	59.1	0.000	56.9	96 71-129
Chlorobenzene	59.1	0.000	54.1	91 72-128

LAS LABORATORIES

MATRIX SPIKE DUPLICATE DATA SUMMARY
VOLATILE ORGANICS BY GC/MS

Client Sample ID: 97BPXLIA4SD01(01)	LAL Sample ID: 46007MSD
Date Collected: 16-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 24-FEB-97	Analytical Dilution: 1
	Analytical Batch ID: 022197-8260-D1
Percent Moisture: 17.13	Preparation Dilution: 0.990

Compound	Recovery	GC Range
1,2-Dichloroethane-d4	94%	77-127
Toluene-d8	99%	84-120
Bromofluorobenzene	89%	78-125

Compound	Concentration (ppm)	Recovery (%)	Concentration (ppm)	Concentration (ppm)	Concentration (ppm)	Concentration (ppm)	Concentration (ppm)	GC Range
1,1-Dichloroethene	59.7	54.4	91	5	22			54-138
Benzene	59.7	58.2	97	0	21			70-130
Trichloroethene	59.7	60.3	101	1	24			57-132
Toluene	59.7	58.6	98	2	21			71-129
Chlorobenzene	59.7	54.4	91	0	21			72-128

LAS LABORATORIES

MATRIX SPIKE DUPLICATE DATA SUMMARY
VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIA4SD01(01)	LAL Sample ID:	46007MSD
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Dilution:	1
		Analytical Batch ID:	022197-8260-D1
Percent Moisture:	17.13	Preparation Dilution:	0.990

Compound	Recovery	GC Results
1,2-Dichloroethane-d4	94%	77-127
Toluene-d8	99%	84-120
Bromofluorobenzene	89%	78-125

Compound	Spike Conc. (ug/L)	Lab Conc. (ug/L)	Recovery (%)	Std. Dev.	GC Results	
					Run	Recovery
1,1-Dichloroethene	59.7	54.4	91	5	22	54-138
Benzene	59.7	58.2	97	0	21	70-130
Trichloroethene	59.7	60.3	101	1	24	57-132
Toluene	59.7	58.6	98	2	21	71-129
Chlorobenzene	59.7	54.4	91	0	21	72-128

LAS LABORATORIES

VOLATILE INTERNAL STANDARD
REA AND RT SUMMARY

Instrument ID: GC/MS-D

Date/Time Analyzed: 21-FEB-97 1757

Analytical Batch ID: 022197-8260-D1

	(IS1(PFB)) Area	RT	(IS2(DFB)) Area	RT	(IS3(CBZ)) Area	RT	(IS4(DCB)) Area	RT
12 HOUR STD	1077894	10.80	1828675	12.28	1710322	16.83	1679519	20.99
UPPER LIMIT	2155788	11.30	3657350	12.78	3420644	17.33	3359038	21.49
LOWER LIMIT	538947	10.30	914338	11.78	855161	16.33	839760	20.49
CUSTOMER SAMPLE NO.								
Method Blank	1113507	10.81	1835703	12.29	1796273	16.83	1538773	20.98
Lab Ctrl Sample	995715	10.80	1721974	12.28	1674017	16.82	1545448	20.99
97BPXLIB10SD62(08)	795804	10.80	1431612	12.28	1226841	16.82	953084	20.97
97BPXLI11SD02(08)	812568	10.80	1631751	12.28	885290	16.82	1176179	20.97
97BPXLIC2SD01(01)	914475	10.80	1426595	12.28	1273103	16.82	893396	20.96
97BPXLIC2SD02(08)	1021932	10.79	1636462	12.28	1450597	16.82	1197053	20.97
97BPXLIC2SD61(08)	983546	10.80	1561843	12.28	1371031	16.82	1123958	20.96
97BPXLIC4SD02(08)	870510	10.80	1385040	12.28	1283674	16.82	968594	20.96
97BPXLIA4SD02(08)	899867	10.80	1501433	12.27	1309723	16.82	1017067	20.96
97BPXLIA6SD01(01)	899426	10.81	1448054	12.28	1174679	16.82	799171*	20.97
97BPXLIA6SD02(08)	687117	10.80	1110828	12.28	870905	16.82	612581*	20.97
97BPXLIA6SD62(08)	679368	10.80	1090082	12.28	905641	16.82	645721*	20.97
97BPXLIA8SD01(01)	29382*	10.81	47430*	12.29	37015*	16.81	23206*	20.96
97BPXLIA4SD01(01)	904316	10.84	1447852	12.30	1317864	16.87	1051139	21.01
97BPXLIA4SD01(01)MS	936078	10.80	1509373	12.29	1381518	16.83	1214107	20.99
97BPXLIA4SD01(01)MSD	897891	10.80	1423953	12.29	1304055	16.83	1084600	20.99

- IS1 (PFB) = Pentafluorobenzene
- IS2 (DFB) = 1,4-Difluorobenzene
- IS3 (CBZ) = Chlorobenzene-d5
- IS4 (DCB) = 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
- RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIC4SD01(01)	LAL Sample ID:	L8849-102
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	26-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022597-8260-D1
Percent Moisture:	19.41	Preparation Dilution:	0.980

SURROGATE	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	94%	77-127
Toluene-d8	91%	84-120
Bromofluorobenzene	77% *	78-125

CONSTITUENT	CHK. NO.	RESULT ug/kg	PCCL ug/kg	DATA QUALIFIER (S)
Dichlorodifluoromethane	75-71-8	<6.1	6.1	
Chloromethane	74-87-3	<6.1	6.1	
Vinyl Chloride	75-01-4	<6.1	6.1	
Bromomethane	74-83-9	<6.1	6.1	
Chloroethane	75-00-3	<6.1	6.1	
Trichlorofluoromethane	75-69-4	<6.1	6.1	
Freon 113	76-13-1	<12.	12.	
Acetone	67-64-1	31.	12.	
1,1-Dichloroethene	75-35-4	<6.1	6.1	
Carbon Disulfide	75-15-0	<6.1	6.1	
Methylene Chloride	75-09-2	<6.1	6.1	
trans-1,2-Dichloroethene	156-60-5	<6.1	6.1	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.1	6.1	
2-Butanone	78-93-3	<12.	12.	
2,2-Dichloropropane	594-20-7	<6.1	6.1	
cis-1,2-Dichloroethene	156-59-2	<6.1	6.1	
Chloroform	67-66-3	<6.1	6.1	
Bromochloromethane	74-97-5	<6.1	6.1	
1,1,1-Trichloroethane	71-55-6	<6.1	6.1	
2-Chloroethylvinylether	110-75-8	<24.	24.	
1,1-Dichloropropene	563-58-6	<6.1	6.1	
Carbon tetrachloride	56-23-5	<6.1	6.1	
1,2-Dichloroethane	107-06-2	<6.1	6.1	
Benzene	71-43-2	<6.1	6.1	
Trichloroethene	79-01-6	<6.1	6.1	
1,2-Dichloropropane	78-87-5	<6.1	6.1	
Bromodichloromethane	75-27-4	<6.1	6.1	
Dibromomethane	74-95-3	<6.1	6.1	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.1	6.1	
Toluene	108-88-3	<6.1	6.1	
trans-1,3-Dichloropropene	10061-02-6	<6.1	6.1	
1,1,2-Trichloroethane	79-00-5	<6.1	6.1	
2-Hexanone	591-78-6	<12.	12.	
1,2-Dibromoethane	106-93-4	<6.1	6.1	
1,3-Dichloropropane	142-28-9	<6.1	6.1	
Tetrachloroethene	127-18-4	<6.1	6.1	
Dibromochloromethane	124-48-1	<6.1	6.1	
Chlorobenzene	108-90-7	<6.1	6.1	
1,1,1,2-Tetrachloroethane	630-20-6	<6.1	6.1	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIC4SD01(01)	LAL Sample ID:	L8849-102
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	26-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022597-8260-D1
Percent Moisture:	19.41	Preparation Dilution:	0.980

CONSTITUENT	CAS NO	RESULT	PCB	DATA QUALITY (S)
		µg/g	(µg/g)	
Ethylbenzene	100-41-4	<6.1	6.1	
m,p-Xylene	136777-61-2	<6.1	6.1	
o-Xylene	95-47-6	<6.1	6.1	
Styrene	100-42-5	<6.1	6.1	
Bromoform	75-25-2	<6.1	6.1	
Isopropylbenzene	98-82-8	<6.1	6.1	
1,1,2,2-Tetrachloroethane	79-34-5	<6.1	6.1	
1,2,3-Trichloropropane	96-18-4	<6.1	6.1	
n-Propylbenzene	103-65-1	<6.1	6.1	
Bromobenzene	108-86-1	<6.1	6.1	
1,3,5-Trimethylbenzene	108-67-8	<6.1	6.1	
2-Chlorotoluene	95-49-8	<6.1	6.1	
4-Chlorotoluene	106-43-4	<6.1	6.1	
tert-Butylbenzene	98-06-6	<6.1	6.1	
1,2,4-Trimethylbenzene	95-63-6	<6.1	6.1	
sec-Butylbenzene	135-98-8	<6.1	6.1	
p-Isopropyltoluene	99-87-6	<6.1	6.1	
1,3-Dichlorobenzene	541-73-1	<6.1	6.1	
1,4-Dichlorobenzene	106-46-7	<6.1	6.1	
n-Butylbenzene	104-51-8	<6.1	6.1	
1,2-Dichlorobenzene	95-50-1	<6.1	6.1	
1,2-Dibromo-3-chloropropane	96-12-8	<6.1	6.1	
1,2,4-Trichlorobenzene	120-82-1	<6.1	6.1	
Hexachlorobutadiene	87-68-3	<6.1	6.1	
Naphthalene	91-20-3	<6.1	6.1	
1,2,3-Trichlorobenzene	87-61-6	<6.1	6.1	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID: 97BPXLIC4SD01(01)	LAL Sample ID: L8849-102
Date Collected: 15-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 25-FEB-97	Analytical Dilution: 1
Matrix: Soil	Analytical Batch ID: 022597-8260-D1
Percent Moisture: 19.41	Preparation Dilution: 0.980

SURROGATE	RECOVERY	GC INJECTION
1,2-Dichloroethane-d4	98%	77-127
Toluene-d8	88%	84-120
Bromofluorobenzene	75% *	78-125

COMPOUND	CAL. NO.	RESULT ug/kg	LOD ug/kg	DATA QUALITY INDEX
Dichlorodifluoromethane	75-71-8	<6.1	6.1	
Chloromethane	74-87-3	<6.1	6.1	
Vinyl Chloride	75-01-4	<6.1	6.1	
Bromomethane	74-83-9	<6.1	6.1	
Chloroethane	75-00-3	<6.1	6.1	
Trichlorofluoromethane	75-69-4	<6.1	6.1	
Freon 113	76-13-1	<12.	12.	
Acetone	67-64-1	42.	12.	
1,1-Dichloroethene	75-35-4	<6.1	6.1	
Carbon Disulfide	75-15-0	<6.1	6.1	
Methylene Chloride	75-09-2	<6.1	6.1	
trans-1,2-Dichloroethene	156-60-5	<6.1	6.1	
Vinyl Acetate	108-05-4	<12.	12.	
1,1-Dichloroethane	75-34-3	<6.1	6.1	
2-Butanone	78-93-3	<12.	12.	
2,2-Dichloropropane	594-20-7	<6.1	6.1	
cis-1,2-Dichloroethene	156-59-2	<6.1	6.1	
Chloroform	67-66-3	<6.1	6.1	
Bromochloromethane	74-97-5	<6.1	6.1	
1,1,1-Trichloroethane	71-55-6	<6.1	6.1	
2-Chloroethylvinylether	110-75-8	<24.	24.	
1,1-Dichloropropene	563-58-6	<6.1	6.1	
Carbon tetrachloride	56-23-5	<6.1	6.1	
1,2-Dichloroethane	107-06-2	<6.1	6.1	
Benzene	71-43-2	<6.1	6.1	
Trichloroethene	79-01-6	<6.1	6.1	
1,2-Dichloropropane	78-87-5	<6.1	6.1	
Bromodichloromethane	75-27-4	<6.1	6.1	
Dibromomethane	74-95-3	<6.1	6.1	
4-Methyl-2-Pentanone	108-10-1	<12.	12.	
cis-1,3-Dichloropropene	10061-01-5	<6.1	6.1	
Toluene	108-88-3	<6.1	6.1	
trans-1,3-Dichloropropene	10061-02-6	<6.1	6.1	
1,1,2-Trichloroethane	79-00-5	<6.1	6.1	
2-Hexanone	591-78-6	<12.	12.	
1,2-Dibromoethane	106-93-4	<6.1	6.1	
1,3-Dichloropropene	142-28-9	<6.1	6.1	
Tetrachloroethene	127-18-4	<6.1	6.1	
Dibromochloromethane	124-48-1	<6.1	6.1	
Chlorobenzene	108-90-7	<6.1	6.1	
1,1,1,2-Tetrachloroethane	630-20-6	<6.1	6.1	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIC4SD01(01)	LAL Sample ID:	L8849-102
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022597-8260-D1
Percent Moisture:	19.41	Preparation Dilution:	0.980

COMPOUND	CAS NO.	RESULT ug/kg	LOL ug/kg	DATA QUALIFIER (S)
Ethylbenzene	100-41-4	<6.1	6.1	
m,p-Xylene	136777-61-2	<6.1	6.1	
o-Xylene	95-47-6	<6.1	6.1	
Styrene	100-42-5	<6.1	6.1	
Bromoform	75-25-2	<6.1	6.1	
Isopropylbenzene	98-82-8	<6.1	6.1	
1,1,2,2-Tetrachloroethane	79-34-5	<6.1	6.1	
1,2,3-Trichloropropane	96-18-4	<6.1	6.1	
n-Propylbenzene	103-65-1	<6.1	6.1	
Bromobenzene	108-86-1	<6.1	6.1	
1,3,5-Trimethylbenzene	108-67-8	<6.1	6.1	
2-Chlorotoluene	95-49-8	<6.1	6.1	
4-Chlorotoluene	106-43-4	<6.1	6.1	
tert-Butylbenzene	98-06-6	<6.1	6.1	
1,2,4-Trimethylbenzene	95-63-6	<6.1	6.1	
sec-Butylbenzene	135-98-8	<6.1	6.1	
p-Isopropyltoluene	99-87-6	<6.1	6.1	
1,3-Dichlorobenzene	541-73-1	<6.1	6.1	
1,4-Dichlorobenzene	106-46-7	<6.1	6.1	
n-Butylbenzene	104-51-8	<6.1	6.1	
1,2-Dichlorobenzene	95-50-1	<6.1	6.1	
1,2-Dibromo-3-chloropropane	96-12-8	<6.1	6.1	
1,2,4-Trichlorobenzene	120-82-1	<6.1	6.1	
Hexachlorobutadiene	87-68-3	<6.1	6.1	
Naphthalene	91-20-3	<6.1	6.1	
1,2,3-Trichlorobenzene	87-61-6	<6.1	6.1	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID: 97BPXLIIISD01(01)	LAL Sample ID: L8849-107
Date Collected: 15-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 26-FEB-97	Analytical Dilution: 1
Matrix: Soil	Analytical Batch ID: 022597-8260-D1
Percent Moisture: N/A	Preparation Dilution: 1.00

SURROGATE	RECOVERY	CC RANGE
1,2-Dichloroethane-d4	97%	77-127
Toluene-d8	84%	84-120
Bromofluorobenzene	70% *	78-125

COMPOUND	CAS NO.	RESULT ug/kg	LOQ ug/kg	DATA QUALITY (P/P)
Dichlorodifluoromethane	75-71-8	<5.0	5.0	
Chloromethane	74-87-3	<5.0	5.0	
Vinyl Chloride	75-01-4	<5.0	5.0	
Bromomethane	74-83-9	<5.0	5.0	
Chloroethane	75-00-3	<5.0	5.0	
Trichlorofluoromethane	75-69-4	<5.0	5.0	
Freon 113	76-13-1	<10.	10.	
Acetone	67-64-1	31.	10.	
1,1-Dichloroethene	75-35-4	<5.0	5.0	
Carbon Disulfide	75-15-0	<5.0	5.0	
Methylene Chloride	75-09-2	<5.0	5.0	
trans-1,2-Dichloroethene	156-60-5	<5.0	5.0	
Vinyl Acetate	108-05-4	<10.	10.	
1,1-Dichloroethane	75-34-3	<5.0	5.0	
2-Butanone	78-93-3	<10.	10.	
2,2-Dichloropropane	594-20-7	<5.0	5.0	
cis-1,2-Dichloroethene	156-59-2	<5.0	5.0	
Chloroform	67-66-3	<5.0	5.0	
Bromochloromethane	74-97-5	<5.0	5.0	
1,1,1-Trichloroethane	71-55-6	<5.0	5.0	
2-Chloroethylvinylether	110-75-8	<20.	20.	
1,1-Dichloropropene	563-58-6	<5.0	5.0	
Carbon tetrachloride	56-23-5	<5.0	5.0	
1,2-Dichloroethane	107-06-2	<5.0	5.0	
Benzene	71-43-2	<5.0	5.0	
Trichloroethene	79-01-6	<5.0	5.0	
1,2-Dichloropropane	78-87-5	<5.0	5.0	
Bromodichloromethane	75-27-4	<5.0	5.0	
Dibromomethane	74-95-3	<5.0	5.0	
4-Methyl-2-Pentanone	108-10-1	<10.	10.	
cis-1,3-Dichloropropene	10061-01-5	<5.0	5.0	
Toluene	108-88-3	<5.0	5.0	
trans-1,3-Dichloropropene	10061-02-6	<5.0	5.0	
1,1,2-Trichloroethane	79-00-5	<5.0	5.0	
2-Hexanone	591-78-6	<10.	10.	
1,2-Dibromoethane	106-93-4	<5.0	5.0	
1,3-Dichloropropane	142-28-9	<5.0	5.0	
Tetrachloroethene	127-18-4	<5.0	5.0	
Dibromochloromethane	124-48-1	<5.0	5.0	
Chlorobenzene	108-90-7	<5.0	5.0	
1,1,1,2-Tetrachloroethane	630-20-6	<5.0	5.0	

LAS LABORATORIES

OLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID: 97BPXLIIISD01(01)	LAL Sample ID: L8849-107
Date Collected: 15-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 26-FEB-97	Analytical Dilution: 1
Matrix: Soil	Analytical Batch ID: 022597-8260-D1
Percent Moisture: N/A	Preparation Dilution: 1.00

CONSTITUENT	LAB NO.	RESULT mg/kg	PQL ug/kg	DATA QUALIFIER (S)
Ethylbenzene	100-41-4	<5.0	5.0	
m,p-Xylene	136777-61-2	<5.0	5.0	
o-Xylene	95-47-6	<5.0	5.0	
Styrene	100-42-5	<5.0	5.0	
Bromoform	75-25-2	<5.0	5.0	
Isopropylbenzene	98-82-8	<5.0	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	<5.0	5.0	
1,2,3-Trichloropropane	96-18-4	<5.0	5.0	
n-Propylbenzene	103-65-1	<5.0	5.0	
Bromobenzene	108-86-1	<5.0	5.0	
1,3,5-Trimethylbenzene	108-67-8	<5.0	5.0	
2-Chlorotoluene	95-49-8	<5.0	5.0	
4-Chlorotoluene	106-43-4	<5.0	5.0	
tert-Butylbenzene	98-06-6	<5.0	5.0	
1,2,4-Trimethylbenzene	95-63-6	<5.0	5.0	
sec-Butylbenzene	135-98-8	<5.0	5.0	
p-Isopropyltoluene	99-87-6	<5.0	5.0	
1,3-Dichlorobenzene	541-73-1	<5.0	5.0	
1,4-Dichlorobenzene	106-46-7	<5.0	5.0	
n-Butylbenzene	104-51-8	<5.0	5.0	
1,2-Dichlorobenzene	95-50-1	<5.0	5.0	
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	5.0	
1,2,4-Trichlorobenzene	120-82-1	<5.0	5.0	
Hexachlorobutadiene	87-68-3	<5.0	5.0	
Naphthalene	91-20-3	<5.0	5.0	
1,2,3-Trichlorobenzene	87-61-6	<5.0	5.0	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID: 97BPXLIISD01(01)	LAL Sample ID: L8849-107
Date Collected: 15-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 26-FEB-97	Analytical Dilution: 1
Matrix: Soil	Analytical Batch ID: 022597-8260-D1
Percent Moisture: 23.19	Preparation Dilution: 0.970

CONSTITUENT	RECOVERY	GC Limits
1,2-Dichloroethane-d4	97%	77-127
Toluene-d8	87%	84-120
Bromofluorobenzene	70% *	78-125

CONSTITUENT	CAS No.	RESULT ng/kg	PQL ng/kg	DATA QUALITY
Dichlorodifluoromethane	75-71-8	<6.3	6.3	
Chloromethane	74-87-3	<6.3	6.3	
Vinyl Chloride	75-01-4	<6.3	6.3	
Bromomethane	74-83-9	<6.3	6.3	
Chloroethane	75-00-3	<6.3	6.3	
Trichlorofluoromethane	75-69-4	<6.3	6.3	
Freon 113	76-13-1	<13.	13.	
Acetone	67-64-1	53.	13.	
1,1-Dichloroethene	75-35-4	<6.3	6.3	
Carbon Disulfide	75-15-0	<6.3	6.3	
Methylene Chloride	75-09-2	<6.3	6.3	
trans-1,2-Dichloroethene	156-60-5	<6.3	6.3	
Vinyl Acetate	108-05-4	<13.	13.	
1,1-Dichloroethane	75-34-3	<6.3	6.3	
2-Butanone	78-93-3	<13.	13.	
2,2-Dichloropropane	594-20-7	<6.3	6.3	
cis-1,2-Dichloroethene	156-59-2	<6.3	6.3	
Chloroform	67-66-3	<6.3	6.3	
Bromochloromethane	74-97-5	<6.3	6.3	
1,1,1-Trichloroethane	71-55-6	<6.3	6.3	
2-Chloroethylvinylether	110-75-8	<25.	25.	
1,1-Dichloropropene	563-58-6	<6.3	6.3	
Carbon tetrachloride	56-23-5	<6.3	6.3	
1,2-Dichloroethane	107-06-2	<6.3	6.3	
Benzene	71-43-2	<6.3	6.3	
Trichloroethene	79-01-6	<6.3	6.3	
1,2-Dichloropropane	78-87-5	<6.3	6.3	
Bromodichloromethane	75-27-4	<6.3	6.3	
Dibromomethane	74-95-3	<6.3	6.3	
4-Methyl-2-Pentanone	108-10-1	<13.	13.	
cis-1,3-Dichloropropene	10061-01-5	<6.3	6.3	
Toluene	108-88-3	<6.3	6.3	
trans-1,3-Dichloropropene	10061-02-6	<6.3	6.3	
1,1,2-Trichloroethane	79-00-5	<6.3	6.3	
2-Hexanone	591-78-6	<13.	13.	
1,2-Dibromoethane	106-93-4	<6.3	6.3	
1,3-Dichloropropane	142-28-9	<6.3	6.3	
Tetrachloroethene	127-18-4	<6.3	6.3	
Dibromochloromethane	124-48-1	<6.3	6.3	
Chlorobenzene	108-90-7	<6.3	6.3	
1,1,1,2-Tetrachloroethane	630-20-6	<6.3	6.3	

LAS LABORATORIES

OLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIILSD01(01)	LAL Sample ID:	L8849-107
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	26-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022597-8260-D1
Percent Moisture:	23.19	Preparation Dilution:	0.970

CONCENTRATION	CONC. NO.	RESULT	UNIT	DATA QUALIFIER(S)
		ug/kg	ug/kg	
Ethylbenzene	100-41-4	<6.3	6.3	
m,p-Xylene	136777-61-2	<6.3	6.3	
o-Xylene	95-47-6	<6.3	6.3	
Styrene	100-42-5	<6.3	6.3	
Bromoform	75-25-2	<6.3	6.3	
Isopropylbenzene	98-82-8	<6.3	6.3	
1,1,2,2-Tetrachloroethane	79-34-5	<6.3	6.3	
1,2,3-Trichloropropane	96-18-4	<6.3	6.3	
n-Propylbenzene	103-65-1	<6.3	6.3	
Bromobenzene	108-86-1	<6.3	6.3	
1,3,5-Trimethylbenzene	108-67-8	<6.3	6.3	
2-Chlorotoluene	95-49-8	<6.3	6.3	
4-Chlorotoluene	106-43-4	<6.3	6.3	
tert-Butylbenzene	98-06-6	<6.3	6.3	
1,2,4-Trimethylbenzene	95-63-6	<6.3	6.3	
sec-Butylbenzene	135-98-8	<6.3	6.3	
p-Isopropyltoluene	99-87-6	<6.3	6.3	
1,3-Dichlorobenzene	541-73-1	<6.3	6.3	
1,4-Dichlorobenzene	106-46-7	<6.3	6.3	
n-Butylbenzene	104-51-8	<6.3	6.3	
1,2-Dichlorobenzene	95-50-1	<6.3	6.3	
1,2-Dibromo-3-chloropropane	96-12-8	<6.3	6.3	
1,2,4-Trichlorobenzene	120-82-1	<6.3	6.3	
Hexachlorobutadiene	87-68-3	<6.3	6.3	
Naphthalene	91-20-3	<6.3	6.3	
1,2,3-Trichlorobenzene	87-61-6	<6.3	6.3	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLI1A1OSD02(08)	LAL Sample ID:	L8849-84
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	44.6	Preparation Dilution:	0.990

COMPONENT	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	93%	77-127
Toluene-d8	89%	84-120
Bromofluorobenzene	77% *	78-125

COMPONENT	CONC. NO.	RESULT	UNIT
		ug/kg	ug/kg
Dichlorodifluoromethane	75-71-8	<8.9	8.9
Chloromethane	74-87-3	<8.9	8.9
Vinyl Chloride	75-01-4	<8.9	8.9
Bromomethane	74-83-9	<8.9	8.9
Chloroethane	75-00-3	<8.9	8.9
Trichlorofluoromethane	75-69-4	<8.9	8.9
Freon 113	76-13-1	<18.	18.
Acetone	67-64-1	100	18.
1,1-Dichloroethene	75-35-4	<8.9	8.9
Carbon Disulfide	75-15-0	<8.9	8.9
Methylene Chloride	75-09-2	<8.9	8.9
trans-1,2-Dichloroethene	156-60-5	<8.9	8.9
Vinyl Acetate	108-05-4	<18.	18.
1,1-Dichloroethane	75-34-3	<8.9	8.9
2-Butanone	78-93-3	23.	18.
2,2-Dichloropropane	594-20-7	<8.9	8.9
cis-1,2-Dichloroethene	156-59-2	<8.9	8.9
Chloroform	67-66-3	<8.9	8.9
Bromochloromethane	74-97-5	<8.9	8.9
1,1,1-Trichloroethane	71-55-6	<8.9	8.9
2-Chloroethylvinylether	110-75-8	<36.	36.
1,1-Dichloropropene	563-58-6	<8.9	8.9
Carbon tetrachloride	56-23-5	<8.9	8.9
1,2-Dichloroethane	107-06-2	<8.9	8.9
Benzene	71-43-2	<8.9	8.9
Trichloroethene	79-01-6	<8.9	8.9
1,2-Dichloropropane	78-87-5	<8.9	8.9
Bromodichloromethane	75-27-4	<8.9	8.9
Dibromomethane	74-95-3	<8.9	8.9
4-Methyl-2-Pentanone	108-10-1	<18.	18.
cis-1,3-Dichloropropene	10061-01-5	<8.9	8.9
Toluene	108-88-3	<8.9	8.9
trans-1,3-Dichloropropene	10061-02-6	<8.9	8.9
1,1,2-Trichloroethane	79-00-5	<8.9	8.9
2-Hexanone	591-78-6	<18.	18.
1,2-Dibromoethane	106-93-4	<8.9	8.9
1,3-Dichloropropene	142-28-9	<8.9	8.9
Tetrachloroethene	127-18-4	<8.9	8.9
Dibromochloromethane	124-48-1	<8.9	8.9
Chlorobenzene	108-90-7	<8.9	8.9
1,1,1,2-Tetrachloroethane	630-20-6	<8.9	8.9

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
#260 VOLATILES

Client Sample ID:	97BPXLI1A10SD02(08)	LAL Sample ID:	L8849-84
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	44.6	Preparation Dilution:	0.990

CONSTITUENT	CLIENT ID	RESULT	UCL	DATA QUALIFIER (S)
Ethylbenzene	100-41-4	<8.9	8.9	
m,p-Xylene	136777-61-2	<8.9	8.9	
o-Xylene	95-47-6	<8.9	8.9	
Styrene	100-42-5	<8.9	8.9	
Bromoform	75-25-2	<8.9	8.9	
Isopropylbenzene	98-82-8	<8.9	8.9	
1,1,2,2-Tetrachloroethane	79-34-5	<8.9	8.9	
1,2,3-Trichloropropane	96-18-4	<8.9	8.9	
n-Propylbenzene	103-65-1	<8.9	8.9	
Bromobenzene	108-86-1	<8.9	8.9	
1,3,5-Trimethylbenzene	108-67-8	<8.9	8.9	
2-Chlorotoluene	95-49-8	<8.9	8.9	
4-Chlorotoluene	106-43-4	<8.9	8.9	
tert-Butylbenzene	98-06-6	<8.9	8.9	
1,2,4-Trimethylbenzene	95-63-6	<8.9	8.9	
sec-Butylbenzene	135-98-8	<8.9	8.9	
p-Isopropyltoluene	99-87-6	<8.9	8.9	
1,3-Dichlorobenzene	541-73-1	<8.9	8.9	
1,4-Dichlorobenzene	106-46-7	<8.9	8.9	
n-Butylbenzene	104-51-8	<8.9	8.9	
1,2-Dichlorobenzene	95-50-1	<8.9	8.9	
1,2-Dibromo-3-chloropropane	96-12-8	<8.9	8.9	
1,2,4-Trichlorobenzene	120-82-1	<8.9	8.9	
Hexachlorobutadiene	87-68-3	<8.9	8.9	
Naphthalene	91-20-3	<8.9	8.9	
1,2,3-Trichlorobenzene	87-61-6	<8.9	8.9	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLI1A10SD02(08)	LAL Sample ID:	L8849-84
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022597-8260-D1
Percent Moisture:	44.6	Preparation Dilution:	1.00

ORGANIC	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	92%	77-127
Toluene-d8	88%	84-120
Bromofluorobenzene	68% *	78-125

CONSTITUENT	GC No.	RESULT ug/kg	LOQ ug/kg	DATA QUALITY (1-5)
Dichlorodifluoromethane	75-71-8	<9.0	9.0	
Chloromethane	74-87-3	<9.0	9.0	
Vinyl Chloride	75-01-4	<9.0	9.0	
Bromomethane	74-83-9	<9.0	9.0	
Chloroethane	75-00-3	<9.0	9.0	
Trichlorofluoromethane	75-69-4	<9.0	9.0	
Freon 113	76-13-1	<18.	18.	
Acetone	67-64-1	180	18.	
1,1-Dichloroethene	75-35-4	<9.0	9.0	
Carbon Disulfide	75-15-0	13.	9.0	
Methylene Chloride	75-09-2	<9.0	9.0	
trans-1,2-Dichloroethene	156-60-5	<9.0	9.0	
Vinyl Acetate	108-05-4	<18.	18.	
1,1-Dichloroethane	75-34-3	<9.0	9.0	
2-Butanone	78-93-3	41.	18.	
2,2-Dichloropropane	594-20-7	<9.0	9.0	
cis-1,2-Dichloroethene	156-59-2	<9.0	9.0	
Chloroform	67-66-3	<9.0	9.0	
Bromochloromethane	74-97-5	<9.0	9.0	
1,1,1-Trichloroethane	71-55-6	<9.0	9.0	
2-Chloroethylvinylether	110-75-8	<36.	36.	
1,1-Dichloropropene	563-58-6	<9.0	9.0	
Carbon tetrachloride	56-23-5	<9.0	9.0	
1,2-Dichloroethane	107-06-2	<9.0	9.0	
Benzene	71-43-2	<9.0	9.0	
Trichloroethene	79-01-6	<9.0	9.0	
1,2-Dichloropropane	78-87-5	<9.0	9.0	
Bromodichloromethane	75-27-4	<9.0	9.0	
Dibromomethane	74-95-3	<9.0	9.0	
4-Methyl-2-Pentanone	108-10-1	<18.	18.	
cis-1,3-Dichloropropene	10061-01-5	<9.0	9.0	
Toluene	108-88-3	<9.0	9.0	
trans-1,3-Dichloropropene	10061-02-6	<9.0	9.0	
1,1,2-Trichloroethane	79-00-5	<9.0	9.0	
2-Hexanone	591-78-6	<18.	18.	
1,2-Dibromoethane	106-93-4	<9.0	9.0	
1,3-Dichloropropane	142-28-9	<9.0	9.0	
Tetrachloroethene	127-18-4	<9.0	9.0	
Dibromochloromethane	124-48-1	<9.0	9.0	
Chlorobenzene	108-90-7	<9.0	9.0	
1,1,1,2-Tetrachloroethane	630-20-6	<9.0	9.0	

LAS LABORATORIES

OLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIA10SD02(08)	LAL Sample ID:	L8849-84
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022597-8260-D1
Percent Moisture:	44.6	Preparation Dilution:	1.00

CONSTITUENT	CAS NO	RESULT mg/kg	MDL mg/kg	DATE QUALIFIED (S)
Ethylbenzene	100-41-4	<9.0	9.0	
m,p-Xylene	136777-61-2	<9.0	9.0	
o-Xylene	95-47-6	<9.0	9.0	
Styrene	100-42-5	<9.0	9.0	
Bromoform	75-25-2	<9.0	9.0	
Isopropylbenzene	98-82-8	<9.0	9.0	
1,1,2,2-Tetrachloroethane	79-34-5	<9.0	9.0	
1,2,3-Trichloropropane	96-18-4	<9.0	9.0	
n-Propylbenzene	103-65-1	<9.0	9.0	
Bromobenzene	108-86-1	<9.0	9.0	
1,3,5-Trimethylbenzene	108-67-8	<9.0	9.0	
2-Chlorotoluene	95-49-8	<9.0	9.0	
4-Chlorotoluene	106-43-4	<9.0	9.0	
tert-Butylbenzene	98-06-6	<9.0	9.0	
1,2,4-Trimethylbenzene	95-63-6	<9.0	9.0	
sec-Butylbenzene	135-98-8	<9.0	9.0	
p-Isopropyltoluene	99-87-6	<9.0	9.0	
1,3-Dichlorobenzene	541-73-1	<9.0	9.0	
1,4-Dichlorobenzene	106-46-7	<9.0	9.0	
n-Butylbenzene	104-51-8	<9.0	9.0	
1,2-Dichlorobenzene	95-50-1	<9.0	9.0	
1,2-Dibromo-3-chloropropane	96-12-8	<9.0	9.0	
1,2,4-Trichlorobenzene	120-82-1	<9.0	9.0	
Hexachlorobutadiene	87-68-3	<9.0	9.0	
Naphthalene	91-20-3	<9.0	9.0	
1,2,3-Trichlorobenzene	87-61-6	<9.0	9.0	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIB8SD02(08)	LAL Sample ID:	L8849-94
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022597-8260-D1
Percent Moisture:	28.76	Preparation Dilution:	0.970

ANALYTE	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	97%	77-127
Toluene-d8	85%	84-120
Bromofluorobenzene	63% *	78-125

COMPONENT	CAS NO.	RESULT ug/kg	POP ug/kg	DATA QUALIFIER(S)
Dichlorodifluoromethane	75-71-8	<6.8	6.8	
Chloromethane	74-87-3	<6.8	6.8	
Vinyl Chloride	75-01-4	<6.8	6.8	
Bromomethane	74-83-9	<6.8	6.8	
Chloroethane	75-00-3	<6.8	6.8	
Trichlorofluoromethane	75-69-4	<6.8	6.8	
Freon 113	76-13-1	<14.	14.	
Acetone	67-64-1	44.	14.	
1,1-Dichloroethene	75-35-4	<6.8	6.8	
Carbon Disulfide	75-15-0	24.	6.8	
Methylene Chloride	75-09-2	<6.8	6.8	
trans-1,2-Dichloroethene	156-60-5	<6.8	6.8	
Vinyl Acetate	108-05-4	<14.	14.	
1,1-Dichloroethane	75-34-3	<6.8	6.8	
2-Butanone	78-93-3	<14.	14.	
2,2-Dichloropropane	594-20-7	<6.8	6.8	
cis-1,2-Dichloroethene	156-59-2	<6.8	6.8	
Chloroform	67-66-3	<6.8	6.8	
Bromochloromethane	74-97-5	<6.8	6.8	
1,1,1-Trichloroethane	71-55-6	<6.8	6.8	
2-Chloroethylvinylether	110-75-8	<27.	27.	
1,1-Dichloropropene	563-58-6	<6.8	6.8	
Carbon tetrachloride	56-23-5	<6.8	6.8	
1,2-Dichloroethane	107-06-2	<6.8	6.8	
Benzene	71-43-2	<6.8	6.8	
Trichloroethene	79-01-6	<6.8	6.8	
1,2-Dichloropropane	78-87-5	<6.8	6.8	
Bromodichloromethane	75-27-4	<6.8	6.8	
Dibromomethane	74-95-3	<6.8	6.8	
4-Methyl-2-Pentanone	108-10-1	<14.	14.	
cis-1,3-Dichloropropene	10061-01-5	<6.8	6.8	
Toluene	108-88-3	<6.8	6.8	
trans-1,3-Dichloropropene	10061-02-6	<6.8	6.8	
1,1,2-Trichloroethane	79-00-5	<6.8	6.8	
2-Hexanone	591-78-6	<14.	14.	
1,2-Dibromoethane	106-93-4	<6.8	6.8	
1,3-Dichloropropane	142-28-9	<6.8	6.8	
Tetrachloroethene	127-18-4	<6.8	6.8	
Dibromochloromethane	124-48-1	<6.8	6.8	
Chlorobenzene	108-90-7	<6.8	6.8	
1,1,1,2-Tetrachloroethane	630-20-6	<6.8	6.8	

LAS LABORATORIES

OLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIB8SD02(08)	LAL Sample ID:	L8849-94
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022597-8260-D1
Percent Moisture:	28.76	Preparation Dilution:	0.970

CONSTITUENT	CAS NO.	RESULT ug/kg	COL. ug/kg	DATA QUALIFIER(S)
Ethylbenzene	100-41-4	<6.8	6.8	
m,p-Xylene	136777-61-2	<6.8	6.8	
o-Xylene	95-47-6	<6.8	6.8	
Styrene	100-42-5	<6.8	6.8	
Bromoform	75-25-2	<6.8	6.8	
Isopropylbenzene	98-82-8	<6.8	6.8	
1,1,2,2-Tetrachloroethane	79-34-5	<6.8	6.8	
1,2,3-Trichloropropane	96-18-4	<6.8	6.8	
n-Propylbenzene	103-65-1	<6.8	6.8	
Bromobenzene	108-86-1	<6.8	6.8	
1,3,5-Trimethylbenzene	108-67-8	<6.8	6.8	
2-Chlorotoluene	95-49-8	<6.8	6.8	
4-Chlorotoluene	106-43-4	<6.8	6.8	
tert-Butylbenzene	98-06-6	<6.8	6.8	
1,2,4-Trimethylbenzene	95-63-6	<6.8	6.8	
sec-Butylbenzene	135-98-8	<6.8	6.8	
p-Isopropyltoluene	99-87-6	<6.8	6.8	
1,3-Dichlorobenzene	541-73-1	<6.8	6.8	
1,4-Dichlorobenzene	106-46-7	<6.8	6.8	
n-Butylbenzene	104-51-8	<6.8	6.8	
1,2-Dichlorobenzene	95-50-1	<6.8	6.8	
1,2-Dibromo-3-chloropropane	96-12-8	<6.8	6.8	
1,2,4-Trichlorobenzene	120-82-1	<6.8	6.8	
Hexachlorobutadiene	87-68-3	<6.8	6.8	
Naphthalene	91-20-3	<6.8	6.8	
1,2,3-Trichlorobenzene	87-61-6	<6.8	6.8	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIB8SD02(08)	LAL Sample ID:	L8849-94
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	28.76	Preparation Dilution:	1.00

SUBSTITUTE	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	103%	77-127
Toluene-d8	87%	84-120
Bromofluorobenzene	70% *	78-125

CONSTITUENT	GC#	RESULT ug/kg	PLC ug/kg
Dichlorodifluoromethane	75-71-8	<7.0	7.0
Chloromethane	74-87-3	<7.0	7.0
Vinyl Chloride	75-01-4	<7.0	7.0
Bromomethane	74-83-9	<7.0	7.0
Chloroethane	75-00-3	<7.0	7.0
Trichlorofluoromethane	75-69-4	<7.0	7.0
Freon 113	76-13-1	<14.	14.
Acetone	67-64-1	47.	14.
1,1-Dichloroethene	75-35-4	<7.0	7.0
Carbon Disulfide	75-15-0	12.	7.0
Methylene Chloride	75-09-2	<7.0	7.0
trans-1,2-Dichloroethene	156-60-5	<7.0	7.0
Vinyl Acetate	108-05-4	<14.	14.
1,1-Dichloroethane	75-34-3	<7.0	7.0
2-Butanone	78-93-3	<14.	14.
2,2-Dichloropropane	594-20-7	<7.0	7.0
cis-1,2-Dichloroethene	156-59-2	<7.0	7.0
Chloroform	67-66-3	<7.0	7.0
Bromochloromethane	74-97-5	<7.0	7.0
1,1,1-Trichloroethane	71-55-6	<7.0	7.0
2-Chloroethylvinylether	110-75-8	<28.	28.
1,1-Dichloropropene	563-58-6	<7.0	7.0
Carbon tetrachloride	56-23-5	<7.0	7.0
1,2-Dichloroethane	107-06-2	<7.0	7.0
Benzene	71-43-2	<7.0	7.0
Trichloroethene	79-01-6	<7.0	7.0
1,2-Dichloropropane	78-87-5	<7.0	7.0
Bromodichloromethane	75-27-4	<7.0	7.0
Dibromomethane	74-95-3	<7.0	7.0
4-Methyl-2-Pentanone	108-10-1	<14.	14.
cis-1,3-Dichloropropene	10061-01-5	<7.0	7.0
Toluene	108-88-3	<7.0	7.0
trans-1,3-Dichloropropene	10061-02-6	<7.0	7.0
1,1,2-Trichloroethane	79-00-5	<7.0	7.0
2-Hexanone	591-78-6	<14.	14.
1,2-Dibromoethane	106-93-4	<7.0	7.0
1,3-Dichloropropane	142-28-9	<7.0	7.0
Tetrachloroethene	127-18-4	<7.0	7.0
Dibromochloromethane	124-48-1	<7.0	7.0
Chlorobenzene	108-90-7	<7.0	7.0
1,1,1,2-Tetrachloroethane	630-20-6	<7.0	7.0

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID: 97BPXLIB8SD02(08)
Date Collected: 15-FEB-97
Date Analyzed: 25-FEB-97
Matrix: Soil
Percent Moisture: 28.76

LAL Sample ID: L8849-94
Date Received: 19-FEB-97
Analytical Dilution: 1
Analytical Batch ID: 022497-8260-D1
Preparation Dilution: 1.00

CONSTITUENT	CAS NO.	RESULT ug/kg	DOC ug/kg	DATA QUALIFIER(S)
Ethylbenzene	100-41-4	<7.0	7.0	
m,p-Xylene	136777-61-2	<7.0	7.0	
o-Xylene	95-47-6	<7.0	7.0	
Styrene	100-42-5	<7.0	7.0	
Bromoform	75-25-2	<7.0	7.0	
Isopropylbenzene	98-82-8	<7.0	7.0	
1,1,2,2-Tetrachloroethane	79-34-5	<7.0	7.0	
1,2,3-Trichloropropane	96-18-4	<7.0	7.0	
n-Propylbenzene	103-65-1	<7.0	7.0	
Bromobenzene	108-86-1	<7.0	7.0	
1,3,5-Trimethylbenzene	108-67-8	<7.0	7.0	
2-Chlorotoluene	95-49-8	<7.0	7.0	
4-Chlorotoluene	106-43-4	<7.0	7.0	
tert-Butylbenzene	98-06-6	<7.0	7.0	
2,4-Trimethylbenzene	95-63-6	<7.0	7.0	
sec-Butylbenzene	135-98-8	<7.0	7.0	
p-Isopropyltoluene	99-87-6	<7.0	7.0	
1,3-Dichlorobenzene	541-73-1	<7.0	7.0	
1,4-Dichlorobenzene	106-46-7	<7.0	7.0	
n-Butylbenzene	104-51-8	<7.0	7.0	
1,2-Dichlorobenzene	95-50-1	<7.0	7.0	
1,2-Dibromo-3-chloropropane	96-12-8	<7.0	7.0	
1,2,4-Trichlorobenzene	120-82-1	<7.0	7.0	
Hexachlorobutadiene	87-68-3	<7.0	7.0	
Naphthalene	91-20-3	<7.0	7.0	
1,2,3-Trichlorobenzene	87-61-6	<7.0	7.0	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIB8SD01(01)	LAL Sample ID:	L8849-98
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022597-8260-D1
Percent Moisture:	28.44	Preparation Dilution:	1.00

SUBSTITUTE	RECOVERY	PRECISION
1,2-Dichloroethane-d4	96%	77-127
Toluene-d8	83% *	84-120
Bromofluorobenzene	72% *	78-125

CONSTITUENT	GC No.	RESULT mg/kg	LOD mg/kg	DATA QUALITY INDEX
Dichlorodifluoromethane	75-71-8	<7.0	7.0	
Chloromethane	74-87-3	<7.0	7.0	
Vinyl Chloride	75-01-4	<7.0	7.0	
Bromomethane	74-83-9	<7.0	7.0	
Chloroethane	75-00-3	<7.0	7.0	
Trichlorofluoromethane	75-69-4	<7.0	7.0	
Freon 113	76-13-1	<14.	14.	
Acetone	67-64-1	27.	14.	
1,1-Dichloroethene	75-35-4	<7.0	7.0	
Carbon Disulfide	75-15-0	<7.0	7.0	
Methylene Chloride	75-09-2	<7.0	7.0	
trans-1,2-Dichloroethene	156-60-5	<7.0	7.0	
Vinyl Acetate	108-05-4	<14.	14.	
1,1-Dichloroethane	75-34-3	<7.0	7.0	
2-Butanone	78-93-3	<14.	14.	
2,2-Dichloropropane	594-20-7	<7.0	7.0	
cis-1,2-Dichloroethene	156-59-2	<7.0	7.0	
Chloroform	67-66-3	<7.0	7.0	
Bromochloromethane	74-97-5	<7.0	7.0	
1,1,1-Trichloroethane	71-55-6	<7.0	7.0	
2-Chloroethylvinylether	110-75-8	<28.	28.	
1,1-Dichloropropene	563-58-6	<7.0	7.0	
Carbon tetrachloride	56-23-5	<7.0	7.0	
1,2-Dichloroethane	107-06-2	<7.0	7.0	
Benzene	71-43-2	<7.0	7.0	
Trichloroethene	79-01-6	<7.0	7.0	
1,2-Dichloropropane	78-87-5	<7.0	7.0	
Bromodichloromethane	75-27-4	<7.0	7.0	
Dibromomethane	74-95-3	<7.0	7.0	
4-Methyl-2-Pentanone	108-10-1	<14.	14.	
cis-1,3-Dichloropropene	10061-01-5	<7.0	7.0	
Toluene	108-88-3	<7.0	7.0	
trans-1,3-Dichloropropene	10061-02-6	<7.0	7.0	
1,1,2-Trichloroethane	79-00-5	<7.0	7.0	
2-Hexanone	591-78-6	<14.	14.	
1,2-Dibromoethane	106-93-4	<7.0	7.0	
1,3-Dichloropropane	142-28-9	<7.0	7.0	
Tetrachloroethene	127-18-4	<7.0	7.0	
Dibromochloromethane	124-48-1	<7.0	7.0	
Chlorobenzene	108-90-7	<7.0	7.0	
1,1,1,2-Tetrachloroethane	630-20-6	<7.0	7.0	

LAS LABORATORIES

VLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID:	97BPXLIB8SD01(01)	LAL Sample ID:	L8849-98
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022597-8260-D1
Percent Moisture:	28.44	Preparation Dilution:	1.00

CONSTITUENT	CLIENT ID	RESULT	LOD	DATA QUALIFIER (6)
Ethylbenzene	100-41-4	<7.0	7.0	
m,p-Xylene	136777-61-2	<7.0	7.0	
o-Xylene	95-47-6	<7.0	7.0	
Styrene	100-42-5	<7.0	7.0	
Bromoform	75-25-2	<7.0	7.0	
Isopropylbenzene	98-82-8	<7.0	7.0	
1,1,2,2-Tetrachloroethane	79-34-5	<7.0	7.0	
1,2,3-Trichloropropane	96-18-4	<7.0	7.0	
n-Propylbenzene	103-65-1	<7.0	7.0	
Bromobenzene	108-86-1	<7.0	7.0	
1,3,5-Trimethylbenzene	108-67-8	<7.0	7.0	
2-Chlorotoluene	95-49-8	<7.0	7.0	
4-Chlorotoluene	106-43-4	<7.0	7.0	
tert-Butylbenzene	98-06-6	<7.0	7.0	
1,2,4-Trimethylbenzene	95-63-6	<7.0	7.0	
sec-Butylbenzene	135-98-8	<7.0	7.0	
p-Isopropyltoluene	99-87-6	<7.0	7.0	
1,3-Dichlorobenzene	541-73-1	<7.0	7.0	
1,4-Dichlorobenzene	106-46-7	<7.0	7.0	
n-Butylbenzene	104-51-8	<7.0	7.0	
1,2-Dichlorobenzene	95-50-1	<7.0	7.0	
1,2-Dibromo-3-chloropropane	96-12-8	<7.0	7.0	
1,2,4-Trichlorobenzene	120-82-1	<7.0	7.0	
Hexachlorobutadiene	87-68-3	<7.0	7.0	
Naphthalene	91-20-3	<7.0	7.0	
1,2,3-Trichlorobenzene	87-61-6	<7.0	7.0	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS
8260 VOLATILES

Client Sample ID: 97BFXLIBSSD01(01)	LAL Sample ID: L8849-98
Date Collected: 15-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 25-FEB-97	Analytical Dilution: 1
Matrix: Soil	Analytical Batch ID: 022497-8260-D1
Percent Moisture: 28.44	Preparation Dilution: 1.00

CONCENTRATION	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	102%	77-127
Toluene-d8	60% *	84-120
Bromofluorobenzene	68% *	78-125

CONSTITUENT	GC RANGE	RESULT ug/kg	REL ug/kg	REMARKS QUALITY INDEX
Dichlorodifluoromethane	75-71-8	<7.0	7.0	
Chloromethane	74-87-3	<7.0	7.0	
Vinyl Chloride	75-01-4	<7.0	7.0	
Bromomethane	74-83-9	<7.0	7.0	
Chloroethane	75-00-3	<7.0	7.0	
Trichlorofluoromethane	75-69-4	<7.0	7.0	
Freon 113	76-13-1	<14.	14.	
Acetone	67-64-1	60.	14.	
1,1-Dichloroethene	75-35-4	<7.0	7.0	
Carbon Disulfide	75-15-0	<7.0	7.0	
Methylene Chloride	75-09-2	<7.0	7.0	
trans-1,2-Dichloroethene	156-60-5	<7.0	7.0	
Vinyl Acetate	108-05-4	<14.	14.	
1,1-Dichloroethane	75-34-3	<7.0	7.0	
2-Butanone	78-93-3	<14.	14.	
2,2-Dichloropropane	594-20-7	<7.0	7.0	
cis-1,2-Dichloroethene	156-59-2	<7.0	7.0	
Chloroform	67-66-3	<7.0	7.0	
Bromochloromethane	74-97-5	<7.0	7.0	
1,1,1-Trichloroethane	71-55-6	<7.0	7.0	
2-Chloroethylvinylether	110-75-8	<28.	28.	
1,1-Dichloropropene	563-58-6	<7.0	7.0	
Carbon tetrachloride	56-23-5	<7.0	7.0	
1,2-Dichloroethane	107-06-2	<7.0	7.0	
Benzene	71-43-2	<7.0	7.0	
Trichloroethene	79-01-6	<7.0	7.0	
1,2-Dichloropropane	78-87-5	<7.0	7.0	
Bromodichloromethane	75-27-4	<7.0	7.0	
Dibromomethane	74-95-3	<7.0	7.0	
4-Methyl-2-Pentanone	108-10-1	<14.	14.	
cis-1,3-Dichloropropene	10061-01-5	<7.0	7.0	
Toluene	108-88-3	<7.0	7.0	
trans-1,3-Dichloropropene	10061-02-6	<7.0	7.0	
1,1,2-Trichloroethane	79-00-5	<7.0	7.0	
2-Hexanone	591-78-6	<14.	14.	
1,2-Dibromoethane	106-93-4	<7.0	7.0	
1,3-Dichloropropane	142-28-9	<7.0	7.0	
Tetrachloroethene	127-18-4	<7.0	7.0	
Dibromochloromethane	124-48-1	<7.0	7.0	
Chlorobenzene	108-90-7	<7.0	7.0	
1,1,1,2-Tetrachloroethane	630-20-6	<7.0	7.0	

LAS LABORATORIES

LATILE ORGANICS BY GC/MS
#260 VOLATILES

Client Sample ID:	97HPXLIB8SD01(01)	LAL Sample ID:	L8849-98
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Analytical Batch ID:	022497-8260-D1
Percent Moisture:	28.44	Preparation Dilution:	1.00

CONSTITUENT	REF ID	RESULT	LO	DATA QUALIFIER (R)
		ug/kg	ug/kg	
Ethylbenzene	100-41-4	<7.0	7.0	
m,p-Xylene	136777-61-2	<7.0	7.0	
o-Xylene	95-47-6	<7.0	7.0	
Styrene	100-42-5	<7.0	7.0	
Bromoform	75-25-2	<7.0	7.0	
Isopropylbenzene	98-82-8	<7.0	7.0	
1,1,2,2-Tetrachloroethane	79-34-5	<7.0	7.0	
1,2,3-Trichloropropane	96-18-4	<7.0	7.0	
n-Propylbenzene	103-65-1	<7.0	7.0	
Bromobenzene	108-86-1	<7.0	7.0	
1,3,5-Trimethylbenzene	108-67-8	<7.0	7.0	
2-Chlorotoluene	95-49-8	<7.0	7.0	
4-Chlorotoluene	106-43-4	<7.0	7.0	
tert-Butylbenzene	98-06-6	<7.0	7.0	
2,4-Trimethylbenzene	95-63-6	<7.0	7.0	
sec-Butylbenzene	135-98-8	<7.0	7.0	
p-Isopropyltoluene	99-87-6	<7.0	7.0	
1,3-Dichlorobenzene	541-73-1	<7.0	7.0	
1,4-Dichlorobenzene	106-46-7	<7.0	7.0	
n-Butylbenzene	104-51-8	<7.0	7.0	
1,2-Dichlorobenzene	95-50-1	<7.0	7.0	
1,2-Dibromo-3-chloropropane	96-12-8	<7.0	7.0	
1,2,4-Trichlorobenzene	120-82-1	<7.0	7.0	
Hexachlorobutadiene	87-68-3	<7.0	7.0	
Naphthalene	91-20-3	<7.0	7.0	
1,2,3-Trichlorobenzene	87-61-6	<7.0	7.0	

LAS LABORATORIES

SPIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	46011LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Percent Moisture:	N/A	Analytical Batch ID:	022597-8260-01
		Preparation Dilution:	1.00

SUBSTRATE	RECOVERY	GC RANGE
1,2-Dichloroethane-d4	91%	77-127
Toluene-d8	95%	84-120
Bromofluorobenzene	79%	78-125

CONSTITUENT	CAS NO.	RESULT mg/kg	ML mg/kg	QUALITY INDEX
Dichlorodifluoromethane	75-71-8	48.	5.0	
Chloromethane	74-87-3	49.	5.0	
Vinyl Chloride	75-01-4	52.	5.0	
Bromomethane	74-83-9	50.	5.0	
Chloroethane	75-00-3	49.	5.0	
Trichlorofluoromethane	75-69-4	50.	5.0	
Freon 113	76-13-1	46.	10.	
Acetone	67-64-1	110	10.	
1,1-Dichloroethene	75-35-4	52.	5.0	
Carbon Disulfide	75-15-0	42.	5.0	
Methylene Chloride	75-09-2	50.	5.0	
trans-1,2-Dichloroethene	156-60-5	50.	5.0	
Vinyl Acetate	108-05-4	45.	10.	
1,1-Dichloroethane	75-34-3	55.	5.0	
2-Butanone	78-93-3	44.	10.	
2,2-Dichloropropane	594-20-7	55.	5.0	
cis-1,2-Dichloroethene	156-59-2	60.	5.0	
Chloroform	67-66-3	55.	5.0	
Bromochloromethane	74-97-5	53.	5.0	
1,1,1-Trichloroethane	71-55-6	53.	5.0	
2-Chloroethylvinylether	110-75-8	240	20.	
1,1-Dichloropropene	563-58-6	48.	5.0	
Carbon tetrachloride	56-23-5	46.	5.0	
1,2-Dichloroethane	107-06-2	48.	5.0	
Benzene	71-43-2	53.	5.0	
Trichloroethene	79-01-6	59.	5.0	
1,2-Dichloropropane	78-87-5	52.	5.0	
Bromodichloromethane	75-27-4	49.	5.0	
Dibromomethane	74-95-3	47.	5.0	
4-Methyl-2-Pentanone	108-10-1	31.	10.	
cis-1,3-Dichloropropene	10061-01-5	49.	5.0	
Toluene	108-88-3	49.	5.0	
trans-1,3-Dichloropropene	10061-02-6	48.	5.0	
1,1,2-Trichloroethane	79-00-5	51.	5.0	
2-Hexanone	591-78-6	16.	10.	
1,2-Dibromoethane	106-93-4	48.	5.0	
1,3-Dichloropropane	142-28-9	54.	5.0	
Tetrachloroethene	127-18-4	50.	5.0	
Dibromochloromethane	124-48-1	50.	5.0	
Chlorobenzene	108-90-7	47.	5.0	
1,1,1,2-Tetrachloroethane	630-20-6	51.	5.0	

LAS LABORATORIES

SPIKED SAMPLE RESULT
VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	46011LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
		Analytical Batch ID:	022597-8260-D1
Percent Moisture:	N/A	Preparation Dilution:	1.00

CONCENTRATION	LAB ID	CONCENTRATION	CONCENTRATION	DATE QUALIFIED (S)
Ethylbenzene	100-41-4	47.	5.0	
m,p-Xylene	136777-61-2	94.	5.0	
o-Xylene	95-47-6	46.	5.0	
Styrene	100-42-5	44.	5.0	
Bromoforn	75-25-2	47.	5.0	
Isopropylbenzene	98-82-8	43.	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	30.	5.0	
1,2,3-Trichloropropane	96-18-4	45.	5.0	
n-Propylbenzene	103-65-1	46.	5.0	
Bromobenzene	108-86-1	44.	5.0	
1,3,5-Trimethylbenzene	108-67-8	48.	5.0	
2-Chlorotoluene	95-49-8	47.	5.0	
4-Chlorotoluene	106-43-4	42.	5.0	
tert-Butylbenzene	98-06-6	50.	5.0	
1,2,4-Trimethylbenzene	95-63-6	45.	5.0	
sec-Butylbenzene	135-98-8	43.	5.0	
p-Isopropyltoluene	99-87-6	43.	5.0	
1,3-Dichlorobenzene	541-73-1	43.	5.0	
1,4-Dichlorobenzene	106-46-7	42.	5.0	
n-Butylbenzene	104-51-8	39.	5.0	
1,2-Dichlorobenzene	95-50-1	42.	5.0	
1,2-Dibromo-3-chloropropane	96-12-8	18.	5.0	
1,2,4-Trichlorobenzene	120-82-1	39.	5.0	
Hexachlorobutadiene	87-68-3	37.	5.0	
Naphthalene	91-20-3	38.	5.0	
1,2,3-Trichlorobenzene	87-61-6	38.	5.0	

LAS LABORATORIES

VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Method Blank	LAL Sample ID:	46011MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Percent Moisture:	N/A	Analytical Batch ID:	022597-8260-D1
		Preparation Dilution:	1.00

SUBSTRATE	RECOVERY	ISOTOPE
1,2-Dichloroethane-d4	101%	77-127
Toluene-d8	87%	84-120
Bromofluorobenzene	79%	78-125

CONCENTRATION	CONC. (PPM)	RESULT (PPM)	REF. (PPM)
Dichlorodifluoromethane	75-71-8	<5.0	5.0
Chloromethane	74-87-3	<5.0	5.0
Vinyl Chloride	75-01-4	<5.0	5.0
Bromomethane	74-83-9	<5.0	5.0
Chloroethane	75-00-3	<5.0	5.0
Trichlorofluoromethane	75-69-4	<5.0	5.0
Freon 113	76-13-1	<10.	10.
Acetone	67-64-1	<10.	10.
1,1-Dichloroethene	75-35-4	<5.0	5.0
Carbon Disulfide	75-15-0	<5.0	5.0
Methylene Chloride	75-09-2	<5.0	5.0
trans-1,2-Dichloroethene	156-60-5	<5.0	5.0
Vinyl Acetate	108-05-4	<10.	10.
1,1-Dichloroethane	75-34-3	<5.0	5.0
2-Butanone	78-93-3	<10.	10.
2,2-Dichloropropane	594-20-7	<5.0	5.0
cis-1,2-Dichloroethene	156-59-2	<5.0	5.0
Chloroform	67-66-3	<5.0	5.0
Bromochloromethane	74-97-5	<5.0	5.0
1,1,1-Trichloroethane	71-55-6	<5.0	5.0
2-Chloroethylvinylether	110-75-8	<20.	20.
1,1-Dichloropropene	563-58-6	<5.0	5.0
Carbon tetrachloride	56-23-5	<5.0	5.0
1,2-Dichloroethane	107-06-2	<5.0	5.0
Benzene	71-43-2	<5.0	5.0
Trichloroethene	79-01-6	<5.0	5.0
1,2-Dichloropropane	78-87-5	<5.0	5.0
Bromodichloromethane	75-27-4	<5.0	5.0
Dibromomethane	74-95-3	<5.0	5.0
4-Methyl-2-Pentanone	108-10-1	<10.	10.
cis-1,3-Dichloropropane	10061-01-5	<5.0	5.0
Toluene	108-88-3	<5.0	5.0
trans-1,3-Dichloropropene	10061-02-6	<5.0	5.0
1,1,2-Trichloroethane	79-00-5	<5.0	5.0
2-Hexanone	591-78-6	<10.	10.
1,2-Dibromoethane	106-93-4	<5.0	5.0
1,3-Dichloropropane	142-28-9	<5.0	5.0
Tetrachloroethane	127-18-4	<5.0	5.0
Dibromochloromethane	124-48-1	<5.0	5.0
Chlorobenzene	108-90-7	<5.0	5.0
1,1,1,2-Tetrachloroethane	630-20-6	<5.0	5.0

LAS LABORATORIES

OLATILE ORGANICS BY GC/MS

Client Sample ID: Method Blank
Date Collected: N/A
Date Analyzed: 25-FEB-97
Percent Moisture: N/A

LAL Sample ID: 46011MB
Date Received: N/A
Analytical Dilution: 1
Analytical Batch ID: 022597-8260-D1
Preparation Dilution: 1.00

COMPOUNDS	REF ID	CONCENTRATION (PPM)	NOISE	DATA QUALIFIER (S)
Ethylbenzene	100-41-4	<5.0	5.0	
m,p-Xylene	136777-61-2	<5.0	5.0	
o-Xylene	95-47-6	<5.0	5.0	
Styrene	100-42-5	<5.0	5.0	
Bromoform	75-25-2	<5.0	5.0	
Isopropylbenzene	98-82-8	<5.0	5.0	
1,1,2,2-Tetrachloroethane	79-34-5	<5.0	5.0	
1,2,3-Trichloropropane	96-18-4	<5.0	5.0	
n-Propylbenzene	103-65-1	<5.0	5.0	
Bromobenzene	108-86-1	<5.0	5.0	
1,3,5-Trimethylbenzene	108-67-8	<5.0	5.0	
2-Chlorotoluene	95-49-8	<5.0	5.0	
4-Chlorotoluene	106-43-4	<5.0	5.0	
tert-Butylbenzene	98-06-6	<5.0	5.0	
1,2,4-Trimethylbenzene	95-63-6	<5.0	5.0	
sec-Butylbenzene	135-98-8	<5.0	5.0	
p-Isopropyltoluene	99-87-6	<5.0	5.0	
1,3-Dichlorobenzene	541-73-1	<5.0	5.0	
1,4-Dichlorobenzene	106-46-7	<5.0	5.0	
n-Butylbenzene	104-51-8	<5.0	5.0	
1,2-Dichlorobenzene	95-50-1	<5.0	5.0	
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	5.0	
1,2,4-Trichlorobenzene	120-82-1	<5.0	5.0	
Hexachlorobutadiene	87-68-3	<5.0	5.0	
Naphthalene	91-20-3	<5.0	5.0	
1,2,3-Trichlorobenzene	87-61-6	<5.0	5.0	

LAS LABORATORIES

LCS DATA SUMMARY

VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	46011LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	25-FEB-97	Analytical Dilution:	1
Percent Moisture:	N/A	Analytical Batch ID:	022597-8260-D1
		Preparation Dilution:	1.00

CONSTITUENT	RECOVERY	GC METHOD
1,2-Dichloroethane-d4	91%	77-127
Toluene-d8	95%	84-120
Bromofluorobenzene	79%	78-125

CONSTITUENT	SPIKE AMOUNT µg/g	DOC CONCENTRATION µg/g	GC RECOVERY	GC METHOD
1,1-Dichloroethene	50.0	52.2	104	54-138
Benzene	50.0	52.6	105	70-130
Trichloroethene	50.0	58.5	117	57-132
Toluene	50.0	49.1	98	71-129
Chlorobenzene	50.0	47.3	95	72-128

LAS

LCS DATA SUMMARY
VOLATILE ORGANICS BY GC/MS

Client Sample ID: Lab Ctrl Sample
Date Collected: N/A
Date Analyzed: 25-FEB-97

LAL Sample ID: 46012LCS
Date Received: N/A
Analytical Dilution: 1
Analytical Batch ID: 022597-8260-C1
Preparation Dilution: 1.00

SURROGATE	RECOVERY	QC Limits
1,2-Dichloroethane-d4	92%	84-122
Toluene-d8	95%	87-117
Bromofluorobenzene	92%	83-118

Constituent	Spike Added ug/L	LCS Concentration ug/L	LCS % Recovery	QC Limits
1,1-Dichloroethene	50.0	42.1	84	62-124
Benzene	50.0	44.7	89	68-128
Trichloroethene	50.0	44.2	88	65-125
Toluene	50.0	45.5	91	69-129
Chlorobenzene	50.0	43.4	87	68-128

LAS

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Instrument ID: GC/MS-D

Date/Time Analyzed: 19-FEB-97 1807

Analytical Batch ID: 021997-8260-D1

	IS1 (PFB) Area	RT	IS2 (DFB) Area	RT	IS3 (CBZ) Area	RT	IS4 (DCB) Area	RT
12 HOUR STD	1070976	10.92	1685823	12.41	1524075	16.99	1523650	21.17
UPPER LIMIT	2141952	11.42	3371646	12.91	3048150	17.49	3047300	21.67
LOWER LIMIT	535488	10.42	842912	11.91	762038	16.49	761825	20.67
CUSTOMER SAMPLE NO.								
Method Blank	1027937	10.92	1640922	12.41	1460549	16.99	1224051	21.15
Lab Ctrl Sample	1158685	10.91	1720796	12.41	1579935	16.98	1520752	21.17
AF7031-1306	838559	10.92	1319122	12.41	1136463	16.98	841120	21.15
AF7031-1306MS	975690	10.92	1503251	12.41	1270851	16.99	1210272	21.15
AF7031-1306MSD	993757	10.92	1563050	12.41	1402626	16.98	1219754	21.15
97BPXLIB3SD02(08)	821105	10.92	1290347	12.41	1135656	16.98	793510	21.15

IS1 (PFB) = Pentafluorobenzene
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5
 IS4 (DCB) = 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
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

LAS

**VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY**

Instrument ID: GC/MS-D

Date/Time Analyzed: 20-FEB-97 1752

Analytical Batch ID: 022097-8260-D1

	IS1 (PFB) AREA	RT	IS2 (DFB) AREA	RT	IS3 (CBZ) AREA	RT	IS4 (DCB) AREA	RT
12 HOUR STD	1004208	10.91	1624597	12.41	1479020	16.98	1486139	21.16
UPPER LIMIT	2008416	11.41	3249194	12.91	2958040	17.48	2972278	21.66
LOWER LIMIT	502104	10.41	812299	11.91	739510	16.48	743070	20.66
=====								
CUSTOMER SAMPLE NO.								
Method Blank	1074385	10.92	1678422	12.41	1497963	16.98	1295199	21.14
Lab Ctrl Sample	912740	10.91	1489980	12.40	1353155	16.97	1345651	21.15
97BPXLIB3SD01(01)	998193	10.91	1516695	12.40	1368085	16.97	1017923	21.14
97EXLIB3SD01MS	975391	10.91	1488096	12.40	1320462	16.96	1095455	21.14
97EXLIB3SD01MSD	940681	10.90	1437020	12.39	1201520	16.96	1066261	21.14
97BPXLIB6SD01(01)	892611	10.91	1367818	12.40	1188925	16.98	915243	21.14
97BPXLIB6SD02(08)	895089	10.90	1348156	12.39	1194878	16.96	896865	21.13
97BPXLIB10SD01(01)	894079	10.91	1307395	12.39	1188284	16.96	949076	21.12
97BPXLIB10SD02(08)	954713	10.91	1434221	12.39	1196663	16.96	960486	21.12

- IS1 (PFB) = Pentafluorobenzene
- IS2 (DFB) = 1,4-Difluorobenzene
- IS3 (CBZ) = Chlorobenzene-d5
- IS4 (DCB) = 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
- RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

LAS

VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY

Instrument ID: GC/MS-D

Date/Time Analyzed: 21-FEB-97 1757

Analytical Batch ID: 022197-8260-D1

	IS1 (PFB) Area	RT	IS2 (DFB) Area	RT	IS3 (CBZ) Area	RT	IS4 (DCB) Area	RT
12 HOUR STD	1077894	10.80	1828675	12.28	1710322	16.83	1679519	20.99
UPPER LIMIT	2155788	11.30	3657350	12.78	3420644	17.33	3359038	21.49
LOWER LIMIT	538947	10.30	914338	11.78	855161	16.33	839760	20.49

CUSTOMER SAMPLE NO.								
Method Blank	1113507	10.81	1835703	12.29	1796273	16.83	1538773	20.98
Lab Ctrl Sample	995715	10.80	1721974	12.28	1674017	16.82	1545448	20.99
97BPXLIB10SD62(08)	795804	10.80	1431612	12.28	1226841	16.82	953084	20.97
97BPXLI11SD02(08)	812568	10.80	1631751	12.28	885290	16.82	1176179	20.97
97BPXLIC2SD01(01)	914475	10.80	1426595	12.28	1273103	16.82	893396	20.96
97BPXLIC2SD02(08)	1021932	10.79	1636462	12.28	1450597	16.82	1197053	20.97
97BPXLIC2SD61(08)	983546	10.80	1561843	12.28	1371031	16.82	1123958	20.96
97BPXLIC4SD02(08)	870510	10.80	1385040	12.28	1283674	16.82	968594	20.96
97BPXLIA4SD02(08)	899867	10.80	1501433	12.27	1309723	16.82	1017067	20.96
97BPXLIA6SD01(01)	899426	10.81	1448054	12.28	1174679	16.82	799171*	20.97
97BPXLIA6SD02(08)	687117	10.80	1110828	12.28	870905	16.82	612581*	20.97
97BPXLIA6SD62(08)	679368	10.80	1090082	12.28	905641	16.82	645721*	20.97
97BPXLIA8SD01(01)	29382*	10.81	47430*	12.29	37015*	16.81	23206*	20.96

IS1 (PFB) = Pentafluorobenzene
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5
 IS4 (DCB) = 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
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

LAS

VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY

Instrument ID: GC/MS-D

Date/Time Analyzed: 24-FEB-97 1636

Analytical Batch ID: 022497-8260-D1

	IS1 (PFB) Area	RT	IS2 (DFB) Area	RT	IS3 (CBZ) Area	RT	IS4 (DCB) Area	RT
12 HOUR STD	1107666	10.79	1787304	12.28	1609069	16.82	1586416	20.98
UPPER LIMIT	2215332	11.29	3574608	12.78	3218138	17.32	3172832	21.48
LOWER LIMIT	553833	10.29	893652	11.78	804535	16.32	793208	20.48

CUSTOMER SAMPLE NO.								
Method Blank	1092387	10.81	1731031	12.29	1670995	16.83	1427985	20.98
Lab Ctrl Sample	912796	10.80	1521751	12.29	1447897	16.83	1404732	20.99
97BPXLIA4SD01(01)	904316	10.84	1447852	12.30	1317864	16.87	1051139	21.01
97BPXLIA4SD01(01)MS	936078	10.80	1509373	12.29	1381518	16.83	1214107	20.99
97BPXLIA4SD01(01)MSD	897891	10.80	1423953	12.29	1304055	16.83	1084600	20.99
97BPXLIA6SD01(01)RE	896591	10.81	1390647	12.28	1181526	16.83	816529	20.98
97BPXLIA6SD02(08)RE	784890	10.82	1232023	12.29	1080532	16.84	773918*	20.98
97BPXLIA6SD62(08)RE	710086	10.81	1141729	12.28	987728	16.83	665461*	20.97
97BPXLIA8SD02(08)	846685	10.83	1327673	12.29	1171141	16.84	877360	20.98
97BPXLIA8SD01(01)RE	806146	10.81	1255377	12.29	983262	16.83	673320*	20.97
97BPXLIA10SD01(01)	769354	10.82	1203224	12.28	1046346	16.83	828783	20.97
97BPXLIA10SD02(08)	935140	10.82	1479856	12.28	1226971	16.83	952126	20.98
97BPXLITB21697	1035888	10.81	1639631	12.28	1470559	16.82	1283646	20.97
97BPXLIB8SD02(08)	721272	10.81	1135480	12.28	893237	16.83	624523*	20.96
97BPXLIB8SD01(01)	576309	10.80	1024200	12.28	795270*	16.82	524032*	20.97

- IS1 (PFB) = Pentafluorobenzene
- IS2 (DFB) = 1,4-Difluorobenzene
- IS3 (CBZ) = Chlorobenzene-d5
- IS4 (DCB) = 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
- RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

LAS LABORATORIES

VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY

Instrument ID: GC/MS-D

Date/Time Analyzed: 25-FEB-97 1602

Analytical Batch ID: 022597-8260-D1

	IS1 (PFB) Area	RT	IS2 (DFB) Area	RT	IS3 (CBZ) Area	RT	IS4 (DCB) Area	RT
12 HOUR STD	1417259	10.78	2476992	12.27	1905944	16.82	1663111	20.9
UPPER LIMIT	2834518	11.28	4953984	12.77	3811888	17.32	3326222	21.4
LOWER LIMIT	708630	10.28	1238496	11.77	952972	16.32	831556	20.4

CUSTOMER SAMPLE NO.								
Lab Ctrl Sample	1366188	10.80	2397782	12.28	2035373	16.83	1683044	20.9
Method Blank	1360755	10.87	2282014	12.28	1928092	16.84	1308796	20.
97BPXLIYA10SDO2(O8)RE	1191159	10.80	1953887	12.28	1528431	16.83	1018580	20.
97BPXLIB8SDO2(O8)RE	1036529	10.81	1714717	12.28	1238272	16.83	768063*	20.9
97BPXLIB8SDO1(O1)RE	1196511	10.81	1978794	12.28	1550485	16.83	1104251	20.9
97BPXLIC4SDO1(O1)	1077779	10.81	1710084	12.28	1393480	16.83	861793	20.
97BPXLI11SDO1(O1)	1098246	10.81	1716552	12.28	1354338	16.83	875552	20.
97BPXLIC4SDO1(O1)RE	1179250	10.80	1767437	12.28	1485250	16.82	1077000	20.9
97BPXLI11SDO1(O1)RE	1025589	10.80	1644835	12.28	1264066	16.82	864404	20.9

IS1 (PFB) = Pentafluorobenzene
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5
 IS4 (DCB) = 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
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

LAS

VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY

Instrument ID: GC/MS-C

Date/Time Analyzed: 25-FEB-97 1728

Analytical Batch ID: 022597-8260-C1

	IS1 (PFB)		IS2 (DFB)		IS3 (CBZ)		IS4 (DCB)	
	Area #	RT #	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	1780236	11.12	3396506	12.65	3013288	17.33	2594279	21.56
UPPER LIMIT	3560472	11.62	6793012	13.15	6026576	17.83	5188558	22.06
LOWER LIMIT	890118	10.62	1698253	12.15	1506644	16.83	1297140	21.06
CUSTOMER SAMPLE NO.								
Lab Ctrl Sample	1835202	11.13	3519861	12.66	3193986	17.33	2699268	21.54
Method Blank	1620721	11.13	3149537	12.66	2932373	17.32	2154845	21.52
97BPXLI021497	1769214	11.12	3374777	12.65	3097861	17.32	2282034	21.54

IS1 (PFB) = Pentafluorobenzene
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5
 IS4 (DCB) = 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
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

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



RUN LOGS / INJECTION LOGS

Page 1

J. Foster 2-21-97

ANA. LYST	DATE	TIME OF INJ.	LAL #	DESCRIPTION/CLIENT	SOL #	MATRIX/DIL	DATA FILE	TIME FILE	METHOD FILE	OR	COMMENTS
✓	2/2/97	202		AFB 020997D	0971-39-5		TD2948	MD0321	MS0800	OK	
		2122	VSTD200	VSTD020997D1	0971-40-1/2		49		DS8260		ALS-1 NO GOOD SOIL SPT GASES LOW
		2202	VSTD150				50				2
		2240	VSTD100				51				3
		2320	VSTD050				52				4
		0000	VSTD020				53				5
✓	2/4/97	1239		AFB 020997D	0971-39-5		TD2954	MD0321	MS0800	OK	
		1810	VSTD200	VSTD020997D1	0971-40-1/2		54		DS8260		ALS-1 GOOD SOIL SPT 8260
		1850	VSTD150				56			OK	2
		1929	VSTD110				57			OK	3
		2008	VSTD050				58			OK	4
		2048	VSTD020				59			OK	5
		2122		BLANK	1175-40-3		60			OK	6
		2202	VSTD200	VSTD020997D1	0971-40-1/2		61		DS8260	OK	7 GOOD WATER 8260 Spt
		2240	VSTD100	VSTD020997D1			62			OK	8
		2320	VSTD050				63			OK	9
		0000	VSTD020				64			OK	11
		0000	VSTD020				65			OK	12
✓	2/6/97	1678		AFB 020997D	0971-39-5		TD2966	MD0321	MS0800	OK	
		1709		VSTD020997D1	0971-40-1/2		67		DS8260	OK	ALS-1
		1809		45424 MB	0971-40-1		68			OK	2
		1848		45424 CLS	0971-40-2	5-0029	69			OK	3
		1928	18722-1	074009101			70			OK	4 PKL
		2007	18722-4	074009102		5-1054	71			OK	5
		2046	18722-5	074009103		5-0046	72			OK	6
		2126	18722-6	074009104		5-0026	73			OK	7
		2205	18722-7	074009105		5-0045	74			OK	8
		2245	18722-8	074009106		5-0045	75			OK	1
		2324	18722-9	074009107		5-0049	76			OK	2
		0000	18722-10			5-0069	77			OK	3

ANA. LYST	DATE	TIME OF INJ.	LAL #	DESCRIPTION/CLIENT	SOL #	MATRIX/DR	DATA FILE	TUNE FILE	METHOD FILE	DR	COMMENTS
JH	2/19/97	1645		056021497D2	1977-99-5		703168	MD1321	ME.DA-91	OK	
		1712		157D021497D1	1977-99-10A		69		DW390	OK	ALS-1
		1600		45692MS	0977-99-21		70			OK	2
		1944	L8764-7	VN01863M	0977-99-21		71			OK	3 PH=7
		2110	45692MS		0977-99-21		72			OK	4 PH=7
		2150	45692MS		0977-99-21		73			OK	5 PH=7
		2226	L8780-1	97-HA-01A	0977-99-21		74			OK	6 PH=1
		2302	L8780-3	97-HA-01D			75			OK	7 PH=1
		2337	L8780-5	97-HA-01C			76			OK	8 PH=1
		0013	L8780-9	97-HA-01D			77			OK	9 PH=1
		0049	L8780-9	97-HA-01E			78			OK	11 PH=1
			L8810-2	97-HA-01E			79			OK	12
			L8810-15	97-HA-01E			80			OK	13
			L8810-19	97-HA-01E			81			OK	14
			45692MS				82			OK	15
			45692MS				83			OK	1
		1423	45692MS				84			OK	2
JH	2/19/97	1724		056021497D1	1977-99-5		763065	MD1321	ME.DA-91	OK	
		1807		157D021497D1	1977-99-10A		86		D58260	OK	ALS-1
		1945		45798MS	0977-99-3		87			OK	2
		2129		45798MS	0977-99-3		88			OK	3
		2211	L8811-2	AF7131-1306	0977-99-3	5-0089	89			OK	4
		2257	45798MS		0977-99-3	5-0026	90			OK	5
		2336	45798MS		0977-99-3	5-0026	91			OK	6 T.S. + S.M. out. PH
		0015	L8849-1	97BPXLE036P01	0977-99-3	5-0031	92			OK	7 T.S. + S.M. out. PH analysis
		0054	L8849-5	97BPXLE036P02		5-0031	93			OK	8
		0133	L8849-9	97BPXLE036P01(OL)		5-0031	94			OK	9 T.S. + S.M. out. PH analysis
		0212	L8849-13	97BPXLE036P02(OL)		5-0031	95			OK	11 T.S. + S.M. out. PH analysis
		0257	L8849-17	97BPXLE036P01(OL)		5-0031	96			OK	12 T.S. out. PH analysis
		0330	L8849-21	97BPXLE036P02(OL)		5-0031	97			OK	13 T.S. + S.M. out. PH analysis

ANALYST	DATE	TIME OF WJ.	LAL #	DESCRIPTION/CLIENT	SOL #	MATRIX/CHK	DATA FILE	TUNE FILE	METHOD FILE	DR	COMMENTS
JH	2/19/98	1922		06-502209721	0978-99-8		TD2198	MD1321	MD1321	OK	
		1752		V5TD12209721	1978-01-12		99		DSP260	OK	ALS-1
		1830		45872 MB	1978-01-3		704100			OK	2
		1909		45872 LLS	1978-01-1	5.000g	01			OK	3
		2034	18844-1	970X11835001	0978-49-3	5.000g	02			OK	4
		2112	45852 MB		1978-01-3	4.998g	03			OK	5
		2151	45852 MB			5.008g	04			OK	6
		2229	18844-9	970X11835011(01)	1978-49-3	5.010g	05			OK	7
		2308	18844-12	970X11835012(01)		5.000g	06			OK	8
		2346	18844-17	970X11835001(01)		4.998g	07			OK	9
		1025	18844-21	970X11835002(08)		5.000g	08			OK	11
		0104	18844-25	970X11835002(01)		5.000g	09			OK	12 T.S. + SURE out, Residual
		0142	18844-33	970X11835002(08)		5.000g	10			OK	13
		1221	18844-37	970X11835001(01)		5.004g	11			OK	14
		0257	18844-41	970X11835002(01)		5.001g	12			OK	15
		0228	18844-45	970X11835001(08)		5.000g	13			OK	1
											initial RAA found
JH	2/21/98	1927		06-12214721	0978-99-5		TD4014	MD1321	MD1321	OK	
		1757		V5TD12219721	0978-01-12		15		DSP260	OK	ALS-1
		1836		45925 MB	1978-01-3		16			OK	2
		1915		45925 LLS	1978-01-1	5.000g	17			OK	3
		1953	18844-25	970X11835002(08)	0978-49-3	5.000g	18			OK	4
		2032	18844-33	970X11835002(01)		5.000g	19			OK	5
		2111	18844-37	970X11835001(01)		5.000g	20			OK	6
		2150	18844-41	970X11835002(01)		5.000g	21			OK	7
		2228	18844-45	970X11835001(08)		4.998g	22			OK	8
		2307	18844-49	970X11835002(08)		5.002g	23			OK	9
		2346	18844-53	970X11835001(01)		5.000g	24			OK	11 T.S. out, Residual
		1025	18844-57	970X11835002(08)		5.000g	25			OK	12
		0103	18844-60	970X11835001(01)		5.010g	26			OK	13 T.S. + SURE out, Residual
		0142	18844-64	970X11835001(08)		4.998g	27			OK	14
		0221	18844-68	970X11835002(08)		6.000g	28			OK	15

LOCKHEED ANALYTICAL LAB

REVIEWED BY

INSTRUMENT ID # 05/MS-D

LOGBOOK#

LAL-99-100-0028

PAGE #

000059

ANA (YST)	DATE	TIME OF INJ	IAL #	DESCRIPTION/CLIENT	SOL #	MATRIX/CON	DATA FILE	TUNE FILE	METHOD FILE	DR	COMMENTS
TR	2/2/89	1255	1004-72	978KLEA1500(01)	0978-01-2		70029	MON121	DS1260	REL	MS-1 T.S. + GUCR met
		1338	1197-72	978KLEA1500(01)			↓ 30	↓	↓		2
TR	2/2/89	1604		978KLEA1500(01)	0978-01-5		700091	MON121	MS1000	REL	
		1636		US70620X9721	0978-01-12		32		DS1260	REL	MS-1
		1715		4600MS	0978-01-3		33			REL	2
		1762		4600MS	0978-01-1	5-0069	34			REL	3
		1838	1004-53	978KLEA1500(01)	0978-01-5	5-0115	35			REL	4
		1910	46013MS		0978-01-1	5-0029	36			REL	5
		1948	4600200			5-0019	37			REL	6
		2009	1004-60	978KLEA1500(01)	0978-01-5	5-0119	38			REL	7 Suck out, Report w/ 700026
		2100	1004-60	978KLEA1500(01)		5-0129	39			REL	8 S.S. met, Report w/ 700027
		2157	1004-60	978KLEA1500(01)		5-0069	40			REL	9 T.S. met, Report w/ 700028
		2236	1004-71	978KLEA1500(01)		4-9989	41			REL	11
		2284	1004-71	978KLEA1500(01)		5-0069	42			REL	12 T.S. + Suck out, Report w/ 700030
		2354	1004-70	978KLEA1500(01)		5-0015	43			REL	13
		0032	1004-84	978KLEA1500(01)		5-0057	44			REL	14 Suck out, Report w/ 700031
		0111	1004-88	978KLEA1500(01)			45			REL	15 R#1
		0150	1004-89	978KLEA1500(01)		5-9989	46			REL	1 T.S. + Suck out, Report w/ 700032
		0220	1004-89	978KLEA1500(01)		5-0019	47			REL	2
TR	2/2/89	1531		4601MS	0978-01-5		700081	MON121	MS1000	REL	
		1607		4601MS	0978-01-12		48		DS1260	REL	MS-1
		1648		4601MS	0978-01-3		49			REL	2 Suck out
		1728		4601MS	0978-01-1	5-0019	50			REL	3
		2109		4601MS	0978-01-5		51			REL	2
		2148	1004-91	978KLEA1500(01)		5-0069	52			REL	4 Suck out, Report w/ 700034
		2229	1004-91	978KLEA1500(01)		5-0129	53			REL	5 S.S. met, Report w/ 700036
		2306	1004-91	978KLEA1500(01)		5-0015	54			REL	6 Suck out, Report w/ 700037
		2345	1004-102	978KLEA1500(01)		5-0019	55			REL	7 Suck out, Report w/ 700038
		0014	1004-07	978KLEA1500(01)		5-0129	56			REL	8 Suck out, Report w/ 700039
		0103	1004-102	978KLEA1500(01)		5-0019	57			REL	4 Suck out, Report w/ 700040
		0143	1004-102	978KLEA1500(01)		5-0015	58			REL	7 Suck out, Report w/ 700041

ANALYST	DATE OF INJ.	TIME OF INJ.	ALS NO.	LAS SAMPLE ID	DESCRIPTION/CLIENT SAMPLE ID	SOLUTION ID	MA DILUTION	DATA FILE	TUNE FILE	METHOD FILE	DR?	COMMENTS
CH	2/20/97	0306	1	45779MS	9702120907	0978-49-2	5ml H ₂ O	C3958	MC0604	CMCIPAF	DNR	MSD outside tune, see C5966
+	+	0351	2	45779MSD	↓	↓	↓	6050	↓	↓	↓	inside 12 hr. tune, see C5969
CH	2/20/97	0804	DI	TUNE	BFB020097C1	0978-50-1	—	C3961	MC0604	MECBFB	OK	
		0838	2	CCV	VSTD45822	0978-49-2	5ml H ₂ O	62		CMCIPAF	OK	
		0936	2	45822 LCS	LCS	0978-49-2	↓	63		↓	OK	
		1022	4	Blank	Cleanings	0978-49-2	↓	64		↓	OK	
		1107	5	45822 MB	Method Blank	↓	↓	65		↓	OK	
		1151	6	L8841-10	(1) 9702120913	↓	↓	66		↓	OK	pH=7
		1235	7	L8841-16	(12) 9702121157	↓	↓	67		↓	OK	↓
		1320	8	45779MS	9702120907	0978-49-2	↓	68		↓	OK	↓
↓	↓	1405	10	45779MSD	↓	↓	↓	69		↓	OK	↓
CH	2/24/97	3:58	DI	TUNE	BFB022497C1	0978-50-1	—	C3970	MC0604	MECBFB	OK	
		4:34	2	CCV	VSTD022497C1	0978-49-2	5ml H ₂ O	71		CMCIPAF	DNR	
		5:38	?	↓	↓	↓	↓	72		↓	↓	
		7:51	DI	TUNE	BFB022497C1	0978-50-1	↓	73		↓	OK	
		8:24	1	VSTD020	IC020022497C1	0978-49-2	5ml H ₂ O	74		↓	OK	
		9:14	2	VSTD060	IC050022497C1	↓	↓	75		↓	OK	
		9:59	4	VSTD100	IC100022497C1	↓	↓	76		↓	OK	GOOD 9240 H ₂ O Spt. Initial Cal. N/ From 21.123A & IPA
		10:43	5	VSTD150	IC150022497C1	↓	↓	77		↓	OK	
		11:27	6	VSTD200	IC200022497C1	↓	↓	78		↓	OK	
		18:12	7	5 PPB	5 PPB Verification	↓	↓	79		↓	OK	
		12:56	8	Blank	46009 LCS LCS	0978-49-2	↓	80		↓	OK	
		1:41	10	46009 LCS DUP	LCS DUP	0978-49-2	↓	81		↓	OK	
		2:26	11	Blank	Cleanings Blank	0978-49-2	↓	82		↓	OK	
		3:11	12	46009 MB	Method Blank	↓	↓	83		↓	OK	
		3:56	13	L8874-18	030452-012/Tip Blank	↓	↓	84		↓	OK	
		4:40	14	L8874-4	030452-024/TTR	↓	↓	85		↓	OK	
↓	↓	5:26	16	Blank	Blank	↓	↓	86		↓	OK	
CH	2/25/97	4:23	1	↓	↓	↓	↓	87		↓	OK	
CH	2/25/97	4:57	DI	TUNE	BFB022597C1	0978-50-1	—	C3988	MC0604	MECBFB	OK	

S NO. = Tekmar Purge and Trap Autosampler Position Number. For Data Reportable? (DR?) Column: DNR = Do Not Report; Rep = Report (QC failure, report with another analysis); OK = Report (No QC failure). GC/MS VOA DOS

INJ. NO.	DATE OF INJ.	TIME OF INJ.	ALS NO.	LAS SAMPLE ID	DESCRIPTION/ CLIENT SAMPLE ID	SOLUTION ID	MATRIX/ DILUTION	DATA FILE	TUNE FILE	METHOD FILE	DR? 2/20/99	COMMENTS
✓	2/25/99	5:28		DLV	VSTD022597C1	0978-62-1	5ml/10	C3989	MCD604	WJETAF	OK	
		6:10		46012CS		0978-62-1		90		WJETAF	OK	
		6:59		Blank		0978-62-1		91			DNR	
		7:39		46012MB				92			OK	
		8:28		Blank				93			DNR	
		9:13		L8844-91	97BPXL1021497			94			OK	
		10:07		46012SDP		0978-62-1		95				
				Blank		0978-62-1		96				
				L8874-18	030482-012/TRIP BLANK			97				
				L8874-4	030482-004/TTR			98				
				L8863-51	SKD00003			99				
				L8863-53	SKD00004			400				
✓				L8863-54	SKD00005			401				

74

0 = Tekmer Purge and Trap Autosampler Position Number. For Data Reportable? (DR?) Column: DNR = Do Not Report; Rep = Report (QC failure, report with another analysis); OK = Report (No QC failure).

GC/MS VOA DOS



SAMPLE RESULTS FORMS AND QC SUMMARIES



EPA METHOD 8270 (Semivolatile Organics)



LAS

EMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB3SD01(01)	LAL Sample ID:	L8849-2
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	26.33	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	66%	15-111
Phenol-d5	85%	21-110
Nitrobenzene-d5	72%	17-114
2-Fluorobiphenyl	94%	29-114
2,4,6-Tribromophenol	84%	33-136
Terphenyl-d14	117%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<900	900	
bis(2-Chloroethyl)ether	111-44-4	<900	900	
2-Chlorophenol	95-57-8	<900	900	
1,3-Dichlorobenzene	541-73-1	<900	900	
1,4-Dichlorobenzene	106-46-7	<900	900	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<900	900	
2-Methylphenol	95-48-7	<900	900	
bis(2-chloroisopropyl)ether	108-60-1	<900	900	
4-Methylphenol	106-44-5	<900	900	
N-Nitroso-di-n-propylamine	621-64-7	<900	900	
Hexachloroethane	67-72-1	<900	900	
Nitrobenzene	98-95-3	<900	900	
Isophorone	78-59-1	<900	900	
2-Nitrophenol	88-75-5	<900	900	
2,4-Dimethylphenol	105-67-9	<900	900	
Benzoic acid	65-85-0	<4500	4500	
bis(2-Chloroethoxy)methane	111-91-1	<900	900	
2,4-Dichlorophenol	120-83-2	<900	900	
1,2,4-Trichlorobenzene	120-82-1	<900	900	
Naphthalene	91-20-3	<900	900	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<900	900	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<900	900	
Hexachlorocyclopentadiene	77-47-4	<900	900	
2,4,6-Trichlorophenol	88-06-2	<900	900	
2,4,5-Trichlorophenol	95-95-4	<900	900	
2-Chloronaphthalene	91-58-7	<900	900	
2-Nitroaniline	88-74-4	<4500	4500	
Dimethylphthalate	131-11-3	<900	900	
Acenaphthylene	208-96-8	<900	900	
2,6-Dinitrotoluene	606-20-2	<900	900	
3-Nitroaniline	99-09-2	<4500	4500	
Acenaphthene	83-32-9	<900	900	
2,4-Dinitrophenol	51-28-5	<4500	4500	
4-Nitrophenol	100-02-7	<4500	4500	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB3SD01(01)	LAL Sample ID:	L8849-2
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	26.33	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (s)
Dibenzofuran	132-64-9	<900	900	
2,4-Dinitrotoluene	121-14-2	<900	900	
Diethylphthalate	84-66-2	<900	900	
4-Chlorophenyl-phenylether	7005-72-3	<900	900	
Fluorene	86-73-7	<900	900	
4-Nitroaniline	100-01-6	<4500	4500	
4,6-Dinitro-2-methylphenol	534-52-1	<4500	4500	
N-Nitrosodiphenylamine (1)	86-30-6	<900	900	
4-Bromophenyl-phenylether	101-55-3	<900	900	
Hexachlorobenzene	118-74-1	<900	900	
Pentachlorophenol	87-86-5	<4500	4500	
Phenanthrene	85-01-8	<900	900	
Anthracene	120-12-7	<900	900	
Carbazole	86-74-8	<900	900	
Di-n-butylphthalate	84-74-2	<900	900	
Fluoranthene	206-44-0	<900	900	
Pyrene	129-00-0	<900	900	
Butylbenzylphthalate	85-68-7	<900	900	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<900	900	
Chrysene	218-01-9	<900	900	
bis(2-Ethylhexyl)phthalate	117-81-7	<900	900	
Di-n-octylphthalate	117-84-0	<900	900	
Benzo(b)fluoranthene	205-99-2	<900	900	
Benzo(k)fluoranthene	207-08-9	<900	900	
Benzo(a)pyrene	50-32-8	<900	900	
Indeno(1,2,3-cd)pyrene	193-39-5	<900	900	
Dibenz(a,h)anthracene	53-70-3	<900	900	
Benzo(g,h,i)perylene	191-24-2	<900	900	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS 1270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB3SD02 (08)	LAL Sample ID:	L8849-6
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	18.83	Preparation Dilution:	0.997

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	64%	15-111
Phenol-d5	80%	21-110
Nitrobenzene-d5	73%	17-114
2-Fluorobiphenyl	95%	29-114
2,4,6-Tribromophenol	90%	33-136
Terphenyl-d14	119%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ug/Kg	DATA QUALIFIER (s)
Phenol	108-95-2	<810	810	
bis(2-Chloroethyl) ether	111-44-4	<810	810	
2-Chlorophenol	95-57-8	<810	810	
1,3-Dichlorobenzene	541-73-1	<810	810	
1,4-Dichlorobenzene	106-46-7	<810	810	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<810	810	
2-Methylphenol	95-48-7	<810	810	
bis(2-chloroisopropyl) ether	108-60-1	<810	810	
4-Methylphenol	106-44-5	<810	810	
N-Nitroso-di-n-propylamine	621-64-7	<810	810	
Hexachloroethane	67-72-1	<810	810	
Nitrobenzene	98-95-3	<810	810	
Isophorone	78-59-1	<810	810	
2-Nitrophenol	88-75-5	<810	810	
2,4-Dimethylphenol	105-67-9	<810	810	
Benzoic acid	65-85-0	<4100	4100	
bis(2-Chloroethoxy) methane	111-91-1	<810	810	
2,4-Dichlorophenol	120-83-2	<810	810	
1,2,4-Trichlorobenzene	120-82-1	<810	810	
Naphthalene	91-20-3	<810	810	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<810	810	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<810	810	
Hexachlorocyclopentadiene	77-47-4	<810	810	
2,4,6-Trichlorophenol	88-06-2	<810	810	
2,4,5-Trichlorophenol	95-95-4	<810	810	
2-Chloronaphthalene	91-58-7	<810	810	
2-Nitroaniline	88-74-4	<4100	4100	
Dimethylphthalate	131-11-3	<810	810	
Acenaphthylene	208-96-8	<810	810	
2,6-Dinitrotoluene	606-20-2	<810	810	
3-Nitroaniline	99-09-2	<4100	4100	
Acenaphthene	83-32-9	<810	810	
2,4-Dinitrophenol	51-28-5	<4100	4100	
4-Nitrophenol	100-02-7	<4100	4100	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB3SD02 (08)	LAL Sample ID:	L8849-6
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	18.83	Preparation Dilution:	0.997

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<810	810	
2,4-Dinitrotoluene	121-14-2	<810	810	
Diethylphthalate	84-66-2	<810	810	
4-Chlorophenyl-phenylether	7005-72-3	<810	810	
Fluorene	86-73-7	<810	810	
4-Nitroaniline	100-01-6	<4100	4100	
4,6-Dinitro-2-methylphenol	534-52-1	<4100	4100	
N-Nitrosodiphenylamine (1)	86-30-6	<810	810	
4-Bromophenyl-phenylether	101-55-3	<810	810	
Hexachlorobenzene	118-74-1	<810	810	
Pentachlorophenol	87-86-5	<4100	4100	
Phenanthrene	85-01-8	<810	810	
Anthracene	120-12-7	<810	810	
Carbazole	86-74-8	<810	810	
Di-n-butylphthalate	84-74-2	<810	810	
Fluoranthene	206-44-0	<810	810	
Pyrene	129-00-0	<810	810	
Butylbenzylphthalate	85-68-7	<810	810	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<810	810	
Chrysene	218-01-9	<810	810	
bis(2-Ethylhexyl)phthalate	117-81-7	<810	810	
Di-n-octylphthalate	117-84-0	<810	810	
Benzo(b)fluoranthene	205-99-2	<810	810	
Benzo(k)fluoranthene	207-08-9	<810	810	
Benzo(a)pyrene	50-32-8	<810	810	
Indeno(1,2,3-cd)pyrene	193-39-5	<810	810	
Dibenz(a,h)anthracene	53-70-3	<810	810	
Benzo(g,h,i)perylene	191-24-2	<810	810	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS 3270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB6SD01(01)	LAL Sample ID:	L8849-10
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	32.2	Preparation Dilution:	0.994

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	65%	15-111
Phenol-d5	80%	21-110
Nitrobenzene-d5	70%	17-114
2-Fluorobiphenyl	94%	29-114
2,4,6-Tribromophenol	81%	33-136
Terphenyl-d14	100%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<970	970	
bis(2-Chloroethyl) ether	111-44-4	<970	970	
2-Chlorophenol	95-57-8	<970	970	
1,3-Dichlorobenzene	541-73-1	<970	970	
1,4-Dichlorobenzene	106-46-7	<970	970	
Benzyl alcohol	100-51-6	<1900	1900	
1,2-Dichlorobenzene	95-50-1	<970	970	
2-Methylphenol	95-48-7	<970	970	
bis(2-chloroisopropyl) ether	108-60-1	<970	970	
4-Methylphenol	106-44-5	<970	970	
N-Nitroso-di-n-propylamine	621-64-7	<970	970	
Hexachloroethane	67-72-1	<970	970	
Nitrobenzene	98-95-3	<970	970	
Isophorone	78-59-1	<970	970	
2-Nitrophenol	88-75-5	<970	970	
2,4-Dimethylphenol	105-67-9	<970	970	
Benzoic acid	65-85-0	<4900	4900	
bis(2-Chloroethoxy)methane	111-91-1	<970	970	
2,4-Dichlorophenol	120-83-2	<970	970	
1,2,4-Trichlorobenzene	120-82-1	<970	970	
Naphthalene	91-20-3	<970	970	
4-Chloroaniline	106-47-8	<1900	1900	
Hexachlorobutadiene	87-68-3	<970	970	
4-Chloro-3-methylphenol	59-50-7	<1900	1900	
2-Methylnaphthalene	91-57-6	<970	970	
Hexachlorocyclopentadiene	77-47-4	<970	970	
2,4,6-Trichlorophenol	88-06-2	<970	970	
2,4,5-Trichlorophenol	95-95-4	<970	970	
2-Chloronaphthalene	91-58-7	<970	970	
2-Nitroaniline	88-74-4	<4900	4900	
Dimethylphthalate	131-11-3	<970	970	
Acenaphthylene	208-96-8	<970	970	
2,6-Dinitrotoluene	606-20-2	<970	970	
3-Nitroaniline	99-09-2	<4900	4900	
Acenaphthene	83-32-9	<970	970	
2,4-Dinitrophenol	51-28-5	<4900	4900	
4-Nitrophenol	100-02-7	<4900	4900	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB6SD01 (01)	LAL Sample ID:	L8849-10
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	32.2	Preparation Dilution:	0.994

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (s)
Dibenzofuran	132-64-9	<970	970	
2,4-Dinitrotoluene	121-14-2	<970	970	
Diethylphthalate	84-66-2	<970	970	
4-Chlorophenyl-phenylether	7005-72-3	<970	970	
Fluorene	86-73-7	<970	970	
4-Nitroaniline	100-01-6	<4900	4900	
4,6-Dinitro-2-methylphenol	534-52-1	<4900	4900	
N-Nitrosodiphenylamine (1)	86-30-6	<970	970	
4-Bromophenyl-phenylether	101-55-3	<970	970	
Hexachlorobenzene	118-74-1	<970	970	
Pentachlorophenol	87-86-5	<4900	4900	
Phenanthrene	85-01-8	<970	970	
Anthracene	120-12-7	<970	970	
Carbazole	86-74-8	<970	970	
Di-n-butylphthalate	84-74-2	<970	970	
Fluoranthene	206-44-0	<970	970	
Pyrene	129-00-0	<970	970	
Butylbenzylphthalate	85-68-7	<970	970	
3,3'-Dichlorobenzidine	91-94-1	<1900	1900	
Benzo(a)anthracene	56-55-3	<970	970	
Chrysene	218-01-9	<970	970	
bis(2-Ethylhexyl)phthalate	117-81-7	<970	970	
Di-n-octylphthalate	117-84-0	<970	970	
Benzo(b)fluoranthene	205-99-2	<970	970	
Benzo(k)fluoranthene	207-08-9	<970	970	
Benzo(a)pyrene	50-32-8	<970	970	
Indeno(1,2,3-cd)pyrene	193-39-5	<970	970	
Dibenz(a,h)anthracene	53-70-3	<970	970	
Benzo(g,h,i)perylene	191-24-2	<970	970	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
70 SEMI-VOLATILES

Client Sample ID:	97BPXLIB6SD02 (08)	LAL Sample ID:	L8849-14
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	22.03	Preparation Dilution:	0.993

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	65%	15-111
Phenol-d5	79%	21-110
Nitrobenzene-d5	74%	17-114
2-Fluorobiphenyl	94%	29-114
2,4,6-Tribromophenol	86%	33-136
Terphenyl-d14	104%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<840	840	
bis(2-Chloroethyl) ether	111-44-4	<840	840	
2-Chlorophenol	95-57-8	<840	840	
1,3-Dichlorobenzene	541-73-1	<840	840	
1,4-Dichlorobenzene	106-46-7	<840	840	
Benzyl alcohol	100-51-6	<1700	1700	
1,2-Dichlorobenzene	95-50-1	<840	840	
2-Methylphenol	95-48-7	<840	840	
bis(2-chloroisopropyl) ether	108-60-1	<840	840	
4-Methylphenol	106-44-5	<840	840	
N-Nitroso-di-n-propylamine	621-64-7	<840	840	
Hexachloroethane	67-72-1	<840	840	
Nitrobenzene	98-95-3	<840	840	
Isophorone	78-59-1	<840	840	
2-Nitrophenol	88-75-5	<840	840	
2,4-Dimethylphenol	105-67-9	<840	840	
Benzoic acid	65-85-0	<4200	4200	
bis(2-Chloroethoxy)methane	111-91-1	<840	840	
2,4-Dichlorophenol	120-83-2	<840	840	
1,2,4-Trichlorobenzene	120-82-1	<840	840	
Naphthalene	91-20-3	<840	840	
4-Chloroaniline	106-47-8	<1700	1700	
Hexachlorobutadiene	87-68-3	<840	840	
4-Chloro-3-methylphenol	59-50-7	<1700	1700	
2-Methylnaphthalene	91-57-6	<840	840	
Hexachlorocyclopentadiene	77-47-4	<840	840	
2,4,6-Trichlorophenol	88-06-2	<840	840	
2,4,5-Trichlorophenol	95-95-4	<840	840	
2-Chloronaphthalene	91-58-7	<840	840	
2-Nitroaniline	88-74-4	<4200	4200	
Dimethylphthalate	131-11-3	<840	840	
Acenaphthylene	208-96-8	<840	840	
2,6-Dinitrotoluene	606-20-2	<840	840	
3-Nitroaniline	99-09-2	<4200	4200	
Acenaphthene	83-32-9	<840	840	
2,4-Dinitrophenol	51-28-5	<4200	4200	
4-Nitrophenol	100-02-7	<4200	4200	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB6SD02 (08)	LAL Sample ID:	L8849-14
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	22.03	Preparation Dilution:	0.993

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTIFICATION LIMIT ug/kg	DATA QUALIFIER (s)
Dibenzofuran	132-64-9	<840	840	
2,4-Dinitrotoluene	121-14-2	<840	840	
Diethylphthalate	84-66-2	<840	840	
4-Chlorophenyl-phenylether	7005-72-3	<840	840	
Fluorene	86-73-7	<840	840	
4-Nitroaniline	100-01-6	<4200	4200	
4,6-Dinitro-2-methylphenol	534-52-1	<4200	4200	
N-Nitrosodiphenylamine (1)	86-30-6	<840	840	
4-Bromophenyl-phenylether	101-55-3	<840	840	
Hexachlorobenzene	118-74-1	<840	840	
Pentachlorophenol	87-86-5	<4200	4200	
Phenanthrene	85-01-8	<840	840	
Anthracene	120-12-7	<840	840	
Carbazole	86-74-8	<840	840	
Di-n-butylphthalate	84-74-2	<840	840	
Fluoranthene	206-44-0	<840	840	
Pyrene	129-00-0	<840	840	
Butylbenzylphthalate	85-68-7	<840	840	
3,3'-Dichlorobenzidine	91-94-1	<1700	1700	
Benzo (a) anthracene	56-55-3	<840	840	
Chrysene	218-01-9	<840	840	
bis (2-Ethylhexyl) phtalate	117-81-7	<840	840	
Di-n-octylphthalate	117-84-0	<840	840	
Benzo (b) fluoranthene	205-99-2	<840	840	
Benzo (k) fluoranthene	207-08-9	<840	840	
Benzo (a) pyrene	50-32-8	<840	840	
Indeno (1,2,3-cd) pyrene	193-39-5	<840	840	
Dibenz (a, h) anthracene	53-70-3	<840	840	
Benzo (g, h, i) perylene	191-24-2	<840	840	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
70 SEMI-VOLATILES

Client Sample ID:	97BPXLIB10SD01(01)	LAL Sample ID:	L8849-18
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	20.06	Preparation Dilution:	0.995

SURROGATE	RECOVERY	QC LIMITS
2-Fluorophenol	66%	15-111
Phenol-d5	76%	21-110
Nitrobenzene-d5	91%	17-114
2-Fluorobiphenyl	97%	29-114
2,4,6-Tribromophenol	88%	33-136
Terphenyl-d14	106%	32-151

CONSTITUENT	CAS NO	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<830	830	
bis(2-Chloroethyl) ether	111-44-4	<830	830	
2-Chlorophenol	95-57-8	<830	830	
1,3-Dichlorobenzene	541-73-1	<830	830	
1,4-Dichlorobenzene	106-46-7	<830	830	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<830	830	
2-Methylphenol	95-48-7	<830	830	
bis(2-chloroisopropyl) ether	108-60-1	<830	830	
4-Methylphenol	106-44-5	<830	830	
N-Nitroso-di-n-propylamine	621-64-7	<830	830	
Hexachloroethane	67-72-1	<830	830	
Nitrobenzene	98-95-3	<830	830	
Isophorone	78-59-1	<830	830	
2-Nitrophenol	88-75-5	<830	830	
2,4-Dimethylphenol	105-67-9	<830	830	
Benzoic acid	65-85-0	<4100	4100	
bis(2-Chloroethoxy) methane	111-91-1	<830	830	
2,4-Dichlorophenol	120-83-2	<830	830	
1,2,4-Trichlorobenzene	120-82-1	<830	830	
Naphthalene	91-20-3	<830	830	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<830	830	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<830	830	
Hexachlorocyclopentadiene	77-47-4	<830	830	
2,4,6-Trichlorophenol	88-06-2	<830	830	
2,4,5-Trichlorophenol	95-95-4	<830	830	
2-Chloronaphthalene	91-58-7	<830	830	
2-Nitroaniline	88-74-4	<4100	4100	
Dimethylphthalate	131-11-3	<830	830	
Acenaphthylene	208-96-8	<830	830	
2,6-Dinitrotoluene	606-20-2	<830	830	
3-Nitroaniline	99-09-2	<4100	4100	
Acenaphthene	83-32-9	<830	830	
2,4-Dinitrophenol	51-28-5	<4100	4100	
4-Nitrophenol	100-02-7	<4100	4100	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB10SD01(01)	LAL Sample ID:	L8849-18
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	20.06	Preparation Dilution:	0.995

CONSTITUENT	CAS NO	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ug/Kg	DATA QUALIFIER (B,
Dibenzofuran	132-64-9	<830	830	
2,4-Dinitrotoluene	121-14-2	<830	830	
Diethylphthalate	84-66-2	<830	830	
4-Chlorophenyl-phenylether	7005-72-3	<830	830	
Fluorene	86-73-7	<830	830	
4-Nitroaniline	100-01-6	<4100	4100	
4,6-Dinitro-2-methylphenol	534-52-1	<4100	4100	
N-Nitrosodiphenylamine (1)	86-30-6	<830	830	
4-Bromophenyl-phenylether	101-55-3	<830	830	
Hexachlorobenzene	118-74-1	<830	830	
Pentachlorophenol	87-86-5	<4100	4100	
Phenanthrene	85-01-8	<830	830	
Anthracene	120-12-7	<830	830	
Carbazole	86-74-8	<830	830	
Di-n-butylphthalate	84-74-2	<830	830	
Fluoranthene	206-44-0	<830	830	
Pyrene	129-00-0	<830	830	
Butylbenzylphthalate	85-68-7	<830	830	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<830	830	
Chrysene	218-01-9	<830	830	
bis(2-Ethylhexyl)phthalate	117-81-7	<830	830	
Di-n-octylphthalate	117-84-0	<830	830	
Benzo(b)fluoranthene	205-99-2	<830	830	
Benzo(k)fluoranthene	207-08-9	<830	830	
Benzo(a)pyrene	50-32-8	<830	830	
Indeno(1,2,3-cd)pyrene	193-39-5	<830	830	
Dibenz(a,h)anthracene	53-70-3	<830	830	
Benzo(g,h,i)perylene	191-24-2	<830	830	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB10SD02(08)	LAL Sample ID:	L8849-22
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	27.19	Preparation Dilution:	0.996

SRROGATE	RECOVERY	QC Limits
2-Fluorophenol	68%	15-111
Phenol-d5	80%	21-110
Nitrobenzene-d5	79%	17-114
2-Fluorobiphenyl	94%	29-114
2,4,6-Tribromophenol	80%	33-136
Terphenyl-d14	108%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (S)
Phenol	108-95-2	<900	900	
bis(2-Chloroethyl) ether	111-44-4	<900	900	
2-Chlorophenol	95-57-8	<900	900	
1,3-Dichlorobenzene	541-73-1	<900	900	
1,4-Dichlorobenzene	106-46-7	<900	900	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<900	900	
2-Methylphenol	95-48-7	<900	900	
bis(2-chloroisopropyl) ether	108-60-1	<900	900	
4-Methylphenol	106-44-5	<900	900	
N-Nitroso-di-n-propylamine	621-64-7	<900	900	
Hexachloroethane	67-72-1	<900	900	
Nitrobenzene	98-95-3	<900	900	
Isophorone	78-59-1	<900	900	
2-Nitrophenol	88-75-5	<900	900	
2,4-Dimethylphenol	105-67-9	<900	900	
Benzoic acid	65-85-0	<4500	4500	
bis(2-Chloroethoxy)methane	111-91-1	<900	900	
2,4-Dichlorophenol	120-83-2	<900	900	
1,2,4-Trichlorobenzene	120-82-1	<900	900	
Naphthalene	91-20-3	<900	900	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<900	900	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<900	900	
Hexachlorocyclopentadiene	77-47-4	<900	900	
2,4,6-Trichlorophenol	88-06-2	<900	900	
2,4,5-Trichlorophenol	95-95-4	<900	900	
2-Chloronaphthalene	91-58-7	<900	900	
2-Nitroaniline	88-74-4	<4500	4500	
Dimethylphthalate	131-11-3	<900	900	
Acenaphthylene	208-96-8	<900	900	
2,6-Dinitrotoluene	606-20-2	<900	900	
3-Nitroaniline	99-09-2	<4500	4500	
Acenaphthene	83-32-9	<900	900	
2,4-Dinitrophenol	51-28-5	<4500	4500	
4-Nitrophenol	100-02-7	<4500	4500	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB10SD02(08)	LAL Sample ID:	L8849-22
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	27.19	Preparation Dilution:	0.996

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (B)
Dibenzofuran	132-64-9	<900	900	
2,4-Dinitrotoluene	121-14-2	<900	900	
Diethylphthalate	84-66-2	<900	900	
4-Chlorophenyl-phenylether	7005-72-3	<900	900	
Fluorene	86-73-7	<900	900	
4-Nitroaniline	100-01-6	<4500	4500	
4,6-Dinitro-2-methylphenol	534-52-1	<4500	4500	
N-Nitrosodiphenylamine (1)	86-30-6	<900	900	
4-Bromophenyl-phenylether	101-55-3	<900	900	
Hexachlorobenzene	118-74-1	<900	900	
Pentachlorophenol	87-86-5	<4500	4500	
Phenanthrene	85-01-8	<900	900	
Anthracene	120-12-7	<900	900	
Carbazole	86-74-8	<900	900	
Di-n-butylphthalate	84-74-2	<900	900	
Fluoranthene	206-44-0	<900	900	
Pyrene	129-00-0	<900	900	
Butylbenzylphthalate	85-68-7	<900	900	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<900	900	
Chrysene	218-01-9	<900	900	
bis(2-Ethylhexyl)phthalate	117-81-7	<900	900	
Di-n-octylphthalate	117-84-0	<900	900	
Benzo(b)fluoranthene	205-99-2	<900	900	
Benzo(k)fluoranthene	207-08-9	<900	900	
Benzo(a)pyrene	50-32-8	<900	900	
Indeno(1,2,3-cd)pyrene	193-39-5	<900	900	
Dibenz(a,h)anthracene	53-70-3	<900	900	
Benzo(g,h,i)perylene	191-24-2	<900	900	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
70 SEMI-VOLATILES

Client Sample ID:	97BPXLIB10SD62(08)	LAL Sample ID:	L8849-26
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	26.49	Preparation Dilution:	0.994

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	66%	15-111
Phenol-d5	81%	21-110
Nitrobenzene-d5	72%	17-114
2-Fluorobiphenyl	92%	29-114
2,4,6-Tribromophenol	86%	33-136
Terphenyl-d14	102%	32-151

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTITATION LIMIT ug/kg	DATA QUALIFIER(S)
Phenol	108-95-2	<890	890	
bis(2-Chloroethyl) ether	111-44-4	<890	890	
2-Chlorophenol	95-57-8	<890	890	
1,3-Dichlorobenzene	541-73-1	<890	890	
1,4-Dichlorobenzene	106-46-7	<890	890	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<890	890	
2-Methylphenol	95-48-7	<890	890	
bis(2-chloroisopropyl) ether	108-60-1	<890	890	
4-Methylphenol	106-44-5	<890	890	
N-Nitroso-di-n-propylamine	621-64-7	<890	890	
Hexachloroethane	67-72-1	<890	890	
Nitrobenzene	98-95-3	<890	890	
Isophorone	78-59-1	<890	890	
2-Nitrophenol	88-75-5	<890	890	
2,4-Dimethylphenol	105-67-9	<890	890	
Benzoic acid	65-85-0	<4500	4500	
bis(2-Chloroethoxy)methane	111-91-1	<890	890	
2,4-Dichlorophenol	120-83-2	<890	890	
1,2,4-Trichlorobenzene	120-82-1	<890	890	
Naphthalene	91-20-3	<890	890	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<890	890	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<890	890	
Hexachlorocyclopentadiene	77-47-4	<890	890	
2,4,6-Trichlorophenol	88-06-2	<890	890	
2,4,5-Trichlorophenol	95-95-4	<890	890	
2-Chloronaphthalene	91-58-7	<890	890	
2-Nitroaniline	88-74-4	<4500	4500	
Dimethylphthalate	131-11-3	<890	890	
Acenaphthylene	208-96-8	<890	890	
2,6-Dinitrotoluene	606-20-2	<890	890	
3-Nitroaniline	99-09-2	<4500	4500	
Acenaphthene	83-32-9	<890	890	
2,4-Dinitrophenol	51-28-5	<4500	4500	
4-Nitrophenol	100-02-7	<4500	4500	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB10SD62(08)	LAL Sample ID:	L8849-26
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	26.49	Preparation Dilution:	0.994

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ug/Kg	DATA QUALIFIER (S)
Dibenzofuran	132-64-9	<890	890	
2,4-Dinitrotoluene	121-14-2	<890	890	
Diethylphthalate	84-66-2	<890	890	
4-Chlorophenyl-phenylether	7005-72-3	<890	890	
Fluorene	86-73-7	<890	890	
4-Nitroaniline	100-01-6	<4500	4500	
4,6-Dinitro-2-methylphenol	534-52-1	<4500	4500	
N-Nitrosodiphenylamine (1)	86-30-6	<890	890	
4-Bromophenyl-phenylether	101-55-3	<890	890	
Hexachlorobenzene	118-74-1	<890	890	
Pentachlorophenol	87-86-5	<4500	4500	
Phenanthrene	85-01-8	<890	890	
Anthracene	120-12-7	<890	890	
Carbazole	86-74-8	<890	890	
Di-n-butylphthalate	84-74-2	<890	890	
Fluoranthene	206-44-0	<890	890	
Pyrene	129-00-0	<890	890	
Butylbenzylphthalate	85-68-7	<890	890	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<890	890	
Chrysene	218-01-9	<890	890	
bis(2-Ethylhexyl)phthalate	117-81-7	<890	890	
Di-n-octylphthalate	117-84-0	<890	890	
Benzo(b)fluoranthene	205-99-2	<890	890	
Benzo(k)fluoranthene	207-08-9	<890	890	
Benzo(a)pyrene	50-32-8	<890	890	
Indeno(1,2,3-cd)pyrene	193-39-5	<890	890	
Dibenz(a,h)anthracene	53-70-3	<890	890	
Benzo(g,h,i)perylene	191-24-2	<890	890	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
3270 SEMI-VOLATILES

Client Sample ID:	97BPXLIII1SD01(01)	LAL Sample ID:	L8849-30
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	23.19	Preparation Dilution:	0.996

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	68%	15-111
Phenol-d5	82%	21-110
Nitrobenzene-d5	75%	17-114
2-Fluorobiphenyl	93%	29-114
2,4,6-Tribromophenol	85%	33-136
Terphenyl-d14	101%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (S)
Phenol	108-95-2	<860	860	
bis(2-Chloroethyl) ether	111-44-4	<860	860	
2-Chlorophenol	95-57-8	<860	860	
1,3-Dichlorobenzene	541-73-1	<860	860	
1,4-Dichlorobenzene	106-46-7	<860	860	
Benzyl alcohol	100-51-6	<1700	1700	
1,2-Dichlorobenzene	95-50-1	<860	860	
2-Methylphenol	95-48-7	<860	860	
bis(2-chloroisopropyl) ether	108-60-1	<860	860	
4-Methylphenol	106-44-5	<860	860	
N-Nitroso-di-n-propylamine	621-64-7	<860	860	
Hexachloroethane	67-72-1	<860	860	
Nitrobenzene	98-95-3	<860	860	
Isophorone	78-59-1	<860	860	
2-Nitrophenol	88-75-5	<860	860	
2,4-Dimethylphenol	105-67-9	<860	860	
Benzoic acid	65-85-0	<4300	4300	
bis(2-Chloroethoxy) methane	111-91-1	<860	860	
2,4-Dichlorophenol	120-83-2	<860	860	
1,2,4-Trichlorobenzene	120-82-1	<860	860	
Naphthalene	91-20-3	<860	860	
4-Chloroaniline	106-47-8	<1700	1700	
Hexachlorobutadiene	87-68-3	<860	860	
4-Chloro-3-methylphenol	59-50-7	<1700	1700	
2-Methylnaphthalene	91-57-6	<860	860	
Hexachlorocyclopentadiene	77-47-4	<860	860	
2,4,6-Trichlorophenol	88-06-2	<860	860	
2,4,5-Trichlorophenol	95-95-4	<860	860	
2-Chloronaphthalene	91-58-7	<860	860	
2-Nitroaniline	88-74-4	<4300	4300	
Dimethylphthalate	131-11-3	<860	860	
Acenaphthylene	208-96-8	<860	860	
2,6-Dinitrotoluene	606-20-2	<860	860	
3-Nitroaniline	99-09-2	<4300	4300	
Acenaphthene	83-32-9	<860	860	
2,4-Dinitrophenol	51-28-5	<4300	4300	
4-Nitrophenol	100-02-7	<4300	4300	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLII1SD01(01)	LAL Sample ID:	L8849-30
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	23.19	Preparation Dilution:	0.996

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DAT QUALIFIED
Dibenzofuran	132-64-9	<860	860	
2,4-Dinitrotoluene	121-14-2	<860	860	
Diethylphthalate	84-66-2	<860	860	
4-Chlorophenyl-phenylether	7005-72-3	<860	860	
Fluorene	86-73-7	<860	860	
4-Nitroaniline	100-01-6	<4300	4300	
4,6-Dinitro-2-methylphenol	534-52-1	<4300	4300	
N-Nitrosodiphenylamine (1)	86-30-6	<860	860	
4-Bromophenyl-phenylether	101-55-3	<860	860	
Hexachlorobenzene	118-74-1	<860	860	
Pentachlorophenol	87-86-5	<4300	4300	
Phenanthrene	85-01-8	<860	860	
Anthracene	120-12-7	<860	860	
Carbazole	86-74-8	<860	860	
Di-n-butylphthalate	84-74-2	<860	860	
Fluoranthene	206-44-0	<860	860	
Pyrene	129-00-0	<860	860	
Butylbenzylphthalate	85-68-7	<860	860	
3,3'-Dichlorobenzidine	91-94-1	<1700	1700	
Benzo(a)anthracene	56-55-3	<860	860	
Chrysene	218-01-9	<860	860	
bis(2-Ethylhexyl)phthalate	117-81-7	<860	860	
Di-n-octylphthalate	117-84-0	<860	860	
Benzo(b)fluoranthene	205-99-2	<860	860	
Benzo(k)fluoranthene	207-08-9	<860	860	
Benzo(a)pyrene	50-32-8	<860	860	
Indeno(1,2,3-cd)pyrene	193-39-5	<860	860	
Dibenz(a,h)anthracene	53-70-3	<860	860	
Benzo(g,h,i)perylene	191-24-2	<860	860	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
 '0 SEMI-VOLATILES

Client Sample ID:	97BPXLI1SD02 (08)	LAL Sample ID:	L8849-34
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	21.34	Preparation Dilution:	0.995

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	70%	15-111
Phenol-d5	79%	21-110
Nitrobenzene-d5	87%	17-114
2-Fluorobiphenyl	95%	29-114
2,4,6-Tribromophenol	84%	33-136
Terphenyl-d14	109%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ug/Kg	DATA QUALIFIER (e)
Phenol	108-95-2	<830	830	
bis(2-Chloroethyl) ether	111-44-4	<830	830	
2-Chlorophenol	95-57-8	<830	830	
1,3-Dichlorobenzene	541-73-1	<830	830	
1,4-Dichlorobenzene	106-46-7	<830	830	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<830	830	
2-Methylphenol	95-48-7	<830	830	
bis(2-chloroisopropyl) ether	108-60-1	<830	830	
4-Methylphenol	106-44-5	<830	830	
N-Nitroso-di-n-propylamine	621-64-7	<830	830	
Hexachloroethane	67-72-1	<830	830	
Nitrobenzene	98-95-3	<830	830	
Isophorone	78-59-1	<830	830	
2-Nitrophenol	88-75-5	<830	830	
2,4-Dimethylphenol	105-67-9	<830	830	
Benzoic acid	65-85-0	<4200	4200	
bis(2-Chloroethoxy)methane	111-91-1	<830	830	
2,4-Dichlorophenol	120-83-2	<830	830	
1,2,4-Trichlorobenzene	120-82-1	<830	830	
Naphthalene	91-20-3	<830	830	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<830	830	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<830	830	
Hexachlorocyclopentadiene	77-47-4	<830	830	
2,4,6-Trichlorophenol	88-06-2	<830	830	
2,4,5-Trichlorophenol	95-95-4	<830	830	
2-Chloronaphthalene	91-58-7	<830	830	
2-Nitroaniline	88-74-4	<4200	4200	
Dimethylphthalate	131-11-3	<830	830	
Acenaphthylene	208-96-8	<830	830	
2,6-Dinitrotoluene	606-20-2	<830	830	
3-Nitroaniline	99-09-2	<4200	4200	
Acenaphthene	83-32-9	<830	830	
2,4-Dinitrophenol	51-28-5	<4200	4200	
4-Nitrophenol	100-02-7	<4200	4200	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIII1SD02(08)	LAL Sample ID:	L8849-34
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	21.34	Preparation Dilution:	0.995

CONSTITUENT	CAS NO.	RESULT ug/kg	PRACTICAL QUANTIFICATION LIMIT ug/kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<830	830	
2,4-Dinitrotoluene	121-14-2	<830	830	
Diethylphthalate	84-66-2	<830	830	
4-Chlorophenyl-phenylether	7005-72-3	<830	830	
Fluorene	86-73-7	<830	830	
4-Nitroaniline	100-01-6	<4200	4200	
4,6-Dinitro-2-methylphenol	534-52-1	<4200	4200	
N-Nitrosodiphenylamine (1)	86-30-6	<830	830	
4-Bromophenyl-phenylether	101-55-3	<830	830	
Hexachlorobenzene	118-74-1	<830	830	
Pentachlorophenol	87-86-5	<4200	4200	
Phenanthrene	85-01-8	<830	830	
Anthracene	120-12-7	<830	830	
Carbazole	86-74-8	<830	830	
Di-n-butylphthalate	84-74-2	<830	830	
Fluoranthene	206-44-0	<830	830	
Pyrene	129-00-0	<830	830	
Butylbenzylphthalate	85-68-7	<830	830	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<830	830	
Chrysene	218-01-9	<830	830	
bis(2-Ethylhexyl)phthalate	117-81-7	<830	830	
Di-n-octylphthalate	117-84-0	<830	830	
Benzo(b)fluoranthene	205-99-2	<830	830	
Benzo(k)fluoranthene	207-08-9	<830	830	
Benzo(a)pyrene	50-32-8	<830	830	
Indeno(1,2,3-cd)pyrene	193-39-5	<830	830	
Dibenz(a,h)anthracene	53-70-3	<830	830	
Benzo(g,h,i)perylene	191-24-2	<830	830	

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SEMI-VOLATILE ORGANICS BY GC/MS 8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC2SD01(01)	LAL Sample ID:	L8849-38
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	26.72	Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	59%	15-111
Phenol-d5	71%	21-110
Nitrobenzene-d5	77%	17-114
2-Fluorobiphenyl	85%	29-114
2,4,6-Tribromophenol	86%	33-136
Terphenyl-d14	103%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ug/Kg	DATA QUALIFIER (s)
Phenol	108-95-2	<900	900	
bis(2-Chloroethyl) ether	111-44-4	<900	900	
2-Chlorophenol	95-57-8	<900	900	
1,3-Dichlorobenzene	541-73-1	<900	900	
1,4-Dichlorobenzene	106-46-7	<900	900	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<900	900	
2-Methylphenol	95-48-7	<900	900	
bis(2-chloroisopropyl) ether	108-60-1	<900	900	
4-Methylphenol	106-44-5	<900	900	
N-Nitroso-di-n-propylamine	621-64-7	<900	900	
Hexachloroethane	67-72-1	<900	900	
Nitrobenzene	98-95-3	<900	900	
Isophorone	78-59-1	<900	900	
2-Nitrophenol	88-75-5	<900	900	
2,4-Dimethylphenol	105-67-9	<900	900	
Benzoic acid	65-85-0	<4500	4500	
bis(2-Chloroethoxy) methane	111-91-1	<900	900	
2,4-Dichlorophenol	120-83-2	<900	900	
1,2,4-Trichlorobenzene	120-82-1	<900	900	
Naphthalene	91-20-3	<900	900	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<900	900	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<900	900	
Hexachlorocyclopentadiene	77-47-4	<900	900	
2,4,6-Trichlorophenol	88-06-2	<900	900	
2,4,5-Trichlorophenol	95-95-4	<900	900	
2-Chloronaphthalene	91-58-7	<900	900	
2-Nitroaniline	88-74-4	<4500	4500	
Dimethylphthalate	131-11-3	<900	900	
Acenaphthylene	208-96-8	<900	900	
2,6-Dinitrotoluene	606-20-2	<900	900	
3-Nitroaniline	99-09-2	<4500	4500	
Acenaphthene	83-32-9	<900	900	
2,4-Dinitrophenol	51-28-5	<4500	4500	
4-Nitrophenol	100-02-7	<4500	4500	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC2SD01(01)	LAL Sample ID:	L8849-38
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	26.72	Preparation Dilution:	0.999

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (s)
Dibenzofuran	132-64-9	<900	900	
2,4-Dinitrotoluene	121-14-2	<900	900	
Diethylphthalate	84-66-2	<900	900	
4-Chlorophenyl-phenylether	7005-72-3	<900	900	
Fluorene	86-73-7	<900	900	
4-Nitroaniline	100-01-6	<4500	4500	
4,6-Dinitro-2-methylphenol	534-52-1	<4500	4500	
N-Nitrosodiphenylamine (1)	86-30-6	<900	900	
4-Bromophenyl-phenylether	101-55-3	<900	900	
Hexachlorobenzene	118-74-1	<900	900	
Pentachlorophenol	87-86-5	<4500	4500	
Phenanthrene	85-01-8	<900	900	
Anthracene	120-12-7	<900	900	
Carbazole	86-74-8	<900	900	
Di-n-butylphthalate	84-74-2	<900	900	
Fluoranthene	206-44-0	<900	900	
Pyrene	129-00-0	<900	900	
Butylbenzylphthalate	85-68-7	<900	900	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<900	900	
Chrysene	218-01-9	<900	900	
bis(2-Ethylhexyl)phthalate	117-81-7	<900	900	
Di-n-octylphthalate	117-84-0	<900	900	
Benzo(b)fluoranthene	205-99-2	<900	900	
Benzo(k)fluoranthene	207-08-9	<900	900	
Benzo(a)pyrene	50-32-8	<900	900	
Indeno(1,2,3-cd)pyrene	193-39-5	<900	900	
Dibenz(a,h)anthracene	53-70-3	<900	900	
Benzo(g,h,i)perylene	191-24-2	<900	900	

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SEMI-VOLATILE ORGANICS BY GC/MS 270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC2SD02(08)	LAL Sample ID:	L8849-42
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	19.74	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	66%	15-111
Phenol-d5	79%	21-110
Nitrobenzene-d5	76%	17-114
2-Fluorobiphenyl	90%	29-114
2,4,6-Tribromophenol	80%	33-136
Terphenyl-d14	111%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<830	830	
bis(2-Chloroethyl) ether	111-44-4	<830	830	
2-Chlorophenol	95-57-8	<830	830	
1,3-Dichlorobenzene	541-73-1	<830	830	
1,4-Dichlorobenzene	106-46-7	<830	830	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<830	830	
2-Methylphenol	95-48-7	<830	830	
bis(2-chloroisopropyl) ether	108-60-1	<830	830	
4-Methylphenol	106-44-5	<830	830	
N-Nitroso-di-n-propylamine	621-64-7	<830	830	
Hexachloroethane	67-72-1	<830	830	
Nitrobenzene	98-95-3	<830	830	
Isophorone	78-59-1	<830	830	
2-Nitrophenol	88-75-5	<830	830	
2,4-Dimethylphenol	105-67-9	<830	830	
Benzoic acid	65-85-0	<4100	4100	
bis(2-Chloroethoxy)methane	111-91-1	<830	830	
2,4-Dichlorophenol	120-83-2	<830	830	
1,2,4-Trichlorobenzene	120-82-1	<830	830	
Naphthalene	91-20-3	<830	830	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<830	830	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<830	830	
Hexachlorocyclopentadiene	77-47-4	<830	830	
2,4,6-Trichlorophenol	88-06-2	<830	830	
2,4,5-Trichlorophenol	95-95-4	<830	830	
2-Chloronaphthalene	91-58-7	<830	830	
2-Nitroaniline	88-74-4	<4100	4100	
Dimethylphthalate	131-11-3	<830	830	
Acenaphthylene	208-96-8	<830	830	
2,6-Dinitrotoluene	606-20-2	<830	830	
3-Nitroaniline	99-09-2	<4100	4100	
Acenaphthene	83-32-9	<830	830	
2,4-Dinitrophenol	51-28-5	<4100	4100	
4-Nitrophenol	100-02-7	<4100	4100	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC2SD02(08)	LAL Sample ID:	L8849-42
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	19.74	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (s)
Dibenzofuran	132-64-9	<830	830	
2,4-Dinitrotoluene	121-14-2	<830	830	
Diethylphthalate	84-66-2	<830	830	
4-Chlorophenyl-phenylether	7005-72-3	<830	830	
Fluorene	86-73-7	<830	830	
4-Nitroaniline	100-01-6	<4100	4100	
4,6-Dinitro-2-methylphenol	534-52-1	<4100	4100	
N-Nitrosodiphenylamine (1)	86-30-6	<830	830	
4-Bromophenyl-phenylether	101-55-3	<830	830	
Hexachlorobenzene	118-74-1	<830	830	
Pentachlorophenol	87-86-5	<4100	4100	
Phenanthrene	85-01-8	<830	830	
Anthracene	120-12-7	<830	830	
Carbazole	86-74-8	<830	830	
Di-n-butylphthalate	84-74-2	<830	830	
Fluoranthene	206-44-0	<830	830	
Pyrene	129-00-0	<830	830	
Butylbenzylphthalate	85-68-7	<830	830	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<830	830	
Chrysene	218-01-9	<830	830	
bis(2-Ethylhexyl)phthalate	117-81-7	<830	830	
Di-n-octylphthalate	117-84-0	<830	830	
Benzo(b)fluoranthene	205-99-2	<830	830	
Benzo(k)fluoranthene	207-08-9	<830	830	
Benzo(a)pyrene	50-32-8	<830	830	
Indeno(1,2,3-cd)pyrene	193-39-5	<830	830	
Dibenz(a,h)anthracene	53-70-3	<830	830	
Benzo(g,h,i)perylene	191-24-2	<830	830	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC2SD61(08)	LAL Sample ID:	L8849-46
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	19.23	Preparation Dilution:	0.995

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	67%	15-111
Phenol-d5	79%	21-110
Nitrobenzene-d5	76%	17-114
2-Fluorobiphenyl	93%	29-114
2,4,6-Tribromophenol	78%	33-136
Terphenyl-d14	116%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<810	810	
bis(2-Chloroethyl) ether	111-44-4	<810	810	
2-Chlorophenol	95-57-8	<810	810	
1,3-Dichlorobenzene	541-73-1	<810	810	
1,4-Dichlorobenzene	106-46-7	<810	810	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<810	810	
2-Methylphenol	95-48-7	<810	810	
bis(2-chloroisopropyl) ether	108-60-1	<810	810	
4-Methylphenol	106-44-5	<810	810	
N-Nitroso-di-n-propylamine	621-64-7	<810	810	
Hexachloroethane	67-72-1	<810	810	
Nitrobenzene	98-95-3	<810	810	
Isophorone	78-59-1	<810	810	
2-Nitrophenol	88-75-5	<810	810	
2,4-Dimethylphenol	105-67-9	<810	810	
Benzoic acid	65-85-0	<4100	4100	
bis(2-Chloroethoxy)methane	111-91-1	<810	810	
2,4-Dichlorophenol	120-83-2	<810	810	
1,2,4-Trichlorobenzene	120-82-1	<810	810	
Naphthalene	91-20-3	<810	810	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<810	810	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<810	810	
Hexachlorocyclopentadiene	77-47-4	<810	810	
2,4,6-Trichlorophenol	88-06-2	<810	810	
2,4,5-Trichlorophenol	95-95-4	<810	810	
2-Chloronaphthalene	91-58-7	<810	810	
2-Nitroaniline	88-74-4	<4100	4100	
Dimethylphthalate	131-11-3	<810	810	
Acenaphthylene	208-96-8	<810	810	
2,6-Dinitrotoluene	606-20-2	<810	810	
3-Nitroaniline	99-09-2	<4100	4100	
Acenaphthene	83-32-9	<810	810	
2,4-Dinitrophenol	51-28-5	<4100	4100	
4-Nitrophenol	100-02-7	<4100	4100	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC2SD61(08)	LAL Sample ID:	L8849-46
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	19.23	Preparation Dilution:	0.995

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<810	810	
2,4-Dinitrotoluene	121-14-2	<810	810	
Diethylphthalate	84-66-2	<810	810	
4-Chlorophenyl-phenylether	7005-72-3	<810	810	
Fluorene	86-73-7	<810	810	
4-Nitroaniline	100-01-6	<4100	4100	
4,6-Dinitro-2-methylphenol	534-52-1	<4100	4100	
N-Nitrosodiphenylamine (1)	86-30-6	<810	810	
4-Bromophenyl-phenylether	101-55-3	<810	810	
Hexachlorobenzene	118-74-1	<810	810	
Pentachlorophenol	87-86-5	<4100	4100	
Phenanthrene	85-01-8	<810	810	
Anthracene	120-12-7	<810	810	
Carbazole	86-74-8	<810	810	
Di-n-butylphthalate	84-74-2	<810	810	
Fluoranthene	206-44-0	<810	810	
Pyrene	129-00-0	<810	810	
Butylbenzylphthalate	85-68-7	<810	810	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<810	810	
Chrysene	218-01-9	<810	810	
bis(2-Ethylhexyl)phthalate	117-81-7	<810	810	
Di-n-octylphthalate	117-84-0	<810	810	
Benzo(b)fluoranthene	205-99-2	<810	810	
Benzo(k)fluoranthene	207-08-9	<810	810	
Benzo(a)pyrene	50-32-8	<810	810	
Indeno(1,2,3-cd)pyrene	193-39-5	<810	810	
Dibenz(a,h)anthracene	53-70-3	<810	810	
Benzo(g,h,i)perylene	191-24-2	<810	810	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS 1270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC4SD02(08)	LAL Sample ID:	L8849-50
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	23.85	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	32%	15-111
Phenol-d5	52%	21-110
Nitrobenzene-d5	36%	17-114
2-Fluorobiphenyl	59%	29-114
2,4,6-Tribromophenol	93%	33-136
Terphenyl-d14	87%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (s)
Phenol	108-95-2	<860	860	
bis(2-Chloroethyl) ether	111-44-4	<860	860	
2-Chlorophenol	95-57-8	<860	860	
1,3-Dichlorobenzene	541-73-1	<860	860	
1,4-Dichlorobenzene	106-46-7	<860	860	
Benzyl alcohol	100-51-6	<1700	1700	
1,2-Dichlorobenzene	95-50-1	<860	860	
2-Methylphenol	95-48-7	<860	860	
bis(2-chloroisopropyl) ether	108-60-1	<860	860	
4-Methylphenol	106-44-5	<860	860	
N-Nitroso-di-n-propylamine	621-64-7	<860	860	
Hexachloroethane	67-72-1	<860	860	
Nitrobenzene	98-95-3	<860	860	
Isophorone	78-59-1	<860	860	
2-Nitrophenol	88-75-5	<860	860	
2,4-Dimethylphenol	105-67-9	<860	860	
Benzoic acid	65-85-0	<4300	4300	
bis(2-Chloroethoxy) methane	111-91-1	<860	860	
2,4-Dichlorophenol	120-83-2	<860	860	
1,2,4-Trichlorobenzene	120-82-1	<860	860	
Naphthalene	91-20-3	<860	860	
4-Chloroaniline	106-47-8	<1700	1700	
Hexachlorobutadiene	87-68-3	<860	860	
4-Chloro-3-methylphenol	59-50-7	<1700	1700	
2-Methylnaphthalene	91-57-6	<860	860	
Hexachlorocyclopentadiene	77-47-4	<860	860	
2,4,6-Trichlorophenol	88-06-2	<860	860	
2,4,5-Trichlorophenol	95-95-4	<860	860	
2-Chloronaphthalene	91-58-7	<860	860	
2-Nitroaniline	88-74-4	<4300	4300	
Dimethylphthalate	131-11-3	<860	860	
Acenaphthylene	208-96-8	<860	860	
2,6-Dinitrotoluene	606-20-2	<860	860	
3-Nitroaniline	99-09-2	<4300	4300	
Acenaphthene	83-32-9	<860	860	
2,4-Dinitrophenol	51-28-5	<4300	4300	
4-Nitrophenol	100-02-7	<4300	4300	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC4SD02(08)	LAL Sample ID:	L8849-50
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	23.85	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<860	860	
2,4-Dinitrotoluene	121-14-2	<860	860	
Diethylphthalate	84-66-2	<860	860	
4-Chlorophenyl-phenylether	7005-72-3	<860	860	
Fluorene	86-73-7	<860	860	
4-Nitroaniline	100-01-6	<4300	4300	
4,6-Dinitro-2-methylphenol	534-52-1	<4300	4300	
N-Nitrosodiphenylamine (1)	86-30-6	<860	860	
4-Bromophenyl-phenylether	101-55-3	<860	860	
Hexachlorobenzene	118-74-1	<860	860	
Pentachlorophenol	87-86-5	<4300	4300	
Phenanthrene	85-01-8	<860	860	
Anthracene	120-12-7	<860	860	
Carbazole	86-74-8	<860	860	
Di-n-butylphthalate	84-74-2	<860	860	
Fluoranthene	206-44-0	<860	860	
Pyrene	129-00-0	<860	860	
Butylbenzylphthalate	85-68-7	<860	860	
3,3'-Dichlorobenzidine	91-94-1	<1700	1700	
Benzo(a)anthracene	56-55-3	<860	860	
Chrysene	218-01-9	<860	860	
bis(2-Ethylhexyl)phthalate	117-81-7	<860	860	
Di-n-octylphthalate	117-84-0	<860	860	
Benzo(b)fluoranthene	205-99-2	<860	860	
Benzo(k)fluoranthene	207-08-9	<860	860	
Benzo(a)pyrene	50-32-8	<860	860	
Indeno(1,2,3-cd)pyrene	193-39-5	<860	860	
Dibenz(a,h)anthracene	53-70-3	<860	860	
Benzo(g,h,i)perylene	191-24-2	<860	860	

LAS

EMI-VOLATILE ORGANICS BY GC/MS 8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA4SD01(01)	LAL Sample ID:	L8849-54
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	17.13	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	44%	15-111
Phenol-d5	57%	21-110
Nitrobenzene-d5	50%	17-114
2-Fluorobiphenyl	68%	29-114
2,4,6-Tribromophenol	96%	33-136
Terphenyl-d14	83%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<800	800	
bis(2-Chloroethyl) ether	111-44-4	<800	800	
2-Chlorophenol	95-57-8	<800	800	
1,3-Dichlorobenzene	541-73-1	<800	800	
1,4-Dichlorobenzene	106-46-7	<800	800	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<800	800	
2-Methylphenol	95-48-7	<800	800	
bis(2-chloroisopropyl) ether	108-60-1	<800	800	
4-Methylphenol	106-44-5	<800	800	
N-Nitroso-di-n-propylamine	621-64-7	<800	800	
Hexachloroethane	67-72-1	<800	800	
Nitrobenzene	98-95-3	<800	800	
Isophorone	78-59-1	<800	800	
2-Nitrophenol	88-75-5	<800	800	
2,4-Dimethylphenol	105-67-9	<800	800	
Benzoic acid	65-85-0	<4000	4000	
bis(2-Chloroethoxy)methane	111-91-1	<800	800	
2,4-Dichlorophenol	120-83-2	<800	800	
1,2,4-Trichlorobenzene	120-82-1	<800	800	
Naphthalene	91-20-3	<800	800	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<800	800	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<800	800	
Hexachlorocyclopentadiene	77-47-4	<800	800	
2,4,6-Trichlorophenol	88-06-2	<800	800	
2,4,5-Trichlorophenol	95-95-4	<800	800	
2-Chloronaphthalene	91-58-7	<800	800	
2-Nitroaniline	88-74-4	<4000	4000	
Dimethylphthalate	131-11-3	<800	800	
Acenaphthylene	208-96-8	<800	800	
2,6-Dinitrotoluene	606-20-2	<800	800	
3-Nitroaniline	99-09-2	<4000	4000	
Acenaphthene	83-32-9	<800	800	
2,4-Dinitrophenol	51-28-5	<4000	4000	
4-Nitrophenol	100-02-7	<4000	4000	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA4SD01(01)	LAL Sample ID:	L8849-54
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	17.13	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<800	800	
2,4-Dinitrotoluene	121-14-2	<800	800	
Diethylphthalate	84-66-2	<800	800	
4-Chlorophenyl-phenylether	7005-72-3	<800	800	
Fluorene	86-73-7	<800	800	
4-Nitroaniline	100-01-6	<4000	4000	
4,6-Dinitro-2-methylphenol	534-52-1	<4000	4000	
N-Nitrosodiphenylamine (1)	86-30-6	<800	800	
4-Bromophenyl-phenylether	101-55-3	<800	800	
Hexachlorobenzene	118-74-1	<800	800	
Pentachlorophenol	87-86-5	<4000	4000	
Phenanthrene	85-01-8	<800	800	
Anthracene	120-12-7	<800	800	
Carbazole	86-74-8	<800	800	
Di-n-butylphthalate	84-74-2	<800	800	
Fluoranthene	206-44-0	<800	800	
Pyrene	129-00-0	<800	800	
Butylbenzylphthalate	85-68-7	<800	800	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<800	800	
Chrysene	218-01-9	<800	800	
bis(2-Ethylhexyl)phthalate	117-81-7	<800	800	
Di-n-octylphthalate	117-84-0	<800	800	
Benzo(b)fluoranthene	205-99-2	<800	800	
Benzo(k)fluoranthene	207-08-9	<800	800	
Benzo(a)pyrene	50-32-8	<800	800	
Indeno(1,2,3-cd)pyrene	193-39-5	<800	800	
Dibenz(a,h)anthracene	53-70-3	<800	800	
Benzo(g,h,i)perylene	191-24-2	<800	800	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
3270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA4SD02 (08)	LAL Sample ID:	L8849-57
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	18.66	Preparation Dilution:	0.997

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	46%	15-111
Phenol-d5	56%	21-110
Nitrobenzene-d5	51%	17-114
2-Fluorobiphenyl	59%	29-114
2,4,6-Tribromophenol	88%	33-136
Terphenyl-d14	78%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<810	810	
bis(2-Chloroethyl) ether	111-44-4	<810	810	
2-Chlorophenol	95-57-8	<810	810	
1,3-Dichlorobenzene	541-73-1	<810	810	
1,4-Dichlorobenzene	106-46-7	<810	810	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<810	810	
2-Methylphenol	95-48-7	<810	810	
bis(2-chloroisopropyl) ether	108-60-1	<810	810	
4-Methylphenol	106-44-5	<810	810	
N-Nitroso-di-n-propylamine	621-64-7	<810	810	
Hexachloroethane	67-72-1	<810	810	
Nitrobenzene	98-95-3	<810	810	
Isophorone	78-59-1	<810	810	
2-Nitrophenol	88-75-5	<810	810	
2,4-Dimethylphenol	105-67-9	<810	810	
Benzoic acid	65-85-0	<4100	4100	
bis(2-Chloroethoxy)methane	111-91-1	<810	810	
2,4-Dichlorophenol	120-83-2	<810	810	
1,2,4-Trichlorobenzene	120-82-1	<810	810	
Naphthalene	91-20-3	<810	810	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<810	810	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<810	810	
Hexachlorocyclopentadiene	77-47-4	<810	810	
2,4,6-Trichlorophenol	88-06-2	<810	810	
2,4,5-Trichlorophenol	95-95-4	<810	810	
2-Chloronaphthalene	91-58-7	<810	810	
2-Nitroaniline	88-74-4	<4100	4100	
Dimethylphthalate	131-11-3	<810	810	
Acenaphthylene	208-96-8	<810	810	
2,6-Dinitrotoluene	606-20-2	<810	810	
3-Nitroaniline	99-09-2	<4100	4100	
Acenaphthene	83-32-9	<810	810	
2,4-Dinitrophenol	51-28-5	<4100	4100	
4-Nitrophenol	100-02-7	<4100	4100	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLLA4SD02(08)	LAL Sample ID:	L8849-57
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	18.66	Preparation Dilution:	0.997

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<810	810	
2,4-Dinitrotoluene	121-14-2	<810	810	
Diethylphthalate	84-66-2	<810	810	
4-Chlorophenyl-phenylether	7005-72-3	<810	810	
Fluorene	86-73-7	<810	810	
4-Nitroaniline	100-01-6	<4100	4100	
4,6-Dinitro-2-methylphenol	534-52-1	<4100	4100	
N-Nitrosodiphenylamine (1)	86-30-6	<810	810	
4-Bromophenyl-phenylether	101-55-3	<810	810	
Hexachlorobenzene	118-74-1	<810	810	
Pentachlorophenol	87-86-5	<4100	4100	
Phenanthrene	85-01-8	<810	810	
Anthracene	120-12-7	<810	810	
Carbazole	86-74-8	<810	810	
Di-n-butylphthalate	84-74-2	<810	810	
Fluoranthene	206-44-0	<810	810	
Pyrene	129-00-0	<810	810	
Butylbenzylphthalate	85-68-7	<810	810	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<810	810	
Chrysene	218-01-9	<810	810	
bis(2-Ethylhexyl)phthalate	117-81-7	<810	810	
Di-n-octylphthalate	117-84-0	<810	810	
Benzo(b)fluoranthene	205-99-2	<810	810	
Benzo(k)fluoranthene	207-08-9	<810	810	
Benzo(a)pyrene	50-32-8	<810	810	
Indeno(1,2,3-cd)pyrene	193-39-5	<810	810	
Dibenz(a,h)anthracene	53-70-3	<810	810	
Benzo(g,h,i)perylene	191-24-2	<810	810	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
3270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA6SD01 (01)	LAL Sample ID:	L8849-61
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	42.88	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	50%	15-111
Phenol-d5	67%	21-110
Nitrobenzene-d5	55%	17-114
2-Fluorobiphenyl	73%	29-114
2,4,6-Tribromophenol	95%	33-136
Terphenyl-d14	83%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (s)
Phenol	108-95-2	<1200	1200	
bis(2-Chloroethyl) ether	111-44-4	<1200	1200	
2-Chlorophenol	95-57-8	<1200	1200	
1,3-Dichlorobenzene	541-73-1	<1200	1200	
1,4-Dichlorobenzene	106-46-7	<1200	1200	
Benzyl alcohol	100-51-6	<2300	2300	
1,2-Dichlorobenzene	95-50-1	<1200	1200	
2-Methylphenol	95-48-7	<1200	1200	
bis(2-chloroisopropyl) ether	108-60-1	<1200	1200	
4-Methylphenol	106-44-5	<1200	1200	
N-Nitroso-di-n-propylamine	621-64-7	<1200	1200	
Hexachloroethane	67-72-1	<1200	1200	
Nitrobenzene	98-95-3	<1200	1200	
Isophorone	78-59-1	<1200	1200	
2-Nitrophenol	88-75-5	<1200	1200	
2,4-Dimethylphenol	105-67-9	<1200	1200	
Benzoic acid	65-85-0	<5800	5800	
bis(2-Chloroethoxy)methane	111-91-1	<1200	1200	
2,4-Dichlorophenol	120-83-2	<1200	1200	
1,2,4-Trichlorobenzene	120-82-1	<1200	1200	
Naphthalene	91-20-3	<1200	1200	
4-Chloroaniline	106-47-8	<2300	2300	
Hexachlorobutadiene	87-68-3	<1200	1200	
4-Chloro-3-methylphenol	59-50-7	<2300	2300	
2-Methylnaphthalene	91-57-6	<1200	1200	
Hexachlorocyclopentadiene	77-47-4	<1200	1200	
2,4,6-Trichlorophenol	88-06-2	<1200	1200	
2,4,5-Trichlorophenol	95-95-4	<1200	1200	
2-Chloronaphthalene	91-58-7	<1200	1200	
2-Nitroaniline	88-74-4	<5800	5800	
Dimethylphthalate	131-11-3	<1200	1200	
Acenaphthylene	208-96-8	<1200	1200	
2,6-Dinitrotoluene	606-20-2	<1200	1200	
3-Nitroaniline	99-09-2	<5800	5800	
Acenaphthene	83-32-9	<1200	1200	
2,4-Dinitrophenol	51-28-5	<5800	5800	
4-Nitrophenol	100-02-7	<5800	5800	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA6SD01(01)	LAL Sample ID:	L8849-61
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	42.88	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<1200	1200	
2,4-Dinitrotoluene	121-14-2	<1200	1200	
Diethylphthalate	84-66-2	<1200	1200	
4-Chlorophenyl-phenylether	7005-72-3	<1200	1200	
Fluorene	86-73-7	<1200	1200	
4-Nitroaniline	100-01-6	<5800	5800	
4,6-Dinitro-2-methylphenol	534-52-1	<5800	5800	
N-Nitrosodiphenylamine (1)	86-30-6	<1200	1200	
4-Bromophenyl-phenylether	101-55-3	<1200	1200	
Hexachlorobenzene	118-74-1	<1200	1200	
Pentachlorophenol	87-86-5	<5800	5800	
Phenanthrene	85-01-8	<1200	1200	
Anthracene	120-12-7	<1200	1200	
Carbazole	86-74-8	<1200	1200	
Di-n-butylphthalate	84-74-2	<1200	1200	
Fluoranthene	206-44-0	<1200	1200	
Pyrene	129-00-0	<1200	1200	
Butylbenzylphthalate	85-68-7	<1200	1200	
3,3'-Dichlorobenzidine	91-94-1	<2300	2300	
Benzo(a)anthracene	56-55-3	<1200	1200	
Chrysene	218-01-9	<1200	1200	
bis(2-Ethylhexyl)phthalate	117-81-7	<1200	1200	
Di-n-octylphthalate	117-84-0	<1200	1200	
Benzo(b)fluoranthene	205-99-2	<1200	1200	
Benzo(k)fluoranthene	207-08-9	<1200	1200	
Benzo(a)pyrene	50-32-8	<1200	1200	
Indeno(1,2,3-cd)pyrene	193-39-5	<1200	1200	
Dibenz(a,h)anthracene	53-70-3	<1200	1200	
Benzo(g,h,i)perylene	191-24-2	<1200	1200	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS 3270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA6SD02(08)	LAL Sample ID:	L8849-65
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	28.62	Preparation Dilution:	0.997

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	53%	15-111
Phenol-d5	69%	21-110
Nitrobenzene-d5	56%	17-114
2-Fluorobiphenyl	74%	29-114
2,4,6-Tribromophenol	93%	33-136
Terphenyl-d14	80%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<920	920	
bis(2-Chloroethyl) ether	111-44-4	<920	920	
2-Chlorophenol	95-57-8	<920	920	
1,3-Dichlorobenzene	541-73-1	<920	920	
1,4-Dichlorobenzene	106-46-7	<920	920	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<920	920	
2-Methylphenol	95-48-7	<920	920	
bis(2-chloroisopropyl) ether	108-60-1	<920	920	
4-Methylphenol	106-44-5	<920	920	
N-Nitroso-di-n-propylamine	621-64-7	<920	920	
Hexachloroethane	67-72-1	<920	920	
Nitrobenzene	98-95-3	<920	920	
Isophorone	78-59-1	<920	920	
2-Nitrophenol	88-75-5	<920	920	
2,4-Dimethylphenol	105-67-9	<920	920	
Benzoic acid	65-85-0	<4600	4600	
bis(2-Chloroethoxy)methane	111-91-1	<920	920	
2,4-Dichlorophenol	120-83-2	<920	920	
1,2,4-Trichlorobenzene	120-82-1	<920	920	
Naphthalene	91-20-3	<920	920	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<920	920	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<920	920	
Hexachlorocyclopentadiene	77-47-4	<920	920	
2,4,6-Trichlorophenol	88-06-2	<920	920	
2,4,5-Trichlorophenol	95-95-4	<920	920	
2-Chloronaphthalene	91-58-7	<920	920	
2-Nitroaniline	88-74-4	<4600	4600	
Dimethylphthalate	131-11-3	<920	920	
Acenaphthylene	208-96-8	<920	920	
2,6-Dinitrotoluene	606-20-2	<920	920	
3-Nitroaniline	99-09-2	<4600	4600	
Acenaphthene	83-32-9	<920	920	
2,4-Dinitrophenol	51-28-5	<4600	4600	
4-Nitrophenol	100-02-7	<4600	4600	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA6SD02(08)	LAL Sample ID:	L8849-65
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	28.62	Preparation Dilution:	0.997

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<920	920	
2,4-Dinitrotoluene	121-14-2	<920	920	
Diethylphthalate	84-66-2	<920	920	
4-Chlorophenyl-phenylether	7005-72-3	<920	920	
Fluorene	86-73-7	<920	920	
4-Nitroaniline	100-01-6	<4600	4600	
4,6-Dinitro-2-methylphenol	534-52-1	<4600	4600	
N-Nitrosodiphenylamine (1)	86-30-6	<920	920	
4-Bromophenyl-phenylether	101-55-3	<920	920	
Hexachlorobenzene	118-74-1	<920	920	
Pentachlorophenol	87-86-5	<4600	4600	
Phenanthrene	85-01-8	<920	920	
Anthracene	120-12-7	<920	920	
Carbazole	86-74-8	<920	920	
Di-n-butylphthalate	84-74-2	<920	920	
Fluoranthene	206-44-0	<920	920	
Pyrene	129-00-0	<920	920	
Butylbenzylphthalate	85-68-7	<920	920	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<920	920	
Chrysene	218-01-9	<920	920	
bis(2-Ethylhexyl)phthalate	117-81-7	<920	920	
Di-n-octylphthalate	117-84-0	<920	920	
Benzo(b)fluoranthene	205-99-2	<920	920	
Benzo(k)fluoranthene	207-08-9	<920	920	
Benzo(a)pyrene	50-32-8	<920	920	
Indeno(1,2,3-cd)pyrene	193-39-5	<920	920	
Dibenz(a,h)anthracene	53-70-3	<920	920	
Benzo(g,h,i)perylene	191-24-2	<920	920	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS 270 SEMI-VOLATILES

Client Sample ID:	97BPXLLA6SD62(08)	LAL Sample ID:	L8849-69
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	32.07	Preparation Dilution:	0.992

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	55%	15-111
Phenol-d5	68%	21-110
Nitrobenzene-d5	64%	17-114
2-Fluorobiphenyl	79%	29-114
2,4,6-Tribromophenol	90%	33-136
Terphenyl-d14	80%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<960	960	
bis(2-Chloroethyl) ether	111-44-4	<960	960	
2-Chlorophenol	95-57-8	<960	960	
1,3-Dichlorobenzene	541-73-1	<960	960	
1,4-Dichlorobenzene	106-46-7	<960	960	
Benzyl alcohol	100-51-6	<1900	1900	
1,2-Dichlorobenzene	95-50-1	<960	960	
2-Methylphenol	95-48-7	<960	960	
bis(2-chloroisopropyl) ether	108-60-1	<960	960	
4-Methylphenol	106-44-5	<960	960	
N-Nitroso-di-n-propylamine	621-64-7	<960	960	
Hexachloroethane	67-72-1	<960	960	
Nitrobenzene	98-95-3	<960	960	
Isophorone	78-59-1	<960	960	
2-Nitrophenol	88-75-5	<960	960	
2,4-Dimethylphenol	105-67-9	<960	960	
Benzoic acid	65-85-0	<4800	4800	
bis(2-Chloroethoxy) methane	111-91-1	<960	960	
2,4-Dichlorophenol	120-83-2	<960	960	
1,2,4-Trichlorobenzene	120-82-1	<960	960	
Naphthalene	91-20-3	<960	960	
4-Chloroaniline	106-47-8	<1900	1900	
Hexachlorobutadiene	87-68-3	<960	960	
4-Chloro-3-methylphenol	59-50-7	<1900	1900	
2-Methylnaphthalene	91-57-6	<960	960	
Hexachlorocyclopentadiene	77-47-4	<960	960	
2,4,6-Trichlorophenol	88-06-2	<960	960	
2,4,5-Trichlorophenol	95-95-4	<960	960	
2-Chloronaphthalene	91-58-7	<960	960	
2-Nitroaniline	88-74-4	<4800	4800	
Dimethylphthalate	131-11-3	<960	960	
Acenaphthylene	208-96-8	<960	960	
2,6-Dinitrotoluene	606-20-2	<960	960	
3-Nitroaniline	99-09-2	<4800	4800	
Acenaphthene	83-32-9	<960	960	
2,4-Dinitrophenol	51-28-5	<4800	4800	
4-Nitrophenol	100-02-7	<4800	4800	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA6SD62 (08)	LAL Sample ID:	L8849-69
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	32.07	Preparation Dilution:	0.992

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (s)
Dibenzofuran	132-64-9	<960	960	
2,4-Dinitrotoluene	121-14-2	<960	960	
Diethylphthalate	84-66-2	<960	960	
4-Chlorophenyl-phenylether	7005-72-3	<960	960	
Fluorene	86-73-7	<960	960	
4-Nitroaniline	100-01-6	<4800	4800	
4,6-Dinitro-2-methylphenol	534-52-1	<4800	4800	
N-Nitrosodiphenylamine (1)	86-30-6	<960	960	
4-Bromophenyl-phenylether	101-55-3	<960	960	
Hexachlorobenzene	118-74-1	<960	960	
Pentachlorophenol	87-86-5	<4800	4800	
Phenanthrene	85-01-8	<960	960	
Anthracene	120-12-7	<960	960	
Carbazole	86-74-8	<960	960	
Di-n-butylphthalate	84-74-2	<960	960	
Fluoranthene	206-44-0	<960	960	
Pyrene	129-00-0	<960	960	
Butylbenzylphthalate	85-68-7	<960	960	
3,3'-Dichlorobenzidine	91-94-1	<1900	1900	
Benzo(a)anthracene	56-55-3	<960	960	
Chrysene	218-01-9	<960	960	
bis(2-Ethylhexyl)phthalate	117-81-7	<960	960	
Di-n-octylphthalate	117-84-0	<960	960	
Benzo(b)fluoranthene	205-99-2	<960	960	
Benzo(k)fluoranthene	207-08-9	<960	960	
Benzo(a)pyrene	50-32-8	<960	960	
Indeno(1,2,3-cd)pyrene	193-39-5	<960	960	
Dibenz(a,h)anthracene	53-70-3	<960	960	
Benzo(g,h,i)perylene	191-24-2	<960	960	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS 1270 SEMI-VOLATILES

Client Sample ID:	97BPXLIABSD01(01)	LAL Sample ID:	L8849-77
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	38.38	Preparation Dilution:	0.996

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	49%	15-111
Phenol-d5	67%	21-110
Nitrobenzene-d5	55%	17-114
2-Fluorobiphenyl	73%	29-114
2,4,6-Tribromophenol	98%	33-136
Terphenyl-d14	81%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<1100	1100	
bis(2-Chloroethyl) ether	111-44-4	<1100	1100	
2-Chlorophenol	95-57-8	<1100	1100	
1,3-Dichlorobenzene	541-73-1	<1100	1100	
1,4-Dichlorobenzene	106-46-7	<1100	1100	
Benzyl alcohol	100-51-6	<2100	2100	
1,2-Dichlorobenzene	95-50-1	<1100	1100	
2-Methylphenol	95-48-7	<1100	1100	
bis(2-chloroisopropyl) ether	108-60-1	<1100	1100	
4-Methylphenol	106-44-5	<1100	1100	
N-Nitroso-di-n-propylamine	621-64-7	<1100	1100	
Hexachloroethane	67-72-1	<1100	1100	
Nitrobenzene	98-95-3	<1100	1100	
Isophorone	78-59-1	<1100	1100	
2-Nitrophenol	88-75-5	<1100	1100	
2,4-Dimethylphenol	105-67-9	<1100	1100	
Benzoic acid	65-85-0	<5300	5300	
bis(2-Chloroethoxy)methane	111-91-1	<1100	1100	
2,4-Dichlorophenol	120-83-2	<1100	1100	
1,2,4-Trichlorobenzene	120-82-1	<1100	1100	
Naphthalene	91-20-3	<1100	1100	
4-Chloroaniline	106-47-8	<2100	2100	
Hexachlorobutadiene	87-68-3	<1100	1100	
4-Chloro-3-methylphenol	59-50-7	<2100	2100	
2-Methylnaphthalene	91-57-6	<1100	1100	
Hexachlorocyclopentadiene	77-47-4	<1100	1100	
2,4,6-Trichlorophenol	88-06-2	<1100	1100	
2,4,5-Trichlorophenol	95-95-4	<1100	1100	
2-Chloronaphthalene	91-58-7	<1100	1100	
2-Nitroaniline	88-74-4	<5300	5300	
Dimethylphthalate	131-11-3	<1100	1100	
Acenaphthylene	208-96-8	<1100	1100	
2,6-Dinitrotoluene	606-20-2	<1100	1100	
3-Nitroaniline	99-09-2	<5300	5300	
Acenaphthene	83-32-9	<1100	1100	
2,4-Dinitrophenol	51-28-5	<5300	5300	
4-Nitrophenol	100-02-7	<5300	5300	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIASD01(01)	LAL Sample ID:	L8849-77
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	38.38	Preparation Dilution:	0.996

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER
Dibenzofuran	132-64-9	<1100	1100	
2,4-Dinitrotoluene	121-14-2	<1100	1100	
Diethylphthalate	84-66-2	<1100	1100	
4-Chlorophenyl-phenylether	7005-72-3	<1100	1100	
Fluorene	86-73-7	<1100	1100	
4-Nitroaniline	100-01-6	<5300	5300	
4,6-Dinitro-2-methylphenol	534-52-1	<5300	5300	
N-Nitrosodiphenylamine (1)	86-30-6	<1100	1100	
4-Bromophenyl-phenylether	101-55-3	<1100	1100	
Hexachlorobenzene	118-74-1	<1100	1100	
Pentachlorophenol	87-86-5	<5300	5300	
Phenanthrene	85-01-8	<1100	1100	
Anthracene	120-12-7	<1100	1100	
Carbazole	86-74-8	<1100	1100	
Di-n-butylphthalate	84-74-2	<1100	1100	
Fluoranthene	206-44-0	<1100	1100	
Pyrene	129-00-0	<1100	1100	
Butylbenzylphthalate	85-68-7	<1100	1100	
3,3'-Dichlorobenzidine	91-94-1	<2100	2100	
Benzo(a)anthracene	56-55-3	<1100	1100	
Chrysene	218-01-9	<1100	1100	
bis(2-Ethylhexyl)phthalate	117-81-7	<1100	1100	
Di-n-octylphthalate	117-84-0	<1100	1100	
Benzo(b)fluoranthene	205-99-2	<1100	1100	
Benzo(k)fluoranthene	207-08-9	<1100	1100	
Benzo(a)pyrene	50-32-8	<1100	1100	
Indeno(1,2,3-cd)pyrene	193-39-5	<1100	1100	
Dibenz(a,h)anthracene	53-70-3	<1100	1100	
Benzo(g,h,i)perylene	191-24-2	<1100	1100	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIASD02(08)	LAL Sample ID:	L8849-73
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.987

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	46%	15-111
Phenol-d5	65%	21-110
Nitrobenzene-d5	48%	17-114
2-Fluorobiphenyl	73%	29-114
2,4,6-Tribromophenol	93%	33-136
Terphenyl-d14	79%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ng/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<890	890	
bis(2-Chloroethyl) ether	111-44-4	<890	890	
2-Chlorophenol	95-57-8	<890	890	
1,3-Dichlorobenzene	541-73-1	<890	890	
1,4-Dichlorobenzene	106-46-7	<890	890	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<890	890	
2-Methylphenol	95-48-7	<890	890	
bis(2-chloroisopropyl) ether	108-60-1	<890	890	
4-Methylphenol	106-44-5	<890	890	
N-Nitroso-di-n-propylamine	621-64-7	<890	890	
Hexachloroethane	67-72-1	<890	890	
Nitrobenzene	98-95-3	<890	890	
Isophorone	78-59-1	<890	890	
2-Nitrophenol	88-75-5	<890	890	
2,4-Dimethylphenol	105-67-9	<890	890	
Benzoic acid	65-85-0	<4500	4500	
bis(2-Chloroethoxy)methane	111-91-1	<890	890	
2,4-Dichlorophenol	120-83-2	<890	890	
1,2,4-Trichlorobenzene	120-82-1	<890	890	
Naphthalene	91-20-3	<890	890	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<890	890	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<890	890	
Hexachlorocyclopentadiene	77-47-4	<890	890	
2,4,6-Trichlorophenol	88-06-2	<890	890	
2,4,5-Trichlorophenol	95-95-4	<890	890	
2-Chloronaphthalene	91-58-7	<890	890	
2-Nitroaniline	88-74-4	<4500	4500	
Dimethylphthalate	131-11-3	<890	890	
Acenaphthylene	208-96-8	<890	890	
2,6-Dinitrotoluene	606-20-2	<890	890	
3-Nitroaniline	99-09-2	<4500	4500	
Acenaphthene	83-32-9	<890	890	
2,4-Dinitrophenol	51-28-5	<4500	4500	
4-Nitrophenol	100-02-7	<4500	4500	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA8SD02(08)	LAL Sample ID:	L8849-73
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.987

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<890	890	
2,4-Dinitrotoluene	121-14-2	<890	890	
Diethylphthalate	84-66-2	<890	890	
4-Chlorophenyl-phenylether	7005-72-3	<890	890	
Fluorene	86-73-7	<890	890	
4-Nitroaniline	100-01-6	<4500	4500	
4,6-Dinitro-2-methylphenol	534-52-1	<4500	4500	
N-Nitrosodiphenylamine (1)	86-30-6	<890	890	
4-Bromophenyl-phenylether	101-55-3	<890	890	
Hexachlorobenzene	118-74-1	<890	890	
Pentachlorophenol	87-86-5	<4500	4500	
Phenanthrene	85-01-8	<890	890	
Anthracene	120-12-7	<890	890	
Carbazole	86-74-8	<890	890	
Di-n-butylphthalate	84-74-2	<890	890	
Fluoranthene	206-44-0	<890	890	
Pyrene	129-00-0	<890	890	
Butylbenzylphthalate	85-68-7	<890	890	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<890	890	
Chrysene	218-01-9	<890	890	
bis(2-Ethylhexyl)phthalate	117-81-7	<890	890	
Di-n-octylphthalate	117-84-0	<890	890	
Benzo(b)fluoranthene	205-99-2	<890	890	
Benzo(k)fluoranthene	207-08-9	<890	890	
Benzo(a)pyrene	50-32-8	<890	890	
Indeno(1,2,3-cd)pyrene	193-39-5	<890	890	
Dibenz(a,h)anthracene	53-70-3	<890	890	
Benzo(g,h,i)perylene	191-24-2	<890	890	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA10SD01(01)	LAL Sample ID:	L8849-81
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	35.25	Preparation Dilution:	0.997

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	54%	15-111
Phenol-d5	69%	21-110
Nitrobenzene-d5	63%	17-114
2-Fluorobiphenyl	78%	29-114
2,4,6-Tribromophenol	92%	33-136
Terphenyl-d14	75%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<1000	1000	
bis(2-Chloroethyl) ether	111-44-4	<1000	1000	
2-Chlorophenol	95-57-8	<1000	1000	
1,3-Dichlorobenzene	541-73-1	<1000	1000	
1,4-Dichlorobenzene	106-46-7	<1000	1000	
Benzyl alcohol	100-51-6	<2000	2000	
1,2-Dichlorobenzene	95-50-1	<1000	1000	
2-Methylphenol	95-48-7	<1000	1000	
bis(2-chloroisopropyl) ether	108-60-1	<1000	1000	
4-Methylphenol	106-44-5	<1000	1000	
N-Nitroso-di-n-propylamine	621-64-7	<1000	1000	
Hexachloroethane	67-72-1	<1000	1000	
Nitrobenzene	98-95-3	<1000	1000	
Isophorone	78-59-1	<1000	1000	
2-Nitrophenol	88-75-5	<1000	1000	
2,4-Dimethylphenol	105-67-9	<1000	1000	
Benzoic acid	65-85-0	<5100	5100	
bis(2-Chloroethoxy)methane	111-91-1	<1000	1000	
2,4-Dichlorophenol	120-83-2	<1000	1000	
1,2,4-Trichlorobenzene	120-82-1	<1000	1000	
Naphthalene	91-20-3	<1000	1000	
4-Chloroaniline	106-47-8	<2000	2000	
Hexachlorobutadiene	87-68-3	<1000	1000	
4-Chloro-3-methylphenol	59-50-7	<2000	2000	
2-Methylnaphthalene	91-57-6	<1000	1000	
Hexachlorocyclopentadiene	77-47-4	<1000	1000	
2,4,6-Trichlorophenol	88-06-2	<1000	1000	
2,4,5-Trichlorophenol	95-95-4	<1000	1000	
2-Chloronaphthalene	91-58-7	<1000	1000	
2-Nitroaniline	88-74-4	<5100	5100	
Dimethylphthalate	131-11-3	<1000	1000	
Acenaphthylene	208-96-8	<1000	1000	
2,6-Dinitrotoluene	606-20-2	<1000	1000	
3-Nitroaniline	99-09-2	<5100	5100	
Acenaphthene	83-32-9	<1000	1000	
2,4-Dinitrophenol	51-28-5	<5100	5100	
4-Nitrophenol	100-02-7	<5100	5100	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA10SD01(01)	LAL Sample ID:	LB849-81
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	35.25	Preparation Dilution:	0.997

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<1000	1000	
2,4-Dinitrotoluene	121-14-2	<1000	1000	
Diethylphthalate	84-66-2	<1000	1000	
4-Chlorophenyl-phenylether	7005-72-3	<1000	1000	
Fluorene	86-73-7	<1000	1000	
4-Nitroaniline	100-01-6	<5100	5100	
4,6-Dinitro-2-methylphenol	534-52-1	<5100	5100	
N-Nitrosodiphenylamine (1)	86-30-6	<1000	1000	
4-Bromophenyl-phenylether	101-55-3	<1000	1000	
Hexachlorobenzene	118-74-1	<1000	1000	
Pentachlorophenol	87-86-5	<5100	5100	
Phenanthrene	85-01-8	<1000	1000	
Anthracene	120-12-7	<1000	1000	
Carbazole	86-74-8	<1000	1000	
Di-n-butylphthalate	84-74-2	<1000	1000	
Fluoranthene	206-44-0	<1000	1000	
Pyrene	129-00-0	<1000	1000	
Butylbenzylphthalate	85-68-7	<1000	1000	
3,3'-Dichlorobenzidine	91-94-1	<2000	2000	
Benzo(a)anthracene	56-55-3	<1000	1000	
Chrysene	218-01-9	<1000	1000	
bis(2-Ethylhexyl)phthalate	117-81-7	<1000	1000	
Di-n-octylphthalate	117-84-0	<1000	1000	
Benzo(b)fluoranthene	205-99-2	<1000	1000	
Benzo(k)fluoranthene	207-08-9	<1000	1000	
Benzo(a)pyrene	50-32-8	<1000	1000	
Indeno(1,2,3-cd)pyrene	193-39-5	<1000	1000	
Dibenz(a,h)anthracene	53-70-3	<1000	1000	
Benzo(g,h,i)perylene	191-24-2	<1000	1000	

LAS LABORATORIES

MI-VOLATILE ORGANICS BY GC/MS
70 SEMI-VOLATILES

Client Sample ID:	97BFXLIA10SD02(08)	LAL Sample ID:	L8849-85
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	44.6	Preparation Dilution:	0.998

SURROGATE	RECOVERY	QC LIMITS
2-Fluorophenol	52%	15-111
Phenol-d5	71%	21-110
Nitrobenzene-d5	57%	17-114
2-Fluorobiphenyl	77%	29-114
2,4,6-Tribromophenol	95%	33-136
Terphenyl-d14	85%	32-151

CONSTITUENT	CAS NO.	RESULT UG/KG	PRACTICAL QUANTIFICATION LIMIT UG/KG	DATA QUALIFIER(s)
Phenol	108-95-2	<1200	1200	
bis(2-Chloroethyl) ether	111-44-4	<1200	1200	
2-Chlorophenol	95-57-8	<1200	1200	
1,3-Dichlorobenzene	541-73-1	<1200	1200	
1,4-Dichlorobenzene	106-46-7	<1200	1200	
Benzyl alcohol	100-51-6	<2300	2300	
1,2-Dichlorobenzene	95-50-1	<1200	1200	
2-Methylphenol	95-48-7	<1200	1200	
bis(2-chloroisopropyl) ether	108-60-1	<1200	1200	
4-Methylphenol	106-44-5	<1200	1200	
N-Nitroso-di-n-propylamine	621-64-7	<1200	1200	
Hexachloroethane	67-72-1	<1200	1200	
Nitrobenzene	98-95-3	<1200	1200	
Isophorone	78-59-1	<1200	1200	
2-Nitrophenol	88-75-5	<1200	1200	
2,4-Dimethylphenol	105-67-9	<1200	1200	
Benzoic acid	65-85-0	<5900	5900	
bis(2-Chloroethoxy) methane	111-91-1	<1200	1200	
2,4-Dichlorophenol	120-83-2	<1200	1200	
1,2,4-Trichlorobenzene	120-82-1	<1200	1200	
Naphthalene	91-20-3	<1200	1200	
4-Chloroaniline	106-47-8	<2300	2300	
Hexachlorobutadiene	87-68-3	<1200	1200	
4-Chloro-3-methylphenol	59-50-7	<2300	2300	
2-Methylnaphthalene	91-57-6	<1200	1200	
Hexachlorocyclopentadiene	77-47-4	<1200	1200	
2,4,6-Trichlorophenol	88-06-2	<1200	1200	
2,4,5-Trichlorophenol	95-95-4	<1200	1200	
2-Chloronaphthalene	91-58-7	<1200	1200	
2-Nitroaniline	88-74-4	<5900	5900	
Dimethylphthalate	131-11-3	<1200	1200	
Acenaphthylene	208-96-8	<1200	1200	
2,6-Dinitrotoluene	606-20-2	<1200	1200	
3-Nitroaniline	99-09-2	<5900	5900	
Acenaphthene	83-32-9	<1200	1200	
2,4-Dinitrophenol	51-28-5	<5900	5900	
4-Nitrophenol	100-02-7	<5900	5900	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA10SD02 (08)	LAL Sample ID:	L8849-85
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	44.6	Preparation Dilution:	0.998

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<1200	1200	
2,4-Dinitrotoluene	121-14-2	<1200	1200	
Diethylphthalate	84-66-2	<1200	1200	
4-Chlorophenyl-phenylether	7005-72-3	<1200	1200	
Fluorene	86-73-7	<1200	1200	
4-Nitroaniline	100-01-6	<5900	5900	
4,6-Dinitro-2-methylphenol	534-52-1	<5900	5900	
N-Nitrosodiphenylamine (1)	86-30-6	<1200	1200	
4-Bromophenyl-phenylether	101-55-3	<1200	1200	
Hexachlorobenzene	118-74-1	<1200	1200	
Pentachlorophenol	87-86-5	<5900	5900	
Phenanthrene	85-01-8	<1200	1200	
Anthracene	120-12-7	<1200	1200	
Carbazole	86-74-8	<1200	1200	
Di-n-butylphthalate	84-74-2	<1200	1200	
Fluoranthene	206-44-0	<1200	1200	
Pyrene	129-00-0	<1200	1200	
Butylbenzylphthalate	85-68-7	<1200	1200	
3,3'-Dichlorobenzidine	91-94-1	<2300	2300	
Benzo (a) anthracene	56-55-3	<1200	1200	
Chrysene	218-01-9	<1200	1200	
bis (2-Ethylhexyl) phthalate	117-81-7	<1200	1200	
Di-n-octylphthalate	117-84-0	<1200	1200	
Benzo (b) fluoranthene	205-99-2	<1200	1200	
Benzo (k) fluoranthene	207-08-9	<1200	1200	
Benzo (a) pyrene	50-32-8	<1200	1200	
Indeno (1,2,3-cd) pyrene	193-39-5	<1200	1200	
Dibenz (a,h) anthracene	53-70-3	<1200	1200	
Benzo (g,h,i) perylene	191-24-2	<1200	1200	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS 1270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB8SD02(08)	LAL Sample ID:	L8849-95
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	28.76	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	53%	15-111
Phenol-d5	69%	21-110
Nitrobenzene-d5	62%	17-114
2-Fluorobiphenyl	78%	29-114
2,4,6-Tribromophenol	95%	33-136
Terphenyl-d14	81%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<920	920	
bis(2-Chloroethyl) ether	111-44-4	<920	920	
2-Chlorophenol	95-57-8	<920	920	
1,3-Dichlorobenzene	541-73-1	<920	920	
1,4-Dichlorobenzene	106-46-7	<920	920	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<920	920	
2-Methylphenol	95-48-7	<920	920	
bis(2-chloroisopropyl) ether	108-60-1	<920	920	
4-Methylphenol	106-44-5	<920	920	
N-Nitroso-di-n-propylamine	621-64-7	<920	920	
Hexachloroethane	67-72-1	<920	920	
Nitrobenzene	98-95-3	<920	920	
Isophorone	78-59-1	<920	920	
2-Nitrophenol	88-75-5	<920	920	
2,4-Dimethylphenol	105-67-9	<920	920	
Benzoic acid	65-85-0	<4600	4600	
bis(2-Chloroethoxy)methane	111-91-1	<920	920	
2,4-Dichlorophenol	120-83-2	<920	920	
1,2,4-Trichlorobenzene	120-82-1	<920	920	
Naphthalene	91-20-3	<920	920	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<920	920	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<920	920	
Hexachlorocyclopentadiene	77-47-4	<920	920	
2,4,6-Trichlorophenol	88-06-2	<920	920	
2,4,5-Trichlorophenol	95-95-4	<920	920	
2-Chloronaphthalene	91-58-7	<920	920	
2-Nitroaniline	88-74-4	<4600	4600	
Dimethylphthalate	131-11-3	<920	920	
Acenaphthylene	208-96-8	<920	920	
2,6-Dinitrotoluene	606-20-2	<920	920	
3-Nitroaniline	99-09-2	<4600	4600	
Acenaphthene	83-32-9	<920	920	
2,4-Dinitrophenol	51-28-5	<4600	4600	
4-Nitrophenol	100-02-7	<4600	4600	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB8SD02(08)	LAL Sample ID:	L8849-95
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	28.76	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<920	920	
2,4-Dinitrotoluene	121-14-2	<920	920	
Diethylphthalate	84-66-2	<920	920	
4-Chlorophenyl-phenylether	7005-72-3	<920	920	
Fluorene	86-73-7	<920	920	
4-Nitroaniline	100-01-6	<4600	4600	
4,6-Dinitro-2-methylphenol	534-52-1	<4600	4600	
N-Nitrosodiphenylamine (1)	86-30-6	<920	920	
4-Bromophenyl-phenylether	101-55-3	<920	920	
Hexachlorobenzene	118-74-1	<920	920	
Pentachlorophenol	87-86-5	<4600	4600	
Phenanthrene	85-01-8	<920	920	
Anthracene	120-12-7	<920	920	
Carbazole	86-74-8	<920	920	
Di-n-butylphthalate	84-74-2	<920	920	
Fluoranthene	206-44-0	<920	920	
Pyrene	129-00-0	<920	920	
Butylbenzylphthalate	85-68-7	<920	920	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<920	920	
Chrysene	218-01-9	<920	920	
bis(2-Ethylhexyl)phthalate	117-81-7	<920	920	
Di-n-octylphthalate	117-84-0	<920	920	
Benzo(b)fluoranthene	205-99-2	<920	920	
Benzo(k)fluoranthene	207-08-9	<920	920	
Benzo(a)pyrene	50-32-8	<920	920	
Indeno(1,2,3-cd)pyrene	193-39-5	<920	920	
Dibenz(a,h)anthracene	53-70-3	<920	920	
Benzo(g,h,i)perylene	191-24-2	<920	920	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB8SD01(01)	LAL Sample ID:	L8849-99
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	28.44	Preparation Dilution:	0.996

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	49%	15-111
Phenol-d5	67%	21-110
Nitrobenzene-d5	59%	17-114
2-Fluorobiphenyl	76%	29-114
2,4,6-Tribromophenol	99%	33-136
Terphenyl-d14	80%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<920	920	
bis(2-Chloroethyl) ether	111-44-4	<920	920	
2-Chlorophenol	95-57-8	<920	920	
1,3-Dichlorobenzene	541-73-1	<920	920	
1,4-Dichlorobenzene	106-46-7	<920	920	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<920	920	
2-Methylphenol	95-48-7	<920	920	
bis(2-chloroisopropyl) ether	108-60-1	<920	920	
4-Methylphenol	106-44-5	<920	920	
N-Nitroso-di-n-propylamine	621-64-7	<920	920	
Hexachloroethane	67-72-1	<920	920	
Nitrobenzene	98-95-3	<920	920	
Isophorone	78-59-1	<920	920	
2-Nitrophenol	88-75-5	<920	920	
2,4-Dimethylphenol	105-67-9	<920	920	
Benzoic acid	65-85-0	<4600	4600	
bis(2-Chloroethoxy)methane	111-91-1	<920	920	
2,4-Dichlorophenol	120-83-2	<920	920	
1,2,4-Trichlorobenzene	120-82-1	<920	920	
Naphthalene	91-20-3	<920	920	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<920	920	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<920	920	
Hexachlorocyclopentadiene	77-47-4	<920	920	
2,4,6-Trichlorophenol	88-06-2	<920	920	
2,4,5-Trichlorophenol	95-95-4	<920	920	
2-Chloronaphthalene	91-58-7	<920	920	
2-Nitroaniline	88-74-4	<4600	4600	
Dimethylphthalate	131-11-3	<920	920	
Acenaphthylene	208-96-8	<920	920	
2,6-Dinitrotoluene	606-20-2	<920	920	
3-Nitroaniline	99-09-2	<4600	4600	
Acenaphthene	83-32-9	<920	920	
2,4-Dinitrophenol	51-28-5	<4600	4600	
4-Nitrophenol	100-02-7	<4600	4600	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB8SD01(01)	LAL Sample ID:	L8849-99
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	28.44	Preparation Dilution:	0.996

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<920	920	
2,4-Dinitrotoluene	121-14-2	<920	920	
Diethylphthalate	84-66-2	<920	920	
4-Chlorophenyl-phenylether	7005-72-3	<920	920	
Fluorene	86-73-7	<920	920	
4-Nitroaniline	100-01-6	<4600	4600	
4,6-Dinitro-2-methylphenol	534-52-1	<4600	4600	
N-Nitrosodiphenylamine (1)	86-30-6	<920	920	
4-Bromophenyl-phenylether	101-55-3	<920	920	
Hexachlorobenzene	118-74-1	<920	920	
Pentachlorophenol	87-86-5	<4600	4600	
Phenanthrene	85-01-8	<920	920	
Anthracene	120-12-7	<920	920	
Carbazole	86-74-8	<920	920	
Di-n-butylphthalate	84-74-2	<920	920	
Fluoranthene	206-44-0	<920	920	
Pyrene	129-00-0	<920	920	
Butylbenzylphthalate	85-68-7	<920	920	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<920	920	
Chrysene	218-01-9	<920	920	
bis(2-Ethylhexyl)phthalate	117-81-7	<920	920	
Di-n-octylphthalate	117-84-0	<920	920	
Benzo(b)fluoranthene	205-99-2	<920	920	
Benzo(k)fluoranthene	207-08-9	<920	920	
Benzo(a)pyrene	50-32-8	<920	920	
Indeno(1,2,3-cd)pyrene	193-39-5	<920	920	
Dibenz(a,h)anthracene	53-70-3	<920	920	
Benzo(g,h,i)perylene	191-24-2	<920	920	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS .270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC4SD01(01)	LAL Sample ID:	L8849-103
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	19.41	Preparation Dilution:	0.995

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	49%	15-111
Phenol-d5	61%	21-110
Nitrobenzene-d5	59%	17-114
2-Fluorobiphenyl	69%	29-114
2,4,6-Tribromophenol	92%	33-136
Terphenyl-d14	80%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<810	810	
bis(2-Chloroethyl) ether	111-44-4	<810	810	
2-Chlorophenol	95-57-8	<810	810	
1,3-Dichlorobenzene	541-73-1	<810	810	
1,4-Dichlorobenzene	106-46-7	<810	810	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<810	810	
2-Methylphenol	95-48-7	<810	810	
bis(2-chloroisopropyl) ether	108-60-1	<810	810	
4-Methylphenol	106-44-5	<810	810	
N-Nitroso-di-n-propylamine	621-64-7	<810	810	
Hexachloroethane	67-72-1	<810	810	
Nitrobenzene	98-95-3	<810	810	
Isophorone	78-59-1	<810	810	
2-Nitrophenol	88-75-5	<810	810	
2,4-Dimethylphenol	105-67-9	<810	810	
Benzoic acid	65-85-0	<4100	4100	
bis(2-Chloroethoxy) methane	111-91-1	<810	810	
2,4-Dichlorophenol	120-83-2	<810	810	
1,2,4-Trichlorobenzene	120-82-1	<810	810	
Naphthalene	91-20-3	<810	810	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<810	810	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<810	810	
Hexachlorocyclopentadiene	77-47-4	<810	810	
2,4,6-Trichlorophenol	88-06-2	<810	810	
2,4,5-Trichlorophenol	95-95-4	<810	810	
2-Chloronaphthalene	91-58-7	<810	810	
2-Nitroaniline	88-74-4	<4100	4100	
Dimethylphthalate	131-11-3	<810	810	
Acenaphthylene	208-96-8	<810	810	
2,6-Dinitrotoluene	606-20-2	<810	810	
3-Nitroaniline	99-09-2	<4100	4100	
Acenaphthene	83-32-9	<810	810	
2,4-Dinitrophenol	51-28-5	<4100	4100	
4-Nitrophenol	100-02-7	<4100	4100	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC4SD01(01)	LAL Sample ID:	L8849-103
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	19.41	Preparation Dilution:	0.995

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL	DATA
			QUANTITATION LIMIT ug/Kg	QUALIFIER(S)
Dibenzofuran	132-64-9	<810	810	
2,4-Dinitrotoluene	121-14-2	<810	810	
Diethylphthalate	84-66-2	<810	810	
4-Chlorophenyl-phenylether	7005-72-3	<810	810	
Fluorene	86-73-7	<810	810	
4-Nitroaniline	100-01-6	<4100	4100	
4,6-Dinitro-2-methylphenol	534-52-1	<4100	4100	
N-Nitrosodiphenylamine (1)	86-30-6	<810	810	
4-Bromophenyl-phenylether	101-55-3	<810	810	
Hexachlorobenzene	118-74-1	<810	810	
Pentachlorophenol	87-86-5	<4100	4100	
Phenanthrene	85-01-8	<810	810	
Anthracene	120-12-7	<810	810	
Carbazole	86-74-8	<810	810	
Di-n-butylphthalate	84-74-2	<810	810	
Fluoranthene	206-44-0	<810	810	
Pyrene	129-00-0	<810	810	
Butylbenzylphthalate	85-68-7	<810	810	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<810	810	
Chrysene	218-01-9	<810	810	
bis(2-Ethylhexyl)phthalate	117-81-7	<810	810	
Di-n-octylphthalate	117-84-0	<810	810	
Benzo(b)fluoranthene	205-99-2	<810	810	
Benzo(k)fluoranthene	207-08-9	<810	810	
Benzo(a)pyrene	50-32-8	<810	810	
Indeno(1,2,3-cd)pyrene	193-39-5	<810	810	
Dibenz(a,h)anthracene	53-70-3	<810	810	
Benzo(g,h,i)perylene	191-24-2	<810	810	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Method Blank	LAL Sample ID:	45791MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Batch ID:	022097-8270-K
Percent Moisture:	N/A	Analytical Dilution:	1
		Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	61%	15-111
Phenol-d5	69%	21-110
Nitrobenzene-d5	83%	17-114
2-Fluorobiphenyl	84%	29-114
2,4,6-Tribromophenol	95%	33-136
Terphenyl-d14	113%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<660	660	
bis(2-Chloroethyl) ether	111-44-4	<660	660	
2-Chlorophenol	95-57-8	<660	660	
1,3-Dichlorobenzene	541-73-1	<660	660	
1,4-Dichlorobenzene	106-46-7	<660	660	
Benzyl alcohol	100-51-6	<1300	1300	
1,2-Dichlorobenzene	95-50-1	<660	660	
2-Methylphenol	95-48-7	<660	660	
bis(2-chloroisopropyl) ether	108-60-1	<660	660	
4-Methylphenol	106-44-5	<660	660	
N-Nitroso-di-n-propylamine	621-64-7	<660	660	
Hexachloroethane	67-72-1	<660	660	
Nitrobenzene	98-95-3	<660	660	
Isophorone	78-59-1	<660	660	
2-Nitrophenol	88-75-5	<660	660	
2,4-Dimethylphenol	105-67-9	<660	660	
Benzoic acid	65-85-0	<3300	3300	
bis(2-Chloroethoxy)methane	111-91-1	<660	660	
2,4-Dichlorophenol	120-83-2	<660	660	
1,2,4-Trichlorobenzene	120-82-1	<660	660	
Naphthalene	91-20-3	<660	660	
4-Chloroaniline	106-47-8	<1300	1300	
Hexachlorobutadiene	87-68-3	<660	660	
4-Chloro-3-methylphenol	59-50-7	<1300	1300	
2-Methylnaphthalene	91-57-6	<660	660	
Hexachlorocyclopentadiene	77-47-4	<660	660	
2,4,6-Trichlorophenol	88-06-2	<660	660	
2,4,5-Trichlorophenol	95-95-4	<660	660	
2-Chloronaphthalene	91-58-7	<660	660	
2-Nitroaniline	88-74-4	<3300	3300	
Dimethylphthalate	131-11-3	<660	660	
Acenaphthylene	208-96-8	<660	660	
2,6-Dinitrotoluene	606-20-2	<660	660	
3-Nitroaniline	99-09-2	<3300	3300	
Acenaphthene	83-32-9	<660	660	
2,4-Dinitrophenol	51-28-5	<3300	3300	
4-Nitrophenol	100-02-7	<3300	3300	

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SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Method Blank	LAL Sample ID:	45791MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	0.999

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<660	660	
2,4-Dinitrotoluene	121-14-2	<660	660	
Diethylphthalate	84-66-2	<660	660	
4-Chlorophenyl-phenylether	7005-72-3	<660	660	
Fluorene	86-73-7	<660	660	
4-Nitroaniline	100-01-6	<3300	3300	
4,6-Dinitro-2-methylphenol	534-52-1	<3300	3300	
N-Nitrosodiphenylamine (1)	86-30-6	<660	660	
4-Bromophenyl-phenylether	101-55-3	<660	660	
Hexachlorobenzene	118-74-1	<660	660	
Pentachlorophenol	87-86-5	<3300	3300	
Phenanthrene	85-01-8	<660	660	
Anthracene	120-12-7	<660	660	
Carbazole	86-74-8	<660	660	
Di-n-butylphthalate	84-74-2	<660	660	
Fluoranthene	206-44-0	<660	660	
Pyrene	129-00-0	<660	660	
Butylbenzylphthalate	85-68-7	<660	660	
3,3'-Dichlorobenzidine	91-94-1	<1300	1300	
Benzo(a)anthracene	56-55-3	<660	660	
Chrysene	218-01-9	<660	660	
bis(2-Ethylhexyl)phthalate	117-81-7	<660	660	
Di-n-octylphthalate	117-84-0	<660	660	
Benzo(b)fluoranthene	205-99-2	<660	660	
Benzo(k)fluoranthene	207-08-9	<660	660	
Benzo(a)pyrene	50-32-8	<660	660	
Indeno(1,2,3-cd)pyrene	193-39-5	<660	660	
Dibenz(a,h)anthracene	53-70-3	<660	660	
Benzo(g,h,i)perylene	191-24-2	<660	660	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Method Blank	LAL Sample ID:	45795MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	49%	15-111
Phenol-d5	59%	21-110
Nitrobenzene-d5	57%	17-114
2-Fluorobiphenyl	64%	29-114
2,4,6-Tribromophenol	94%	33-136
Terphenyl-d14	93%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<660	660	
bis(2-Chloroethyl) ether	111-44-4	<660	660	
2-Chlorophenol	95-57-8	<660	660	
1,3-Dichlorobenzene	541-73-1	<660	660	
1,4-Dichlorobenzene	106-46-7	<660	660	
Benzyl alcohol	100-51-6	<1300	1300	
1,2-Dichlorobenzene	95-50-1	<660	660	
2-Methylphenol	95-48-7	<660	660	
bis(2-chloroisopropyl) ether	108-60-1	<660	660	
4-Methylphenol	106-44-5	<660	660	
N-Nitroso-di-n-propylamine	621-64-7	<660	660	
Hexachloroethane	67-72-1	<660	660	
Nitrobenzene	98-95-3	<660	660	
Isophorone	78-59-1	<660	660	
2-Nitrophenol	88-75-5	<660	660	
2,4-Dimethylphenol	105-67-9	<660	660	
Benzoic acid	65-85-0	<3300	3300	
bis(2-Chloroethoxy) methane	111-91-1	<660	660	
2,4-Dichlorophenol	120-83-2	<660	660	
1,2,4-Trichlorobenzene	120-82-1	<660	660	
Naphthalene	91-20-3	<660	660	
4-Chloroaniline	106-47-8	<1300	1300	
Hexachlorobutadiene	87-68-3	<660	660	
4-Chloro-3-methylphenol	59-50-7	<1300	1300	
2-Methylnaphthalene	91-57-6	<660	660	
Hexachlorocyclopentadiene	77-47-4	<660	660	
2,4,6-Trichlorophenol	88-06-2	<660	660	
2,4,5-Trichlorophenol	95-95-4	<660	660	
2-Chloronaphthalene	91-58-7	<660	660	
2-Nitroaniline	88-74-4	<3300	3300	
Dimethylphthalate	131-11-3	<660	660	
Acenaphthylene	208-96-8	<660	660	
2,6-Dinitrotoluene	606-20-2	<660	660	
3-Nitroaniline	99-09-2	<3300	3300	
Acenaphthene	83-32-9	<660	660	
2,4-Dinitrophenol	51-28-5	<3300	3300	
4-Nitrophenol	100-02-7	<3300	3300	

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SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Method Blank	LAL Sample ID:	45795MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (S)
Dibenzofuran	132-64-9	<660	660	
2,4-Dinitrotoluene	121-14-2	<660	660	
Diethylphthalate	84-66-2	<660	660	
4-Chlorophenyl-phenylether	7005-72-3	<660	660	
Fluorene	86-73-7	<660	660	
4-Nitroaniline	100-01-6	<3300	3300	
4,6-Dinitro-2-methylphenol	534-52-1	<3300	3300	
N-Nitrosodiphenylamine (1)	86-30-6	<660	660	
4-Bromophenyl-phenylether	101-55-3	<660	660	
Hexachlorobenzene	118-74-1	<660	660	
Pentachlorophenol	87-86-5	<3300	3300	
Phenanthrene	85-01-8	<660	660	
Anthracene	120-12-7	<660	660	
Carbazole	86-74-8	<660	660	
Di-n-butylphthalate	84-74-2	<660	660	
Fluoranthene	206-44-0	<660	660	
Pyrene	129-00-0	<660	660	
Butylbenzylphthalate	85-68-7	<660	660	
3,3'-Dichlorobenzidine	91-94-1	<1300	1300	
Benzo(a)anthracene	56-55-3	<660	660	
Chrysene	218-01-9	<660	660	
bis(2-Ethylhexyl)phthalate	117-81-7	<660	660	
Di-n-octylphthalate	117-84-0	<660	660	
Benzo(b)fluoranthene	205-99-2	<660	660	
Benzo(k)fluoranthene	207-08-9	<660	660	
Benzo(a)pyrene	50-32-8	<660	660	
Indeno(1,2,3-cd)pyrene	193-39-5	<660	660	
Dibenz(a,h)anthracene	53-70-3	<660	660	
Benzo(g,h,i)perylene	191-24-2	<660	660	

LAS

SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	45791MS
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	22.03	Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	75%	15-111
Phenol-d5	84%	21-110
Nitrobenzene-d5	83%	17-114
2-Fluorobiphenyl	89%	29-114
2,4,6-Tribromophenol	97%	33-136
Terphenyl-d14	99%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	7800	840	
bis(2-Chloroethyl) ether	111-44-4	7900	840	
2-Chlorophenol	95-57-8	7200	840	
1,3-Dichlorobenzene	541-73-1	5200	840	
1,4-Dichlorobenzene	106-46-7	5700	840	
Benzyl alcohol	100-51-6	7900	1700	
1,2-Dichlorobenzene	95-50-1	5900	840	
2-Methylphenol	95-48-7	10000	840	
bis(2-chloroisopropyl) ether	108-60-1	9000	840	
4-Methylphenol	106-44-5	6100	840	
N-Nitroso-di-n-propylamine	621-64-7	7900	840	
Hexachloroethane	67-72-1	5100	840	
Nitrobenzene	98-95-3	6900	840	
Isophorone	78-59-1	7900	840	
2-Nitrophenol	88-75-5	7400	840	
2,4-Dimethylphenol	105-67-9	8700	840	
Benzoic acid	65-85-0	7800	4200	
bis(2-Chloroethoxy) methane	111-91-1	8100	840	
2,4-Dichlorophenol	120-83-2	8500	840	
1,2,4-Trichlorobenzene	120-82-1	6900	840	
Naphthalene	91-20-3	7700	840	
4-Chloroaniline	106-47-8	7800	1700	
Hexachlorobutadiene	87-68-3	6300	840	
4-Chloro-3-methylphenol	59-50-7	8000	1700	
2-Methylnaphthalene	91-57-6	7900	840	
Hexachlorocyclopentadiene	77-47-4	1200	840	
2,4,6-Trichlorophenol	88-06-2	8100	840	
2,4,5-Trichlorophenol	95-95-4	7900	840	
2-Chloronaphthalene	91-58-7	8000	840	
2-Nitroaniline	88-74-4	7100	4200	
Dimethylphthalate	131-11-3	8700	840	
Acenaphthylene	208-96-8	8400	840	
2,6-Dinitrotoluene	606-20-2	7400	840	
3-Nitroaniline	99-09-2	7700	4200	
Acenaphthene	83-32-9	8400	840	
2,4-Dinitrophenol	51-28-5	5500	4200	
4-Nitrophenol	100-02-7	7500	4200	

LAS

SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIB6SD02 (08)	LAL Sample ID:	45791MS
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Batch ID:	022097-8270-K
Percent Moisture:	22.03	Analytical Dilution:	1
		Preparation Dilution:	0.999

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (S)
Dibenzofuran	132-64-9	8200	840	
2,4-Dinitrotoluene	121-14-2	6200	840	
Diethylphthalate	84-66-2	8700	840	
4-Chlorophenyl-phenylether	7005-72-3	8100	840	
Fluorene	86-73-7	8500	840	
4-Nitroaniline	100-01-6	8900	4200	
4,6-Dinitro-2-methylphenol	534-52-1	5800	4200	
N-Nitrosodiphenylamine (1)	86-30-6	9100	840	
4-Bromophenyl-phenylether	101-55-3	8200	840	
Hexachlorobenzene	118-74-1	8500	840	
Pentachlorophenol	87-86-5	9500	4200	
Phenanthrene	85-01-8	9100	840	
Anthracene	120-12-7	8900	840	
Carbazole	86-74-8	9500	840	
Di-n-butylphthalate	84-74-2	9200	840	
Fluoranthene	206-44-0	9500	840	
Pyrene	129-00-0	7400	840	
Butylbenzylphthalate	85-68-7	7800	840	
3,3'-Dichlorobenzidine	91-94-1	8300	1700	
Benzo(a)anthracene	56-55-3	9200	840	
Chrysene	218-01-9	9200	840	
bis(2-Ethylhexyl)phthalate	117-81-7	8600	840	
Di-n-octylphthalate	117-84-0	7500	840	
Benzo(b)fluoranthene	205-99-2	8900	840	
Benzo(k)fluoranthene	207-08-9	8300	840	
Benzo(a)pyrene	50-32-8	8900	840	
Indeno(1,2,3-cd)pyrene	193-39-5	9100	840	
Dibenz(a,h)anthracene	53-70-3	9100	840	
Benzo(g,h,i)perylene	191-24-2	9000	840	

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SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIA8SD02(08)	LAL Sample ID:	45795MS
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Batch ID:	022197-8270-K
Percent Moisture:	26.69	Analytical Dilution:	1
		Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	38%	15-111
Phenol-d5	54%	21-110
Nitrobenzene-d5	44%	17-114
2-Fluorobiphenyl	71%	29-114
2,4,6-Tribromophenol	100%	33-136
Terphenyl-d14	87%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	5500	900	
bis(2-Chloroethyl) ether	111-44-4	3100	900	
2-Chlorophenol	95-57-8	4500	900	
1,3-Dichlorobenzene	541-73-1	2400	900	
1,4-Dichlorobenzene	106-46-7	2600	900	
Benzyl alcohol	100-51-6	6200	1800	
1,2-Dichlorobenzene	95-50-1	2700	900	
2-Methylphenol	95-48-7	6200	900	
bis(2-chloroisopropyl) ether	108-60-1	3900	900	
4-Methylphenol	106-44-5	7700	900	
N-Nitroso-di-n-propylamine	621-64-7	5200	900	
Hexachloroethane	67-72-1	2600	900	
Nitrobenzene	98-95-3	4200	900	
Isophorone	78-59-1	6200	900	
2-Nitrophenol	88-75-5	5000	900	
2,4-Dimethylphenol	105-67-9	6600	900	
Benzoic acid	65-85-0	8100	4500	
bis(2-Chloroethoxy)methane	111-91-1	5600	900	
2,4-Dichlorophenol	120-83-2	6900	900	
1,2,4-Trichlorobenzene	120-82-1	4500	900	
Naphthalene	91-20-3	5200	900	
4-Chloroaniline	106-47-8	3300	1800	
Hexachlorobutadiene	87-68-3	4200	900	
4-Chloro-3-methylphenol	59-50-7	7000	1800	
2-Methylnaphthalene	91-57-6	5900	900	
Hexachlorocyclopentadiene	77-47-4	1300	900	
2,4,6-Trichlorophenol	88-06-2	7900	900	
2,4,5-Trichlorophenol	95-95-4	7900	900	
2-Chloronaphthalene	91-58-7	6800	900	
2-Nitroaniline	88-74-4	8000	4500	
Dimethylphthalate	131-11-3	8300	900	
Acenaphthylene	208-96-8	7400	900	
2,6-Dinitrotoluene	606-20-2	8800	900	
3-Nitroaniline	99-09-2	7200	4500	
Acenaphthene	83-32-9	7600	900	
2,4-Dinitrophenol	51-28-5	11000	4500	
4-Nitrophenol	100-02-7	9700	4500	

LAS

SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLI8SD02(08)	LAL Sample ID:	45795MS
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.999

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	7700	900	
2,4-Dinitrotoluene	121-14-2	9200	900	
Diethylphthalate	84-66-2	8500	900	
4-Chlorophenyl-phenylether	7005-72-3	8200	900	
Fluorene	86-73-7	8000	900	
4-Nitroaniline	100-01-6	9300	4500	
4,6-Dinitro-2-methylphenol	534-52-1	10000	4500	
N-Nitrosodiphenylamine (1)	86-30-6	8100	900	
4-Bromophenyl-phenylether	101-55-3	7500	900	
Hexachlorobenzene	118-74-1	7800	900	
Pentachlorophenol	87-86-5	11000	4500	
Phenanthrene	85-01-8	8300	900	
Anthracene	120-12-7	8200	900	
Carbazole	86-74-8	8900	900	
Di-n-butylphthalate	84-74-2	8300	900	
Fluoranthene	206-44-0	9500	900	
Pyrene	129-00-0	7200	900	
Butylbenzylphthalate	85-68-7	7600	900	
3,3'-Dichlorobenzidine	91-94-1	5300	1800	
Benzo(a)anthracene	56-55-3	8500	900	
Chrysene	218-01-9	8600	900	
bis(2-Ethylhexyl)phthalate	117-81-7	7500	900	
Di-n-octylphthalate	117-84-0	6300	900	
Benzo(b)fluoranthene	205-99-2	7600	900	
Benzo(k)fluoranthene	207-08-9	7800	900	
Benzo(a)pyrene	50-32-8	8100	900	
Indeno(1,2,3-cd)pyrene	193-39-5	8400	900	
Dibenz(a,h)anthracene	53-70-3	8300	900	
Benzo(g,h,i)perylene	191-24-2	8500	900	

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SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	45791MSD
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Batch ID:	022097-8270-K
Percent Moisture:	22.03	Analytical Dilution:	1
		Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	71%	15-111
Phenol-d5	75%	21-110
Nitrobenzene-d5	85%	17-114
2-Fluorobiphenyl	87%	29-114
2,4,6-Tribromophenol	97%	33-136
Terphenyl-d14	103%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	6500	840	
bis(2-Chloroethyl) ether	111-44-4	6600	840	
2-Chlorophenol	95-57-8	6600	840	
1,3-Dichlorobenzene	541-73-1	5000	840	
1,4-Dichlorobenzene	106-46-7	5100	840	
Benzyl alcohol	100-51-6	8300	1700	
1,2-Dichlorobenzene	95-50-1	5300	840	
2-Methylphenol	95-48-7	9400	840	
bis(2-chloroisopropyl) ether	108-60-1	8000	840	
4-Methylphenol	106-44-5	5700	840	
N-Nitroso-di-n-propylamine	621-64-7	7700	840	
Hexachloroethane	67-72-1	4400	840	
Nitrobenzene	98-95-3	7000	840	
Isophorone	78-59-1	7900	840	
2-Nitrophenol	88-75-5	7900	840	
2,4-Dimethylphenol	105-67-9	8600	840	
Benzoic acid	65-85-0	7600	4200	
bis(2-Chloroethoxy) methane	111-91-1	8100	840	
2,4-Dichlorophenol	120-83-2	8400	840	
1,2,4-Trichlorobenzene	120-82-1	7100	840	
Naphthalene	91-20-3	7500	840	
4-Chloroaniline	106-47-8	7400	1700	
Hexachlorobutadiene	87-68-3	6600	840	
4-Chloro-3-methylphenol	59-50-7	8000	1700	
2-Methylnaphthalene	91-57-6	7500	840	
Hexachlorocyclopentadiene	77-47-4	1500	840	
2,4,6-Trichlorophenol	88-06-2	8200	840	
2,4,5-Trichlorophenol	95-95-4	7600	840	
2-Chloronaphthalene	91-58-7	7900	840	
2-Nitroaniline	88-74-4	7600	4200	
Dimethylphthalate	131-11-3	8700	840	
Acenaphthylene	208-96-8	8200	840	
2,6-Dinitrotoluene	606-20-2	8100	840	
3-Nitroaniline	99-09-2	7700	4200	
Acenaphthene	83-32-9	8000	840	
2,4-Dinitrophenol	51-28-5	6700	4200	
4-Nitrophenol	100-02-7	7000	4200	

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SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	45791MSD
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	22.03	Preparation Dilution:	0.999

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	8000	840	
2,4-Dinitrotoluene	121-14-2	7100	840	
Diethylphthalate	84-66-2	8400	840	
4-Chlorophenyl-phenylether	7005-72-3	7900	840	
Fluorene	86-73-7	8100	840	
4-Nitroaniline	100-01-6	8800	4200	
4,6-Dinitro-2-methylphenol	534-52-1	7000	4200	
N-Nitrosodiphenylamine (1)	86-30-6	8700	840	
4-Bromophenyl-phenylether	101-55-3	8300	840	
Hexachlorobenzene	118-74-1	8500	840	
Pentachlorophenol	87-86-5	9900	4200	
Phenanthrene	85-01-8	9000	840	
Anthracene	120-12-7	8600	840	
Carbazole	86-74-8	9100	840	
Di-n-butylphthalate	84-74-2	8900	840	
Fluoranthene	206-44-0	8900	840	
Pyrene	129-00-0	7700	840	
Butylbenzylphthalate	85-68-7	8100	840	
3,3'-Dichlorobenzidine	91-94-1	8200	1700	
Benzo (a) anthracene	56-55-3	9100	840	
Chrysene	218-01-9	9200	840	
bis (2-Ethylhexyl) phthalate	117-81-7	8400	840	
Di-n-octylphthalate	117-84-0	7200	840	
Benzo (b) fluoranthene	205-99-2	8100	840	
Benzo (k) fluoranthene	207-08-9	8800	840	
Benzo (a) pyrene	50-32-8	8800	840	
Indeno (1,2,3-cd) pyrene	193-39-5	9400	840	
Dibenz (a, h) anthracene	53-70-3	9500	840	
Benzo (g, h, i) perylene	191-24-2	9500	840	

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SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIASD02(08)	LAL Sample ID:	45795MSD
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.989

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	52%	15-111
Phenol-d5	64%	21-110
Nitrobenzene-d5	61%	17-114
2-Fluorobiphenyl	85%	29-114
2,4,6-Tribromophenol	110%	33-136
Terphenyl-d14	92%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	6400	890	
bis(2-Chloroethyl) ether	111-44-4	4400	890	
2-Chlorophenol	95-57-8	5600	890	
1,3-Dichlorobenzene	541-73-1	3400	890	
1,4-Dichlorobenzene	106-46-7	3600	890	
Benzyl alcohol	100-51-6	7200	1800	
1,2-Dichlorobenzene	95-50-1	3500	890	
2-Methylphenol	95-48-7	7600	890	
bis(2-chloroisopropyl) ether	108-60-1	5000	890	
4-Methylphenol	106-44-5	9200	890	
N-Nitroso-di-n-propylamine	621-64-7	6000	890	
Hexachloroethane	67-72-1	3400	890	
Nitrobenzene	98-95-3	5600	890	
Isophorone	78-59-1	7000	890	
2-Nitrophenol	88-75-5	6300	890	
2,4-Dimethylphenol	105-67-9	7400	890	
Benzoic acid	65-85-0	8400	4500	
bis(2-Chloroethoxy)methane	111-91-1	6600	890	
2,4-Dichlorophenol	120-83-2	7900	890	
1,2,4-Trichlorobenzene	120-82-1	5800	890	
Naphthalene	91-20-3	6400	890	
4-Chloroaniline	106-47-8	4100	1800	
Hexachlorobutadiene	87-68-3	5400	890	
4-Chloro-3-methylphenol	59-50-7	7500	1800	
2-Methylnaphthalene	91-57-6	7000	890	
Hexachlorocyclopentadiene	77-47-4	1900	890	
2,4,6-Trichlorophenol	88-06-2	8700	890	
2,4,5-Trichlorophenol	95-95-4	8200	890	
2-Chloronaphthalene	91-58-7	7900	890	
2-Nitroaniline	88-74-4	8700	4500	
Dimethylphthalate	131-11-3	8800	890	
Acenaphthylene	208-96-8	8300	890	
2,6-Dinitrotoluene	606-20-2	9600	890	
3-Nitroaniline	99-09-2	8100	4500	
Acenaphthene	83-32-9	8400	890	
2,4-Dinitrophenol	51-28-5	13000	4500	
4-Nitrophenol	100-02-7	11000	4500	

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SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLLABSD02(08)	LAL Sample ID:	45795MSD
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.989

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	8400	890	
2,4-Dinitrotoluene	121-14-2	9900	890	
Diethylphthalate	84-66-2	9000	890	
4-Chlorophenyl-phenylether	7005-72-3	8700	890	
Fluorene	86-73-7	8600	890	
4-Nitroaniline	100-01-6	9900	4500	
4,6-Dinitro-2-methylphenol	534-52-1	11000	4500	
N-Nitrosodiphenylamine (1)	86-30-6	8300	890	
4-Bromophenyl-phenylether	101-55-3	8100	890	
Hexachlorobenzene	118-74-1	8200	890	
Pentachlorophenol	87-86-5	11000	4500	
Phenanthrene	85-01-8	8600	890	
Anthracene	120-12-7	8500	890	
Carbazole	86-74-8	9100	890	
Di-n-butylphthalate	84-74-2	8600	890	
Fluoranthene	206-44-0	9500	890	
Pyrene	129-00-0	7600	890	
Butylbenzylphthalate	85-68-7	8100	890	
3,3'-Dichlorobenzidine	91-94-1	6200	1800	
Benzo(a)anthracene	56-55-3	9200	890	
Chrysene	218-01-9	9000	890	
bis(2-Ethylhexyl)phthalate	117-81-7	7900	890	
Di-n-octylphthalate	117-84-0	6500	890	
Benzo(b)fluoranthene	205-99-2	9000	890	
Benzo(k)fluoranthene	207-08-9	7700	890	
Benzo(a)pyrene	50-32-8	8700	890	
Indeno(1,2,3-cd)pyrene	193-39-5	8500	890	
Dibenz(a,h)anthracene	53-70-3	8800	890	
Benzo(g,h,i)perylene	191-24-2	9100	890	

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SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45791LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Batch ID:	022097-8270-K
Percent Moisture:	N/A	Analytical Dilution:	1
		Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	73%	15-111
Phenol-d5	70%	21-110
Nitrobenzene-d5	88%	17-114
2-Fluorobiphenyl	95%	29-114
2,4,6-Tribromophenol	90%	33-136
Terphenyl-d14	103%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	5100	660	
bis(2-Chloroethyl) ether	111-44-4	5300	660	
2-Chlorophenol	95-57-8	4800	660	
1,3-Dichlorobenzene	541-73-1	4700	660	
1,4-Dichlorobenzene	106-46-7	4500	660	
Benzyl alcohol	100-51-6	5000	1300	
1,2-Dichlorobenzene	95-50-1	4400	660	
2-Methylphenol	95-48-7	5300	660	
bis(2-chloroisopropyl) ether	108-60-1	5100	660	
4-Methylphenol	106-44-5	4800	660	
N-Nitroso-di-n-propylamine	621-64-7	5000	660	
Hexachloroethane	67-72-1	4500	660	
Nitrobenzene	98-95-3	5600	660	
Isophorone	78-59-1	5900	660	
2-Nitrophenol	88-75-5	5600	660	
2,4-Dimethylphenol	105-67-9	5600	660	
Benzoic acid	65-85-0	5800	3300	
bis(2-Chloroethoxy) methane	111-91-1	5500	660	
2,4-Dichlorophenol	120-83-2	5300	660	
1,2,4-Trichlorobenzene	120-82-1	5400	660	
Naphthalene	91-20-3	5600	660	
4-Chloroaniline	106-47-8	4400	1300	
Hexachlorobutadiene	87-68-3	5300	660	
4-Chloro-3-methylphenol	59-50-7	5700	1300	
2-Methylnaphthalene	91-57-6	5200	660	
Hexachlorocyclopentadiene	77-47-4	5700	660	
2,4,6-Trichlorophenol	88-06-2	6400	660	
2,4,5-Trichlorophenol	95-95-4	6300	660	
2-Chloronaphthalene	91-58-7	6100	660	
2-Nitroaniline	88-74-4	6400	3300	
Dimethylphthalate	131-11-3	5900	660	
Acenaphthylene	208-96-8	6200	660	
2,6-Dinitrotoluene	606-20-2	6300	660	
3-Nitroaniline	99-09-2	4900	3300	
Acenaphthene	83-32-9	6200	660	
2,4-Dinitrophenol	51-28-5	6500	3300	
4-Nitrophenol	100-02-7	5500	3300	

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SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45791LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Batch ID:	022097-8270-K
Percent Moisture:	N/A	Analytical Dilution:	1
		Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	5800	660	
2,4-Dinitrotoluene	121-14-2	6300	660	
Diethylphthalate	84-66-2	5800	660	
4-Chlorophenyl-phenylether	7005-72-3	6000	660	
Fluorene	86-73-7	6000	660	
4-Nitroaniline	100-01-6	6000	3300	
4,6-Dinitro-2-methylphenol	534-52-1	7500	3300	
N-Nitrosodiphenylamine (1)	86-30-6	6400	660	
4-Bromophenyl-phenylether	101-55-3	6400	660	
Hexachlorobenzene	118-74-1	6500	660	
Pentachlorophenol	87-86-5	6700	3300	
Phenanthrene	85-01-8	6600	660	
Anthracene	120-12-7	6500	660	
Carbazole	86-74-8	6700	660	
Di-n-butylphthalate	84-74-2	6400	660	
Fluoranthene	206-44-0	6900	660	
Pyrene	129-00-0	6100	660	
Butylbenzylphthalate	85-68-7	6200	660	
3,3'-Dichlorobenzidine	91-94-1	5800	1300	
Benzo(a)anthracene	56-55-3	6800	660	
Chrysene	218-01-9	6700	660	
bis(2-Ethylhexyl)phthalate	117-81-7	6100	660	
Di-n-octylphthalate	117-84-0	5500	660	
Benzo(b)fluoranthene	205-99-2	6300	660	
Benzo(k)fluoranthene	207-08-9	6500	660	
Benzo(a)pyrene	50-32-8	6900	660	
Indeno(1,2,3-cd)pyrene	193-39-5	7200	660	
Dibenz(a,h)anthracene	53-70-3	7200	660	
Benzo(g,h,i)perylene	191-24-2	7100	660	

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SPIKED SAMPLE RESULT SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45795LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Batch ID:	022197-8270-K
Percent Moisture:	N/A	Analytical Dilution:	1
		Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	61%	15-111
Phenol-d5	65%	21-110
Nitrobenzene-d5	68%	17-114
2-Fluorobiphenyl	80%	29-114
2,4,6-Tribromophenol	103%	33-136
Terphenyl-d14	89%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTIFICATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	4900	660	
bis(2-Chloroethyl) ether	111-44-4	4500	660	
2-Chlorophenol	95-57-8	4500	660	
1,3-Dichlorobenzene	541-73-1	4200	660	
1,4-Dichlorobenzene	106-46-7	4300	660	
Benzyl alcohol	100-51-6	4700	1300	
1,2-Dichlorobenzene	95-50-1	4100	660	
2-Methylphenol	95-48-7	5000	660	
bis(2-chloroisopropyl) ether	108-60-1	4700	660	
4-Methylphenol	106-44-5	5300	660	
N-Nitroso-di-n-propylamine	621-64-7	4600	660	
Hexachloroethane	67-72-1	3800	660	
Nitrobenzene	98-95-3	4800	660	
Isophorone	78-59-1	5400	660	
2-Nitrophenol	88-75-5	4900	660	
2,4-Dimethylphenol	105-67-9	4900	660	
Benzoic acid	65-85-0	4300	3300	
bis(2-Chloroethoxy) methane	111-91-1	5100	660	
2,4-Dichlorophenol	120-83-2	5600	660	
1,2,4-Trichlorobenzene	120-82-1	4800	660	
Naphthalene	91-20-3	5100	660	
4-Chloroaniline	106-47-8	3600	1300	
Hexachlorobutadiene	87-68-3	4600	660	
4-Chloro-3-methylphenol	59-50-7	5600	1300	
2-Methylnaphthalene	91-57-6	5100	660	
Hexachlorocyclopentadiene	77-47-4	3200	660	
2,4,6-Trichlorophenol	88-06-2	5900	660	
2,4,5-Trichlorophenol	95-95-4	5900	660	
2-Chloronaphthalene	91-58-7	5500	660	
2-Nitroaniline	88-74-4	6100	3300	
Dimethylphthalate	131-11-3	6400	660	
Acenaphthylene	208-96-8	5900	660	
2,6-Dinitrotoluene	606-20-2	6600	660	
3-Nitroaniline	99-09-2	5200	3300	
Acenaphthene	83-32-9	5900	660	
2,4-Dinitrophenol	51-28-5	7400	3300	
4-Nitrophenol	100-02-7	6500	3300	

LAS

SPIKED SAMPLE RESULT SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	4579SLCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_4579S	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER (S)
Dibenzofuran	132-64-9	5700	660	
2,4-Dinitrotoluene	121-14-2	6600	660	
Diethylphthalate	84-66-2	6400	660	
4-Chlorophenyl-phenylether	7005-72-3	6100	660	
Fluorene	86-73-7	6200	660	
4-Nitroaniline	100-01-6	7100	3300	
4,6-Dinitro-2-methylphenol	534-52-1	7600	3300	
N-Nitrosodiphenylamine (1)	86-30-6	5900	660	
4-Bromophenyl-phenylether	101-55-3	5900	660	
Hexachlorobenzene	118-74-1	6100	660	
Pentachlorophenol	87-86-5	7800	3300	
Phenanthrene	85-01-8	6400	660	
Anthracene	120-12-7	6400	660	
Carbazole	86-74-8	6800	660	
Di-n-butylphthalate	84-74-2	6300	660	
Fluoranthene	206-44-0	7100	660	
Pyrene	129-00-0	5300	660	
Butylbenzylphthalate	85-68-7	5600	660	
3,3'-Dichlorobenzidine	91-94-1	5200	1300	
Benzo(a)anthracene	56-55-3	6600	660	
Chrysene	218-01-9	6500	660	
bis(2-Ethylhexyl)phthalate	117-81-7	5600	660	
Di-n-octylphthalate	117-84-0	4800	660	
Benzo(b)fluoranthene	205-99-2	6200	660	
Benzo(k)fluoranthene	207-08-9	5500	660	
Benzo(a)pyrene	50-32-8	6300	660	
Indeno(1,2,3-cd)pyrene	193-39-5	6100	660	
Dibenz(a,h)anthracene	53-70-3	7000	660	
Benzo(g,h,i)perylene	191-24-2	6900	660	

LAS

MATRIX SPIKE DATA SUMMARY SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	45791MS
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Batch ID:	022097-8270-K
Percent Moisture:	22.03	Analytical Dilution:	1
		Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	75%	15-111
Phenol-d5	84%	21-110
Nitrobenzene-d5	83%	17-114
2-Fluorobiphenyl	89%	29-114
2,4,6-Tribromophenol	97%	33-136
Terphenyl-d14	99%	32-151

Constituent	Spike Added ug/Kg	Sample Concentration ug/Kg	MS Concentration ug/Kg	% Recovery	QC Limits
					% Recovery
Phenol	8540	0.000	7830	92	28-110
2-Chlorophenol	8540	0.000	7210	84	22-110
1,4-Dichlorobenzene	8540	0.000	5650	66	21-110
N-Nitroso-di-n-propylamine	8540	0.000	7940	93	24-110
1,2,4-Trichlorobenzene	8540	0.000	6940	81	32-110
4-Chloro-3-methylphenol	8540	0.000	7970	93	35-112
Acenaphthene	8540	0.000	8360	98	31-117
4-Nitrophenol	8540	0.000	7530	88	29-127
2,4-Dinitrotoluene	8540	0.000	6170	72	51-112
Pentachlorophenol	8540	0.000	9530	112	41-133
Pyrene	8540	0.000	7420	87	45-135

LAS

MATRIX SPIKE DATA SUMMARY SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLI8SD02(08)	LAL Sample ID:	45795MS
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	38%	15-111
Phenol-d5	54%	21-110
Nitrobenzene-d5	44%	17-114
2-Fluorobiphenyl	71%	29-114
2,4,6-Tribromophenol	100%	33-136
Terphenyl-d14	87%	32-151

Constituent	Spike Added ug/Kg	Sample Concentration ug/Kg	MS Concentration ug/Kg	% Recovery	QC Limits
					% Recovery
Phenol	9080	0.000	5540	61	28-110
2-Chlorophenol	9080	0.000	4500	50	22-110
1,4-Dichlorobenzene	9080	0.000	2600	29	21-110
N-Nitroso-di-n-propylamine	9080	0.000	5200	57	24-110
1,2,4-Trichlorobenzene	9080	0.000	4530	50	32-110
4-Chloro-3-methylphenol	9080	0.000	7010	77	35-112
Acenaphthene	9080	0.000	7580	83	31-117
4-Nitrophenol	9080	0.000	9690	107	29-127
2,4-Dinitrotoluene	9080	0.000	9220	101	51-112
Pentachlorophenol	9080	0.000	10700	118	41-133
Pyrene	9080	0.000	7200	79	45-135

LAS

MATRIX SPIKE DUPLICATE DATA SUMMARY SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIB6SD02 (08)	LAL Sample ID:	45791MSD
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Batch ID:	022097-8270-K
Percent Moisture:	22.03	Analytical Dilution:	1
		Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	71%	15-111
Phenol-d5	75%	21-110
Nitrobenzene-d5	85%	17-114
2-Fluorobiphenyl	87%	29-114
2,4,6-Tribromophenol	97%	33-136
Terphenyl-d14	103%	32-151

Constituent	Spike Added ug/Kg	MSD Concentration ug/Kg	%	RPD	QC Limits	
					RPD	% Recovery
Phenol	8540	6470	76	19	35	28-110
2-Chlorophenol	8540	6600	77	9	50	22-110
1,4-Dichlorobenzene	8540	5100	60	10	27	21-110
N-Nitroso-di-n-propylamine	8540	7670	90	3	38	24-110
1,2,4-Trichlorobenzene	8540	7060	83	2	23	32-110
4-Chloro-3-methylphenol	8540	8000	94	0	33	35-112
Acenaphthene	8540	8010	94	4	19	31-117
4-Nitrophenol	8540	6960	81	8	50	29-127
2,4-Dinitrotoluene	8540	7060	83	13	47	51-112
Pentachlorophenol	8540	9860	115	3	47	41-133
Pyrene	8540	7690	90	4	36	45-135

LAS

MATRIX SPIKE DUPLICATE DATA SUMMARY SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIA8SD02 (08)	LAL Sample ID:	45795MSD
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Batch ID:	022197-8270-K
Percent Moisture:	26.69	Analytical Dilution:	1
		Preparation Dilution:	0.989

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	52%	15-111
Phenol-d5	64%	21-110
Nitrobenzene-d5	61%	17-114
2-Fluorobiphenyl	85%	29-114
2,4,6-Tribromophenol	110%	33-136
Terphenyl-d14	92%	32-151

Constituent	Spike Added ug/Kg	MSD Concentration ug/Kg	Recovery	RPD	QC Limits	
					RPD	Recovery
Phenol	9000	6410	71	16	35	28-1
2-Chlorophenol	9000	5570	62	22	50	22
1,4-Dichlorobenzene	9000	3640	40	34*	27	21
N-Nitroso-di-n-propylamine	9000	5980	66	15	38	24-1
1,2,4-Trichlorobenzene	9000	5840	65	26*	23	32-1
4-Chloro-3-methylphenol	9000	7450	83	7	33	35
Acenaphthene	9000	8400	93	11	19	31
4-Nitrophenol	9000	10600	118	10	50	29-1
2,4-Dinitrotoluene	9000	9880	110	8	47	51-1
Pentachlorophenol	9000	11200	124	6	47	41
Pyrene	9000	7610	85	6	36	45

LAS

LCS DATA SUMMARY

SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45791LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Batch ID:	022097-8270-K
Percent Moisture:	N/A	Analytical Dilution:	1
		Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	73%	15-111
Phenol-d5	70%	21-110
Nitrobenzene-d5	88%	17-114
2-Fluorobiphenyl	95%	29-114
2,4,6-Tribromophenol	90%	33-136
Terphenyl-d14	103%	32-151

Constituent	Spike Added ug/Kg	LCS Concentration ug/Kg	LCS % Recovery	QC Limits
Phenol	6660	5080	76	28-110
2-Chlorophenol	6660	4790	72	22-110
1,4-Dichlorobenzene	6660	4520	68	21-110
N-Nitroso-di-n-propylamine	6660	4980	75	24-110
1,2,4-Trichlorobenzene	6660	5360	80	32-110
4-Chloro-3-methylphenol	6660	5670	85	35-112
Acenaphthene	6660	6220	93	31-117
4-Nitrophenol	6660	5490	82	29-127
2,4-Dinitrotoluene	6660	6300	95	51-112
Pentachlorophenol	6660	6670	100	41-133
Pyrene	6660	6140	92	45-135

LAS

LCS DATA SUMMARY

SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45795LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Batch ID:	022197-8270-K
Percent Moisture:	N/A	Analytical Dilution:	1
		Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	61%	15-111
Phenol-d5	65%	21-110
Nitrobenzene-d5	68%	17-114
2-Fluorobiphenyl	80%	29-114
2,4,6-Tribromophenol	103%	33-136
Terphenyl-d14	89%	32-151

Constituent	Spike Added ug/Kg	ICS Concentration ug/Kg	ICS % Recovery	QC Limits
Phenol	6670	4940	74	28-110
2-Chlorophenol	6670	4540	68	22-110
1,4-Dichlorobenzene	6670	4290	64	21-110
N-Nitroso-di-n-propylamine	6670	4630	69	24-110
1,2,4-Trichlorobenzene	6670	4750	71	32-110
4-Chloro-3-methylphenol	6670	5630	84	35-112
Acenaphthene	6670	5850	88	31-117
4-Nitrophenol	6670	6500	98	29-127
2,4-Dinitrotoluene	6670	6610	99	51-112
Pentachlorophenol	6670	7840	118	41-133
Pyrene	6670	5300	80	45-135

LAS

SEMI-VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY

Instrument ID: hpk

Date/Time Analyzed: 20-FEB-97 1440

Analytical Batch ID: 022097-8270-K

		IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
		Area #	RT #	Area #	RT #	Area #	RT
12 HOUR STD		565022	5.04	2021689	6.26	1063913	8.61
UPPER LIMIT		1130044	5.54	4043378	6.76	2127826	9.11
LOWER LIMIT		282511	4.54	1010845	5.76	531957	8.11
=====		=====	=====	=====	=====	=====	=====
CUSTOMER	LAS						
SAMPLE ID	SAMPLE ID						
Method Blank	45791MB	628150	5.05	2071483	6.25	1040219	8.6
Lab Ctrl Sample	45791LCS	506987	5.05	1705860	6.26	754746	8.6
97BPXLIB10SD01(01)	L8849-18	592442	5.05	1859338	6.26	836694	8.6
97BPXLIC2SD01(01)	L8849-38	629323	5.04	2014669	6.26	962718	8.6
97BPXLII1SD02(08)	L8849-34	628333	5.04	1959962	6.26	844060	8.6
97BPXLIC2SD02(08)	L8849-42	599366	5.04	1989879	6.26	885860	8.6
97BPXLIB10SD02(08)	L8849-22	641808	5.04	2121371	6.26	948609	8.6
97BPXLIB3SD01(01)	L8849-2	536067	5.04	1820796	6.26	806125	8.6
97BPXLIC2SD61(08)	L8849-46	577706	5.04	1869444	6.26	803005	8.6
97BPXLII1SD01(01)	L8849-30	625722	5.04	2155549	6.26	962680	8.6
97BPXLIB10SD62(08)	L8849-26	508559	5.04	1700156	6.26	730981	8.6
97BPXLIB3SD02(08)	L8849-6	527296	5.04	1684088	6.26	726963	8.6
97BPXLIB6SD01(01)	L8849-10	574876	5.04	1985604	6.26	844800	8.6
97BPXLIB6SD02(08)	L8849-14	559786	5.04	1872700	6.26	811484	8.6
97BPXLIB6SD02(08)MS	45791MS	430316	5.04	1515285	6.25	756186	8.6
97BPXLIB6SD02(08)MSD	45791MSD	564420	5.04	1904863	6.26	952458	8.6

IS1 (DCB) = 1,4-Dichlorobenzene-d4
 IS2 (NPT) = Naphthalene-d8
 IS3 (ANT) = Acenaphthene-d10

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
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

LAS

SEMI-VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY

Instrument ID: hpk

Date/Time Analyzed: 20-FEB-97 1440

Analytical Batch ID: 022097-8270-K

		IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
		Area #	RT #	Area #	RT #	Area #	RT
12 HOUR STD		1524389	11.18	619835	16.33	426275	18.94
UPPER LIMIT		3048778	11.68	1239670	16.83	852550	19.44*
LOWER LIMIT		762195	10.68	309918	15.83	213138	18.44
=====		=====	=====	=====	=====	=====	=====
CUSTOMER	LAS						
SAMPLE ID	SAMPLE ID						
Method Blank	45791MB	1337376	11.17	552251	16.32	383231	18.9
Lab Ctrl Sample	45791LCS	926786	11.18	470568	16.33	365810	18.94
97BPXLIB10SD01(01)	L8849-18	963662	11.17	459702	16.32	352241	18.9
97BPXLIC2SD01(01)	L8849-38	1120575	11.17	503866	16.32	401176	18.9
97BPXLII1SD02(08)	L8849-34	971275	11.17	426920	16.32	341524	18.9*
97BPXLIC2SD02(08)	L8849-42	953143	11.17	411586	16.32	317836	18.94
97BPXLIB10SD02(08)	L8849-22	1034013	11.17	457463	16.32	389046	18.9
97BPXLIB3SD01(01)	L8849-2	916219	11.17	379944	16.31	301640	18.9
97BPXLIC2SD61(08)	L8849-46	860904	11.17	335840	16.32	254943	18.94
97BPXLII1SD01(01)	L8849-30	1054436	11.17	465178	16.32	395643	18.95
97BPXLIB10SD62(08)	L8849-26	852343	11.17	430005	16.32	371113	18
97BPXLIB3SD02(08)	L8849-6	889549	11.17	365844	16.31	282443	18
97BPXLIB6SD01(01)	L8849-10	910297	11.18	425529	16.32	365964	18.94
97BPXLIB6SD02(08)	L8849-14	945108	11.17	460210	16.32	388517	18.9*
97BPXLIB6SD02(08)MS	45791MS	994881	11.18	593233	16.33	494065	18.9
97BPXLIB6SD02(08)MSD	45791MSD	1219402	11.19	653574	16.34	542701	18.9

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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
RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

LAS

SEMI-VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY

Instrument ID: hpk

Date/Time Analyzed: 21-FEB-97 1805

Analytical Batch ID: 022197-8270-K

		IS1 (DCB)		IS2 (NPT)		IS3 (ANT)	
		Area #	RT #	Area #	RT #	Area #	RT #
=====		=====	=====	=====	=====	=====	=====
12 HOUR STD		558085	4.99	1868845	6.22	925684	8.57
UPPER LIMIT		1116170	5.49	3737690	6.72	1851368	9.07
LOWER LIMIT		279043	4.49	934423	5.72	462842	8.07
=====		=====	=====	=====	=====	=====	=====
CUSTOMER	LAS						
SAMPLE ID	SAMPLE ID						
Method Blank	45795MB	571119	4.99	1884012	6.21	978463	8.56
Lab Ctrl Sample	45795LCS	497850	4.99	1640537	6.22	809315	8.56
97BPXLIA4SD01 (01)	L8849-54	489003	4.99	1588131	6.21	794623	8.56
97BPXLIA6SD01 (01)	L8849-61	500771	4.99	1645651	6.21	823288	8.56
97BPXLIA4SD02 (08)	L8849-57	529082	4.99	1749642	6.21	914226	8.56
97BPXLIC4SD02 (08)	L8849-50	556620	4.99	1928429	6.21	990977	8.56
97BPXLIA6SD02 (08)	L8849-65	498029	4.99	1636992	6.21	821777	8.56
97BPXLIA8SD01 (01)	L8849-77	536313	4.99	1755635	6.20	906185	8.56
97BPXLIA8SD02 (08)	L8849-73	550899	4.99	1784542	6.21	897337	8.56
97BPXLIA8SD02 (08) MS	45795MS	466533	4.99	1504401	6.21	733129	8.56
97BPXLIA8SD02 (08) MSD	45795MSD	478522	4.99	1549906	6.22	744512	8.56
97BPXLIA6SD62 (08)	L8849-69	525230	4.99	1684371	6.22	791805	8.56
97BPXLIA10SD01 (01)	L8849-81	504850	4.99	1627635	6.22	812539	8.56
97BPXLIA10SD02 (08)	L8849-85	529747	4.99	1721164	6.22	852885	8.56
97BPXLIB8SD01 (01)	L8849-99	476343	4.99	1520679	6.21	780023	8.56
97BPXLIB8SD02 (08)	L8849-95	546362	4.99	1746942	6.22	882952	8.56
97BPXLIC4SD01 (01)	L8849-103	515497	4.99	1653301	6.21	835440	8.56

IS1 (DCB) = 1,4-Dichlorobenzene-d4
 IS2 (NPT) = Naphthalene-d8
 IS3 (ANT) = Acenaphthene-d10

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
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

LAS

SEMI-VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY

Instrument ID: hpk

Date/Time Analyzed: 21-FEB-97 1805

Analytical Batch ID: 022197-8270-K

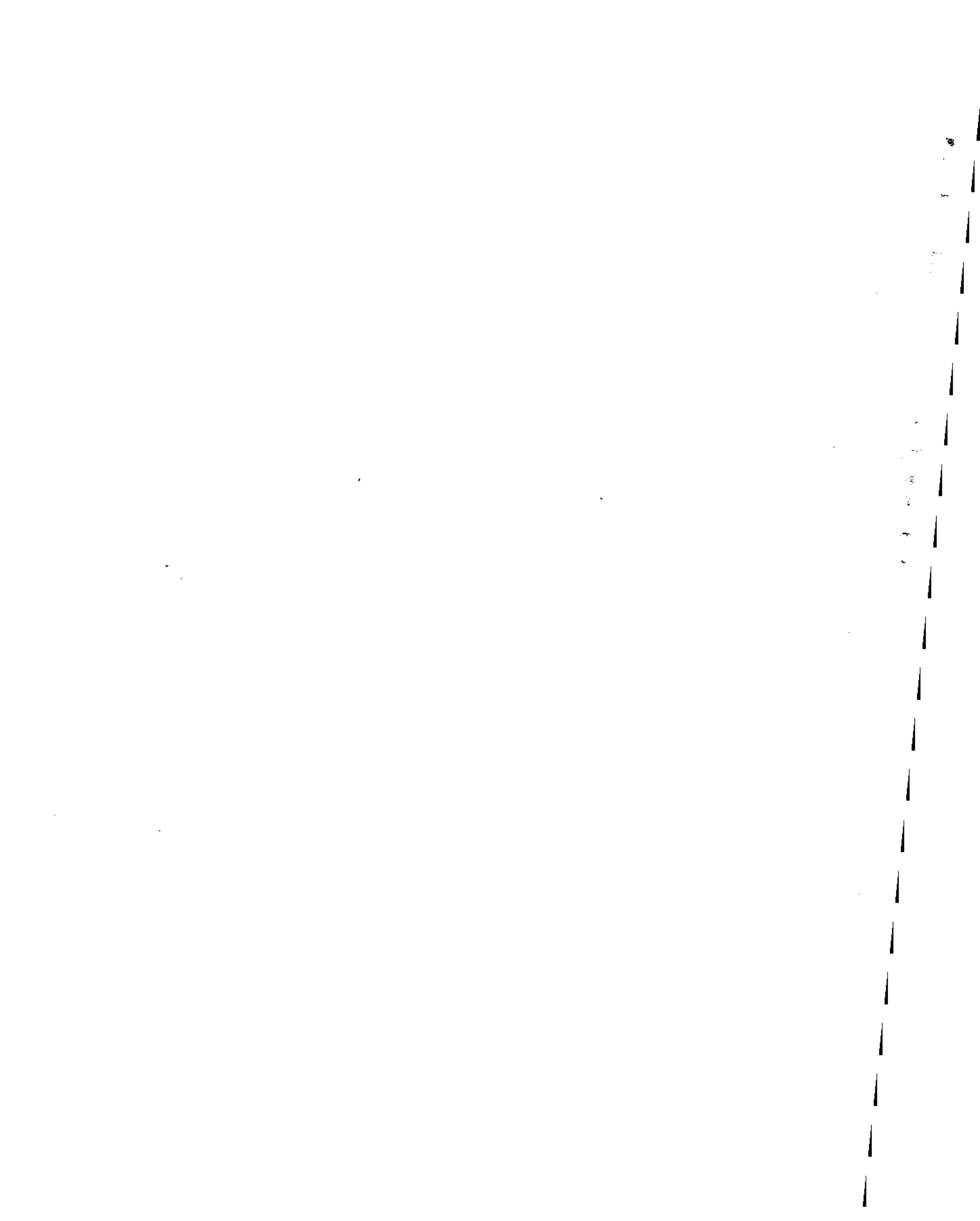
		IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
		Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD		1342588	11.12	843660	16.28	689219	18.90
UPPER LIMIT		2685176	11.62	1687320	16.78	1378438	19.40
LOWER LIMIT		671294	10.62	421830	15.78	344610	18.40
=====		=====	=====	=====	=====	=====	=====
CUSTOMER	LAS						
SAMPLE ID	SAMPLE ID						
Method Blank	45795MB	1370064	11.12	808392	16.27	661525	18.90
Lab Ctrl Sample	45795LCS	1181022	11.12	724230	16.29	623412	18.90
97BPXLIA4SD01 (01)	L8849-54	1119803	11.11	750541	16.27	630131	18.90
97BPXLIA6SD01 (01)	L8849-61	1169963	11.11	723816	16.27	601976	18.90
97BPXLIA4SD02 (08)	L8849-57	1316845	11.11	848794	16.27	710093	18.90
97BPXLIC4SD02 (08)	L8849-50	1331892	11.11	743017	16.27	616451	18.90
97BPXLIA6SD02 (08)	L8849-65	1141275	11.12	733986	16.27	625439	18.90
97BPXLIA8SD01 (01)	L8849-77	1277700	11.11	834840	16.27	707450	18.90
97BPXLIA8SD02 (08)	L8849-73	1290875	11.11	809069	16.27	670780	18.90
97BPXLIA8SD02 (08)MS	45795MS	1091161	11.13	664470	16.29	579933	18.90
97BPXLIA8SD02 (08)MSD	45795MSD	1127610	11.12	658063	16.29	577065	18.90
97BPXLIA6SD62 (08)	L8849-69	1051539	11.11	661772	16.28	560951	18.90
97BPXLIA10SD01 (01)	L8849-81	1140042	11.11	757037	16.28	638527	18.90
97BPXLIA10SD02 (08)	L8849-85	1174078	11.12	714287	16.28	627323	18.90
97BPXLIB8SD01 (01)	L8849-99	1115919	11.12	764065	16.27	637506	18.90
97BPXLIB8SD02 (08)	L8849-95	1264841	11.12	800457	16.28	650853	18.90
97BPXLIC4SD01 (01)	L8849-103	1100039	11.12	768155	16.29	627685	18.90

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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
RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

RUN LOGS/EXTRACTION SHEETS



1111 Susan 2-21-97

ANA TEST	DATE OF INJ	TIME OF INJ	LAS SAMPLE ID	DESCRIPTION/ CLIENT SAMPLE ID	SOLUTION ID	MATRIX/ DILUTION	DATA FILE	BATCH ID	METHOD FILE	TAPE ID	DRY	COMMENTS
✓	2/10/97	13:41		SP. V. 2024	0331-41-1		5000001	4/2/197	Ketchum		DK	Washed
		13:25		15201020	0706-53-20		5000002		Ketchum		DK	#221
		14:35		15201020	0706-53-20		5000003		Ketchum		DK	More to Ketchum
		15:05	4305310	111	00334421	not re	5000004				Rep	more to Ketchum
		15:31	14178-33	V. 2024-5			5000005				DK	
		16:03	14178-33	V. 2024-5			5000006				DK	
		16:31	14178-10	V. 2024-7.5			5000007				Rep	more to Ketchum
		17:00	14178-34	V. 2024-10			5000008				DK	more to Ketchum
			14178-48	V. 2024-0			5000009				DK	more to Ketchum
			14178-31	V. 2024-0			5000010				DK	more to Ketchum
			14178-10	V. 2024-0			5000011				DK	more to Ketchum
			14178-16	V. 2024-0			5000012				DK	more to Ketchum
			14178-32	V. 2024-0			5000013				DK	more to Ketchum
				V. 2024			5000014				DK	more to Ketchum
				M. 15			5000015				DK	more to Ketchum
				M. 15			5000016				DK	more to Ketchum
	2/10/97			SP. V. 2024			5000017	4/2/197	Ketchum		DK	more to Ketchum
				15201020			5000018		Ketchum		DK	more to Ketchum
				15201020			5000019		Ketchum		DK	more to Ketchum
	2/10/97			SP. V. 2024	0331-41-1		5000020	4/2/197	Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000021		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000022		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000023		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000024		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000025		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000026		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000027		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000028		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000029		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000030		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000031		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000032		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000033		Ketchum		DK	more to Ketchum
				15201020	0706-53-20		5000034		Ketchum		DK	more to Ketchum

Data Reports (DR) Column: DRN - Do Not Report; Rep - Report (QC failure, report with another analysis); OK - Report (No QC failure)

OCMS BYOA UNW

ANA (VST)	DATE OF MJ	TIME OF MJ	LAS SAMPLE ID	DESCRIPTION/CLIENT SAMPLE ID	SOLUTION ID	MATRIX/DILUTION	DATA FILE	BATCH ID	METHOD FILE	TAPE ID	DR?	COMMENTS
✓	1/11/01	1913		171601120	1333-41-7		17050007	1500007	K270007		OK	2
✓	1/11/01	1913		171601120	1716-45-12		17050008				OK	3
✓	1/11/01	1915		5222057	0716-53-12		17050009				OK	7
✓	1/11/01	1916		5050012	0729-41-3		17050010				OK	International only
✓	1/11/01	1929		1511005787	1729-41-1		17050011	K270011	K270011		OK	passed
✓	1/11/01	1940		171601120	1716-53-20		17050012		K270012		OK	needs 500000
		1513	11571002	MILWAUKEE	180329-44-4	50ml	17050013				OK	
		1514	4579115	LC5			17050014				OK	
		1612	14599118	9789VLE210200101			17050015				OK	
		1617	14599138	9789VLE2100101			17050016				OK	
		1717	14599134	9789VLE2100200			17050017				OK	
		1752	14599142	9789VLE2100300			17050018				OK	
		1821	14599122	9789VLE2100400			17050019				OK	
		1852	1459912	9789VLE2100500			17050020				OK	
		1876	14599140	9789VLE2100600			17050021				OK	
		1950	14599130	9789VLE2100700			17050022				OK	
		2026	14599126	9789VLE2100800			17050023				OK	
		2125	1459916	9789VLE2100900			17050024				OK	
		2126	1459910	9789VLE2101000			17050025				OK	
		2211	1459914	9789VLE2101100			17050026				OK	
		2232	14599102	9789VLE2101200			17050027				OK	
		2312	14599101	9789VLE2101300			17050028				OK	
		2331		LC5 standard blank	18051-45-3		17050029				OK	check only
				NE 21011			17050030				OK	
				MEL12			17050031				OK	
✓	1/11/01	1935		1511005787	0729-41-1		17050032	1500007	K270032		OK	OVERLAP - OK ✓
✓	1/11/01	1936		171601120	1716-53-20		17050033		K270033		OK	check only
✓	1/11/01	1935		5050012	0729-41-1		17050034		K270034		OK	passed
✓	1/11/01	1915		171601120	1716-53-20		17050035		K270035		OK	needs 500000
✓	1/11/01	1912		MILWAUKEE	180329-44-4	50ml	17050036				OK	

* Data Reportable? (DR?) Column: OMR = Do Not Report; Reg = Report IOC failure, report with another analysis; OK = Report (No IOC failure)

GCMS SVOA UNIT

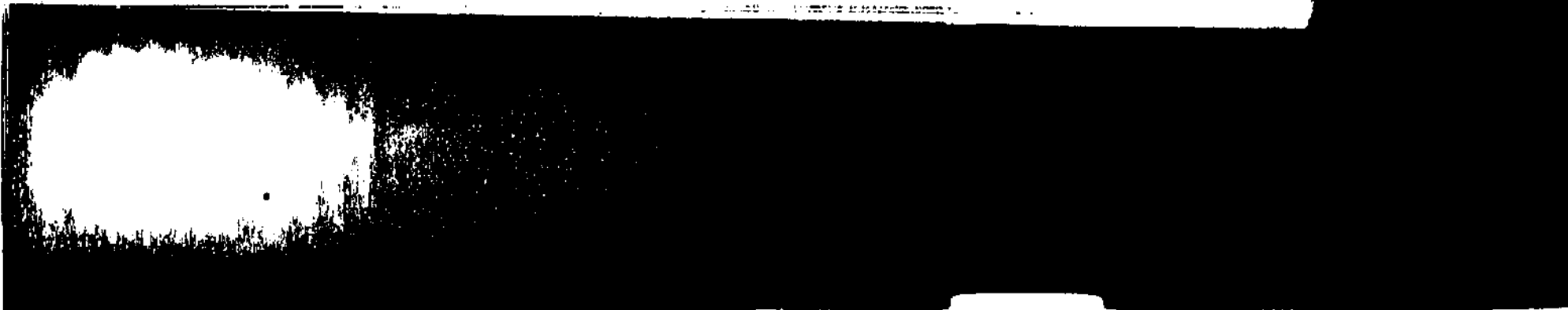
153



ANA- LYST	DATE OF INJ.	TIME OF INJ.	LAS SAMPLE ID	DESCRIPTION/ CLIENT SAMPLE ID	SOLUTION ID	MATRIX/ DILUTION	DATA FILE	BATCH ID	METHOD FILE	TAPE ID	DRP	COMMENTS
✓	2/27/91	19184	415 78715	1113	7510711-44-4	5011	51601006	K62047	K62046		DR	
		19189	44447-54	9768 YLLA 45001(01)			51601007				DR	
		20211	44447-61	9768 YLLA 465001(01)			51601008				DR	
		20445	44447-65	9768 YLLA 45002(08)			51601009				DR	
		2114	44447-50	9768 YLLA 45003(08)			51601010				DR	
		2146	44447-16	9768 YLLA 65002(08)			51601011				DR	
		2214	44447-17	9768 YLLA 5001(01)			51601012				DR	
		2251	44447-73	9768 YLLA 84501(08)			51601013				DR	
		2323	415 78507	9768 YLLA 85002(08)			51601014				DR	
		2354	415 78507	9768 YLLA 85002(08)			51601015				DR	
✓	2/27/91	19186	44447-64	9768 YLLA 65002(08)			51601016				DR	
		19187	44447-81	9768 YLLA 10501(01)			51601017				DR	
		19189	44447-85	9768 YLLA 10502(08)			51601018				DR	
		19200	44447-89	9768 YLLA 85001(01)			51601019				DR	
		19232	44447-95	9768 YLLA 85002(08)			51601020				DR	
		19273	44447-112	9768 YLLA 45001(01)			51601021				DR	
				1113			51601022				DR	
				1113			51601023				DR	
✓	2/27/91	19182		51601024	7239-41-1		51601001	K62047	K62046		DR	passed
		19183		51601025	7239-43-20	7239-41-1	51601002	K62047	K62046		DR	passed
				51601026	7239-43-8	7239-41-1	51601003	K62047	K62046		DR	
				51601027	7239-43-7		51601004				DR	
				51601028	7239-43-6		51601005				DR	
				51601029	7239-43-5		51601006				DR	
				51601030	7239-43-4		51601007				DR	
				51601031	7239-43-3		51601008				DR	

For Data Reportable? (DR?) Column: DNR = Do Not Report; Rep = Report (GC failure, report with another analysis); DR = Report (No GC failure)

GCMS BYOA UMW



FULL TAL
MATRIX SPIKES

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (ba08)

EXTRACTION SHEET FOR: 8270 SEMI-VOLATILES Extraction

WORKSHEET NUMBER: 8270 SEMI-VOLATILES_45791

7 DAY JRT !!

AL #	GC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/CREATED	VOL. (ml) EXTR.	SAMPLE PH	SURR ML	MS ML	1ST COOK FINAL VOL. MLS	TOTAL VOL. ON GPC	2ND COOK FINAL VOL. MLS	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
8849-18	2	97BPXLI1810SD01(01)	15-FEB-97	19-FEB-97	30.14	N/A	20		1 ml	N/A	N/A	2.0ml	~2ml
8849-38		97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	30.04								
8849-34		97BPXLI11SD02(08)	15-FEB-97	19-FEB-97	30.16								
8849-42		97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	30.00								
8849-22		97BPXLI1810SD02(08)	15-FEB-97	19-FEB-97	30.12								
8849-2		97BPXLI183SD01(01)	14-FEB-97	19-FEB-97	30.00								
8849-46		97BPXLIC2SD01(08)	15-FEB-97	19-FEB-97	30.14								
8849-30		97BPXLI11SD01(01)	15-FEB-97	19-FEB-97	30.11								
8849-26		97BPXLI1810SD02(08)	15-FEB-97	19-FEB-97	30.18								
8849-6		97BPXLI183SD02(08)	14-FEB-97	19-FEB-97	30.10								
8849-10		97BPXLI186SD01(01)	15-FEB-97	19-FEB-97	30.19								
8849-14		97BPXLI186SD02(08)	15-FEB-97	19-FEB-97	30.20								
45791MB	MB	Method Blank		19-FEB-97	30.02								

EXTRACTION METHOD: Bonification - 3550

EXTRACTION STARTED : 2-19-97 EXTRACTION COMPLETED : 2-19-97

DATE & TIME STARTED (acid): N/A DATE & TIME COMPLETED (acid): N/A

DATE & TIME STARTED (BN) : N/A DATE & TIME COMPLETED (BN) : N/A

C BATCH# : 8270 SEMI-VOLATILES_45791

LOT #'S

SURR ID # : 0859-56-1 CONC: 100-150 ug/ml MECL2 : 36240

S ID # : 0766-65-18 CONC: 100 ug/ml ACETONE: 36079

NA2S04 : 439635

2/16/97

SIGNED: [Signature]

SIGNED: _____

SPIKED WITNESS: [Signature]

SIGNED: _____

REVIEWED BY: [Signature] 02-20-97

NARRATIVE: GPC was skipped. Samples were micron-filtered after they were brought to final concentrations. 2/19/97

EXTRACT COC: RECEIVED BY: [Signature] DATE: 2/20/97

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2

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (bs08)

EXTRACTION SHEET FOR: 8270 SEMI-VOLATILES Extraction

WORKSHEET NUMBER: 8270 SEMI-VOLATILES_45791

AL #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/CREATED	VOL/WT EXTR	SAMPLE PH	SURR ML	MS ML	1ST COOK FINAL VOL MLs	TOTAL VOL ON GPC	2ND COOK FINAL VOL MLs	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
5791LCS	LCS	Lab Ctrl Sample		19-FEB-97	30.01	N/A	2.0	2.0	1ml	N/A	N/A	2.0ml	≈ 2ml
5791MS L8849-14	MS	Matrix Spike	15-FEB-97	19-FEB-97	30.03	↓	2.0	2.0	↓	↓	↓	↓	↓
5791MSD L8849-14	MSD	Matrix Spike Dup	15-FEB-97	19-FEB-97	30.02	↓	2.0	2.0	↓	↓	↓	↓	↓
PIKEL045791	SPIKEL0T	Spike Lot Sample		19-FEB-97									

LAB 02 19-97

EXTRACTION METHOD: _____

EXTRACTION STARTED : _____ EXTRACTION COMPLETED : _____

DATE & TIME STARTED (acid): _____ DATE & TIME COMPLETED (acid): _____

SIGNED: _____

DATE & TIME STARTED (BN) : _____ DATE & TIME COMPLETED (BN) : _____

SIGNED: _____

BATCH# : 8270 SEMI-VOLATILES_45791

LOT #'S

SPIKED WITNESS: _____

RR ID # : _____ CONC: _____ MECL2 : _____

SIGNED: _____

ID # : _____ CONC: _____ ACETONE: _____ NA2SO4 : _____

REVIEWED BY: _____

NARRATIVE

EXTRACT COC: RECEIVED BY: _____ DATE: _____

FULL TAL
MATRIX SPIKE

LOCKHEED ANALYTICAL SERVICES
TRACKING SHEET DATA REPORT (ba08)
EXTRACTION SHEET FOR: 8270 SEMI-VOLATILES Extraction
WORKSHEET NUMBER: 8270 SEMI-VOLATILES_45795

FPS

7 day TAT!!

L #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/ CREATED	VOL/WT EXTR	SAMPLE PH	SURR ML	MS ML	1ST COOK FINAL VOL ML'S	TOTAL VOL ON GPC	2ND COOK FINAL VOL ML'S	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
849-54		97BPXLI A4SD01(01)	16-FEB-97	19-FEB-97	30.01	N/A	2.0		4.0ml	2ml	0.5ml	1.0ml	1ml
849-61		97BPXLI A6SD01(01)	16-FEB-97	19-FEB-97	30.00								
849-57		97BPXLI A4SD02(08)	16-FEB-97	19-FEB-97	30.08								
849-50		97BPXLI C4SD02(08)	15-FEB-97	19-FEB-97	30.00								
849-65		97BPXLI A6SD02(08)	16-FEB-97	19-FEB-97	30.09								
849-77		97BPXLI A8SD01(01)	16-FEB-97	19-FEB-97	30.13								
849-73		97BPXLI A8SD02(08)	16-FEB-97	19-FEB-97	30.40								
849-69		97BPXLI A6SD02(08)	16-FEB-97	19-FEB-97	30.24								
849-81		97BPXLI A10SD01(01)	16-FEB-97	19-FEB-97	30.08								
849-85		97BPXLI A10SD02(08)	16-FEB-97	19-FEB-97	30.07								
849-99		97BPXLI B8SD01(01)	15-FEB-97	19-FEB-97	30.13								
849-95		97BPXLI B8SD02(08)	15-FEB-97	19-FEB-97	30.00								
849-103		97BPXLI C4SD01(01)	15-FEB-97	19-FEB-97	30.15								

REACTION METHOD: Sonication - Method 3350

REACTION STARTED : 2-20-97 EXTRACTION COMPLETED : 2/21/97

E & TIME STARTED (acid): N/A DATE & TIME COMPLETED (acid): N/A

E & TIME STARTED (BN) : N/A DATE & TIME COMPLETED (BN) : N/A

BATCH# : 8270 SEMI-VOLATILES_45795 LOT #'S

R ID # : 0854-83-3 CONC: 100/100 mg/ml MECL2 : 36240

ID # : 0766-65-18 CONC: 100 mg/ml ACETONE: 36079 NA2SO4 : K39635

SIGNED: Chris Kuranku

SIGNED: _____

SPIKED WITNESS: James Mitchell

SIGNED: Steve Colley

REVIEWED BY: Melith L. Brown 02-21-97

RATIVE EXTRACT COC: RECEIVED BY: [Signature] DATE: 2/21/97

LOCKHEED ANALYTICAL SERVICES
 TRACKING SHEET DATA REPORT (ba08)
 EXTRACTION SHEET FOR: 8270 SEMI-VOLATILES Extraction
 WORKSHEET NUMBER: 8270 SEMI-VOLATILES_45795

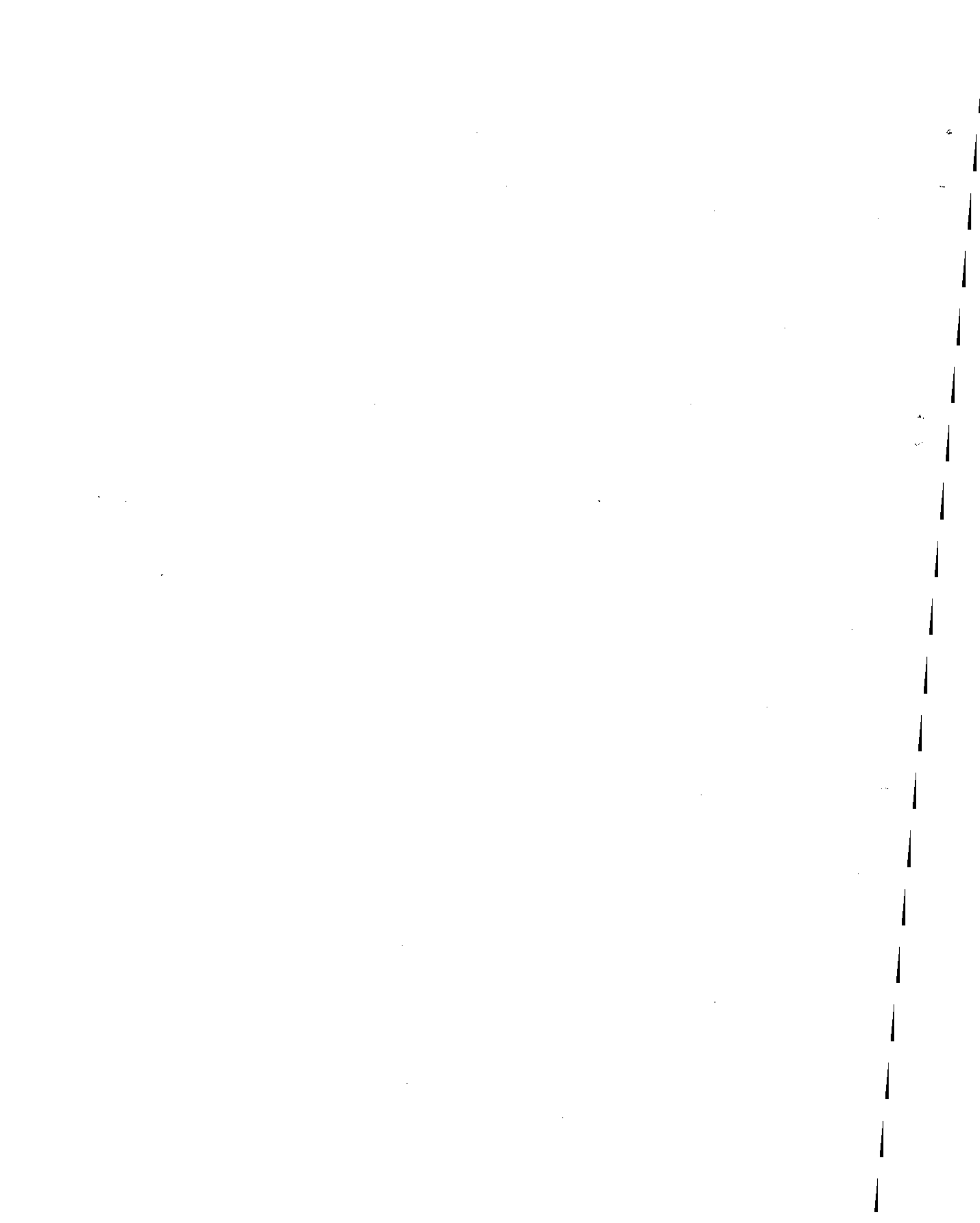
#	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/CREATED	VOL/WT EXTR	SAMPLE PH	SURR ML	MS ML	1ST COOK FINAL VOL. MLS	TOTAL VOL ON GPC	2ND COOK FINAL VOL. MLS	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
95MB	MB	Method Blank		19-FEB-97	30.00	N/A	2.0		4.0ml	2ml	0.5ml	1.0ml	1ml
95LCS	LCS	Lab Ctrl Sample		19-FEB-97	30.00	↓	↓	2.0	↓	↓	↓	↓	↓
95MS L8849-B	MS	Matrix Spike	16-FEB-97	19-FEB-97	30.03	↓	↓	↓	↓	↓	↓	↓	↓
95MSD L8849-B	MSD	Matrix Spike Dup	16-FEB-97	19-FEB-97	30.32	↓	↓	↓	↓	↓	↓	↓	↓
1K660745795	SPKELOT	Spike Lot Sample		19-FEB-97									

UCB 02-19-97

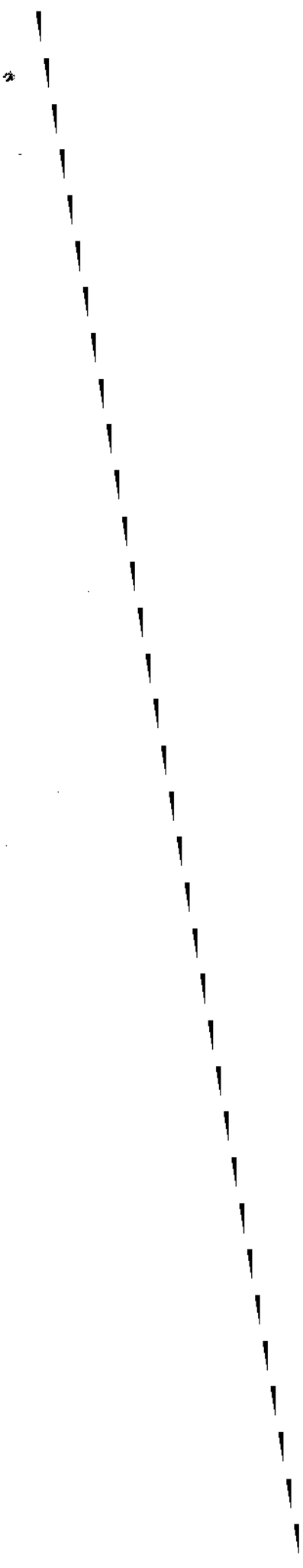
REACTION METHOD: _____
 REACTION STARTED : _____ EXTRACTION COMPLETED : _____
 E & TIME STARTED (acid): _____ DATE & TIME COMPLETED (acid): _____
 E & TIME STARTED (BN) : _____ DATE & TIME COMPLETED (BN) : _____
 BATCH# : 8270 SEMI-VOLATILES_45795 LOT #'S _____
 IR ID # : _____ CONC: _____ MECL2 : _____
 ID # : _____ CONC: _____ ACETONE: _____ HA2604 : _____

SIGNED: _____
 SIGNED: _____
 SPIKED WITNESS: _____
 SIGNED: _____
 REVIEWED BY: _____

RRATIVE _____ EXTRACT COC: RECIEVED BY: _____ DATE: _____



AK 102.0 DIESEL RANGE ORGANICS



DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIB3SD01(01)	LAL Sample ID:	18849-2
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	26.33	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	76%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	29.	4.1	41.	J

LAS

DIESEL BY GC-FID ALASKA METHOD AK 102.0 DRO

Client Sample ID:	97BPXLIB3SD02(08)	LAL Sample ID:	L8849-6
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	18.83	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	76%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DET. QUAL (S)
Diesel Range Organics	TPH	<37.	3.7	37.	

LAS

DIESEL BY GC-FID ALASKA METHOD AK 102.0 DRO

Client Sample ID:	97BFXLIB6SD01(01)	LAL Sample ID:	L8849-10
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	32.2	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	126%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL (S)
Diesel Range Organics		TPH 8.1	4.4	44.	J

LAS

DIESEL BY GC-FID ALASKA METHOD AK 102.0 DRO

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	18849-14
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	0.99
Percent Moisture:	22.03	QC Group:	AK 102.0 DRO_45796

SUBROGATE	RECOVERY	QC Limits
N-OCTACOSANE	118%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAQ QUAL(S)
Diesel Range Organics	TPH	7.0	3.8	38.	J

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIB10SD01(01)	LAL Sample ID:	L8849-18
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0.
Percent Moisture:	20.06	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	106%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<37.	3.7	37.	

LAS

DIESEL BY GC-FID ALASKA METHOD AK 102.0 DRO

Client Sample ID:	97BPXLIB10SD02(08)	LAL Sample ID:	L8849-22
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	27.19	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	117%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics		TPH 10.	4.1	41.	J

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXL1B10SD62(08)	LAL Sample ID:	-L8849-26
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	26.49	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	140%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	14.	4.1	41.	XJ

LAS

DIESEL BY GC-FID ALASKA METHOD AK 102.0 DRO

Client Sample ID:	97BPXLIII1SD01 (01)	LAL Sample ID:	L8849-30
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	23.19	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	124%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics	TPH	4.3	3.9	39.	J

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIII1SD02(08)	LAL Sample ID:	L8849-34
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	21.34	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	125%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	6.7	3.8	38.	XJ

DIESEL BY GC-FID ALASKA METHOD

AK 102.0 DRO

Client Sample ID:	97BPXLIC2SD01(01)	LAL Sample ID:	18849-38
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	0.99
Percent Moisture:	26.72	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	65%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics	TPH	4.6	4.1	41.	J

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIC2SD02(08)	LAL Sample ID:	18849-42
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	0.99
Percent Moisture:	19.74	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	89%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<37.	3.7	37.	

LAS

DIESEL BY GC-FID ALASKA METHOD

AK 102.0 DRO

Client Sample ID:	97BPXLIC2SD61(08)	LAL Sample ID:	L8849-46
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	19.23	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	105%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics		TPH 15.	3.7	37.	J

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIC4SD02(08)	LAL Sample ID:	L8849-50
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	23.85	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	94%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<39.	3.9	39.	

LAS

DIESEL BY GC-FID ALASKA METHOD AK 102.0 DRO

Client Sample ID:	97BPXLIA4SD01(01)	LAL Sample ID:	L8849-54
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	17.13	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	84%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics		TPH <36.	3.6	36.	

LAS

DIESEL BY GC-FID ALASKA METHOD AK 102.0 DRO

Client Sample ID:	97BPXLIA4SD02(08)	LAL Sample ID:	L8849-57
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	18.66	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	85%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics		TPH <37.	3.7	37.	

DIESEL BY GC-FID ALASKA METHOD

AK 102.0 DRO

Client Sample ID:	97BPXLIA6SD01(01)	LAL Sample ID:	L8849-61
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	42.88	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	86%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT. QUAL(S)
Diesel Range Organics	TPH	<52.	5.2	52.	

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIA6SD02(08)	LAL Sample ID:	18849-65
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	28.62	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	116%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<42.	4.2	42.	X

LAS

DIESEL BY GC-FID ALASKA METHOD AK 102.0 DRO

Client Sample ID:	97BPXLIA6SD62(08)	LAL Sample ID:	L8849-69
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	32.07	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	89%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics	TPH	<44.	4.4	44.	X

LAS

DIESEL BY GC-FID ALASKA METHOD

AK 102.0 DRO

Client Sample ID:	97BPXLIASD02(08)	LAL Sample ID:	18849-73
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	26.69	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	101%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics		TPH <41.	4.1	41.	

LAS

DIESEL BY GC-FID ALASKA METHOD AK 102.0 DRO

Client Sample ID:	97BPXLIASSD01(01)	LAL Sample ID:	-L8849-77
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	0.99
Percent Moisture:	38.38	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	98%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL ng/kg	PQL/RDL ng/kg	I QUI
Diesel Range Organics	TPH	<48.	4.8	48.	

LAS

DIESEL BY GC-FID ALASKA METHOD AK 102.0 DRO

Client Sample ID:	97BPXLIA10SD01(01)	LAL Sample ID:	L8849-81
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	35.25	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	79%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<46.	4.6	46.	

LAS

DIESEL BY GC-FID ALASKA METHOD AK 102.0 DRO

Client Sample ID:	97BFXLIA10SD02(08)	LAL Sample ID:	L8849-85
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	44.6	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	120%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<54.	5.4	54.	X

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID: 97BPXLIB8SD02(08)	LAL Sample ID: L8849-95
Date Collected: 15-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 22-FEB-97	Analytical Batch ID: 021897-8015-D-3
Date Extracted: 20-FEB-97	Analytical Dilution: 1
Matrix: Soil	Preparation Dilution: 0.99
Percent Moisture: 28.76	QC Group: AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	139%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	7.7	4.2	42.	XJ

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIB8SD01(01)	LAL Sample ID:	L8849-99
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	28.44	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	115%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	POL/REL mg/kg	DAT. QUAL(S)
Diesel Range Organics	TPH	<42.	4.2	42.	

LAS

DIESEL BY GC-FID ALASKA METHOD AK 102.0 DRO

Client Sample ID:	97BPXLIC4SD01(01)	LAL Sample ID:	L8849-103
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	19.41	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	110%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL (S)
Diesel Range Organics	TPH	<37.	3.7	37.	

LAS

DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	Method Blank	LAL Sample ID:	45797MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	N/A	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	64%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics	TPH	<30.	3.0	30.	

DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	Method Blank	LAL Sample ID:	45796MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	N/A	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	86%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<30.	3.0	30.	

LAS

SPIKED SAMPLE RESULT DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	97BPXLIC4SD01(01)	LAL Sample ID:	45797MS
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	19.41	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	95%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL (S)
Diesel Range Organics	TPH	500	3.7	37.	

LAS

PIKED SAMPLE RESULT DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	97BPXLIB3SD02(08)	LAL Sample ID:	45796MS
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	18.83	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	84%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	500	3.7	37.	

LAS

SPIKED SAMPLE RESULT DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	97BPXLIC4SD01(01)	LAL Sample ID:	45797MSD
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Percent Moisture:	19.41	Preparation Dilution:	1.0
		QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	91%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/REL mg/kg	DATA QUAL (S)
Diesel Range Organics		TPH 490	3.7	37.	

LAS

UNPIKED SAMPLE RESULT DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	97BPXLIB3SD02(08)	LAL Sample ID:	45796MSD
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	18.83	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	92%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL.(S)
Diesel Range Organics	TPH	490	3.7	37.	

**SPIKED SAMPLE RESULT
DIESEL BY GC-FID ALASKA METHOD**

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45797LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	N/A	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	75%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/REL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	420	3.0	30.	

LAS

PIKED SAMPLE RESULT DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45796LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	N/A	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	93%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	380	3.0	30.	

LAS

MATRIX SPIKE DATA SUMMARY DIESEL BY GC-FID ALASKA METHOD

Client Sample ID: 97BPXLIC4SD01(01)	LAL Sample ID: 45797MS
Date Collected: 15-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 21-FEB-97	Analytical Batch ID: 021897-8015-D-2
Date Extracted: 20-FEB-97	Analytical Dilution: 1
	Preparation Dilution: 1.0
Percent Moisture: 19.41	QC Group: AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	95%	25-162

Constituent	Spike Added mg/kg	Sample Concentration mg/kg	MS Concentration mg/kg	% Recovery	QC Limits
					% Recovery
Diesel Range Organics	621	0.570	503	81	51-151

**MATRIX SPIKE DATA SUMMARY
DIESEL BY GC-FID ALASKA METHOD**

Client Sample ID:	97BPXLIB3SD02 (08)	LAL Sample ID:	45796MS
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	18.83	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	84%	25-162

Constituent	Spike Added mg/kg	Sample Concentration mg/kg	MS Concentration mg/kg	Recovery	QC Limits
					Recovery
Diesel Range Organics	618	2.41	502	81	51-153

LAS

MATRIX SPIKE DUPLICATE DATA SUMMARY DIESEL BY GC-FID ALASKA METHOD

Client Sample ID: 97BPXLIC4SD01(01)	LAL Sample ID: 45797MSD
Date Collected: 15-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 21-FEB-97	Analytical Batch ID: 021897-8015-D-2
Date Extracted: 20-FEB-97	Analytical Dilution: 1
	Preparation Dilution: 1.0
Percent Moisture: 19.41	QC Group: AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	91%	25-162

Constituent	Spike Added mg/kg	MSD Concentration mg/kg	Recovery	RPD	QC Limits	
					RPD	Recovery
Diesel Range Organics	623	489	79	3	30	51-11

MATRIX SPIKE DUPLICATE DATA SUMMARY
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID: 97BPXLIB3SD02(08)	LAL Sample ID: 45796MSD
Date Collected: 14-FEB-97	Date Received: 19-FEB-97
Date Analyzed: 22-FEB-97	Analytical Batch ID: 021897-8015-D-3
Date Extracted: 20-FEB-97	Analytical Dilution: 1
	Preparation Dilution: 1.0
Percent Moisture: 18.83	QC Group: AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	92%	25-162

Constituent	Spike Added mg/kg	MSD Concentration mg/kg	† Recovery	RPD	QC Limits	
					RPD	† Recovery
Diesel Range Organics	618	490	79	2	30	51-153

LAS

LCS DATA SUMMARY DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45797LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	N/A	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	75%	25-162

Constituent	Spike Added mg/kg	LCS Concentration mg/kg	LCS ↓ Recovery	QC Limits
Diesel Range Organics	501	425.	85	51-153

LAS

TEST DATA SUMMARY DIESEL BY GC-FID ALASKA METHOD

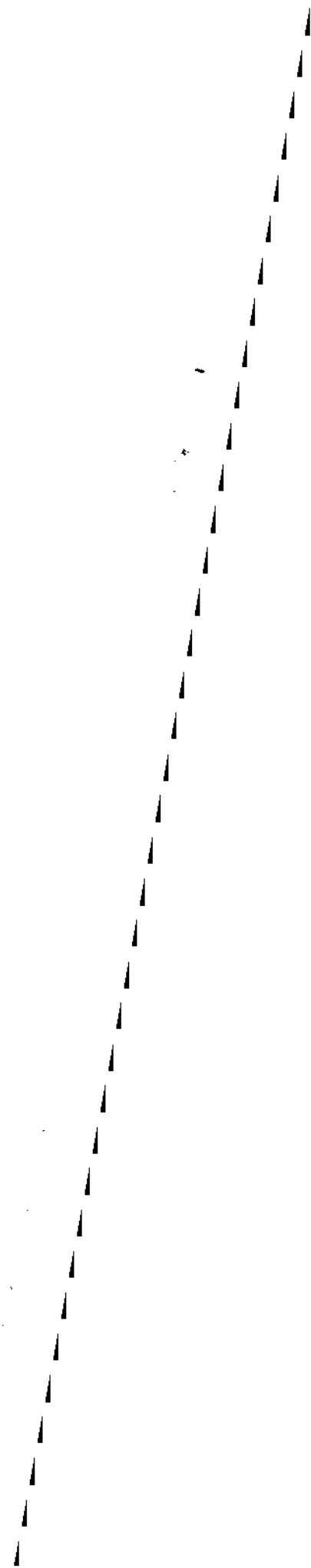
Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45796LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	N/A	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	93%	25-162

Constituent	Spike Added mg/kg	LCS Concentration mg/kg	LCS % Recovery	QC Limits
Diesel Range Organics	502	377	75	51-153



RUN LOGS/EXTRACTION SHEETS



Analyst	Date and Time	Sample Name	Description/ Solution	Matrix/ Dil.	Raw Data File	Method File	Reported	ReAnalyzed
IAA	2/14/97 9:27	CH2CL2		1	8015\021497-D\02149701.d01	8015\021497-D.MET		
IAA	2/14/97 10:12	RT 0608.36.1		1	8015\021497-D\02149701.d02	8015\021497-D.MET	OK	
IAA	2/14/97 10:57	RT 0727.58.1		1	8015\021497-D\02149701.d03	8015\021497-D.MET	OK	
IAA	2/14/97 11:41	1D 0990.04.1		1	8015\021497-D\02149701.d04	8015\021497-D.MET	OK	
IAA	2/14/97 12:26	2D 0990.04.2		1	8015\021497-D\02149701.d06	8015\021497-D.MET	OK	
IAA	2/14/97 13:12	3D 0990.04.3		1	8015\021497-D\02149701.d08	8015\021497-D.MET	OK	
IAA	2/14/97 13:56	4D 0990.04.4		1	8015\021497-D\02149701.d07	8015\021497-D.MET	OK	
IAA	2/14/97 14:41	5D 0990.04.5		1	8015\021497-D\02149701.d08	8015\021497-D.MET	OK	
IAA	2/14/97 15:26	D QCCS 0990.08.1		1	8015\021497-D\02149701.d09	8015\021497-D.MET	OK	
IAA	2/14/97 16:11	1G 0990.08.1		1	8015\021497-D\02149701.d10	8015\021497-D.MET	OK	
IAA	2/14/97 16:56	2G 0990.08.2		1	8015\021497-D\02149701.d11	8015\021497-D.MET	OK	
IAA	2/14/97 17:42	3G 0990.08.3		1	8015\021497-D\02149701.d12	8015\021497-D.MET	OK	
IAA	2/14/97 18:27	4G 0990.08.4		1	8015\021497-D\02149701.d13	8015\021497-D.MET	OK	
IAA	2/14/97 19:11	5G 0990.08.5		1	8015\021497-D\02149701.d14	8015\021497-D.MET	OK	
IAA	2/14/97 19:56	G QCCS 0990.08.2		1	8015\021497-D\02149701.d15	8015\021497-D.MET	OK	
IAA	2/14/97 20:41	1K 0990.07.1		1	8015\021497-D\02149701.d16	8015\021497-D.MET	OK	
IAA	2/14/97 21:26	2K 0990.07.2		1	8015\021497-D\02149701.d17	8015\021497-D.MET	OK	
IAA	2/14/97 22:10	3K 0990.07.3		1	8015\021497-D\02149701.d18	8015\021497-D.MET	OK	
IAA	2/14/97 22:55	4K 0990.07.4		1	8015\021497-D\02149701.d19	8015\021497-D.MET	OK	
IAA	2/14/97 23:40	5K 0990.07.5		1	8015\021497-D\02149701.d20	8015\021497-D.MET	OK	
IAA	2/15/97 0:25	1MO 0860.94.1		1	8015\021497-D\02149701.d21	8015\021497-D.MET	OK	
IAA	2/15/97 1:09	2MO 0860.94.2		1	8015\021497-D\02149701.d22	8015\021497-D.MET	OK	
IAA	2/15/97 1:54	3MO 0860.94.3		1	8015\021497-D\02149701.d23	8015\021497-D.MET	OK	
IAA	2/15/97 2:39	4MO 0860.94.4		1	8015\021497-D\02149701.d24	8015\021497-D.MET	OK	
IAA	2/15/97 3:24	5MO 0860.94.5		1	8015\021497-D\02149701.d25	8015\021497-D.MET	OK	
IAA	2/15/97 4:08	3D 0990.04.3		1	8015\021497-D\02149701.d26	8015\021497-D.MET	OK	
IAA	2/15/97 4:53	3D 0990.04.3		1	8015\021497-D\02149701.d27	8015\021497-D.MET		
IAA	2/15/97 5:39	CH2CL2		1	8015\021497-D\02149701.d28	8015\021497-D.MET		
IAA	2/15/97 6:23	45642MB		0.1666	8015\021497-D\02149701.d28	8015\021497-D.MET		
IAA	2/15/97 7:08	45642LCS		0.168	8015\021497-D\02149701.d30	8015\021497-D.MET		
IAA	2/15/97 7:53	45642MS		0.2236	8015\021497-D\02149701.d31	8015\021497-D.MET		
IAA	2/15/97 8:38	45642MSD		0.2233	8015\021497-D\02149701.d32	8015\021497-D.MET		
IAA	2/15/97 8:23	L8794.39		0.2303	8015\021497-D\02149701.d33	8015\021497-D.MET		
IAA	2/15/97 10:07	L8794.40		0.2337	8015\021497-D\02149701.d34	8015\021497-D.MET		
IAA	2/15/97 10:52	L8794.41		0.2581	8015\021497-D\02149701.d35	8015\021497-D.MET		
IAA	2/15/97 11:38	L8794.42		0.2192	8015\021497-D\02149701.d36	8015\021497-D.MET		
IAA	2/15/97 12:22	L8794.43		0.2387	8015\021497-D\02149701.d37	8015\021497-D.MET		
IAA	2/15/97 13:07	L8794.44		0.2445	8015\021497-D\02149701.d38	8015\021497-D.MET		
IAA	2/15/97 13:52	3D 0990.04.3		1	8015\021497-D\02149701.d39	8015\021497-D.MET		
IAA	2/15/97 14:37	3D 0990.04.3		1	8015\021497-D\02149701.d40	8015\021497-D.MET		
IAA	2/15/97 15:21	L8794.45		0.2167	8015\021497-D\02149701.d41	8015\021497-D.MET		
IAA	2/15/97 16:06	L8794.46		0.2226	8015\021497-D\02149701.d42	8015\021497-D.MET		
IAA	2/15/97 16:51	L8794.47		0.2113	8015\021497-D\02149701.d43	8015\021497-D.MET		
IAA	2/15/97 17:36	L8794.48		0.2032	8015\021497-D\02149701.d44	8015\021497-D.MET		
IAA	2/15/97 18:21	L8794.49		0.2294	8015\021497-D\02149701.d45	8015\021497-D.MET		
IAA	2/15/97 19:05	L8794.50		0.2228	8015\021497-D\02149701.d46	8015\021497-D.MET		
IAA	2/15/97 19:50	L8794.51		0.211	8015\021497-D\02149701.d47	8015\021497-D.MET		
IAA	2/15/97 20:35	L8794.52		0.1989	8015\021497-D\02149701.d48	8015\021497-D.MET		
IAA	2/15/97 21:19	L8794.53		0.2269	8015\021497-D\02149701.d49	8015\021497-D.MET		

Analyst	Date and Time	Sample Name	Description/ Solution	Matrix/ Dil.	Raw Data File	Method File	Reported	ReAnalyzed
DA	2/18/97 20:08	30 0990-04-3		1	8015\021897-D\02189701.d01	8015\021497-D.MET		
DA	2/18/97 20:53	30 0990-04-3		1	8015\021897-D\02189701.d02	8015\021497-D.MET		
DA	2/18/97 21:37	3G 0990-06-3		1	8015\021897-D\02189701.d03	8015\021497-D.MET		
DA	2/18/97 22:22	3G 0990-06-3		1	8015\021897-D\02189701.d04	8015\021497-D.MET		
DA	2/18/97 23:08	CH2CL2		1	8015\021897-D\02189701.d05	8015\021497-D.MET		
DA	2/18/97 23:52	45490MB		1	8015\021897-D\02189701.d06	8015\021497-D.MET		
DA	2/19/97 0:37	45490LCS-1		1	8015\021897-D\02189701.d07	8015\021497-D.MET		
DA	2/19/97 1:22	45490LCS-2		1	8015\021897-D\02189701.d08	8015\021497-D.MET		
DA	2/19/97 2:07	45490MS-1		1	8015\021897-D\02189701.d09	8015\021497-D.MET		
DA	2/19/97 2:52	45490MSD-1		1	8015\021897-D\02189701.d10	8015\021497-D.MET		
DA	2/18/97 3:37	45480MS-2		1	8015\021897-D\02189701.d11	8015\021497-D.MET		
DA	2/18/97 4:22	45490MSD-2		1	8015\021897-D\02189701.d12	8015\021497-D.MET		
DA	2/19/97 5:07	L8786-27		1	8015\021897-D\02189701.d13	8015\021497-D.MET		
DA	2/19/97 5:51	L8786-28		1	8015\021897-D\02189701.d14	8015\021497-D.MET		
DA	2/19/97 6:36	L8786-28		1	8015\021897-D\02189701.d15	8015\021497-D.MET		
DA	2/19/97 7:21	CH2CL2		1	8015\021897-D\02189701.d16	8015\021497-D.MET		
DA	2/18/97 8:06	L8786-26		1	8015\021897-D\02189701.d17	8015\021497-D.MET		
DA	2/19/97 8:51	CH2CL2		1	8015\021897-D\02189701.d18	8015\021497-D.MET		
DA	2/18/97 9:36	L8786-25 1:10		1	8015\021897-D\02189701.d19	8015\021497-D.MET		
DA	2/19/97 10:20	30 0990-04-3		1	8015\021897-D\02189701.d20	8015\021497-D.MET		
DA	2/19/97 16:00	3G 0990-06-3		1	8015\021897-D\02189701.d21	8015\021497-D.MET		
DA	2/19/97 16:45	3D 0990-04-3		1	8015\021897-D\02189701.d22	8015\021497-D.MET		
DA	2/21/97 9:30	30 0990-04-3		1	8015\021897-D\02189701.d23	8015\021497-D.MET	OK	
DA	2/21/97 11:49	CH2CL2		1	8015\021897-D\02189701.d24	8015\021497A-D.MET		
DA	2/21/97 12:33	45797MB		0.1663	8015\021897-D\02189701.d25	8015\021497A-D.MET	OK	
DA	2/21/97 13:18	45797LCS		0.1663	8015\021897-D\02189701.d26	8015\021497A-D.MET	OK	
DA	2/21/97 14:03	45797MS		0.2063	8015\021897-D\02189701.d27	8015\021497A-D.MET	OK	
DA	2/21/97 14:49	45797MSD		0.2087	8015\021897-D\02189701.d28	8015\021497A-D.MET	OK	
DA	2/21/97 15:34	L8849-54		0.2002	8015\021897-D\02189701.d29	8015\021497A-D.MET	OK	
DA	2/21/97 16:18	L8849-57		0.2048	8015\021897-D\02189701.d30	8015\021497A-D.MET	OK	
DA	2/21/97 17:04	L8849-61		0.2814	8015\021897-D\02189701.d31	8015\021497A-D.MET	OK	
DA	2/21/97 17:48	L8849-77		0.2689	8015\021897-D\02189701.d32	8015\021497A-D.MET	OK	
DA	2/21/97 18:33	L8849-85		0.2332	8015\021897-D\02189701.d33	8015\021497A-D.MET	OK	
DA	2/21/97 19:19	L8849-50		0.2183	8015\021897-D\02189701.d34	8015\021497A-D.MET	OK	
DA	2/21/97 20:03	L8849-73		0.2271	8015\021897-D\02189701.d35	8015\021497A-D.MET	OK	
DA	2/21/97 20:48	L8849-69		0.2445	8015\021897-D\02189701.d36	8015\021497A-D.MET	OK	
DA	2/21/97 21:34	L8849-81		0.2573	8015\021897-D\02189701.d37	8015\021497A-D.MET	OK	
DA	2/21/97 22:18	30 0990-04-3		1	8015\021897-D\02189701.d38	8015\021497A-D.MET	OK	
DA	2/21/97 23:03	30 0990-04-3		1	8015\021897-D\02189701.d39	8015\021497A-D.MET	NO	
DA	2/21/97 23:48	L8849-85		0.3004	8015\021897-D\02189701.d40	8015\021497A-D.MET	OK	
DA	2/22/97 0:33	L8849-95		0.2326	8015\021897-D\02189701.d41	8015\021497A-D.MET	OK	
DA	2/22/97 1:19	L8849-99		0.2327	8015\021897-D\02189701.d42	8015\021497A-D.MET	OK	
DA	2/22/97 2:03	L8849-103		0.2067	8015\021897-D\02189701.d43	8015\021497A-D.MET	OK	
DA	2/22/97 2:47	CH2CL2		1	8015\021897-D\02189701.d44	8015\021497A-D.MET	NO	
DA	2/22/97 3:32	45796MB		0.1666	8015\021897-D\02189701.d45	8015\021497A-D.MET	OK	
DA	2/22/97 4:17	45796LCS		0.1665	8015\021897-D\02189701.d46	8015\021497A-D.MET	OK	
DA	2/22/97 5:02	45796MS		0.2051	8015\021897-D\02189701.d47	8015\021497A-D.MET	OK	
DA	2/22/97 5:47	45796MSD		0.2053	8015\021897-D\02189701.d48	8015\021497A-D.MET	OK	
DA	2/22/97 6:32	L8849-18		0.2077	8015\021897-D\02189701.d49	8015\021497A-D.MET	OK	

Analyst	Date and Time	Sample Name	Description/ Solution	Matrix/ Dil.	Raw Data File	Method File	Reported	ReAnalyzed
DA	2/22/97 7:18	L8849-34		0.2113	8015\021897-D\02189701.d50	8015\21497A-D.MET	OK	
DA	2/22/97 8:06	L8849-42		0.2059	8015\021897-D\02189701.d51	8015\21497A-D.MET	OK	
DA	2/22/97 8:52	3D 0990-04-3		1	8015\021897-D\02189701.d52	8015\21497A-D.MET	NO	
DA	2/22/97 9:40	3D 0990-04-3		1	8015\021897-D\02189701.d53	8015\21497A-D.MET	OK	
DA	2/22/97 10:28	L8849-38		1	8015\021897-D\02189701.d54	8015\21497A-D.MET	NO	
DA	2/22/97 11:16	L8849-22		1	8015\021897-D\02189701.d55	8015\21497A-D.MET	NO	
DA	2/22/97 12:05	L8849-2		1	8015\021897-D\02189701.d56	8015\21497A-D.MET	NO	
DA	2/22/97 12:56	L8849-46		1	8015\021897-D\02189701.d57	8015\21497A-D.MET	NO	
DA	2/22/97 13:46	L8849-26		1	8015\021897-D\02189701.d58	8015\21497A-D.MET	NO	
DA	2/22/97 14:38	L8849-6		1	8015\021897-D\02189701.d59	8015\21497A-D.MET	NO	
DA	2/22/97 15:29	L8849-30		1	8015\021897-D\02189701.d60	8015\21497A-D.MET	NO	
DA	2/22/97 16:20	L8849-10		1	8015\021897-D\02189701.d61	8015\21497A-D.MET	NO	
DA	2/22/97 17:10	L8849-14		1	8015\021897-D\02189701.d62	8015\21497A-D.MET	NO	
DA	2/22/97 18:00	3D 0990-04-3		1	8015\021897-D\02189701.d63	8015\21497A-D.MET	NO	
DA	2/22/97 18:49	3D 0990-04-3		1	8015\021897-D\02189701.d64	8015\21497A-D.MET	NO	
DA	2/24/97 9:10	CH2CL2		1	8015\021897-D\02189701.d65	8015\21497A-D.MET	NO	
DA	2/24/97 9:56	3D 0990-04-3		1	8015\021897-D\02189701.d66	8015\21497A-D.MET	NO	
DA	2/24/97 11:31	3D 0990-04-3		1	8015\021897-D\02189701.d67	8015\21497A-D.MET	NO	
DA	2/24/97 13:52	CH2CL2		1	8015\021897-D\02189701.d68	8015\21497A-D.MET	NO	
DA	2/24/97 14:38	3D 0990-04-3		1	8015\021897-D\02189701.d69	8015\21497A-D.MET	OK	
DA	2/24/97 15:35	L8849-38		0.2259	8015\021897-D\02189701.d70	8015\21497A-D.MET	OK	
DA	2/24/97 16:20	L8849-22		0.2288	8015\021897-D\02189701.d71	8015\21497A-D.MET	OK	
DA	2/24/97 17:06	L8849-2		0.2258	8015\021897-D\02189701.d72	8015\21497A-D.MET	OK	
DA	2/24/97 17:51	L8849-46		0.2062	8015\021897-D\02189701.d73	8015\21497A-D.MET	OK	
DA	2/24/97 18:36	L8849-26		0.2258	8015\021897-D\02189701.d74	8015\21497A-D.MET	OK	
DA	2/24/97 19:21	L8849-6		0.205	8015\021897-D\02189701.d75	8015\21497A-D.MET	OK	
DA	2/24/97 20:08	L8849-30		0.217	8015\021897-D\02189701.d76	8015\21497A-D.MET	OK	
DA	2/24/97 20:51	L8849-10		0.2457	8015\021897-D\02189701.d77	8015\21497A-D.MET	OK	
DA	2/24/97 21:36	L8849-14		0.2127	8015\021897-D\02189701.d78	8015\21497A-D.MET	OK	
DA	2/24/97 22:21	3D 0990-04-3		1	8015\021897-D\02189701.d79	8015\21497A-D.MET	NO	
DA	2/24/97 23:06	3D 0990-04-3		1	8015\021897-D\02189701.d80	8015\21497A-D.MET	NO	
DA	2/24/97 23:51	3D 0990-04-3		1	8015\021897-D\02189701.d81	8015\21497A-D.MET	OK	
DA	2/25/97 13:19	3D 0990-04-3		1	8015\021897-D\02189701.d82	8015\21497A-D.MET		

LOCKHEED ANALYTICAL SERVICES
 TRACKING SHEET DATA REPORT (ba09)
 EXTRACTION SHEET FOR: AK 102.0 DRO Extraction
 WORKSHEET NUMBER: AK 102.0 DRO_45796

7 DAY TAT!

L #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/ CREATED	VOL (L) EXTR CS	WATER SAMPLE PH	SURR ML	MS ML	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
1849-18		97BPXL1810SD01(01)	15-FEB-97	19-FEB-97	30.12	N/A	2.0		5.0al	~4al
1849-34		97BPXL111SD02(08)	15-FEB-97	19-FEB-97	30.08					
1849-42		97BPXL1C2SD02(08)	15-FEB-97	19-FEB-97	30.26					
1849-38		97BPXL1C2SD01(01)	15-FEB-97	19-FEB-97	30.21					
1849-22		97BPXL1810SD02(08)	15-FEB-97	19-FEB-97	30.01					
1849-2		97BPXL183SD01(01)	14-FEB-97	19-FEB-97	30.06					
1849-46		97BPXL1C2SD61(08)	15-FEB-97	19-FEB-97	30.02					
1849-26		97BPXL1810SD62(08)	15-FEB-97	19-FEB-97	30.12					
1849-6		97BPXL183SD02(08)	14-FEB-97	19-FEB-97	30.05					
1849-30		97BPXL111SD01(01)	15-FEB-97	19-FEB-97	30.00					
1849-10		97BPXL186SD01(01)	15-FEB-97	19-FEB-97	30.02					
1849-14		97BPXL186SD02(08)	15-FEB-97	19-FEB-97	30.15					
1796MB	MB	Method Blank		19-FEB-97	30.02	✓	✓		✓	✓

Diesel
Matrix Spike

EXTRACTION METHOD: Alaska DRO

DATE STARTED: 2-20-97

DATE COMPLETED: 2-20-97

SIGNED: [Signature]
 SPIKE WITNESS: [Signature]

BATCH# : AK 102.0 DRO_45796

LOT #'S

SR ID # : 0859-82-1

CONC: 200.0 mg/hyd MECL2 : 36240

NA2SO4: 1639635

ID # : 0859-80-3

CONC: 15.107 mg/l ACETONE: N/A

REVIEWED BY: [Signature] DATE: 2-20-97

ARRATIVE

EXTRACT COC: RECEIVED BY: [Signature] DATE: 2-20-97

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (b09)

EXTRACTION SHEET FOR: AK 102.0 DRO Extraction

WORKSHEET NUMBER: AK 102.0 DRO_45796

LAB #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/CREATED	VOL/WT EXTR	WATER SAMPLE pH	SURR ML	MS ML	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
1796LCS	LCS	Lab Ctrl Sample		19-FEB-97	30.03	N/A	2.0	1.0	5.0 ml	~ 4 ml
5796MS L8849-6	MS	Matrix Spike	14-FEB-97	19-FEB-97	30.03	↓	↓	↓	↓	↓
5796MSD L8849-6	MSD	Matrix Spike Dup	14-FEB-97	19-FEB-97	30.01	↓	↓	↓	↓	↓
31KEL0745796	SPKEL07	Spike Lot Sample		19-FEB-97						

JCB 02-19-97

EXTRACTION METHOD: _____

DATE STARTED: _____

DATE COMPLETED: _____

SIGNED: _____

BATCH# : AK 102.0 DRO_45796

LOT #'S

SPIKE WITNESS: _____

RR ID # : _____ CONC: _____ MECL2 : _____ NA2SO4: _____

ID # : _____ CONC: _____ ACETONE: _____

REVIEWED BY: _____

ARRATIVE _____ EXTRACT COC: RECEIVED BY: _____ DATE: _____

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (ba09)

EXTRACTION SHEET FOR: AK 102.0 DRO Extraction

WORKSHEET NUMBER: AK 102.0 DRO_45797

7 Day TAT!

AL #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/CREATED	VOL (RT) EXTR CS	WATER SAMPLE pH	SURR ML	MS ML	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
8849-54		97BPXLI A4SD01(01)	16-FEB-97	19-FEB-97	2.20-97					
8849-57		97BPXLI A4SD02(08)	16-FEB-97	19-FEB-97	30.04	N/A	20		5.0ml	~4ml
8849-61		97BPXLI A6SD01(01)	16-FEB-97	19-FEB-97	30.04					
8849-77		97BPXLI A8SD01(01)	16-FEB-97	19-FEB-97	30.04					
8849-65		97BPXLI A6SD02(08)	16-FEB-97	19-FEB-97	30.18					
8849-50		97BPXLI C4SD02(08)	15-FEB-97	19-FEB-97	30.04					
8849-73		97BPXLI A8SD02(08)	16-FEB-97	19-FEB-97	30.04					
8849-69		97BPXLI A6SD02(08)	16-FEB-97	19-FEB-97	30.03					
8849-81		97BPXLI A10SD01(01)	16-FEB-97	19-FEB-97	30.11					
8849-85		97BPXLI A10SD02(08)	16-FEB-97	19-FEB-97	30.01					
8849-95		97BPXLI B8SD02(08)	15-FEB-97	19-FEB-97	30.04					
8849-99		97BPXLI B8SD01(01)	15-FEB-97	19-FEB-97	30.18					
8849-103		97BPXLI C4SD01(01)	15-FEB-97	19-FEB-97	30.02					

Diesel matrix spike

EXTRACTION METHOD: Alaska DRO

DATE STARTED: 2.20.97

DATE COMPLETED: 2.20.97

SIGNED: [Signature]

QC BATCH# : AK 102.0 DRO_45797

LOT #'S

SPIKE WITNESS: [Signature]

SURR ID # : 0859-82-1

CONC: 200.0mg/L MECL2 : 36240

HAZSO4: K39635

MS ID # : 0859-80-3

CONC: 15.10mg/L ACETONE: N/A

REVIEWED BY: [Signature]

NARRATIVE

EXTRACT COC: RECEIVED BY: [Signature] DATE: 2-20-

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (ba09)

EXTRACTION SHEET FOR: AK 102.0 DRO Extraction

WORKSHEET NUMBER: AK 102.0 DRO_45797

LAL #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/CREATED	VOL/WT EXTR	WATER SAMPLE pH	SURR ML	MS ML	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
45797MB	MB	Method Blank		19-FEB-97	30.07	NA	2.0		5.0ml	~4ml
45797LCS	LCS	Lab Ctrl Sample		19-FEB-97	30.06	↓	↓	1.0	↓	↓
45797MS L 8844-03	MS	Matrix Spike	15-FEB-97	19-FEB-97	30.08	↓	↓	↓	↓	↓
45797MSD L 8844-103	MSD	Matrix Spike Dup	15-FEB-97	19-FEB-97	30.02	↓	↓	↓	↓	↓
SPK6LOT45797	SPK6LOT	Spike Lot Sample		10-FEB-97						

ULB 02-17-97

EXTRACTION METHOD: _____

DATE STARTED: _____

DATE COMPLETED: _____

SIGNED: _____

C BATCH# : AK 102.0 DRO_45797

LOT #'S

SPIKE WITNESS: _____

URR ID # : _____ CONC: _____ MECL2 : _____ NA2SO4: _____

S ID # : _____ CONC: _____ ACETONE: _____

REVIEWED BY: _____

NARRATIVE _____ EXTRACT COC: RECEIVED BY: _____ DATE: _____

8015 Soils Conversion Values Ug/MI Concentration To Mg/kg

1. Surrogate Concentration in Ug/MI:

200

Sample Name	Mass In Grams	Percent Solid	Of Surr. (ug/kg) Found	Volume Of Surr. Used ml	Final Volume Of Extract ml	Extract Con. ug/MI If 100% Rec.	Sample Mg/Kg If 100% Rec.	Factor Ug/MI EC Mg/Kg St
L8849-18	30.12	79.94		2	5	80	16.6136001	0.20767
L8849-34	30.08	78.66		2	5	80	16.90499189	0.21131
L8849-42	30.26	80.26		2	5	80	16.46993603	0.20587
L8849-38	30.21	73.28		2	5	80	18.06857095	0.22586
L8849-22	30.01	72.81		2	5	80	18.30715504	0.22884
L8849-2	30.06	73.67		2	5	80	18.06309374	0.22579
L8849-46	30.02	80.77		2	5	80	16.49698568	0.20621
L8849-26	30.12	73.51		2	5	80	18.06588294	0.22582
L8849-6	30.05	81.17		2	5	80	16.39893667	0.20499
L8849-30	30	76.81		2	5	80	17.35885084	0.21699
L8849-10	30.02	67.80		2	5	80	19.65287153	0.24566
L8849-14	30.15	77.97		2	5	80	17.01460014	0.2126
45796MB	30.02	100.00		2	5	80	13.32445037	0.16656
45796LCS	30.03	100.00		2	5	80	13.32001332	0.16650
45796MS	30.03	81.17		2	5	80	16.41002011	0.20513
45796MSD	30.01	81.17		2	5	80	16.42095647	0.20526

8015 Soils Conversion Values Ug/MI Concentration To Mg/kg

1. Surrogate Concentration In Ug/MI:

200

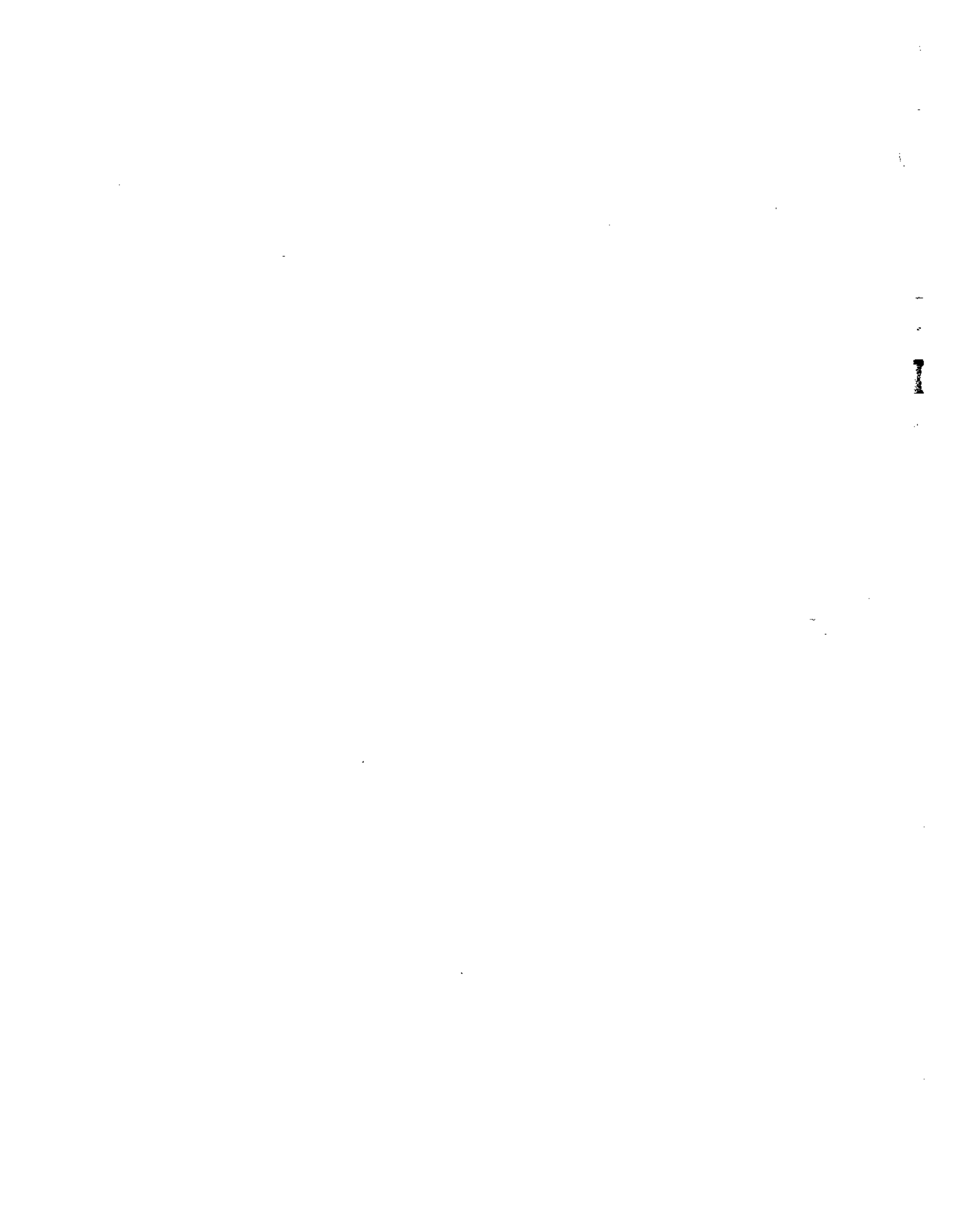
Sample Name	Mass In Grams	Percent Solid	Of Surr. (ug/kg) Found	Volume Of Surr. Used ml	Final Volume Of Extract ml	Extract Con. ug/MI If 100% Rec.	Sample Mg/Kg If 100% Rec.	Factor Ug/MI EC To Mg/Kg SC
L8849-54	30.14	82.87		2	5	80	16.01557623	0.20019
L8849-57	30.04	81.34		2	5	80	16.37027198	0.20463
L8849-61	30.04	57.12		2	5	80	23.31082513	0.29139
L8849-77	30.18	61.62		2	5	80	21.50929173	0.26887
L8849-65	30.04	71.38		2	5	80	18.65397331	0.23317
L8849-50	30.08	76.15		2	5	80	17.46213831	0.21828
L8849-73	30.03	73.31		2	5	80	18.16909692	0.22711
L8849-69	30.11	67.93		2	5	80	19.55703285	0.24446
L8849-81	30.01	64.75		2	5	80	20.58427192	0.25730
L8849-85	30.04	55.40		2	5	80	24.03389259	0.30042
L8849-95	30.18	71.24		2	5	80	18.60397251	0.23255
L8849-99	30.02	71.56		2	5	80	18.61931929	0.23274
L8849-103	30.02	80.59		2	5	80	16.53424295	0.20668
45797MB	30.07	100.00		2	5	80	13.30229465	0.16628
45797LCS	30.06	100.00		2	5	80	13.30671989	0.16633
45797MS	30.08	80.59		2	5	80	16.50064815	0.20626
45797MSD	30.02	80.59		2	5	80	16.53362746	0.20667

Percent Solids for L8849

LAL Sample #	Client ID	Value
L8849-83	97BPXLIA10SD01(01)	64.7527910685805
L8849-87	97BPXLIA10SD02(08)	55.4033485540335
L8849-55	97BPXLIA4SD01(01)	82.8655834564254
L8849-59	97BPXLIA4SD02(08)	81.3411078717201
L8849-63	97BPXLIA6SD01(01)	57.1218795888399
L8849-67	97BPXLIA6SD02(08)	71.3821138211382
L8849-71	97BPXLIA6SD62(08)	67.9276315789474
L8849-79	97BPXLIA8SD01(01)	61.6191904047976
L8849-75	97BPXLIA8SD02(08)	73.3113673805601
L8849-20 --- 8	97BPXLIB10SD01(01)	79.9357945425361
L8849-24 --- 22	97BPXLIB10SD02(08)	72.8070175438596
L8849-28 --- 26	97BPXLIB10SD62(08)	73.5099337748344
L8849-4 --- 2	97BPXLIB3SD01(01)	73.6681887366819
L8849-8 --- 6	97BPXLIB3SD02(08)	81.1708860759494
L8849-12 --- 10	97BPXLIB6SD01(01)	67.7993527508091
L8849-16 --- 14	97BPXLIB6SD02(08)	77.9742765273312
L8849-101	97BPXLIB8SD01(01)	71.5625
L8849-97	97BPXLIB8SD02(08)	71.2418300653595
L8849-40 --- 38	97BPXLIC2SD01(01)	73.28125
L8849-44 --- 42	97BPXLIC2SD02(08)	80.2610114192496
L8849-48 --- 46	97BPXLIC2SD61(08)	80.7692307692308
L8849-105	97BPXLIC4SD01(01)	80.5872756933116
L8849-52	97BPXLIC4SD02(08)	76.1526232114468
L8849-32 --- 30	97BPXLII1SD01(01)	76.8115942028985
L8849-36 --- 34	97BPXLII1SD02(08)	78.6624203821656
L8849-105SD	Duplicate	79.6116504854369

Percent Solids for L8849

LAL Sample #	Client ID	Value
8849-83 — 81 —	97BPXLIA10SD01 (01)	64.7527910685805
L8849-87 — 85 —	97BPXLIA10SD02 (08)	55.4033485540335
L8849-55 — 54 —	97BPXLIA4SD01 (01)	82.8655834564254
L8849-59 — 57 —	97BPXLIA4SD02 (08)	81.3411078717201
L8849-63 — 61 —	97BPXLIA6SD01 (01)	57.1218795888399
L8849-67 — 65 —	97BPXLIA6SD02 (08)	71.3821138211382
L8849-71 — 69 —	97BPXLIA6SD62 (08)	67.9276315789474
L8849-79 — 77 —	97BPXLIA8SD01 (01)	61.6191904047976
L8849-75 — 73 —	97BPXLIA8SD02 (08)	73.3113673805601
L8849-20	97BPXLIB10SD01 (01)	79.9357945425361
L8849-24	97BPXLIB10SD02 (08)	72.8070175438596
L8849-28	97BPXLIB10SD62 (08)	73.5099337748344
L8849-4	97BPXLIB3SD01 (01)	73.6681887366819
L8849-8	97BPXLIB3SD02 (08)	81.1708860759494
L8849-12	97BPXLIB6SD01 (01)	67.7993527508091
L8849-16	97BPXLIB6SD02 (08)	77.9742765273312
L8849-101 — 99 —	97BPXLIB8SD01 (01)	71.5625
L8849-97 — 95 —	97BPXLIB8SD02 (08)	71.2418300653595
L8849-40	97BPXLIC2SD01 (01)	73.28125
L8849-44	97BPXLIC2SD02 (08)	80.2610114192496
L8849-48	97BPXLIC2SD61 (08)	80.7692307692308
L8849-105 — 103 —	97BPXLIC4SD01 (01)	80.5872756933116
L8849-52 — 50 —	97BPXLIC4SD02 (08)	76.1526232114468
L8849-32	97BPXLIII1SD01 (01)	76.8115942028985
L8849-36	97BPXLIII1SD02 (08)	78.6624203821656
L8849-105SD	Duplicate	79.6116504854369

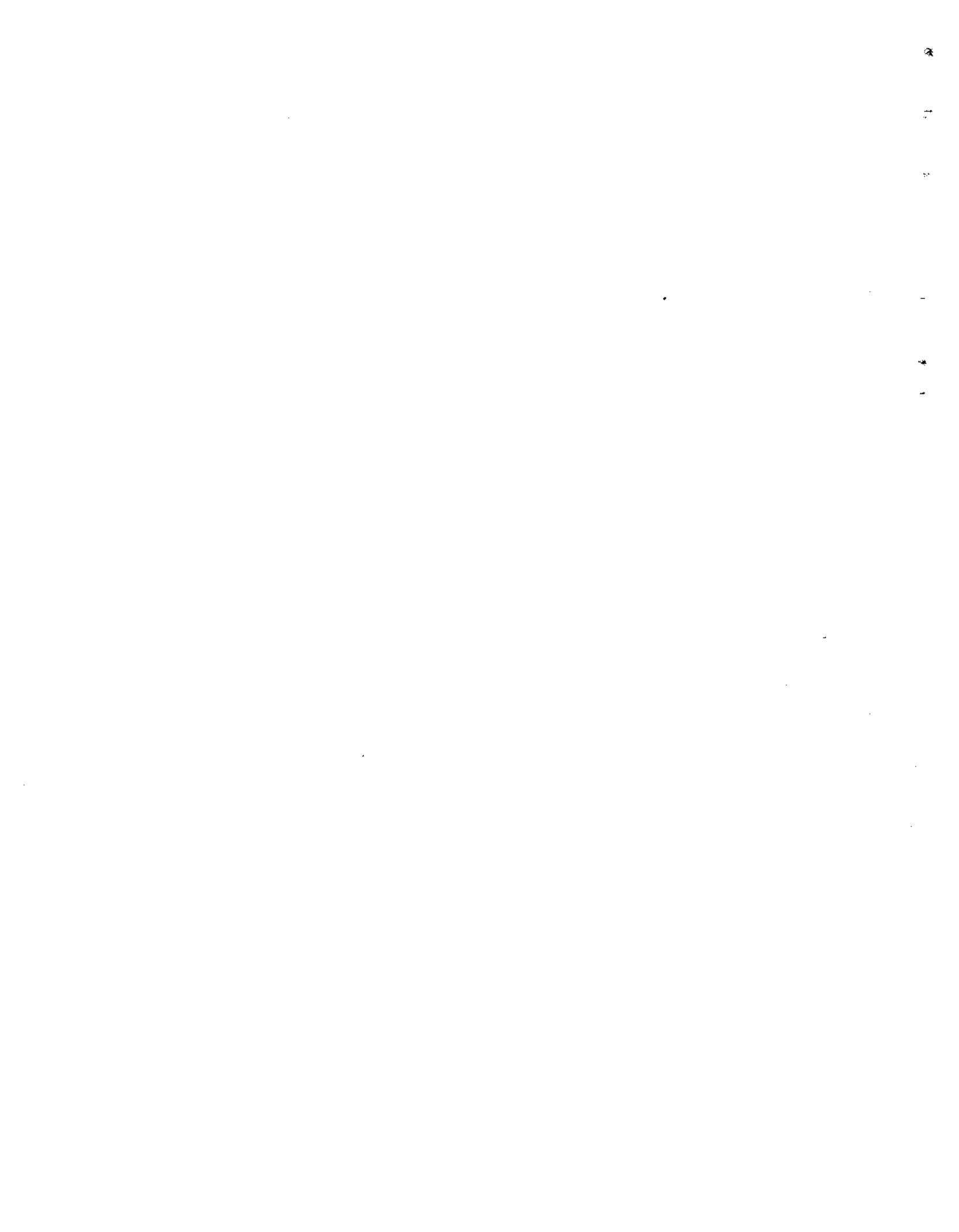




CT&E Laboratory



MONTGOMERY WATSON



COPY

*Reviewed
JFW*



CT&E Environmental Services Inc.

Laboratory Division **////////////////////**

FEDERAL I.D. 22-3334380

200 W. Potter Drive
Anchorage, AK 99518-1605
Tel: (907) 562-2343
Fax: (907) 561-5301

Client PO: **INVOICE NO. 52228023** Workorder Date: 02/17/97
Project Name: 1109002.280101 Liberty Island **DATE 02/25/97** CT&E Ref.# 970760
Account # JMMENGN

PLEASE REMIT TO: P.O. Box 10001-1019, Pasadena, CA 91110-1019

DIRECT PAYMENT INQUIRIES TO: 1919 S. Highland Ave., Suite 210-B, Lombard, IL 60148-4991 Tel. (630) 953-9300 Fax (630) 953-9306

TERMS: Net 30 Days. A Service Charge of One and a Half Percent (1½%) Per Month Will Be Charged on Overdue Accounts.

Bill To
Montgomery Watson Americas Inc
4100 Spenard Rd
Anchorage, AK 99517-2901

FEB 28 1997
MONTGOMERY WATSON

Contact Accounts Payable
Phone (907) 561-5829
Ordered By

Special Instructions

Client Sample ID/CT&E Sample ID	Parameter	Charge
97 BPX LI A4 WA 01(05)[970760001]	Total Suspended Solids	18.00
97 BPX LI A4 WA 01(05)[970760001]	Turbidity	18.00
97 BPX LI A6 WA 01(06)[970760002]	Total Suspended Solids	18.00
97 BPX LI A6 WA 01(06)[970760002]	Turbidity	18.00
97 BPX LI A8 WA 01(2-5)[970760003]	Total Suspended Solids	18.00
97 BPX LI A8 WA 01(2-5)[970760003]	Turbidity	18.00
97 BPX LI A8 WA 02(9-5)[970760004]	Total Suspended Solids	18.00
97 BPX LI A8 WA 02(9-5)[970760004]	Turbidity	18.00
97 BPX LI A10 WA 01(4.5)[970760005]	Total Suspended Solids	18.00
97 BPX LI A10 WA 01(4.5)[970760005]	Turbidity	18.00
97 BPX LI A10 WA 02(11)[970760006]	Total Suspended Solids	18.00
97 BPX LI A10 WA 02(11)[970760006]	Turbidity	18.00
97 BPX LI B3 WA 01(3.2)[970760007]	Total Suspended Solids	18.00
97 BPX LI B3 WA 01(3.2)[970760007]	Turbidity	18.00
97 BPX LI B6 WA 01(2.0)[970760008]	Total Suspended Solids	18.00
97 BPX LI B6 WA 01(2.0)[970760008]	Turbidity	18.00
97 BPX LI B8 WA 02(3.5)[970760009]	Total Suspended Solids	18.00
97 BPX LI B8 WA 02(3.5)[970760009]	Turbidity	18.00
97 BPX LI B8 WA 01(1.5)[970760010]	Total Suspended Solids	18.00

CONTROL NO.
R- 58515



INVOICE (Original)

COPY

CT&E Environmental Services Inc.

Laboratory Division

200 W. Potter Drive
Anchorage, AK 99518-160
Tel: (907) 562-2343
Fax: (907) 561-5301

FEDERAL I.D.: 22-3334380

INVOICE NO. 52228023

Workorder Date: 02/17/97

Client PO:

DATE 02/25/97

CT&E Ref.# 970760

Project Name: 1189002.280101 Liberty Island

Account # JMMENGN

PLEASE REMIT TO: P.O. Box 10001-1019, Pasadena, CA 91110-1019

DIRECT PAYMENT INQUIRIES TO: 1919 S. Highland Ave., Suite 210-B, Lombard, IL 60148-4991 Tel. (630) 953-9300 Fax (630) 953-9306

TERMS: Net 30 Days. A Service Charge of One and a Half Percent (1½%) Per Month Will Be Charged on Overdue Accounts.

Client Sample ID/CT&E Sample ID	Parameter	Charge
97 BPX LI B8 WA 01(1.5)[970760010]	Turbidity	18.00
97 BPX LI B10 WA 01(8.0)[970760011]	Total Suspended Solids	18.00
97 BPX LI B10 WA 01(8.0)[970760011]	Turbidity	18.00
97 BPX LI C2 WA 01(3.0)[970760012]	Total Suspended Solids	18.00
97 BPX LI C2 WA 01(3.0)[970760012]	Turbidity	18.00
97 BPX LI C2 WA 02(8.0)[970760013]	Total Suspended Solids	18.00
97 BPX LI C2 WA 02(8.0)[970760013]	Turbidity	18.00
97 BPX LI C4 WA 01(7.0)[970760014]	Total Suspended Solids	18.00
97 BPX LI C4 WA 01(7.0)[970760014]	Turbidity	18.00
97 BPX LI I1 WA 01(11)[970760015]	Total Suspended Solids	18.00
97 BPX LI I1 WA 01(11)[970760015]	Turbidity	18.00
97 BPX LI B8 WA 03(6.5)[970760016]	Total Suspended Solids	18.00
97 BPX LI B8 WA 03(6.5)[970760016]	Turbidity	18.00
TOTAL DUE		\$576.00

CONTROL NO.
R- 58516



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

February 20, 1997

Bonnie McLear
Montgomery Watson Americas Inc
4100 Spenard Rd
Anchorage, AK 99517-2901

Client Name	Montgomery Watson Americas Inc
Project ID	1189002.280101 Liberty Island [970760]
Printed	February 20, 1997

Enclosed are the analytical results associated with the above project.

As required by the state of Alaska and the USEPA, a formal Quality Assurance/Quality Control Program is maintained by CT&E. A copy of our Quality Control Manual that outlines this program is available at your request.

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth in our Quality Assurance Program Plan.

If you have any questions regarding this report or if we can be of any other assistance, please call your CT&E Project Manager at (907) 562-2343.

The following descriptors may be found on your report which will serve to further qualify the data.

- U - Indicates the compound was analyzed for but not detected.
- J - Indicates an estimated value that falls below PQL, but is greater than the MDL.
- B - Indicates the analyte is found in the blank associated with the sample.
- * - The analyte has exceeded allowable limits.
- GT - Greater Than
- D - Secondary Dilution
- LT - Less Than



CT&E Environmental Services Inc.

CT&E Ref.# 970760001
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI A4 WA 01(05)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/16/97 11:00
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	10.0	0.100	NTU	EPA 180.1			02/18/97	ENB
Total Suspended Solids	48.0	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760002
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI A6 WA 01(06)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/16/97 09:00
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	24.0	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	18.4	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760003
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI A8 WA 01(2-5)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/24/97 10:16
Collected Date/Time 02/15/97 03:50
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	2.1	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	63.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760004
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI A8 WA 02(9-5)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/15/97 04:00
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	5.5	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	24.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760005
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LI A10 WA 01(4.5)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/16/97 01:10
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	3.1	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	44.4	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760006
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI A10 WA 02(11)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/16/97 01:20
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	21.0	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	76.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Environmental Services Inc.

CT&E Ref.# 970760007
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI B3 WA 01(3.2)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/14/97 22:00
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	7.5	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	26.0	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760008
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LJ B6 WA 01(2.0)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/15/97 01:00
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By [Signature]

Sample Remarks:

Table with columns: Parameter, Results, PQL, Units, Method, Allowable Limits, Prep Date, Analysis Date, Init. Rows include Turbidity and Total Suspended Solids.



CT&E Ref.# 970760009
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI B8 WA 02(3.5)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/15/97 04:10
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	6.4	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	64.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760010
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LI B8 WA 01(1.5)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/15/97 04:00
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	6.1	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	46.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760011
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LI B10 WA 01(8.0)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/15/97 08:30
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	5.4	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	39.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760012
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LI C2 WA 01(3.0)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/15/97 21:00
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	3.4	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	13.0	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760013
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI C2 WA 02(8.0)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/15/97 21:10
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	2.8	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	11.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760014
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LI C4 WA 01(7.0)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/15/97 17:00
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	7.4	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	15.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760015
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LJ II WA 01(11)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/15/97 13:45
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	0.54	0.100	NTU	EPA 180.1			02/18/97	EMB
	sample analyzed past 48 hour hold time.							
Total Suspended Solids	8.3	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760016
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI B8 WA 03(6.5)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/15/97 04:20
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	1.7	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	12.3	0.200	mg/L	EPA 160.2			02/18/97	RAM



MONTGOMERY WATSON

C of C # 97-C # LI |
Page 1 of 1

BP EXPLORATION (ALASKA) INC.
LIBERTY ISLAND SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska
(907) 248-8883

97.0760

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

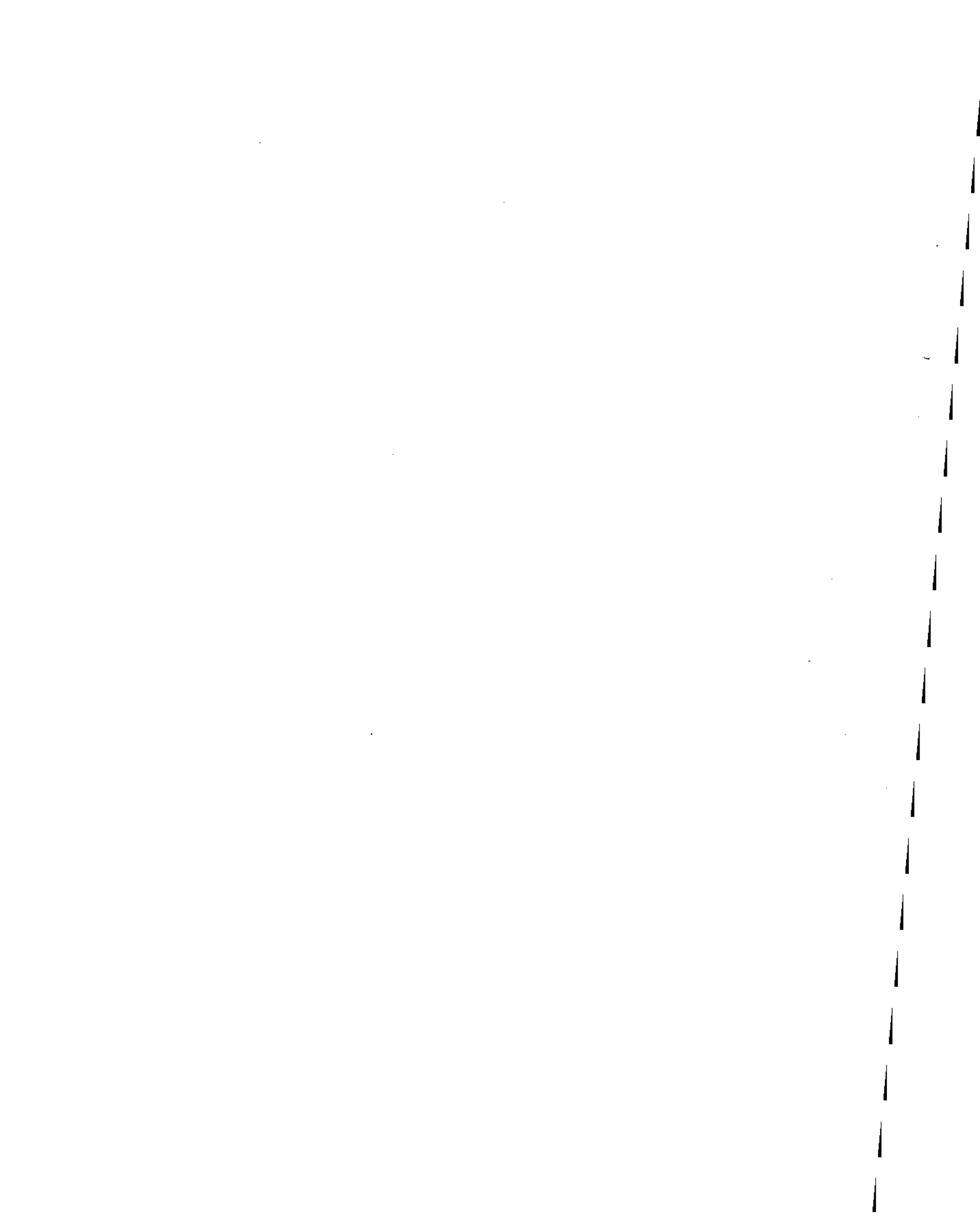
PROJ. NO. 1189002.280101		To: C T & E GAS, ANCHORAGE		TOTAL NO. OF CON- TAINERS	160.2 TSS AND TURB.				REMARKS
SAMPLERS: (Signature) 1997		Signature							
DATE	TIME	S/W	Sample ID						
①	2/16 1100	W	97 BPX LI A4 WA01(05)	2	✓				
②	2/16 0900	W	97 BPX LI A6 WA01(06)	2	✓				
③	2/15 0358	W	97 BPX LI A8 WA01(2.5)	2	✓				
④	2/15 0400	W	97 BPX LI A8 WA02(9.5)	2	✓				Turb TA
⑤	2/16 0110	W	97 BPX LI A10 WA01(4.5)	2	✓				Turb TA
⑥	2/16 0120	W	97 BPX LI A10 WA02(11)	2	✓				
⑦	2/14 2200	W	97 BPX LI 33 WA01(3.2)	1	✓				Turb. TA
⑧	2/15 100	W	97 BPX LI B6 WA01(2.0)	1	✓				Turb TA
⑨	2/15 0410	W	97 BPX LI B8 WA02(3.5)	1	✓				Turb. TA
⑩	2/15 0400	W	97 BPX LI B8 WA01(1.5)	1	✓				Turb. TA
⑪	2/15 0830	W	97 BPX LI B10 WA01(48.0)	2	✓				Turb. TA
⑫	2/15 2100	W	97 BPX LI B10 WA01(3.0)	2	✓				
			C2 WA01(3.0)						NO ENTRY
⑬	2/15 2110	W	97 BPX LI C2 WA02(8.0)	2	✓				
⑭	2/15 1700	W	97 BPX LI C4 WA01(7.0)	2	✓				
⑮	2/15 1345	W	97 BPX LI E1 WA01(11)	2	✓				
Relinquished by: 97 BPX		Date/Time		Shipped via:		Notified:		Date/Time	
Burchman		2/17/96		Delivered					
Received for Laboratory by: Jana Acosta				Date: 2/17/97		Time: 1425			



Columbia Analytical Services



MONTGOMERY WATSON



Review
JF



RECEIVED
MAR 6 1997
ANCH

MONTGOMERY WATSON

March 3, 1997

Doug Quist
Montgomery Watson
4100 Spenard Road
Anchorage, AK 99517

Service Request No: A9700086

Re: **BP Exploration Alaska, Inc./.(1189002.280101)**

Dear Doug:

Attached are the results of the rush samples submitted to our lab on February 21, 1997. For your reference, our service request number for this work is A9700086.

All analyses were performed consistent with generally accepted analytical laboratory principles and practices. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Mike Shelton
Laboratory Director

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Montgomery Watson
Project: BP Exploration Alaska, Inc.
Sample Matrix: Soil

Date Received: 2/21/97
Work Order No: A9700086

CASE NARRATIVE

All analyses were performed consistent with generally accepted analytical principles and practices.

All particle size determination samples were sent to our Kelso laboratory. The service request number for these samples is K971202.

-Acronyms-

MRL Method Reporting Limit
ND None Detected at or above the method reporting limit
DRO Diesel Range Organics
GRO Gasoline Range Organics
RRO Residual Range Organics

Approved by March 3, 1997

000002

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/14/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB3SD01(01)
Lab Code: K9701202-001

Sand Fraction: Weight (Grams) 18.8024
 Sand Fraction: Weight Recovered (Grams) 18.7183
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	53.9082
Percent Solids	72.1
Weight Oven-Dried (Grams)	38.8678

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0320	0.08
Coarse Sand	0.425 mm	40	0.2379	0.61
Medium Sand	0.250 mm	60	1.4789	3.80
Fine Sand	0.106 mm	140	8.7652	22.6
Very Fine Sand	0.075 mm	200	3.8259	9.84
Clay			3.0950	7.96
Silt			23.0950	59.4
Total			40.5299	104

Approved By: Mike Sullivan Date: 3/3/97

000003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/14/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB3SD02(08)
Lab Code: K9701202-002

Sand Fraction: Weight (Grams) 82.8151
Sand Fraction: Weight Recovered (Grams) 82.7387
Sand Fraction: Percent Recovery 100

Weight as received (Grams)	105.248
Percent Solids	83.5
Weight Oven-Dried (Grams)	87.8821

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0452	0.05
Very Coarse Sand	0.850 mm	20	0.0320	0.04
Coarse Sand	0.425 mm	40	0.5295	0.60
Medium Sand	0.250 mm	60	25.8069	29.4
Fine Sand	0.106 mm	140	51.2720	58.3
Very Fine Sand	0.075 mm	200	3.1086	3.54
Clay			1.5800	1.80
Silt			5.6200	6.39
Total			87.9942	100

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB6SD01(01)
Lab Code: K9701202-003

Sand Fraction: Weight (Grams) 2.0336
 Sand Fraction: Weight Recovered (Grams) 1.9723
 Sand Fraction: Percent Recovery 97.0

Weight as received (Grams)	38.5563
Percent Solids	70.1
Weight Oven-Dried (Grams)	27.0280

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0034	0.01
Very Coarse Sand	0.850 mm	20	0.0248	0.09
Coarse Sand	0.425 mm	40	0.0393	0.15
Medium Sand	0.250 mm	60	0.0770	0.28
Fine Sand	0.106 mm	140	0.3171	1.17
Very Fine Sand	0.075 mm	200	0.5936	2.20
Clay			1.9450	7.20
Silt			23.8800	88.4
Total			26.8802	99.5

Approved By: _____

11715

Date: 2/13/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB6SD02(08)
Lab Code: K9701202-004

Sand Fraction: Weight (Grams) 3.0506
 Sand Fraction: Weight Recovered (Grams) 3.024
 Sand Fraction: Percent Recovery 99.1

Weight as received (Grams)	34.8972
Percent Solids	76.7
Weight Oven-Dried (Grams)	26.7662

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0080	0.03
Very Coarse Sand	0.850 mm	20	0.0088	0.03
Coarse Sand	0.425 mm	40	0.0338	0.13
Medium Sand	0.250 mm	60	0.0556	0.21
Fine Sand	0.106 mm	140	0.2879	1.08
Very Fine Sand	0.075 mm	200	0.4201	1.57
Clay			2.3250	8.69
Silt			23.2500	86.9
Total			26.3892	98.6

Approved By: 17715 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB10SD01(01)
Lab Code: K9701202-005

Sand Fraction: Weight (Grams) 8.0821
 Sand Fraction: Weight Recovered (Grams) 8.0039
 Sand Fraction: Percent Recovery 99.0

Weight as received (Grams)	39.5303
Percent Solids	75.8
Weight Oven-Dried (Grams)	29.9640

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0000	0.00
Coarse Sand	0.425 mm	40	0.1198	0.40
Medium Sand	0.250 mm	60	3.9839	13.3
Fine Sand	0.106 mm	140	3.5310	11.8
Very Fine Sand	0.075 mm	200	0.0837	0.28
Clay			6.9850	23.3
Silt			14.9350	49.8
Total			29.6384	98.9

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB8SD02(08)
Lab Code: K9701202-006

Sand Fraction: Weight (Grams) 14.4281
 Sand Fraction: Weight Recovered (Grams) 14.3143
 Sand Fraction: Percent Recovery 99.2

Weight as received (Grams)	61.6584
Percent Solids	67.5
Weight Oven-Dried (Grams)	41.6194

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0269	0.06
Very Coarse Sand	0.850 mm	20	0.1035	0.25
Coarse Sand	0.425 mm	40	0.4336	1.04
Medium Sand	0.250 mm	60	2.5856	6.21
Fine Sand	0.106 mm	140	5.3886	12.9
Very Fine Sand	0.075 mm	200	2.6863	6.45
Clay			5.7450	13.8
Silt			27.2950	65.6
Total			44.2645	106

Approved By: _____

17715 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB8SD02(08)
Lab Code: K9701202-006d

Sand Fraction: Weight (Grams) 10.8452
 Sand Fraction: Weight Recovered (Grams) 10.6645
 Sand Fraction: Percent Recovery 98.3

Weight as received (Grams)	57.3659
Percent Solids	72.5
Weight Oven-Dried (Grams)	41.5903

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0114	0.03
Very Coarse Sand	0.850 mm	20	0.1450	0.35
Coarse Sand	0.425 mm	40	0.3947	0.95
Medium Sand	0.250 mm	60	1.0133	2.44
Fine Sand	0.106 mm	140	3.1458	7.56
Very Fine Sand	0.075 mm	200	1.8541	4.46
Clay			5.1100	12.3
Silt			27.2100	65.4
Total			38.8843	93.5

Approved By: MMIS Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB8SD02(08)
Lab Code: K9701202-006t

Sand Fraction: Weight (Grams) 11.8146
 Sand Fraction: Weight Recovered (Grams) 11.6371
 Sand Fraction: Percent Recovery 98.5

Weight as received (Grams)	54.5878
Percent Solids	70.0
Weight Oven-Dried (Grams)	38.2115

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0031	0.01
Very Coarse Sand	0.850 mm	20	0.1653	0.43
Coarse Sand	0.425 mm	40	0.2877	0.75
Medium Sand	0.250 mm	60	1.0398	2.72
Fine Sand	0.106 mm	140	2.9078	7.61
Very Fine Sand	0.075 mm	200	1.7589	4.60
Clay			4.7300	12.4
Silt			26.1700	68.5
Total			37.0626	97.0

Approved By: 117715 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB8SD01(01)
Lab Code: K9701202-007

Sand Fraction: Weight (Grams) 1.0224
 Sand Fraction: Weight Recovered (Grams) 0.9617
 Sand Fraction: Percent Recovery 94.1

Weight as received (Grams)	38.2747
Percent Solids	68.8
Weight Oven-Dried (Grams)	26.3330

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0012	0.00
Very Coarse Sand	0.850 mm	20	0.0168	0.06
Coarse Sand	0.425 mm	40	0.0257	0.10
Medium Sand	0.250 mm	60	0.0470	0.18
Fine Sand	0.106 mm	140	0.2271	0.86
Very Fine Sand	0.075 mm	200	0.2637	1.00
Clay			2.3600	8.96
Silt			23.6100	89.7
Total			26.5515	101

Approved By: MIS Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB10SD02(08)
Lab Code: K9701202-008

B-10 E17

Sand Fraction: Weight (Grams) 2.0051
 Sand Fraction: Weight Recovered (Grams) 1.975
 Sand Fraction: Percent Recovery 98.5

Weight as received (Grams)	32.4177
Percent Solids	72.5
Weight Oven-Dried (Grams)	23.5028

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0060	0.03
Coarse Sand	0.425 mm	40	0.0321	0.14
Medium Sand	0.250 mm	60	0.3971	1.69
Fine Sand	0.106 mm	140	1.0078	4.29
Very Fine Sand	0.075 mm	200	0.2198	0.94
Clay			6.8450	29.1
Silt			14.9900	63.8
Total			23.4978	100

Approved By: _____ *1/115* Date: *3/3/97*

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIII1SD01(01)
Lab Code: K9701202-009

Sand Fraction: Weight (Grams) 35.3751
 Sand Fraction: Weight Recovered (Grams) 35.1601
 Sand Fraction: Percent Recovery 99.4

Weight as received (Grams)	67.4098
Percent Solids	81.5
Weight Oven-Dried (Grams)	54.9390

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0201	0.04
Very Coarse Sand	0.850 mm	20	0.1352	0.25
Coarse Sand	0.425 mm	40	0.1349	0.25
Medium Sand	0.250 mm	60	0.7251	1.32
Fine Sand	0.106 mm	140	16.9634	30.9
Very Fine Sand	0.075 mm	200	10.2088	18.6
Clay			3.6700	6.68
Silt			20.1850	36.7
Total			52.0425	94.7

Approved By: Mike Stelton Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

**Particle Size Determination
 ASTM Method D422 Modified**

Sample Name: 97BPXLII1SD02(08)
Lab Code: K9701202-010

Sand Fraction: Weight (Grams) 0.3685
 Sand Fraction: Weight Recovered (Grams) 0.323
 Sand Fraction: Percent Recovery 87.7

Weight as received (Grams)	35.8749
Percent Solids	80.5
Weight Oven-Dried (Grams)	28.8793

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0031	0.01
Coarse Sand	0.425 mm	40	0.0018	0.01
Medium Sand	0.250 mm	60	0.0182	0.06
Fine Sand	0.106 mm	140	0.1221	0.42
Very Fine Sand	0.075 mm	200	0.0903	0.31
Clay			15.3100	53.0
Silt			13.0150	45.1
Total			28.5605	98.9

Approved By: _____

LJL Date: *3/3/97*

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIC2SD01(01)
Lab Code: K9701202-011

Sand Fraction: Weight (Grams) 1.4428
 Sand Fraction: Weight Recovered (Grams) 1.3263
 Sand Fraction: Percent Recovery 91.9

Weight as received (Grams)	59.9115
Percent Solids	70.9
Weight Oven-Dried (Grams)	42.4773

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0014	0.00
Coarse Sand	0.425 mm	40	0.0138	0.03
Medium Sand	0.250 mm	60	0.0328	0.08
Fine Sand	0.106 mm	140	0.2163	0.51
Very Fine Sand	0.075 mm	200	0.2545	0.60
Clay			3.5400	8.33
Silt			38.5150	90.7
Total			42.5738	100

Approved By: _____

1778

Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

**Particle Size Determination
 ASTM Method D422 Modified**

Sample Name: 97BPXLIC2SD02(08)
Lab Code: K9701202-012

Sand Fraction: Weight (Grams) 2.6933
Sand Fraction: Weight Recovered (Grams) 2.673
Sand Fraction: Percent Recovery 99.2

Weight as received (Grams)	25.012
Percent Solids	83.5
Weight Oven-Dried (Grams)	20.8850

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0099	0.05
Coarse Sand	0.425 mm	40	0.0283	0.14
Medium Sand	0.250 mm	60	0.2962	1.42
Fine Sand	0.106 mm	140	1.5188	7.27
Very Fine Sand	0.075 mm	200	0.5037	2.41
Clay			9.4800	45.4
Silt			8.3950	40.2
Total			20.2319	96.9

Approved By: 1778 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIC4SD02(08)
Lab Code: K9701202-013

Sand Fraction: Weight (Grams) 66.3786
 Sand Fraction: Weight Recovered (Grams) 66.2127
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	92.254
Percent Solids	79.7
Weight Oven-Dried (Grams)	73.5264

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0013	0.00
Very Coarse Sand	0.850 mm	20	0.0147	0.02
Coarse Sand	0.425 mm	40	0.0545	0.07
Medium Sand	0.250 mm	60	1.4404	1.96
Fine Sand	0.106 mm	140	48.7899	66.4
Very Fine Sand	0.075 mm	200	11.6167	15.8
Clay			1.7050	2.32
Silt			7.7850	10.6
Total			71.4075	97.1

Approved By: _____

11715

Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIC4SD01(01)
Lab Code: K9701202-014

Sand Fraction: Weight (Grams) 10.0257
 Sand Fraction: Weight Recovered (Grams) 9.8972
 Sand Fraction: Percent Recovery 98.7

Weight as received (Grams)	58.1901
Percent Solids	72.2
Weight Oven-Dried (Grams)	42.0133

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0210	0.05
Coarse Sand	0.425 mm	40	0.0389	0.09
Medium Sand	0.250 mm	60	0.5383	1.28
Fine Sand	0.106 mm	140	5.5294	13.2
Very Fine Sand	0.075 mm	200	1.7010	4.05
Clay			3.9050	9.29
Silt			31.8850	75.9
Total			43.6186	104

Approved By: 17715 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA4SD02(08)
Lab Code: K9701202-016

Sand Fraction: Weight (Grams) 90.4426
 Sand Fraction: Weight Recovered (Grams) 90.363
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	108.145
Percent Solids	85.1
Weight Oven-Dried (Grams)	92.0310

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	9.5634	10.4
Fine Gravel	2.00 mm	10	2.3032	2.50
Very Coarse Sand	0.850 mm	20	1.4641	1.59
Coarse Sand	0.425 mm	40	4.3069	4.68
Medium Sand	0.250 mm	60	43.0847	46.8
Fine Sand	0.106 mm	140	28.1088	30.5
Very Fine Sand	0.075 mm	200	1.0047	1.09
Clay			1.5150	1.65
Silt			2.0000	2.17
Total			93.3508	101

Approved By: 17715 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA4SD02(08)
Lab Code: K9701202-016d

Sand Fraction: Weight (Grams) 91.2509
 Sand Fraction: Weight Recovered (Grams) 91.0646
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	107.984
Percent Solids	84.8
Weight Oven-Dried (Grams)	91.5706

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	16.8718	18.4
Fine Gravel	2.00 mm	10	1.9209	2.10
Very Coarse Sand	0.850 mm	20	1.1428	1.25
Coarse Sand	0.425 mm	40	5.3384	5.83
Medium Sand	0.250 mm	60	35.1659	38.4
Fine Sand	0.106 mm	140	29.2320	31.9
Very Fine Sand	0.075 mm	200	0.7958	0.87
Clay			1.6000	1.75
Silt			2.0700	2.26
Total			94.1376	103

Approved By: _____

17715

Date: _____

3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

**Particle Size Determination
 ASTM Method D422 Modified**

Sample Name: 97BPXLIA4SD02(08)
Lab Code: K9701202-0161

Sand Fraction: Weight (Grams) 90.1459
Sand Fraction: Weight Recovered (Grams) 90.0547
Sand Fraction: Percent Recovery 100

Weight as received (Grams)	107.053
Percent Solids	85.0
Weight Oven-Dried (Grams)	90.9414

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	11.4577	12.6
Fine Gravel	2.00 mm	10	0.7290	0.80
Very Coarse Sand	0.850 mm	20	0.7757	0.85
Coarse Sand	0.425 mm	40	3.3704	3.71
Medium Sand	0.250 mm	60	40.0474	44.0
Fine Sand	0.106 mm	140	32.0653	35.3
Very Fine Sand	0.075 mm	200	0.8089	0.89
Clay			1.4050	1.54
Silt			2.1900	2.41
Total			92.8494	102

Approved By: 1778 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA6SD01(01)
Lab Code: K9701202-017

Sand Fraction: Weight (Grams) 59.7172
 Sand Fraction: Weight Recovered (Grams) 59.5882
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	96.8374
Percent Solids	80.5
Weight Oven-Dried (Grams)	77.9541

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	1.0714	1.37
Fine Gravel	2.00 mm	10	0.2535	0.33
Very Coarse Sand	0.850 mm	20	0.1769	0.23
Coarse Sand	0.425 mm	40	0.4364	0.56
Medium Sand	0.250 mm	60	11.1410	14.3
Fine Sand	0.106 mm	140	39.1413	50.2
Very Fine Sand	0.075 mm	200	4.4337	5.69
Clay			3.1250	4.01
Silt			15.1700	19.5
Total			74.9492	96.1

Approved By: _____

1278

Date: _____

3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIA6SD02(08)
Lab Code: K9701202-018

A 6 81

Sand Fraction: Weight (Grams) 29.5097
Sand Fraction: Weight Recovered (Grams) 29.3858
Sand Fraction: Percent Recovery 100

Weight as received (Grams)	70.0063
Percent Solids	72.3
Weight Oven-Dried (Grams)	50.6146

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.1635	0.32
Coarse Sand	0.425 mm	40	0.3399	0.67
Medium Sand	0.250 mm	60	0.7212	1.42
Fine Sand	0.106 mm	140	13.0103	25.7
Very Fine Sand	0.075 mm	200	7.1941	14.2
Clay			2.8250	5.58
Silt			25.0550	49.5
Total			49.3090	97.4

Approved By: 17715 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA8SD02(08)
Lab Code: K9701202-019

A 8 847

Sand Fraction: Weight (Grams) 17.723
 Sand Fraction: Weight Recovered (Grams) 17.5632
 Sand Fraction: Percent Recovery 99.1

Weight as received (Grams)	63.8683
Percent Solids	73.7
Weight Oven-Dried (Grams)	47.0709

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.1316	0.28
Coarse Sand	0.425 mm	40	0.1711	0.36
Medium Sand	0.250 mm	60	0.3260	0.69
Fine Sand	0.106 mm	140	4.6817	9.95
Very Fine Sand	0.075 mm	200	5.1741	11.0
Clay			4.9800	10.6
Silt			30.4200	64.6
Total			45.8845	97.5

Approved By: _____ *17715* Date: *3/3/97*

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA10SD01(01)
Lab Code: K9701202-021

A 110 1F7

Sand Fraction: Weight (Grams) 32.1191
 Sand Fraction: Weight Recovered (Grams) 32.0103
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	61.4534
Percent Solids	81.0
Weight Oven-Dried (Grams)	49.7773

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0394	0.08
Very Coarse Sand	0.850 mm	20	0.0863	0.17
Coarse Sand	0.425 mm	40	0.2890	0.58
Medium Sand	0.250 mm	60	3.4337	6.90
Fine Sand	0.106 mm	140	20.7419	41.7
Very Fine Sand	0.075 mm	200	2.8292	5.68
Clay			1.7400	3.50
Silt			18.6400	37.4
Total			47.7995	96.0

Approved By: _____ *11715* Date: *3/3/97*

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
 Project: Liberty Island/1189002.280101
 Sample Matrix Sediment

Service Request: K9701202
 Date Collected: 2/16/97
 Date Received: 2/24/97
 Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA10SD02(08)
 Lab Code: K9701202-022

A-10 8 fr

Sand Fraction: Weight (Grams) 17.5188
 Sand Fraction: Weight Recovered (Grams) 17.1901
 Sand Fraction: Percent Recovery 98.1

Weight as received (Grams)	61.0743
Percent Solids	56.0
Weight Oven-Dried (Grams)	34.2016

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0838	0.25
Very Coarse Sand	0.850 mm	20	0.6112	1.79
Coarse Sand	0.425 mm	40	0.8858	2.59
Medium Sand	0.250 mm	60	0.6678	1.95
Fine Sand	0.106 mm	140	5.2105	15.2
Very Fine Sand	0.075 mm	200	3.1105	9.09
Clay			5.7050	16.7
Silt			19.7300	57.7
Total			36.0046	105

Approved By: _____ Date: _____

APPENDIX A

**CHAIN OF CUSTODY INFORMATION
COOLER RECEIPT FORM**

000029



MONTGOMERY WATSON

C of C # 97-C # LE 3

Page 1 of 2

441000280

BP EXPLORATION (ALAS) INC.
LIBERTY ISLAND SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

000030

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO.		To:		TOTAL NO. OF CONTAINERS	GRAIN SIZE, ASTM D442				REMARKS
1189002.280101		CAS, ANCHORAGE							
SAMPLERS: (Signature)				1997					
<i>[Signature]</i>									
DATE	TIME	S/W	Sample ID						
2/14	2300	S	97 BPX LI B3 SD 01 (01)	1	✓				-1
2/14	2330	S	97 BPX LI B3 SD 02 (08)	1	✓				-2
2/15	0120	S	97 BPX LI B6 SD 01 (01)	1	✓				-3
2/15	0145	S	97 BPX LI B6 SD 02 (08)	1	✓				-4
2/15	900	S	97 BPX LI B10 SD 01 (01)	1	✓				-5
2/15	0500	S	97 BPX LI B8 SD 02 (08)	1	✓				-6
2/15	0430	S	97 BPX LI B8 SD 01 (01)	1	✓				-7
2/15	1000	S	97 BPX LI B10 SD (02) (08)	1	✓				02 (08) -8
2/15	1400	S	97 BPX LI I1 SD 01 (01)	1	✓				-9
2/15	1445	S	97 BPX LI I1 SD (02) (08)	1	✓				02 (08) -10
2/15	2220	S	97 BPX LI C2 SD 01 (01)	1	✓				-11
2/15	2240	S	97 BPX LI C2 SD 02 (08)	1	✓				-12
2/15	1800	S	97 BPX LI C4 SD 02 (08)	1	✓				-13
2/15	1730	S	97 BPX LI C4 SD 01 (01)	1	✓				-14
2/16	1130	S	97 BPX LI A4 SD 01 (01)	1	✓				-15
2/16	1200	S	97 BPX LI A4 SD 02 (08)	1	✓				-16
2/16	0930	S	97 BPX LI A6 SD 01 (01)	1	✓				-17
Relinquished by: 97 BPX		Date/Time		Shipped via:		Notified: N/A		Date/Time	
<i>[Signature]</i>		2/21/97 1455		<i>Delivered</i>					
Received for Laboratory by:				Date:		Time:			
<i>[Signature]</i>				2-21-97					



MONITOR MERY WATSON

C of C # 97-C # 43
Page 2 of 2

BP EXPLORATION (ALAS) INC.
LIBERTY ISLAND SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

000031

PROJ. NO.		To:		TOTAL NO. OF CONTAINERS	GRAIN SIZE, ASTM D442				REMARKS
1189002.280101		CAS, ANCHORAGE							
SAMPLERS: (Signature)				1	✓				
1997 <i>[Signature]</i>									
DATE	TIME	S/W	Sample ID						
2/16	1800	S	97 BPX LI A6 SD 02(08)	1	✓				-18
2/16	0440	S	97 BPX LI A8 SD 02(08)	1	✓				-19
2/16	0430	S	97 BPX LI A8 SD 01(01)	1	✓				-20
2/16	0830	S	97 BPX LI A10 SD 01(01)	1	✓				-21
2/16	0150	S	97 BPX LI A10 SD 02(08)	1	✓				-22

Relinquished by: 97 BPX *[Signature]* Date/Time: 2/16/97 1:55 Shipped via: Delivered Notified: N/A Date/Time: _____

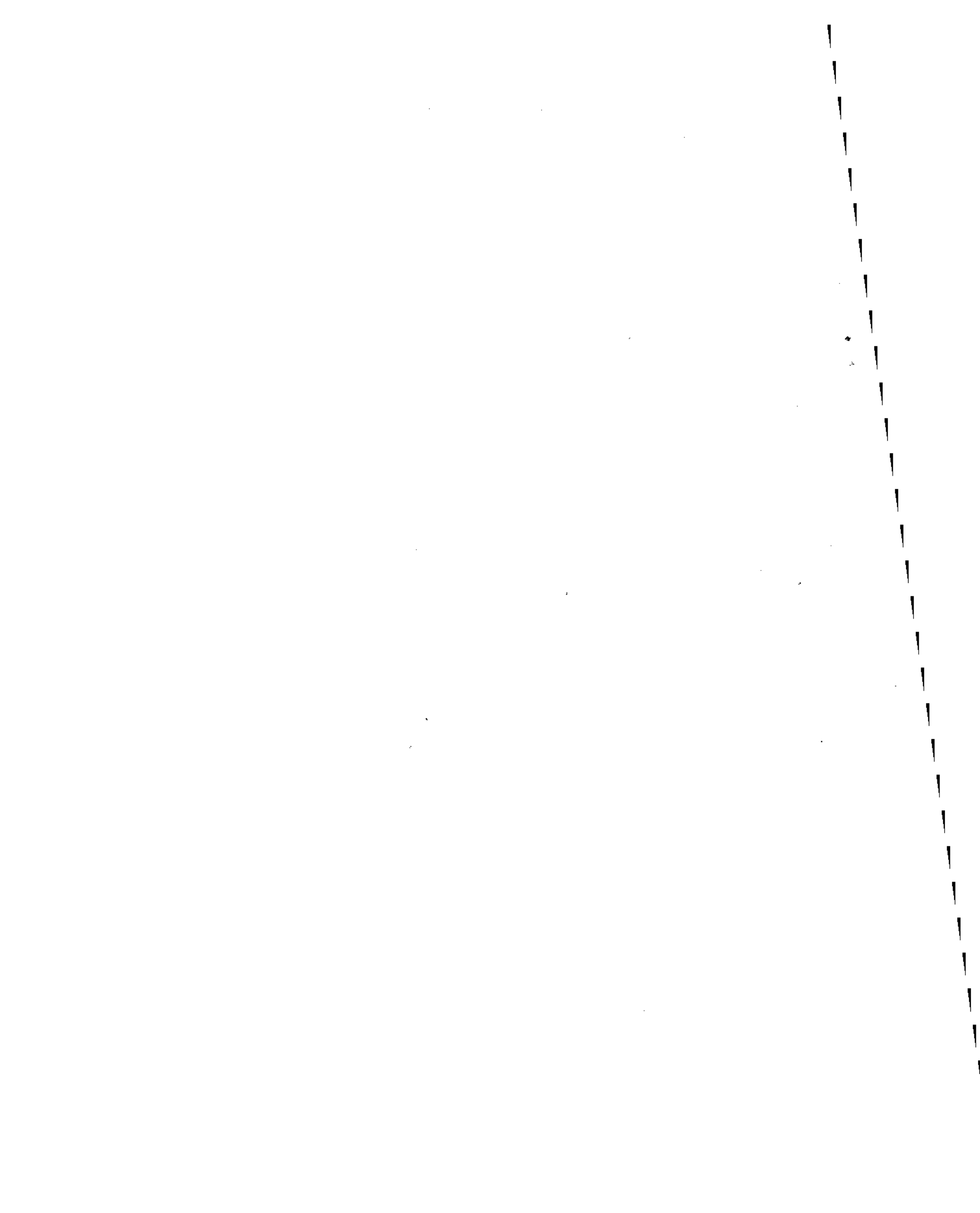
Received for Laboratory by: *[Signature]* Date: 2-21-97 Time: 2:55 PM

Montgomery Watson is an Equal Opportunity Employer. M/W/F/H/V. 2000

Appendix D
Chain-of-Custody-Records



MONTGOMERY WATSON





MONTGOMERY WATSON

Michael Turner

BP EXPLORATION (ALASKA) INC.
LIBERTY ISLAND SEDIMENT AND WATER
SAMPLING

C of C # 97-C # LI |
Page 1 of 1

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska
(907) 248-8883

97.0760

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: CT & E - GAS, ANCHORAGE		TOTAL NO. OF CON- TAINERS	160.2 TSS AND TURB.				REMARKS
SAMPLERS: (Signature) 1997		Signature							
DATE	TIME	S/W	Sample ID						
2/16	1100	W	97 BPX LI A4 WA01 (05)	2	✓				
2/16	0900	W	97 BPX LI A6 WA01 (06)	2	✓				
2/16	0350	W	97 BPX LI A8 WA01 (2.5)	2	✓				
2/15	0400	W	97 BPX LI A8 WA02 (9.5)	2	✓				Turb TA
2/16	0110	W	97 BPX LI A10 WA01 (4.5)	2	✓				Turb TA
2/16	0120	W	97 BPX LI A10 WA02 (11)	2	✓				
2/14	2200	W	97 BPX LI 33 WA01 (3.2)	1	✓				Turb. TA
2/15	100	W	97 BPX LI B6 WA01 (2.0)	1	✓				Turb TA
2/15	0410	W	97 BPX LI B8 WA02 (3.5)	1	✓				Turb. TA
2/15	0400	W	97 BPX LI B8 WA01 (1.5)	1	✓				Turb. TA
2/15	830	W	97 BPX LI B10 WA01 (48.0)	2	✓				Turb. TA
2/15	2100	W	97 BPX LI B10 WA01 (3.0)	2	✓				
			C2 WA01 (3.0)			NO entries			
2/15	2110	W	97 BPX LI C2 WA02 (8.0)	2	✓				
2/15	1700	W	97 BPX LI C4 WA01 (7.0)	2	✓				
2/15	1345	W	97 BPX LI E1 WA01 (11)	2	✓				
2/15	420	W	97 BPX LI B8 WA03 (6.9)	1	✓				Assesd: Burdick
Relinquished by: 97 BPX		Date/Time		Shipped via:		Notified:		Date/Time	
Burdick		2/17/97		Delivered					
Received for Laboratory by: Dana Beckett				Date: 2/17/97			Time: 1425		



February 19, 1997

Bonnie McLearn
Montgomery Watson Americas Inc
4100 Spenard Rd
Anchorage, AK 99517-2901

REGISTERED
FEB 24 1997
MONTGOMERY WATSON

Dear Bonnie McLearn:

Thank you for your recent request for analytical services. The sample(s) below will be analyzed per your request.

These samples will be disposed 30 days after completion of analysis. Your samples are assigned to the indicated project

Client: Montgomery Watson Americas Inc - JMMENGN
Project: 1189002.280101 Liberty Island - [970760]

Sample: 970760001 Client/CT&E ID: 97 BPX LI A4 WA 01(05)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 11:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760002 Client/CT&E ID: 97 BPX LI A6 WA 01(06)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 09:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760003 Client/CT&E ID: 97 BPX LI A8 WA 01(2-5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 03:50 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity



Sample: 970760004 Client/CT&E ID: 97 BPX LI A8 WA 02(9-5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 04:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760005 Client/CT&E ID: 97 BPX LI A10 WA 01(4.5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 01:10 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760006 Client/CT&E ID: 97 BPX LI A10 WA 02(11)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 01:20 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760007 Client/CT&E ID: 97 BPX LI B3 WA 01(3.2)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/14/97 22:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760008 Client/CT&E ID: 97 BPX LI B6 WA 01(2.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 01:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity



Sample: 970760009 Client/CT&E ID: 97 BPX LI B8 WA 02(3.5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 04:10 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760010 Client/CT&E ID: 97 BPX LI B8 WA 01(1.5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 04:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760011 Client/CT&E ID: 97 BPX LI B10 WA 01(8.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 08:30 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760012 Client/CT&E ID: 97 BPX LI C2 WA 01(3.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 21:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760013 Client/CT&E ID: 97 BPX LI C2 WA 02(8.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 21:10 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity



CT&E Environmental Services Inc.

Sample: 970760014 Client/CT&E ID: 97 BPX LI C4 WA 01(7.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 17:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760015 Client/CT&E ID: 97 BPX LI II WA 01(11)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 13:45 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760016 Client/CT&E ID: 97 BPX LI B8 WA 03(6.5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 04:20 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

For further information or assistance concerning samples, please contact:
Joyce Windebank at (907)562-2343



MONTGOMERY WATSON

C of C, #97-LI2

Page 1 of 2

BP EXPLORATION (ALASKA) INC.
LIBERTY ISLAND PIPELINE SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: LOCKHEED, Attn: MARY WOLFE		TOTAL NO. OF CON- TAINERS	WATER				REMARKS
SAMPLERS: (Signature) 1997 WJ [Signature]		[Signature]			TSS, EPA 160.2	VOC, 8260A 2.2 OZ	SVOC (8270B), DRO (8100M), TOC (415.1), 8 OZ.	As, Cd, Cr, Ba, Hg, Cr+6, BaSO4, 4 OZ.	
DATE	TIME	S/W	Sample ID						
2/14	2300	SED	97BPXLIB3SD01(01)	4	X	X	X		
2/14	2330	SED	97BPXLIB3SD01(08)	4					
2/15	0120	SED	97BPXLIB6SD01(01)	4					
2/15	0145	SED	97BPXLIB6SD02(08)	4					
2/15	0900	SED	97BPXLIB10SD01(07)	4					
2/15	0930	SED	97BPXLIB10SD02(08)	4					
2/15	1000	SED	97BPXLIB10SD62(08)	4					
2/15	1400	SED	97BPXLIT1SD01(01)	4					
2/15	1445	SED	97BPXLIT1SD02(08)	4					
2/15	2220	SED	97BPXLIC2SD01(01)	4					
2/15	2230	SED	97BPXLIC2SD02(08)	4					
2/15	2300	SED	97BPXLIC2SD61(08)	4				← 50 62 (08)	
2/15	1800	SED	97BPXLIC4SD02(08)	4				← Completed 2/20 (08) should be	
2/15	1730	SED	97BPXLIC4SD01(08)	4				(01) Bgm	
2/16	1130	SED	97BPXLIA4SD01(01)	3					
2/16	1200	SED	97BPXLIA4SD02(08)	4					
2/16	0930	SED	97BPXLIA6SD01(01)	4	X	X	X		
Relinquished by: [Signature]		Date/Time 2/10/97 1200		Shipped via: FedEx 3842059662		Notified: [Signature]		Date/Time	
Received for Laboratory by:				Date:		Time:			

WJW

correct (01) (08)

← 50 62 (08)
Completed 2/20
(08) should be
(01) Bgm



MONTGOMERY WATSON

C of C, #97-LI2

Page 2 of 2.

BP EXPLORATION (ALAS..A) INC.
LIBERY ISLAND PILELINE SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: LOCKHEED, Attn: MARY WOLFE		TOTAL NO. OF CON- TAINERS	WATER			REMARKS
SAMPLERS: (Signature) 1997 <i>W. [Signature]</i>		<i>Zunchea</i>			TSS, EPA 160.2	VOC, 8260A 2.2 OZ	SVOC (8270B), DRO (8100M), TOC (415.1), 8 OZ.	
DATE	TIME	S/W	Sample ID					
2/16	1000	SED	97BPX LIA6SD02(OE)	4	X	X	X	
2/16	1010	SED	97BPX LIA6SD62(OE)	4				
2/16	0440	SED	97BPX LIA8SD02(OE)	4				
2/16	0430	SED	97BPX LIA8SD01(O1)	4				
2/16	0130	SED	97BPX LIA10SD01(O1)	4				
2/16	0150	SED	97BPX LIA10SD02(OE)	4	X	X	X	
2/16	1900	W	97 BPX LI TB 21697	3	X			
2/14	1900	W	97 BPX LI 021497	3	X			
2/15	0430	SD	97 BPX LIA8SD01(O1)	4	X	X	X	JARS Rec'd
2/15	0500	SD	97BPX LIA8SD02(OE)	4	X	X	X	by LAB - Added to C of C 2/20 <i>[Signature]</i>

✓
✓
2/20
7:20
1/20/97

2009662

Relinquished by: *[Signature]* Date/Time: 2/18/97 (1200) Shipped via: FedEx 3842 Notified: 2009662 Date/Time:

Received for Laboratory by: _____ Date: _____ Time: _____



MONTGOMERY WATSON

C of C, #97-LI2

Page 1 of 2

BP EXPLORATION (ALASKA) INC.
LIBERTY ISLAND PIPELINE SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spanard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: LOCKHEED, Attn: MARY WOLFE		TOTAL NO. OF CON- TAINERS	WATER			REMARKS
SAMPLERS: (Signature) 1997 WL [Signature]		[Signature]			TSS, EPA 160.2 VOC, 8260A 2-2 OZ	SVOC (8270B), DRO (8100M), TOC (415.1), 8 OZ	As, Cd, Cr, Ba, Hg, Cr+6, BaSO4, 4 OZ	
DATE	TIME	S/W	Sample ID					
2/14	2300	SED	97BPXLIB3SD01(01)	4	X	X	X	
2/14	2330	SED	97BPXLIB3SD01(08)	4				
2/15	0120	SED	97BPXLIB6SD01(01)	4				
2/15	0145	SED	97BPXLIB6SD02(08)	4				
2/15	0900	SED	97BPXLIB10SD01(01)	4				
2/15	0930	SED	97BPXLIB10SD02(08)	4				
2/15	1000	SED	97BPXLIB10SD62(08)	4				
2/15	1400	SED	97BPXLI11SD01(01)	4				
2/15	1445	SED	97BPXLI11SD02(08)	4				
2/15	2220	SED	97BPXLIC2SD01(01)	4				
2/15	2240	SED	97BPXLIC2SD02(08)	4				
2/15	2300	SED	97BPXLIC2SD61(08)	4				
2/15	1800	SED	97BPXLIC4SD02(08)	4				
2/15	1730	SED	97BPXLIC4SD01(08)	4				One replicate 02/20 (08) should be (01) Bgm
2/16	1130	SED	97BPXLIA4SD01(01)	3				
2/16	1200	SED	97BPXLIA4SD02(08)	4				
2/16	0930	SED	97BPXLIA6SD01(01)	4	X	X	X	
Retinquished by:		Date/Time		Shipped via:		Notified:		Date/Time
[Signature]		2/10/97 1700		FedEx 38420		9662		
Received for Laboratory by:					Date:		Time:	

3
6
58
WCA
4
16



MONTGOMERY WATSON

C of C, #97-LI2

Page 2 of 2

BP EXPLORATION (ALAS..A) INC.
LIBERTY ISLAND PIPELINE SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: LOCKHEED, Attn: MARY WOLFE		TOTAL NO. OF CON- TAINERS	WATER			REMARKS
SAMPLERS: (Signature) 1997 <i>W. [Signature]</i>		<i>Zmucha</i>			TSS, EPA 160.2 VOC, 8260A 2.2 OZ	SVOC (8270B), DRO (8100M), TOC (415.1), 8 OZ.	As, Cd, Cr, Ba, Hg, Cr+6, BaSO4, 4 OZ.	
DATE	TIME	S/W	Sample ID					
2/16	1000	SED	97BPX LIA6SD02(08)	4	X	X	X	
2/16	1010	SED	97BPX LIA6SD62(08)	4				
2/16	0440	SED	97BPX LIA8SD02(08)	4				
2/16	0430	SED	97BPX LIA8SD01(01)	4				
2/16	0130	SED	97BPX LIA10SD01(01)	4				
2/16	0150	SED	97BPX LIA10SD02(08)	4	X	X	X	
2/16	1900	W	97 BPX LI TB 21697	3	X			
2/14	1900	W	97 BPX LI 021497	3	X			
2/15	0430	SD	97 BPX LIA8SD01(01)	4	X	X	X	JARS Rec'd
2/15	0500	SD	97BPX LIA8SD02(08)	4	X	X	X	by LAB - Added to C of C 2/20 <i>[Signature]</i>
2009652								
Relinquished by: <i>[Signature]</i>		Date/Time 2/18/97 (200)		Shipped via FedEx 384		Notified:		Date/Time
Received for Laboratory by:					Date:		Time:	

3/20/97
2:20
3:00 PM

FedEx. USA Airbill

Tracking Number **3842009662**

Sender's Copy
863140 00006/00200

1 From (please print) _____
Date 2/18/97 Sender's FedEx Account Number 1387-3266-5

Sender Name omnie McLean Phone (907) 248-8883
Dept./Floor/Suite/Room _____

Company MONTGOMERY WATSON

Address 4100 SPENARD RD

City ANCHORAGE State AK Zip 99517

2 Your Internal Billing Reference Information (Optional) (First 30 characters will appear on invoice) 1189002.270101

3 To (please print) _____
Recipient's Name Mary Wolfe Phone (800) 582-7605
Dept./Floor/Suite/Room _____

Company IAS Lab

Address 975 Kelly Johnson Dr.
No "HOLD" at FedEx location, print FedEx address here) (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes)

City Las Vegas State NV Zip 89119

For HOLD at FedEx Location check here
 Hold Weekday (Not available with FedEx First Overnight)
 Hold Saturday (Not available at all locations) (Not available with FedEx First Overnight or FedEx Standard Overnight)
For Saturday Delivery check here
 Home Change (Not available to all locations) (Not available with FedEx First Overnight or FedEx Standard Overnight)

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Questions?
Call 1-800-Go-FedEx (1-800-463-3339)

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 FedEx Priority Overnight (Next business morning)
 FedEx Standard Overnight (Next business afternoon)
 FedEx 2Day® (Second business day)

NEW FedEx First Overnight (Earliest next business morning; delivery to select locations) (Other rates apply)
 * FedEx Letter may not exceed additional charge. Only ground FedEx 2Day rate.

4b Express Freight Service Packages over 150 lbs. Delivery commitment may be later in some areas.
 FedEx Overnight Freight (Next business day service for any distance)
 FedEx 2Day Freight (Second business day service for any distance)
 FedEx Express Saver Freight (Up to 3 business day service based upon distance)
 Call for delivery schedule. See back for detailed descriptions of freight products.

5 Packaging FedEx Letter FedEx Pak FedEx Box FedEx Tube Other Pkg.

6 Special Handling
 Does this shipment contain dangerous goods? Yes (Major chemical, flammable, or toxic) No
 Dry Ice (Dry Ice, U. N. 1845 or Dangerous Goods Shipper's Declaration not required) CA Cargo Aircraft Only

7 Payment
 Bill to: Sender (Account no. in Section 7b to bill) Recipient Third Party Credit Card Cash/Check
(Enter FedEx account no. or Credit Card no. below)

FedEx Account No. _____ Exp. Date _____
 Credit Card No. _____

Total Packages	Total Weight	Total Declared Value*
		\$.00

*When declaring a value higher than \$500 per shipment, you pay an additional charge. See SERVICE CONDITIONS. DECLARED VALUE AND LIMIT OF LIABILITY subject to further information.

8 Release Signature Sign to authorize delivery without obtaining signature.

Your signature authorizes Federal Express to deliver this shipment without obtaining a signature and agree to indemnify and hold harmless Federal Express from any resulting claims.

272

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F A X



MONTGOMERY WATSON

4100 Spenard Road
Anchorage, Alaska 99517

Tel: (907) 248-8883
Fax: (907) 248-8884

Date:

2/20/97

To:

Mary White

Fax No:

702 361-3137

From:

Bonnie McLean

Reference:

Subject:

Co C 97 LI 2
Corrected

No. of Pages:

3

(including cover)

If you do not receive all pages, or if there are any problems with this transmission, please call Jenny Farr at (907) 248-8883.

2/16/97

Time

ADD: 97 BPK LI B8 SD 01 (01) @ 0430
P92. 97 BPK LI B8 SD 02 (08) @ 0500

Correct

Pg 1. 2/15/97 @ 1730

97 BPK LI C4 SD 01 (08)

Should be

97 BPK LI C4 SD 0 2 (01)



MON. GOMERY WATSON

C of C # 97-C # L23

Page 1 of 2

BP EXPLORATION (ALAS) INC.
LIBERTY ISLAND SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: CAS, ANCHORAGE		TOTAL NO. OF CON- TAINERS	GRAIN SIZE, ASTM D442					REMARKS
SAMPLERS: (Signature) 1997 <i>[Signature]</i>										
DATE	TIME	S/W	Sample ID							
2/14	2300	S	97 BPX LI B3 SD 01 (01)	1	✓					
2/14	2330	S	97 BPX LI B3 SD 02 (08)	1	✓					
2/15	0120	S	97 BPX LI B6 SD 01 (01)	1	✓					
2/15	0145	S	97 BPX LI B6 SD 02 (08)	1	✓					
2/15	900	S	97 BPX LI B10 SD 01 (01)	1	✓					
2/15	0900	S	97 BPX LI B8 SD 02 (08)	1	✓					
2/15	0930	S	97 BPX LI B8 SD 01 (01)	1	✓					
2/15	1000	S	97 BPX LI B10 SD (02) (08)	1	✓					02 (08)
2/15	1400	S	97 BPX LI I1 SD 01 (01)	1	✓					
2/15	1445	S	97 BPX LI I1 SD (02) (08)	1	✓					02 (08)
2/15	2220	S	97 BPX LI C2 SD 01 (01)	1	✓					
2/15	2240	S	97 BPX LI C2 SD 02 (08)	1	✓					
2/15	1800	S	97 BPX LI C4 SD 02 (08)	1	✓					
2/15	1730	S	97 BPX LI C4 SD 01 (01)	1	✓					
2/16	1130	S	97 BPX LI A4 SD 01 (01)	1	✓					
2/16	1200	S	97 BPX LI A4 SD 02 (08)	1	✓					
2/16	0930	S	97 BPX LI A6 SD 01 (01)	1	✓					
Relinquished by: 97 BPX <i>[Signature]</i>		Date/Time: 2/21/97 1455		Shipped via: <i>Delivered</i>		Notified: <i>N/A</i>		Date/Time		
Received for Laboratory by: <i>[Signature]</i>				Date: 2-21-97		Time: 2:50 PM				



MO. MONTGOMERY WATSON

C of C # 97-C # 43

Page 2 of 2

BP EXPLORATION (ALASKA) INC.
LIBERTY ISLAND SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: CAS, ANCHORAGE		TOTAL NO. OF CON- TAINERS	GRAIN SIZE, ASTM D442				REMARKS
SAMPLERS: (Signature) 1997 <i>W. Watson</i>									
DATE	TIME	S/W	Sample ID						
2/16	1000	S	97 BPX LI A6 SD 02(08)	1	✓				
2/16	0440	S	97 BPX LI A8 SD 02(08)	1	✓				
2/16	0430	S	97 BPX LI A8 SD 01(01)	1	✓				
2/16	0130	S	97 BPX LI A10 SD 01(01)	1	✓				
2/16	0150	S	97 BPX LI A10 SD 02(08)	1	✓				

Relinquished by: 97 BPX *W. Watson* Date/Time: *2/16/97 1:55* Shipped via: *Delivered* Notified: *N/A* Date/Time: _____

Received for Laboratory by: *Julia Watson* Date: *2-21-97* Time: *2:55 PM*

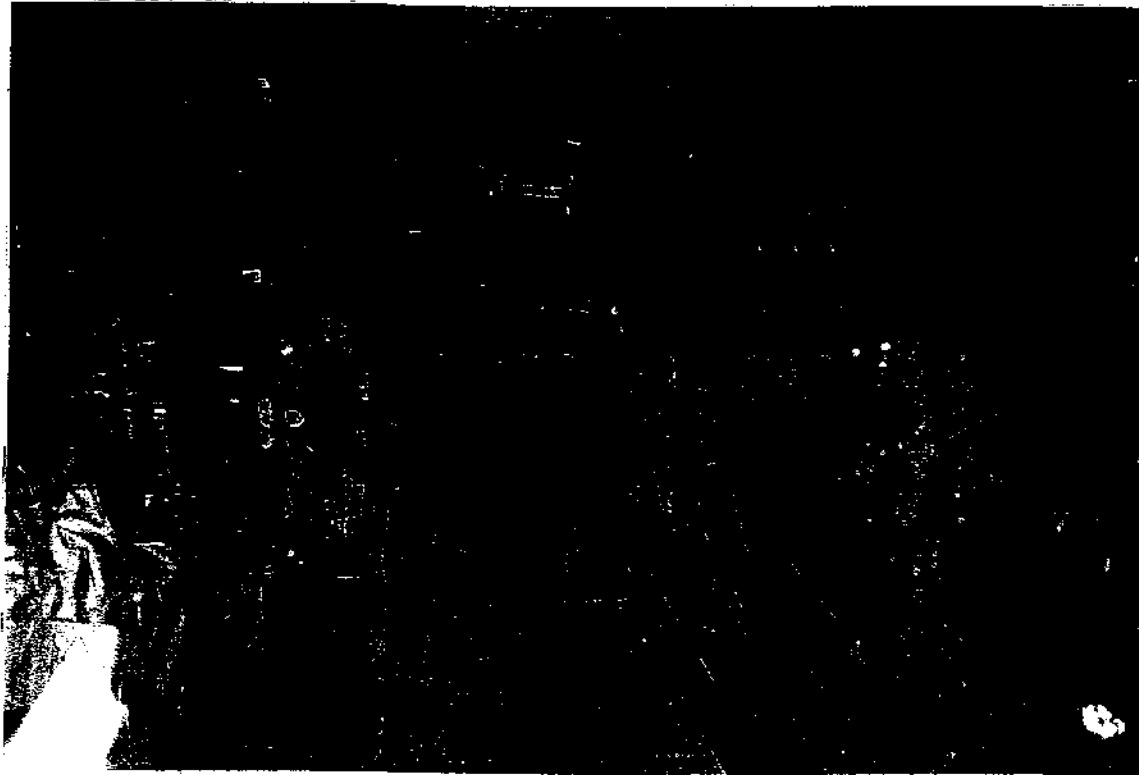
Appendix E

Photographs



MONTGOMERY WATSON

BP Exploration (Alaska), Inc
Liberty Island
Water and Sediment Sampling



Five Foot Split Spoon, Extracted From Hole, Preparing To Open



Collecting Soil Sample From Split Spoon By Bill Nettleton, MW

Appendix F
Health and Safety Plan
(Duane Miller & Associates)



MONTGOMERY WATSON

SOP FILE NO: 4119.22

DATE: Feb. 11, 1997

SIMULTANEOUS OPERATING PLAN BPX: Liberty Geotechnical Exploration

WORK PACKAGE: Drill and sample geotechnical borings

JOB TITLE: Liberty Geotechnical

LOCATION: Offshore in Foggy Island Bay between Endicott and Liberty #1 Ice Island

START DATE: Feb. 14, 1997

COMPLETION DATE: March 1, 1997

SPOC FOR THIS JOB: W. Phillips / E. Bashaw

Acknowledgment _____

OPERATOR: Duane Miller & Associates

Acknowledgment _____

1. List the areas and the individuals that will be impacted by this job.

AREA: offshore in Foggy Island Bay
east of Endicott

INDIVIDUAL: W. Phillips and E. Bashaw

2. Indicate any special worksite considerations that may impact this work:

Ice safety
Polar Bears

3. Provide a brief scope of work:

Drill and sample soil and permafrost conditions at about 30 different locations to depths of 30 to 100 feet below mudline. The drilling will be performed with a CME-75 soils drill mounted in an enclosed sled. A second sled with generator and survival shed will be towed in tandem with the drill sled. The sleds will be moved using a Catco RD-85 which will also carry a 3500 gallon fuel tank.

4. Have the following items been considered in the final work plan?

EMERGENCY ACTION PLAN
WORK PERMITS
LIFT PLANS
SPECIAL PROCEDURES
JOB HAZARD ANALYSIS

X
X
X
X
X

NOTE:

All information referred to in this SOP must be reviewed and approved by the individuals listed in section #1.

DM&A Originator: Duane Miller _____

DUANE MILLER & ASSOCIATES
HAZARD ANALYSIS

ACTIVITY: Geotechnical Exploration - Moving from site to site

ANALYZED BY/DATE: D L Miller 2/11/97

PRINCIPLE STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Movement of drill and support sleds between boring locations using CATCO RD-85	Weak ice Getting lost	Check ice conditions before start of work and after any significant storms Reflector set at each location by survey team Use GPS Have redundant GPS systems Check ice thickness at drilling location
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
RD-85 Hand Held GPS List of boring coordinates Ice auger	Inspect ice conditions prior to start of work Inspect ice conditions after storms Inspect interior of sled before moving	Ice safety Use of GPS
REQUIRED PERMITS	ENVIRONMENTAL REQUIREMENTS	EMERGENCY CONTACTS
DNR Misc land Use Permit NSB Development Permit MMS approval	Housekeeping Backfill boring with any remaining cuttings	Radio CATCO Cellular phone to BP Endicott EMERGENCY 659-2222 or SECURITY 659-6800

DUANE MILLER & ASSOCIATES
HAZARD ANALYSIS

ACTIVITY: Geotechnical Exploration - Drilling and sampling

ANALYZED BY/DATE: D L Miller 2/11/97

PRINCIPLE STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Drill sea ice and subsea soil Stop at depths and sample soil Recover samples, log and label Backfill boring	Equipment / personnel accident Fire in enclosure Polar bears Methane pocket Ice movement while drilling	Inspect equipment & rigging each day Practice safe operation of equipment Placement of fire extinguishers at both ends of enclosure Check operation of methane detector Proper exterior lighting for bear detection Awareness of auger binding as indicator of ice movement Plan for retreat from ice if severe movement
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Drill rig Sample extruder Fire extinguishers Methane detector Emergency survival gear on second sled	Inspect equipment & rigging eachday Qualified driller CATCO RD-85 watches for bears	Drilling safety Operation of fire extinguishers Fire drill w/ plan of evacuation Methane alarm and evacuation plan
REQUIRED PERMITS	ENVIRONMENTAL REQUIREMENTS	EMERGENCY CONTACTS
DNR Misc land Use Permit NSB Development Permit MMS approval	Housekeeping Liners in place for fueling & idling vehicles Good management refueling	Radio CATCO Cellular phone to BP Endicott EMERGENCY 659-2222 or SECURITY 659-6800

DUANE MILLER & ASSOCIATES

HAZARD ANALYSIS

ACTIVITY: Geotechnical Exploration - Personnel transport and temperature monitoring

ANALYZED BY/DATE: D L Miller 2/11/97

PRINCIPLE STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Transport on ice w/ CATCO RD-85 and on Ice-Road w/ 4-wheel drive crew cabs	Weak ice Getting lost	Check ice conditions after any significant storms Use GPS Have redundant GPS systems Convoy 4WD's when visibility is bad
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
RD-85 Hand Held GPS List of boring coordinates	Inspect ice conditions after storms CATCO RD-85 operator watches for bears	Ice safety Use of GPS
REQUIRED PERMITS	ENVIRONMENTAL REQUIREMENTS	EMERGENCY CONTACTS
DNR Misc land Use Permit NSB Development Permit MMS approval	Housekeeping Liners in place for fueling & idling vehicles Good management refueling	Radio CATCO Cellular phone to BP Endicott EMERGENCY 659-2222 or SECURITY 659-6800

MEMORANDUM

Duane Miller & Associates
(907) 346-1021 FAX 346-1636

To: Participating Parties (see distribution at end)
From: Duane Miller
Date: February 11, 1997 DM&A Job No. 4119.22
Subject: Liberty Geotechnical Program - Contingency Plan

Contingency Plan

This winter's geotechnical work for the Liberty Development project will be performed using a soils drill mounted on an enclosed sled and moved by a Catco RD-85 rolligon. The work will be performed on a 24-hour per day basis. Field supervisor and the geologist for one shift will be Walt Phillips of DM&A, the second geo-engineer will be Erin Bashaw, and Mike Hendee will assist during the day shift as expediter and engineering technician. Discovery Drilling will have a driller and helper on each shift. Our contingency planning relies heavily on Catco and BP support for communications and transport.

Environmental sampling will be performed by Bonnie McLean and Bill Nettleton of Montgomery Watson when the drill is cleanest and will be completed before the geotechnical work. Walt and Erin will assist. The work is expected to start Friday's day shift (2/14) and be completed in 2 or 3 shifts. The environmental work should start with Boring B-3 (it can be driven to on the ice road and a snow ramp is present where the drill-sled can be off-loaded).

The geotechnical drilling should start with the near shore borings (B-1, B-2, B-3, B-4 and B-5 and A-1, A-2, A-3 and A-4). These holes are all in shallow water and we might add additional holes depending on what permafrost we find. The work will then continue on to the holes in deeper water. A list of the borings (with coordinates) and a map (showing the ice road) are attached.

Communications Systems

Two systems will be available. The primary system is the Catco Network with radios in the RD-85, in the drill enclosure and at the Catco Base. This allows for communication with Catco Base which is operated on a 24-hour basis and between the drill and the Catco unit.

The second system is cellular phone. The three DM&A cell phones have the following numbers through Arctic Slope Telephone:

Erin Bashaw 448-1358

Walt Phillips 448-1357

Mike Hendee 448-1328

Emergency Notification

During the work for Liberty, if an incident/emergency occurs such as injury, fire or spill, the field party will contact Catco and BP Endicott. Catco will notify the other parties on this list as needed:

Catco Dispatch
Deborah Hamilton-Johnson (days)
Carmenlita Cothron (nights)
radio is expected to be the initial contact
659-2548 or 659-2526

Bill Kuper, Catco General Manager
659-2205 Room Number
659-3711 Pickup

BP Emergency @ Endicott 659-2222 (the "Red" phone)
BP Security @ Endicott 659-6800

Duane Miller, DM&A Anchorage
(907) 346-1021 office 24 hours
(907) 346-2563 home

Kyle Brown, owner/manager, Discovery Drilling
(907) 344-6431 office
(907) 346-2006 home
Mark Terry, operations manager, 346-4098 home
Dave Roes, chief mechanic, 562-6652 home

Fire Response

The drill operation will be equipped with Ansul style fire extinguishers near each exit door. If a fire destroys the drill, the crew will retreat to the RD-85 for weather protection and evacuation or to the secondary survival sled that is moved with the drill.

Injury Response

First aid equipment will be at the drill rig. The drillers and helpers have current first aid and CPR training. If an injury occurs that requires evacuation, BP Emergency should be notified and they will call for help to transport the injured to the emergency aid station at BP Base Camp.

Ice Safety

Robert Lewellen, PhD, has been monitoring the ice in this area for the Liberty Ice Island and ice road. Check with Bob @ Prudhoe Bay Hotel for current

conditions before start of work. If any ice movement is detected, he will provide further inspection to verify that we can still safely travel on the ice.

The holes drilled through the ice should be used to verify the thickness of the ice at each drill site, the initial freeboard and to monitor the change in freeboard as work progresses.

Oil Spill Response

Pickups parked on the ice road will be left running in most weather and a drip pan should be under the engine area of the pickup while it is parked.

Fueling of the operation will be from a 3,500 gallon fuel tank carried by the Rolligon. The fueling operations will be in accordance with best management practices; drip pans will be used and absorbent pads, shovels and collection bags will be available to contain and immediately respond to any small spills.

Catco and BP Emergency will be notified of any fuel spills.

Bear Awareness/Confrontation

All personnel will receive North Slope environmental and Cultural Awareness training in the form of BPX's "Achieving Environmental Excellence" program. All personnel will participate in a specific training program for Polar Bear awareness and safety.

A site layout that minimizes the possibility of polar bear interaction is planned. During drilling operations, the Catco RD-85 operator will watch for bears. A 12-gauge shotgun with buckshot and slugs will be kept at the drill rig for the extreme emergency.

Rolligon Breakdown

If the Rolligon breaks down at a remote location away from camp, the personnel will rely on the emergency equipment in the survival drum on the Rolligon. The Catco radio system will be used to call for help from Catco Prudhoe Operations.

Attachments:

Summary of Planned Borings
Map showing Planned Borings and Existing Ice Road

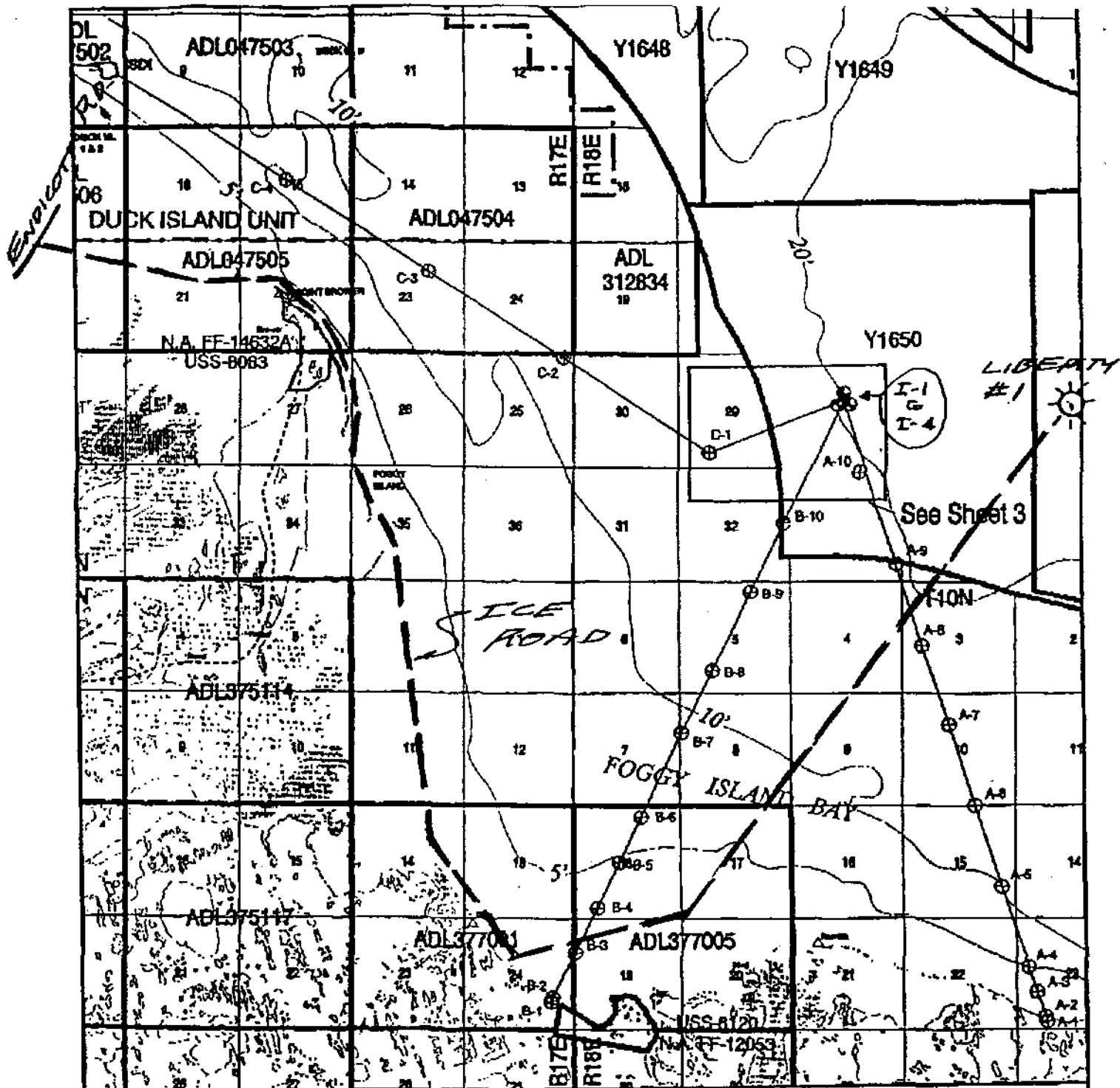
Distribution :

Walt Phillips and Erin Bashaw @ DM&A, Liberty Field
Bonnie McLean @ Montgomery Watson
Bill Kuper @ Catco, Prudhoe Bay
BP Endicott Security
Kyle Brown @ Discovery Drilling Anchorage
Jim Lewis @ BP Exploration (Alaska), Anchorage
José González Jáuregui @ INTEC Engineering c/o BP Anchorage
Rory Mayra @ BP Exploration (Alaska), Anchorage

LIBERTY GEOTECHNICAL EXPLORATION PLAN

Boring	Facility location	EASTING ASP zone 3, NAD 27	NORTHING ASP zone 3, NAD 27	Latitude	Longitude	Enviro. Sampling	Expected Water	Geotech Hole Depth
A1	SSE Badami route	313,271 ft.	5,925,151 ft.	70° 12.026'	147° 30.308'		on shore	30 ft.
A2	SSE Badami route	313,203 ft.	5,925,378 ft.	70° 12.063'	147° 30.343'		beach	30 ft.
A3	SSE Badami route	312,849 ft.	5,926,563 ft.	70° 12.255'	147° 30.528'		3 ft.	30 ft.
A4	SSE Badami route	312,496 ft.	5,927,747 ft.	70° 12.448'	147° 30.714'	yes	5 ft.	30 ft.
A5	SSE Badami route	311,356 ft.	5,931,567 ft.	70° 13.069'	147° 31.311'		9 ft.	30 ft.
A6	SSE Badami route	310,216 ft.	5,935,387 ft.	70° 13.690'	147° 31.909'	yes	16 ft.	30 ft.
A7	SSE Badami route	309,075 ft.	5,939,206 ft.	70° 14.312'	147° 32.508'		18 ft.	30 ft.
A8	SSE Badami route	307,935 ft.	5,943,026 ft.	70° 14.933'	147° 33.107'	yes	20 ft.	30 ft.
A9	SSE Badami route	306,795 ft.	5,946,845 ft.	70° 15.554'	147° 33.707'		19 ft.	30 ft.
A10	SSE Badami route	305,657 ft.	5,950,657 ft.	70° 16.174'	147° 34.307'	yes	18 ft.	30 ft.
B1	SSW Badami route	289,870 ft.	5,926,732 ft.	70° 12.184'	147° 41.641'		on shore	30 ft.
B2	SSW Badami route	289,963 ft.	5,926,908 ft.	70° 12.213'	147° 41.598'		beach	30 ft.
B3	SSW Badami route	291,067 ft.	5,929,001 ft.	70° 12.561'	147° 41.092'	yes	3 ft.	30 ft.
B4	SSW Badami route	292,171 ft.	5,931,093 ft.	70° 12.909'	147° 40.586'		3 ft.	30 ft.
B5	SSW Badami route	293,275 ft.	5,933,186 ft.	70° 13.257'	147° 40.080'		4 ft.	30 ft.
B6	SSW Badami route	294,380 ft.	5,935,278 ft.	70° 13.605'	147° 39.573'	yes	6 ft.	30 ft.
B7	SSW Badami route	296,427 ft.	5,939,158 ft.	70° 14.250'	147° 38.633'		7 ft.	30 ft.
B8	SSW Badami route	297,975 ft.	5,942,092 ft.	70° 14.737'	147° 37.921'	yes	14 ft.	30 ft.
B9	SSW Badami route	299,910 ft.	5,945,758 ft.	70° 15.346'	147° 37.031'		17 ft.	30 ft.
B10	SSW Badami route	301,581 ft.	5,948,926 ft.	70° 15.873'	147° 36.261'	yes	12 ft.	30 ft.
C1	Endicott route	298,096 ft.	5,952,260 ft.	70° 16.404'	147° 37.995'		15 ft.	30 ft.
C2	Endicott route	291,288 ft.	5,956,828 ft.	70° 17.122'	147° 41.359'	yes	15 ft.	30 ft.
C3	Endicott route	284,967 ft.	5,961,071 ft.	70° 17.788'	147° 44.486'		10 ft.	30 ft.
C4	Endicott route	278,336 ft.	5,965,522 ft.	70° 18.486'	147° 47.770'	yes	11 ft.	30 ft.
I1	center of island	304,514 ft.	5,954,484 ft.	70° 16.796'	147° 34.909'		20 ft.	100 ft.
I2	350' SE of island cen	304,815 ft.	5,954,311 ft.	70° 16.769'	147° 34.761'		20 ft.	50 ft.
I3	350' N of island cent	304,515 ft.	5,954,831 ft.	70° 16.853'	147° 34.913'	yes	20 ft.	50 ft.
I4	350' SW of island cer	304,215 ft.	5,954,311 ft.	70° 16.766'	147° 35.052'		20 ft.	50 ft.

Geotechnical hole depths are from mudline. All holes should end in gravel or gravelly sand and not in frozen silt, clay or sand.



This map is based on U.S.G.S. quad Beechy Point (B-2-B-1, A-2-A-1) and on the Unit Operator's Facility Maps.

NORTH

⊕ Boring less than 50' deep
 ⊙ Boring greater than 50' deep

Within T11NR17E Sec. 8, 14, 15, 16, 23, 24, 25
 T11NR18E Sec. 29, 30, 32, 33
 T10NR17E Sec. 24
 T10NR18E Sec. 3, 4, 5, 7, 8, 10, 15, 16, 18, 22, 23

BP EXPLORATION (ALASKA) INC.

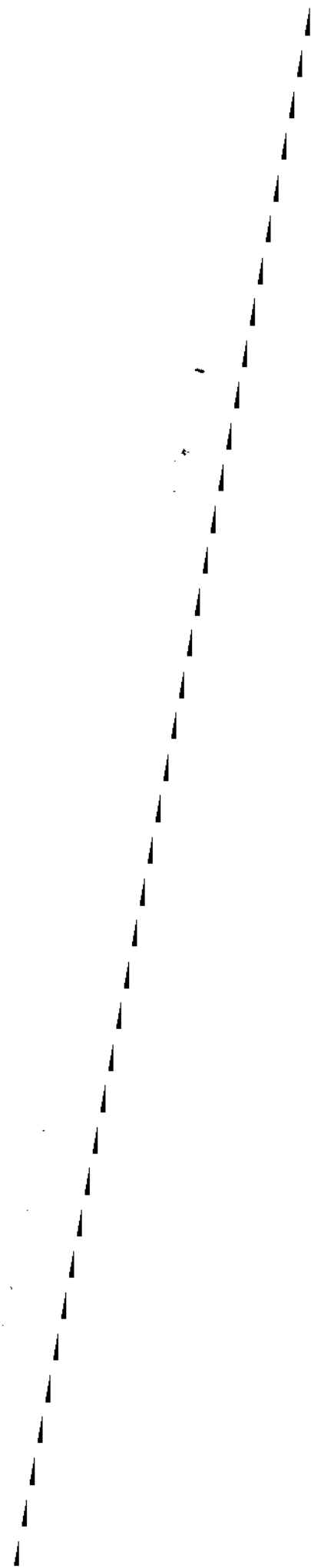
**LIBERTY
 GEOTECHNICAL
 BORE HOLE LOCATIONS
 PERMIT APPLICATION**

DATE:
1/28/87

SCALE:
1" = 1.25 Mile

SHEET:
2 OF 3

RUN LOGS/EXTRACTION SHEETS



Analyst	Date and Time	Sample Name	Description/ Solution	Matrix/ Dil.	Raw Data File	Method File	Reported	ReAnalyzed
IAA	2/14/97 9:27	CH2CL2		1	8015\021497-D\02149701.d01	8015\021497-D.MET		
IAA	2/14/97 10:12	RT 0608.36 1		1	8015\021497-D\02149701.d02	8015\021497-D.MET	OK	
IAA	2/14/97 10:57	RT 0727.58 1		1	8015\021497-D\02149701.d03	8015\021497-D.MET	OK	
IAA	2/14/97 11:41	1D 0990.04 1		1	8015\021497-D\02149701.d04	8015\021497-D.MET	OK	
IAA	2/14/97 12:26	2D 0990.04 2		1	8015\021497-D\02149701.d06	8015\021497-D.MET	OK	
IAA	2/14/97 13:12	3D 0990.04 3		1	8015\021497-D\02149701.d08	8015\021497-D.MET	OK	
IAA	2/14/97 13:56	4D 0990.04 4		1	8015\021497-D\02149701.d07	8015\021497-D.MET	OK	
IAA	2/14/97 14:41	5D 0990.04 5		1	8015\021497-D\02149701.d08	8015\021497-D.MET	OK	
IAA	2/14/97 15:26	D QCCS 0990.08 1		1	8015\021497-D\02149701.d09	8015\021497-D.MET	OK	
IAA	2/14/97 16:11	1G 0990.08 1		1	8015\021497-D\02149701.d10	8015\021497-D.MET	OK	
IAA	2/14/97 16:56	2G 0990.08 2		1	8015\021497-D\02149701.d11	8015\021497-D.MET	OK	
IAA	2/14/97 17:42	3G 0990.08 3		1	8015\021497-D\02149701.d12	8015\021497-D.MET	OK	
IAA	2/14/97 18:27	4G 0990.08 4		1	8015\021497-D\02149701.d13	8015\021497-D.MET	OK	
IAA	2/14/97 19:11	5G 0990.08 5		1	8015\021497-D\02149701.d14	8015\021497-D.MET	OK	
IAA	2/14/97 19:56	G QCCS 0990.08 2		1	8015\021497-D\02149701.d15	8015\021497-D.MET	OK	
IAA	2/14/97 20:41	1K 0990.07 1		1	8015\021497-D\02149701.d16	8015\021497-D.MET	OK	
IAA	2/14/97 21:26	2K 0990.07 2		1	8015\021497-D\02149701.d17	8015\021497-D.MET	OK	
IAA	2/14/97 22:10	3K 0990.07 3		1	8015\021497-D\02149701.d18	8015\021497-D.MET	OK	
IAA	2/14/97 22:55	4K 0990.07 4		1	8015\021497-D\02149701.d19	8015\021497-D.MET	OK	
IAA	2/14/97 23:40	5K 0990.07 5		1	8015\021497-D\02149701.d20	8015\021497-D.MET	OK	
IAA	2/15/97 0:25	1MO 0860.94 1		1	8015\021497-D\02149701.d21	8015\021497-D.MET	OK	
IAA	2/15/97 1:09	2MO 0860.94 2		1	8015\021497-D\02149701.d22	8015\021497-D.MET	OK	
IAA	2/15/97 1:54	3MO 0860.94 3		1	8015\021497-D\02149701.d23	8015\021497-D.MET	OK	
IAA	2/15/97 2:39	4MO 0860.94 4		1	8015\021497-D\02149701.d24	8015\021497-D.MET	OK	
IAA	2/15/97 3:24	5MO 0860.94 5		1	8015\021497-D\02149701.d25	8015\021497-D.MET	OK	
IAA	2/15/97 4:08	3D 0990.04 3		1	8015\021497-D\02149701.d26	8015\021497-D.MET	OK	
IAA	2/15/97 4:53	3D 0990.04 3		1	8015\021497-D\02149701.d27	8015\021497-D.MET		
IAA	2/15/97 5:39	CH2CL2		1	8015\021497-D\02149701.d28	8015\021497-D.MET		
IAA	2/15/97 6:23	45642MB		0.1666	8015\021497-D\02149701.d28	8015\021497-D.MET		
IAA	2/15/97 7:08	45642LCS		0.168	8015\021497-D\02149701.d30	8015\021497-D.MET		
IAA	2/15/97 7:53	45642MS		0.2236	8015\021497-D\02149701.d31	8015\021497-D.MET		
IAA	2/15/97 8:38	45642MSD		0.2233	8015\021497-D\02149701.d32	8015\021497-D.MET		
IAA	2/15/97 8:23	L8794.39		0.2303	8015\021497-D\02149701.d33	8015\021497-D.MET		
IAA	2/15/97 10:07	L8794.40		0.2337	8015\021497-D\02149701.d34	8015\021497-D.MET		
IAA	2/15/97 10:52	L8794.41		0.2581	8015\021497-D\02149701.d35	8015\021497-D.MET		
IAA	2/15/97 11:38	L8794.42		0.2192	8015\021497-D\02149701.d36	8015\021497-D.MET		
IAA	2/15/97 12:22	L8794.43		0.2387	8015\021497-D\02149701.d37	8015\021497-D.MET		
IAA	2/15/97 13:07	L8794.44		0.2445	8015\021497-D\02149701.d38	8015\021497-D.MET		
IAA	2/15/97 13:52	3D 0990.04 3		1	8015\021497-D\02149701.d39	8015\021497-D.MET		
IAA	2/15/97 14:37	3D 0990.04 3		1	8015\021497-D\02149701.d40	8015\021497-D.MET		
IAA	2/15/97 15:21	L8794.45		0.2167	8015\021497-D\02149701.d41	8015\021497-D.MET		
IAA	2/15/97 16:06	L8794.46		0.2226	8015\021497-D\02149701.d42	8015\021497-D.MET		
IAA	2/15/97 16:51	L8794.47		0.2113	8015\021497-D\02149701.d43	8015\021497-D.MET		
IAA	2/15/97 17:36	L8794.48		0.2032	8015\021497-D\02149701.d44	8015\021497-D.MET		
IAA	2/15/97 18:21	L8794.49		0.2294	8015\021497-D\02149701.d45	8015\021497-D.MET		
IAA	2/15/97 19:05	L8794.50		0.2228	8015\021497-D\02149701.d46	8015\021497-D.MET		
IAA	2/15/97 19:50	L8794.51		0.211	8015\021497-D\02149701.d47	8015\021497-D.MET		
IAA	2/15/97 20:35	L8794.52		0.1989	8015\021497-D\02149701.d48	8015\021497-D.MET		
IAA	2/15/97 21:19	L8794.53		0.2269	8015\021497-D\02149701.d49	8015\021497-D.MET		

Analyst	Date and Time	Sample Name	Description/ Solution	Matrix/ Dil.	Raw Data File	Method File	Reported	ReAnalyzed
DA	2/18/97 20:08	30 0990-04 3		1	8015\021897-D\02189701.d01	8015\021497-D.MET		
DA	2/18/97 20:53	30 0990-04 3		1	8015\021897-D\02189701.d02	8015\021497-D.MET		
DA	2/18/97 21:37	3G 0990-06 3		1	8015\021897-D\02189701.d03	8015\021497-D.MET		
DA	2/18/97 22:22	3G 0990-06 3		1	8015\021897-D\02189701.d04	8015\021497-D.MET		
DA	2/18/97 23:08	CH2CL2		1	8015\021897-D\02189701.d05	8015\021497-D.MET		
DA	2/18/97 23:52	45490MB		1	8015\021897-D\02189701.d06	8015\021497-D.MET		
DA	2/19/97 0:37	45490LCS 1		1	8015\021897-D\02189701.d07	8015\021497-D.MET		
DA	2/19/97 1:22	45490LCS 2		1	8015\021897-D\02189701.d08	8015\021497-D.MET		
DA	2/19/97 2:07	45490MS 1		1	8015\021897-D\02189701.d09	8015\021497-D.MET		
DA	2/19/97 2:52	45490MSD 1		1	8015\021897-D\02189701.d10	8015\021497-D.MET		
DA	2/18/97 3:37	45490MS 2		1	8015\021897-D\02189701.d11	8015\021497-D.MET		
DA	2/18/97 4:22	45490MSD 2		1	8015\021897-D\02189701.d12	8015\021497-D.MET		
DA	2/19/97 5:07	L8786 27		1	8015\021897-D\02189701.d13	8015\021497-D.MET		
DA	2/19/97 5:51	L8786 28		1	8015\021897-D\02189701.d14	8015\021497-D.MET		
DA	2/19/97 6:36	L8786 28		1	8015\021897-D\02189701.d15	8015\021497-D.MET		
DA	2/19/97 7:21	CH2CL2		1	8015\021897-D\02189701.d16	8015\021497-D.MET		
DA	2/18/97 8:06	L8786 26		1	8015\021897-D\02189701.d17	8015\021497-D.MET		
DA	2/19/97 8:51	CH2CL2		1	8015\021897-D\02189701.d18	8015\021497-D.MET		
DA	2/18/97 9:36	L8786 25 1:10		1	8015\021897-D\02189701.d19	8015\021497-D.MET		
DA	2/19/97 10:20	30 0990-04 3		1	8015\021897-D\02189701.d20	8015\021497-D.MET		
DA	2/19/97 16:00	3G 0990-06 3		1	8015\021897-D\02189701.d21	8015\021497-D.MET		
DA	2/19/97 16:45	3D 0990-04 3		1	8015\021897-D\02189701.d22	8015\021497-D.MET		
DA	2/21/97 9:30	30 0990-04 3		1	8015\021897-D\02189701.d23	8015\021497-D.MET	OK	
DA	2/21/97 11:49	CH2CL2		1	8015\021897-D\02189701.d24	8015\021497A-D.MET		
DA	2/21/97 12:33	45797MB		0.1663	8015\021897-D\02189701.d25	8015\021497A-D.MET	OK	
DA	2/21/97 13:18	45797LCS		0.1663	8015\021897-D\02189701.d26	8015\021497A-D.MET	OK	
DA	2/21/97 14:03	45797MS		0.2063	8015\021897-D\02189701.d27	8015\021497A-D.MET	OK	
DA	2/21/97 14:49	45797MSD		0.2087	8015\021897-D\02189701.d28	8015\021497A-D.MET	OK	
DA	2/21/97 15:34	L8849 54		0.2002	8015\021897-D\02189701.d29	8015\021497A-D.MET	OK	
DA	2/21/97 16:18	L8849 57		0.2046	8015\021897-D\02189701.d30	8015\021497A-D.MET	OK	
DA	2/21/97 17:04	L8849 61		0.2814	8015\021897-D\02189701.d31	8015\021497A-D.MET	OK	
DA	2/21/97 17:48	L8849 77		0.2689	8015\021897-D\02189701.d32	8015\021497A-D.MET	OK	
DA	2/21/97 18:33	L8849 85		0.2332	8015\021897-D\02189701.d33	8015\021497A-D.MET	OK	
DA	2/21/97 19:19	L8849 50		0.2183	8015\021897-D\02189701.d34	8015\021497A-D.MET	OK	
DA	2/21/97 20:03	L8849 73		0.2271	8015\021897-D\02189701.d35	8015\021497A-D.MET	OK	
DA	2/21/97 20:48	L8849 69		0.2445	8015\021897-D\02189701.d36	8015\021497A-D.MET	OK	
DA	2/21/97 21:34	L8849 81		0.2573	8015\021897-D\02189701.d37	8015\021497A-D.MET	OK	
DA	2/21/97 22:18	30 0990-04-3		1	8015\021897-D\02189701.d38	8015\021497A-D.MET	OK	
DA	2/21/97 23:03	30 0990-04-3		1	8015\021897-D\02189701.d39	8015\021497A-D.MET	NO	
DA	2/21/97 23:48	L8849 85		0.3004	8015\021897-D\02189701.d40	8015\021497A-D.MET	OK	
DA	2/22/97 0:33	L8849 95		0.2326	8015\021897-D\02189701.d41	8015\021497A-D.MET	OK	
DA	2/22/97 1:19	L8849 99		0.2327	8015\021897-D\02189701.d42	8015\021497A-D.MET	OK	
DA	2/22/97 2:03	L8849 103		0.2067	8015\021897-D\02189701.d43	8015\021497A-D.MET	OK	
DA	2/22/97 2:47	CH2CL2		1	8015\021897-D\02189701.d44	8015\021497A-D.MET	NO	
DA	2/22/97 3:32	45796MB		0.1666	8015\021897-D\02189701.d45	8015\021497A-D.MET	OK	
DA	2/22/97 4:17	45796LCS		0.1665	8015\021897-D\02189701.d46	8015\021497A-D.MET	OK	
DA	2/22/97 5:02	45796MS		0.2051	8015\021897-D\02189701.d47	8015\021497A-D.MET	OK	
DA	2/22/97 5:47	45796MSD		0.2053	8015\021897-D\02189701.d48	8015\021497A-D.MET	OK	
DA	2/22/97 6:32	L8849 18		0.2077	8015\021897-D\02189701.d49	8015\021497A-D.MET	OK	

Analyst	Date and Time	Sample Name	Description/ Solution	Matrix/ Dil.	Raw Data File	Method File	Reported	ReAnalyzed
DA	2/22/97 7:18	L8849-34		0.2113	8015\021897-D\02189701.d50	8015\21497A-D.MET	OK	
DA	2/22/97 8:06	L8849-42		0.2059	8015\021897-D\02189701.d51	8015\21497A-D.MET	OK	
DA	2/22/97 8:52	3D 0990-04-3		1	8015\021897-D\02189701.d52	8015\21497A-D.MET	NO	
DA	2/22/97 9:40	3D 0990-04-3		1	8015\021897-D\02189701.d53	8015\21497A-D.MET	OK	
DA	2/22/97 10:28	L8849-38		1	8015\021897-D\02189701.d54	8015\21497A-D.MET	NO	
DA	2/22/97 11:16	L8849-22		1	8015\021897-D\02189701.d55	8015\21497A-D.MET	NO	
DA	2/22/97 12:05	L8849-2		1	8015\021897-D\02189701.d56	8015\21497A-D.MET	NO	
DA	2/22/97 12:56	L8849-46		1	8015\021897-D\02189701.d57	8015\21497A-D.MET	NO	
DA	2/22/97 13:46	L8849-26		1	8015\021897-D\02189701.d58	8015\21497A-D.MET	NO	
DA	2/22/97 14:38	L8849-6		1	8015\021897-D\02189701.d59	8015\21497A-D.MET	NO	
DA	2/22/97 15:29	L8849-30		1	8015\021897-D\02189701.d60	8015\21497A-D.MET	NO	
DA	2/22/97 16:20	L8849-10		1	8015\021897-D\02189701.d61	8015\21497A-D.MET	NO	
DA	2/22/97 17:10	L8849-14		1	8015\021897-D\02189701.d62	8015\21497A-D.MET	NO	
DA	2/22/97 18:00	3D 0990-04-3		1	8015\021897-D\02189701.d63	8015\21497A-D.MET	NO	
DA	2/22/97 18:49	3D 0990-04-3		1	8015\021897-D\02189701.d64	8015\21497A-D.MET	NO	
DA	2/24/97 9:10	CH2CL2		1	8015\021897-D\02189701.d65	8015\21497A-D.MET	NO	
DA	2/24/97 9:56	3D 0990-04-3		1	8015\021897-D\02189701.d66	8015\21497A-D.MET	NO	
DA	2/24/97 11:31	3D 0990-04-3		1	8015\021897-D\02189701.d67	8015\21497A-D.MET	NO	
DA	2/24/97 13:52	CH2CL2		1	8015\021897-D\02189701.d68	8015\21497A-D.MET	NO	
DA	2/24/97 14:38	3D 0990-04-3		1	8015\021897-D\02189701.d69	8015\21497A-D.MET	OK	
DA	2/24/97 15:35	L8849-38		0.2259	8015\021897-D\02189701.d70	8015\21497A-D.MET	OK	
DA	2/24/97 16:20	L8849-22		0.2288	8015\021897-D\02189701.d71	8015\21497A-D.MET	OK	
DA	2/24/97 17:06	L8849-2		0.2258	8015\021897-D\02189701.d72	8015\21497A-D.MET	OK	
DA	2/24/97 17:51	L8849-46		0.2062	8015\021897-D\02189701.d73	8015\21497A-D.MET	OK	
DA	2/24/97 18:36	L8849-26		0.2258	8015\021897-D\02189701.d74	8015\21497A-D.MET	OK	
DA	2/24/97 19:21	L8849-6		0.205	8015\021897-D\02189701.d75	8015\21497A-D.MET	OK	
DA	2/24/97 20:08	L8849-30		0.217	8015\021897-D\02189701.d76	8015\21497A-D.MET	OK	
DA	2/24/97 20:51	L8849-10		0.2457	8015\021897-D\02189701.d77	8015\21497A-D.MET	OK	
DA	2/24/97 21:36	L8849-14		0.2127	8015\021897-D\02189701.d78	8015\21497A-D.MET	OK	
DA	2/24/97 22:21	3D 0990-04-3		1	8015\021897-D\02189701.d79	8015\21497A-D.MET	NO	
DA	2/24/97 23:06	3D 0990-04-3		1	8015\021897-D\02189701.d80	8015\21497A-D.MET	NO	
DA	2/24/97 23:51	3D 0990-04-3		1	8015\021897-D\02189701.d81	8015\21497A-D.MET	OK	
DA	2/25/97 13:19	3D 0990-04-3		1	8015\021897-D\02189701.d82	8015\21497A-D.MET		

LOCKHEED ANALYTICAL SERVICES
 TRACKING SHEET DATA REPORT (ba09)
 EXTRACTION SHEET FOR: AK 102.0 DRO Extraction
 WORKSHEET NUMBER: AK 102.0 DRO_45796

7 DAY TAT!

L #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/ CREATED	VOL (L) EXTR CS	WATER SAMPLE PH	SURR ML	MS ML	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
1849-18		97BPXL1810SD01(01)	15-FEB-97	19-FEB-97	220.17 30.12	N/A	2.0		5.0 ml	~4 ml
1849-34		97BPXL111SD02(08)	15-FEB-97	19-FEB-97	30.08					
1849-42		97BPXL1C2SD02(08)	15-FEB-97	19-FEB-97	30.26					
1849-38		97BPXL1C2SD01(01)	15-FEB-97	19-FEB-97	30.21					
1849-22		97BPXL1810SD02(08)	15-FEB-97	19-FEB-97	30.01					
1849-2		97BPXL183SD01(01)	14-FEB-97	19-FEB-97	30.06					
1849-46		97BPXL1C2SD61(08)	15-FEB-97	19-FEB-97	30.02					
1849-26		97BPXL1810SD62(08)	15-FEB-97	19-FEB-97	30.12					
1849-6		97BPXL183SD02(08)	14-FEB-97	19-FEB-97	30.05					
1849-30		97BPXL111SD01(01)	15-FEB-97	19-FEB-97	30.00					
1849-10		97BPXL186SD01(01)	15-FEB-97	19-FEB-97	30.02					
1849-14		97BPXL186SD02(08)	15-FEB-97	19-FEB-97	30.15					
1796MB	MB	Method Blank		19-FEB-97	30.02	✓	✓			✓

Diesel
Matrix Spike

EXTRACTION METHOD: Alaska DRO

DATE STARTED: 2-20-97

DATE COMPLETED: 2-20-97

SIGNED: [Signature]

BATCH# : AK 102.0 DRO_45796

LOT #'S

SPIKE WITNESS: [Signature]

SR ID # : 0859-82-1

CONC: 200 mg/ml MECL2 : 36240

NA2SO4: 1639635

ID # : 0859-80-3

CONC: 15.107 mg/ml ACETONE: N/A

REVIEWED BY: [Signature]

ARRATIVE

EXTRACT COC: RECEIVED BY: [Signature] DATE: 2-20-97

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (b09)

EXTRACTION SHEET FOR: AK 102.0 DRO Extraction

WORKSHEET NUMBER: AK 102.0 DRO_45796

LAB #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/CREATED	VOL/WT EXTR	WATER SAMPLE pH	SURR ML	MS ML	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
1796LCS	LCS	Lab Ctrl Sample		19-FEB-97	30.03	N/A	2.0	1.0	5.0 ml	~ 4 ml
5796MS L8849-6	MS	Matrix Spike	14-FEB-97	19-FEB-97	30.03	↓	↓	↓	↓	↓
5796MSD L8849-6	MSD	Matrix Spike Dup	14-FEB-97	19-FEB-97	30.01	↓	↓	↓	↓	↓
31KEL0745796	SPKEL07	Spike Lot Sample		19-FEB-97						

JCB 02-19-97

EXTRACTION METHOD: _____

DATE STARTED: _____

DATE COMPLETED: _____

SIGNED: _____

BATCH# : AK 102.0 DRO_45796

LOT #'S

SPIKE WITNESS: _____

RR ID # : _____ CONC: _____ MECL2 : _____ NA2SO4: _____

ID # : _____ CONC: _____ ACETONE: _____

REVIEWED BY: _____

ARRATIVE _____ EXTRACT COC: RECEIVED BY: _____ DATE: _____

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (ba09)

EXTRACTION SHEET FOR: AK 102.0 DRO Extraction

WORKSHEET NUMBER: AK 102.0 DRO_45797

7 Day TAT!

AL #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/CREATED	VOL (RT) EXTR CS	WATER SAMPLE pH	SURR ML	MS ML	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
8849-54		97BPXLI A4SD01(01)	16-FEB-97	19-FEB-97	2.20-97					
8849-57		97BPXLI A4SD02(08)	16-FEB-97	19-FEB-97	30.04	N/A	20		5.0ml	~4ml
8849-61		97BPXLI A6SD01(01)	16-FEB-97	19-FEB-97	30.04					
8849-77		97BPXLI A8SD01(01)	16-FEB-97	19-FEB-97	30.04					
8849-65		97BPXLI A6SD02(08)	16-FEB-97	19-FEB-97	30.18					
8849-50		97BPXLI C4SD02(08)	15-FEB-97	19-FEB-97	30.04					
8849-73		97BPXLI A8SD02(08)	16-FEB-97	19-FEB-97	30.04					
8849-69		97BPXLI A6SD02(08)	16-FEB-97	19-FEB-97	30.03					
8849-81		97BPXLI A10SD01(01)	16-FEB-97	19-FEB-97	30.11					
8849-85		97BPXLI A10SD02(08)	16-FEB-97	19-FEB-97	30.01					
8849-95		97BPXLI B8SD02(08)	15-FEB-97	19-FEB-97	30.04					
8849-99		97BPXLI B8SD01(01)	15-FEB-97	19-FEB-97	30.18					
8849-103		97BPXLI C4SD01(01)	15-FEB-97	19-FEB-97	30.02					

Diesel matrix spike

EXTRACTION METHOD: Alaska DRO

DATE STARTED: 2.20.97

DATE COMPLETED: 2.20.97

SIGNED: [Signature]

QC BATCH# : AK 102.0 DRO_45797

LOT #'S

SPIKE WITNESS: [Signature]

SURR ID # : 0859-82-1

CONC: 200.0mg/L MECL2 : 36240

HAZSO4: K39635

MS ID # : 0859-80-3

CONC: 15.10mg/L ACETONE: N/A

REVIEWED BY: [Signature]

NARRATIVE

EXTRACT COC: RECEIVED BY: [Signature] DATE: 2-20-

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (ba09)

EXTRACTION SHEET FOR: AK 102.0 DRO Extraction

WORKSHEET NUMBER: AK 102.0 DRO_45797

LAL #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/CREATED	VOL/WT EXTR	WATER SAMPLE pH	SURR ML	MS ML	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
45797MB	MB	Method Blank		19-FEB-97	30.07	NA	2.0		5.0ml	~4ml
45797LCS	LCS	Lab Ctrl Sample		19-FEB-97	30.06			1.0		
45797MS L 8844-03	MS	Matrix Spike	15-FEB-97	19-FEB-97	30.08	↓	↓	↓	↓	↓
45797MSD L 8844-103	MSD	Matrix Spike Dup	15-FEB-97	19-FEB-97	30.02	↓	↓	↓	↓	↓
SPK6LOT45797	SPK6LOT	Spike Lot Sample		10-FEB-97						

ULB 02-17-97

EXTRACTION METHOD: _____

DATE STARTED: _____

DATE COMPLETED: _____

SIGNED: _____

C BATCH# : AK 102.0 DRO_45797

LOT #'S

SPIKE WITNESS: _____

URR ID # : _____ CONC: _____ MECL2 : _____ NA2SO4: _____

S ID # : _____ CONC: _____ ACETONE: _____

REVIEWED BY: _____

ARRATIVE _____ EXTRACT COC: RECEIVED BY: _____ DATE: _____

8015 Soils Conversion Values Ug/MI Concentration To Mg/kg

1. Surrogate Concentration In Ug/MI:

200

Sample Name	Mass In Grams	Percent Solid	Of Surr. (ug/kg) Found	Volume Of Surr. Used ml	Final Volume Of Extract ml	Extract Con. ug/MI If 100% Rec.	Sample Mg/Kg If 100% Rec.	Factor Ug/MI EC Mg/Kg St
L8849-18	30.12	79.94		2	5	80	16.6136001	0.20767
L8849-34	30.08	78.66		2	5	80	16.90499189	0.21131
L8849-42	30.26	80.26		2	5	80	16.46993603	0.20587
L8849-38	30.21	73.28		2	5	80	18.06857095	0.22586
L8849-22	30.01	72.81		2	5	80	18.30715504	0.22884
L8849-2	30.06	73.67		2	5	80	18.06309374	0.22579
L8849-46	30.02	80.77		2	5	80	16.49698568	0.20621
L8849-26	30.12	73.51		2	5	80	18.06588294	0.22582
L8849-6	30.05	81.17		2	5	80	16.39893667	0.20499
L8849-30	30	76.81		2	5	80	17.35885084	0.21699
L8849-10	30.02	67.80		2	5	80	19.65287153	0.24566
L8849-14	30.15	77.97		2	5	80	17.01460014	0.2126
45796MB	30.02	100.00		2	5	80	13.32445037	0.16656
45796LCS	30.03	100.00		2	5	80	13.32001332	0.16650
45796MS	30.03	81.17		2	5	80	16.41002011	0.20513
45796MSD	30.01	81.17		2	5	80	16.42095647	0.20526

8015 Soils Conversion Values Ug/MI Concentration To Mg/kg

1. Surrogate Concentration In Ug/MI:

200

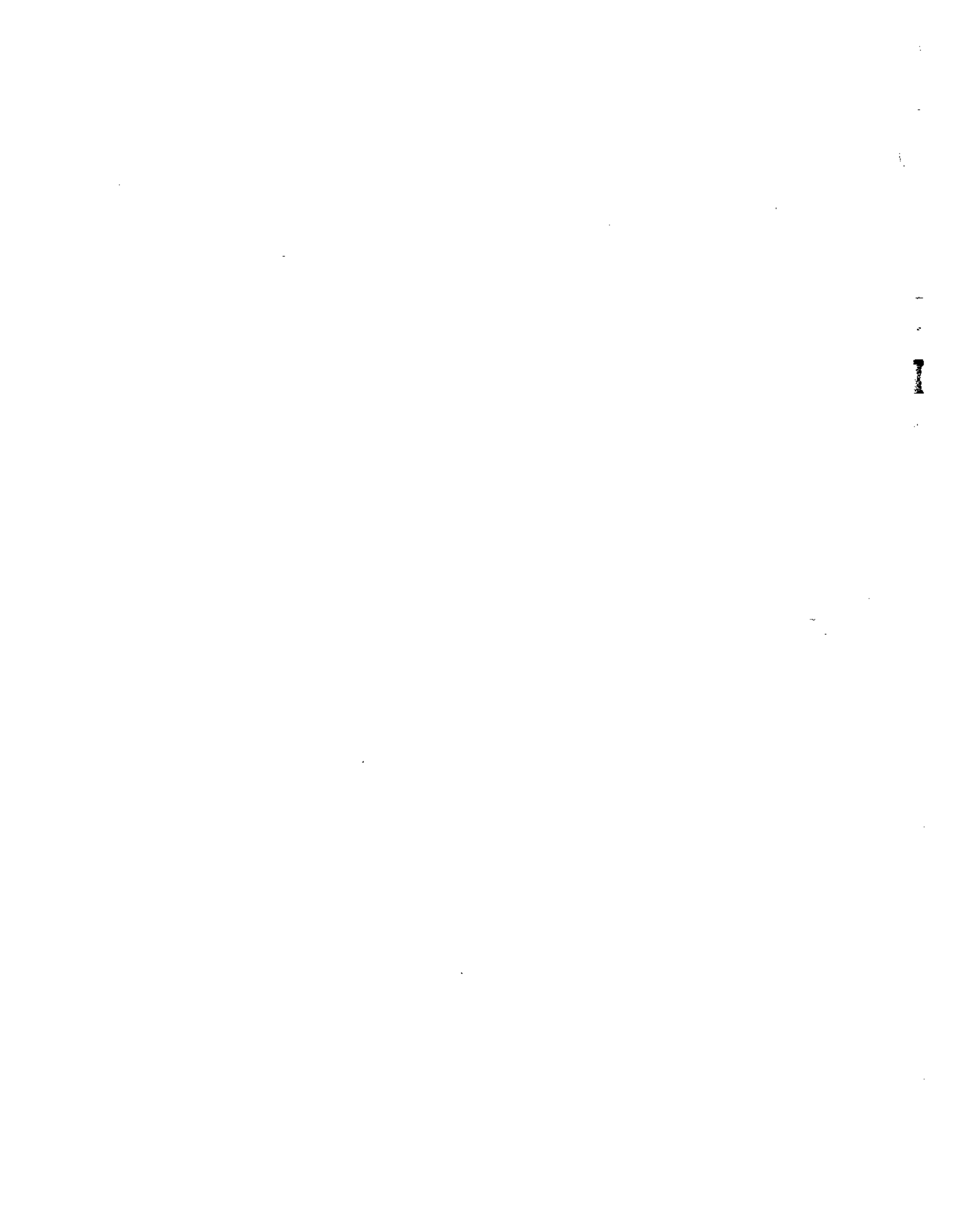
Sample Name	Mass In Grams	Percent Solid	Of Surr. (ug/kg) Found	Volume Of Surr. Used ml	Final Volume Of Extract ml	Extract Con. ug/MI If 100% Rec.	Sample Mg/Kg If 100% Rec.	Factor Ug/MI EC To Mg/Kg SC
L8849-54	30.14	82.87		2	5	80	16.01557623	0.20019
L8849-57	30.04	81.34		2	5	80	16.37027198	0.20463
L8849-61	30.04	57.12		2	5	80	23.31082513	0.29139
L8849-77	30.18	61.62		2	5	80	21.50929173	0.26887
L8849-65	30.04	71.38		2	5	80	18.65397331	0.23317
L8849-50	30.08	76.15		2	5	80	17.46213831	0.21828
L8849-73	30.03	73.31		2	5	80	18.16909692	0.22711
L8849-69	30.11	67.93		2	5	80	19.55703285	0.24446
L8849-81	30.01	64.75		2	5	80	20.58427192	0.25730
L8849-85	30.04	55.40		2	5	80	24.03389259	0.30042
L8849-95	30.18	71.24		2	5	80	18.60397251	0.23255
L8849-99	30.02	71.56		2	5	80	18.61931929	0.23274
L8849-103	30.02	80.59		2	5	80	16.53424295	0.20668
45797MB	30.07	100.00		2	5	80	13.30229465	0.16628
45797LCS	30.06	100.00		2	5	80	13.30671989	0.16633
45797MS	30.08	80.59		2	5	80	16.50064815	0.20626
45797MSD	30.02	80.59		2	5	80	16.53362746	0.20667

Percent Solids for L8849

LAL Sample #	Client ID	Value
L8849-83	97BPXLIA10SD01(01)	64.7527910685805
L8849-87	97BPXLIA10SD02(08)	55.4033485540335
L8849-55	97BPXLIA4SD01(01)	82.8655834564254
L8849-59	97BPXLIA4SD02(08)	81.3411078717201
L8849-63	97BPXLIA6SD01(01)	57.1218795888399
L8849-67	97BPXLIA6SD02(08)	71.3821138211382
L8849-71	97BPXLIA6SD62(08)	67.9276315789474
L8849-79	97BPXLIA8SD01(01)	61.6191904047976
L8849-75	97BPXLIA8SD02(08)	73.3113673805601
L8849-20 --- 8 ---	97BPXLIB10SD01(01) ---	79.9357945425361
L8849-24 --- 22 ---	97BPXLIB10SD02(08) ---	72.8070175438596
L8849-28 --- 26 ---	97BPXLIB10SD62(08) ---	73.5099337748344
L8849-4 --- 2 ---	97BPXLIB3SD01(01) ---	73.6681887366819
L8849-8 --- 6 ---	97BPXLIB3SD02(08) ---	81.1708860759494
L8849-12 --- 10 ---	97BPXLIB6SD01(01) ---	67.7993527508091
L8849-16 --- 14 ---	97BPXLIB6SD02(08) ---	77.9742765273312
L8849-101	97BPXLIB8SD01(01)	71.5625
L8849-97	97BPXLIB8SD02(08)	71.2418300653595
L8849-40 --- 38 ---	97BPXLIC2SD01(01) ---	73.28125
L8849-44 --- 42 ---	97BPXLIC2SD02(08) ---	80.2610114192496
L8849-48 --- 46 ---	97BPXLIC2SD61(08) ---	80.7692307692308
L8849-105	97BPXLIC4SD01(01)	80.5872756933116
L8849-52	97BPXLIC4SD02(08)	76.1526232114468
L8849-32 --- 30 ---	97BPXLII1SD01(01) ---	76.8115942028985
L8849-36 --- 34 ---	97BPXLII1SD02(08) ---	78.6624203821656
L8849-105SD	Duplicate	79.6116504854369

Percent Solids for L8849

LAL Sample #	Client ID	Value
8849-83 — 81 —	97BPXLIA10SD01 (01)	64.7527910685805
L8849-87 — 85 —	97BPXLIA10SD02 (08)	55.4033485540335
L8849-55 — 54 —	97BPXLIA4SD01 (01)	82.8655834564254
L8849-59 — 57 —	97BPXLIA4SD02 (08)	81.3411078717201
L8849-63 — 61 —	97BPXLIA6SD01 (01)	57.1218795888399
L8849-67 — 65 —	97BPXLIA6SD02 (08)	71.3821138211382
L8849-71 — 69 —	97BPXLIA6SD62 (08)	67.9276315789474
L8849-79 — 77 —	97BPXLIA8SD01 (01)	61.6191904047976
L8849-75 — 73 —	97BPXLIA8SD02 (08)	73.3113673805601
L8849-20	97BPXLIB10SD01 (01)	79.9357945425361
L8849-24	97BPXLIB10SD02 (08)	72.8070175438596
L8849-28	97BPXLIB10SD62 (08)	73.5099337748344
L8849-4	97BPXLIB3SD01 (01)	73.6681887366819
L8849-8	97BPXLIB3SD02 (08)	81.1708860759494
L8849-12	97BPXLIB6SD01 (01)	67.7993527508091
L8849-16	97BPXLIB6SD02 (08)	77.9742765273312
L8849-101 — 99 —	97BPXLIB8SD01 (01)	71.5625
L8849-97 — 95 —	97BPXLIB8SD02 (08)	71.2418300653595
L8849-40	97BPXLIC2SD01 (01)	73.28125
L8849-44	97BPXLIC2SD02 (08)	80.2610114192496
L8849-48	97BPXLIC2SD61 (08)	80.7692307692308
L8849-105 — 103 —	97BPXLIC4SD01 (01)	80.5872756933116
L8849-52 — 50 —	97BPXLIC4SD02 (08)	76.1526232114468
L8849-32	97BPXLIII1SD01 (01)	76.8115942028985
L8849-36	97BPXLIII1SD02 (08)	78.6624203821656
L8849-105SD	Duplicate	79.6116504854369





CT&E Laboratory



MONTGOMERY WATSON



COPY

*Reviewed
JFW*



CT&E Environmental Services Inc.

Laboratory Division **////////////////////**

200 W. Potter Drive
Anchorage, AK 99518-1605
Tel: (907) 562-2343
Fax: (907) 561-5301

FEDERAL I.D. 22-3334380

Client PO: **INVOICE NO. 52228023** Workorder Date: 02/17/97
Project Name: 1109002.280101 Liberty Island **DATE 02/25/97** CT&E Ref.# 970760
Account # JMMENGN

PLEASE REMIT TO: P.O. Box 10001-1019, Pasadena, CA 91110-1019

DIRECT PAYMENT INQUIRIES TO: 1919 S. Highland Ave., Suite 210-B, Lombard, IL 60148-4991 Tel. (630) 953-9300 Fax (630) 953-9306

TERMS: Net 30 Days. A Service Charge of One and a Half Percent (1½%) Per Month Will Be Charged on Overdue Accounts.

Bill To
Montgomery Watson Americas Inc
4100 Spenard Rd
Anchorage, AK 99517-2901

FEB 28 1997
MONTGOMERY WATSON

Contact Accounts Payable
Phone (907) 561-5829
Ordered By

Special Instructions

Client Sample ID/CT&E Sample ID	Parameter	Charge
97 BPX LI A4 WA 01(05)[970760001]	Total Suspended Solids	18.00
97 BPX LI A4 WA 01(05)[970760001]	Turbidity	18.00
97 BPX LI A6 WA 01(06)[970760002]	Total Suspended Solids	18.00
97 BPX LI A6 WA 01(06)[970760002]	Turbidity	18.00
97 BPX LI A8 WA 01(2-5)[970760003]	Total Suspended Solids	18.00
97 BPX LI A8 WA 01(2-5)[970760003]	Turbidity	18.00
97 BPX LI A8 WA 02(9-5)[970760004]	Total Suspended Solids	18.00
97 BPX LI A8 WA 02(9-5)[970760004]	Turbidity	18.00
97 BPX LI A10 WA 01(4.5)[970760005]	Total Suspended Solids	18.00
97 BPX LI A10 WA 01(4.5)[970760005]	Turbidity	18.00
97 BPX LI A10 WA 02(11)[970760006]	Total Suspended Solids	18.00
97 BPX LI A10 WA 02(11)[970760006]	Turbidity	18.00
97 BPX LI B3 WA 01(3.2)[970760007]	Total Suspended Solids	18.00
97 BPX LI B3 WA 01(3.2)[970760007]	Turbidity	18.00
97 BPX LI B6 WA 01(2.0)[970760008]	Total Suspended Solids	18.00
97 BPX LI B6 WA 01(2.0)[970760008]	Turbidity	18.00
97 BPX LI B8 WA 02(3.5)[970760009]	Total Suspended Solids	18.00
97 BPX LI B8 WA 02(3.5)[970760009]	Turbidity	18.00
97 BPX LI B8 WA 01(1.5)[970760010]	Total Suspended Solids	18.00

CONTROL NO.

R- 58515



INVOICE (Original)

COPY

CT&E Environmental Services Inc.

Laboratory Division

200 W. Potter Drive
Anchorage, AK 99518-160
Tel: (907) 562-2343
Fax: (907) 561-5301

FEDERAL I.D.: 22-3334380

INVOICE NO. 52228023

Workorder Date: 02/17/97

Client PO:

DATE 02/25/97

CT&E Ref.# 970760

Project Name: 1189002.280101 Liberty Island

Account # JMMENGN

PLEASE REMIT TO: P.O. Box 10001-1019, Pasadena, CA 91110-1019

DIRECT PAYMENT INQUIRIES TO: 1919 S. Highland Ave., Suite 210-B, Lombard, IL 60148-4991 Tel. (630) 953-9300 Fax (630) 953-9306

TERMS: Net 30 Days. A Service Charge of One and a Half Percent (1½%) Per Month Will Be Charged on Overdue Accounts.

Client Sample ID/CT&E Sample ID	Parameter	Charge
97 BPX LI B8 WA 01(1.5)[970760010]	Turbidity	18.00
97 BPX LI B10 WA 01(8.0)[970760011]	Total Suspended Solids	18.00
97 BPX LI B10 WA 01(8.0)[970760011]	Turbidity	18.00
97 BPX LI C2 WA 01(3.0)[970760012]	Total Suspended Solids	18.00
97 BPX LI C2 WA 01(3.0)[970760012]	Turbidity	18.00
97 BPX LI C2 WA 02(8.0)[970760013]	Total Suspended Solids	18.00
97 BPX LI C2 WA 02(8.0)[970760013]	Turbidity	18.00
97 BPX LI C4 WA 01(7.0)[970760014]	Total Suspended Solids	18.00
97 BPX LI C4 WA 01(7.0)[970760014]	Turbidity	18.00
97 BPX LI I1 WA 01(11)[970760015]	Total Suspended Solids	18.00
97 BPX LI I1 WA 01(11)[970760015]	Turbidity	18.00
97 BPX LI B8 WA 03(6.5)[970760016]	Total Suspended Solids	18.00
97 BPX LI B8 WA 03(6.5)[970760016]	Turbidity	18.00
TOTAL DUE		\$576.00

CONTROL NO.

R- 58516



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

February 20, 1997

Bonnie McLear
Montgomery Watson Americas Inc
4100 Spenard Rd
Anchorage, AK 99517-2901

Client Name	Montgomery Watson Americas Inc
Project ID	1189002.280101 Liberty Island [970760]
Printed	February 20, 1997

Enclosed are the analytical results associated with the above project.

As required by the state of Alaska and the USEPA, a formal Quality Assurance/Quality Control Program is maintained by CT&E. A copy of our Quality Control Manual that outlines this program is available at your request.

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth in our Quality Assurance Program Plan.

If you have any questions regarding this report or if we can be of any other assistance, please call your CT&E Project Manager at (907) 562-2343.

The following descriptors may be found on your report which will serve to further qualify the data.

- U - Indicates the compound was analyzed for but not detected.
- J - Indicates an estimated value that falls below PQL, but is greater than the MDL.
- B - Indicates the analyte is found in the blank associated with the sample.
- * - The analyte has exceeded allowable limits.
- GT - Greater Than
- D - Secondary Dilution
- LT - Less Than



CT&E Environmental Services Inc.

CT&E Ref.# 970760001
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LI A4 WA 01(05)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/16/97 11:00
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	10.0	0.100	NTU	EPA 180.1			02/18/97	ENB
Total Suspended Solids	48.0	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760002
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LI A6 WA 01(06)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/16/97 09:00
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	24.0	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	18.4	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760003
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI A8 WA 01(2-5)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/24/97 10:16
Collected Date/Time 02/15/97 03:50
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	2.1	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	63.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760004
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI A8 WA 02(9-5)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/15/97 04:00
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	5.5	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	24.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760005
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LI A10 WA 01(4.5)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/16/97 01:10
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	3.1	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	44.4	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760006
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI A10 WA 02(11)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/16/97 01:20
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	21.0	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	76.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760007
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI B3 WA 01(3.2)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/14/97 22:00
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	7.5	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	26.0	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760008
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LJ B6 WA 01(2.0)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/15/97 01:00
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	0.89	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	2.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760009
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI B8 WA 02(3.5)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/15/97 04:10
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	6.4	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	64.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760010
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LI B8 WA 01(1.5)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/15/97 04:00
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	6.1	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	46.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760011
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LI B10 WA 01(8.0)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/15/97 08:30
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	5.4	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	39.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760012
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LI C2 WA 01(3.0)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/15/97 21:00
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	3.4	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	13.0	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760013
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI C2 WA 02(8.0)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/15/97 21:10
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	2.8	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	11.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760014
 Client Name Montgomery Watson Americas Inc
 Project Name/# 1189002.280101 Liberty Island
 Client Sample ID 97 BPX LI C4 WA 01(7.0)
 Matrix Water (Surface, Eff., Ground)
 Ordered By
 PWSID

Client PO#
 Printed Date/Time 02/20/97 16:45
 Collected Date/Time 02/15/97 17:00
 Received Date/Time 02/17/97 14:25
 Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	7.4	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	15.5	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760015
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI II WA 01(11)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/15/97 13:45
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By *Stephen C Ede*

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	0.54	0.100	NTU	EPA 180.1			02/18/97	EMB
	sample analyzed past 48 hour hold time.							
Total Suspended Solids	8.3	0.200	mg/L	EPA 160.2			02/18/97	RAM



CT&E Ref.# 970760016
Client Name Montgomery Watson Americas Inc
Project Name/# 1189002.280101 Liberty Island
Client Sample ID 97 BPX LI B8 WA 03(6.5)
Matrix Water (Surface, Eff., Ground)
Ordered By
PWSID

Client PO#
Printed Date/Time 02/20/97 16:45
Collected Date/Time 02/15/97 04:20
Received Date/Time 02/17/97 14:25
Technical Director: Stephen C. Ede

Released By

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	1.7	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	12.3	0.200	mg/L	EPA 160.2			02/18/97	RAM



MONTGOMERY WATSON

C of C # 97-C # LI |
Page 1 of 1

BP EXPLORATION (ALASKA) INC.
LIBERTY ISLAND SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska
(907) 248-8883

97.0760

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

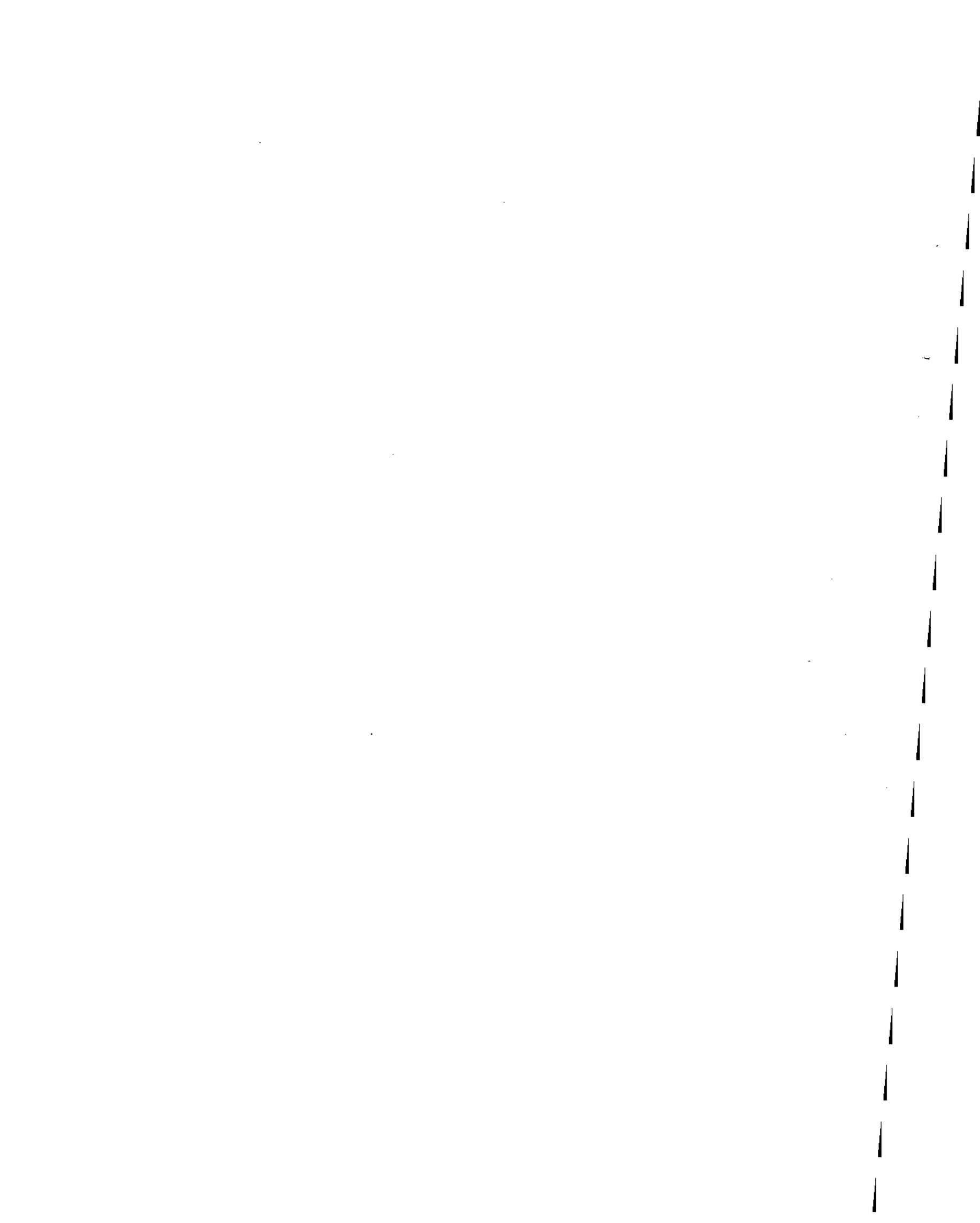
PROJ. NO. 1189002.280101		To: C T & E GAS, ANCHORAGE		TOTAL NO. OF CON- TAINERS	160.2 TSS AND TURB.				REMARKS <i>Run Turb Foot HT.</i>
SAMPLERS: (Signature) 1997 <i>[Signature]</i>		Sample ID							
DATE	TIME	S/W	Sample ID						
1	2/16 1100	W	97 BPX LI A4 WA01(05)	2	✓				
2	2/16 0900	W	97 BPX LI A6 WA01(06)	2	✓				
3	2/15 0358	W	97 BPX LI A8 WA01(2.5)	2	✓				
4	2/15 0400	W	97 BPX LI A8 WA02(9.5)	2	✓				Turb TA
5	2/16 0110	W	97 BPX LI A10 WA01(4.5)	2	✓				Turb TA
6	2/16 0120	W	97 BPX LI A10 WA02(11)	2	✓				
7	2/14 2200	W	97 BPX LI 33 WA01(3.2)	1	✓				Turb. TA
8	2/15 100	W	97 BPX LI B6 WA01(2.0)	1	✓				Turb TA
9	2/15 0410	W	97 BPX LI B8 WA02(3.5)	1	✓				Turb. TA
10	2/15 0400	W	97 BPX LI B8 WA01(1.5)	1	✓				Turb. TA
11	2/15 0830	W	97 BPX LI B10 WA01(48.0)	2	✓				Turb. TA
12	2/15 2100	W	97 BPX LI B10 WA01(3.0)	2	✓				
			C2 WA01(3.0)						NO ENTRY
13	2/15 2110	W	97 BPX LI C2 WA02(8.0)	2	✓				
14	2/15 1700	W	97 BPX LI C4 WA01(7.0)	2	✓				
15	2/15 1345	W	97 BPX LI E1 WA01(11)	2	✓				
Relinquished by: 97 BPX <i>[Signature]</i>		Date/Time 2/17/96		Shipped via: <i>[Signature]</i>		Notified:		Date/Time	
Received for Laboratory by: <i>[Signature]</i>				Date: 2/17/97		Time: 1425			



Columbia Analytical Services



MONTGOMERY WATSON



Review
JF



RECEIVED
MAR 6 1997
ANCH

March 3, 1997

MONTGOMERY WATSON

Doug Quist
Montgomery Watson
4100 Spenard Road
Anchorage, AK 99517

Service Request No: A9700086

Re: **BP Exploration Alaska, Inc./.(1189002.280101)**

Dear Doug:

Attached are the results of the rush samples submitted to our lab on February 21, 1997. For your reference, our service request number for this work is A9700086.

All analyses were performed consistent with generally accepted analytical laboratory principles and practices. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Mike Shelton
Laboratory Director

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Montgomery Watson
Project: BP Exploration Alaska, Inc.
Sample Matrix: Soil

Date Received: 2/21/97
Work Order No: A9700086

CASE NARRATIVE

All analyses were performed consistent with generally accepted analytical principles and practices.

All particle size determination samples were sent to our Kelso laboratory. The service request number for these samples is K971202.

-Acronyms-

MRL Method Reporting Limit
ND None Detected at or above the method reporting limit
DRO Diesel Range Organics
GRO Gasoline Range Organics
RRO Residual Range Organics

Approved by March 3, 1997

000002

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/14/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB3SD01(01)
Lab Code: K9701202-001

Sand Fraction: Weight (Grams) 18.8024
 Sand Fraction: Weight Recovered (Grams) 18.7183
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	53.9082
Percent Solids	72.1
Weight Oven-Dried (Grams)	38.8678

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0320	0.08
Coarse Sand	0.425 mm	40	0.2379	0.61
Medium Sand	0.250 mm	60	1.4789	3.80
Fine Sand	0.106 mm	140	8.7652	22.6
Very Fine Sand	0.075 mm	200	3.8259	9.84
Clay			3.0950	7.96
Silt			23.0950	59.4
Total			40.5299	104

Approved By: Mike Sullivan Date: 3/3/97

000003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/14/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB3SD02(08)
Lab Code: K9701202-002

Sand Fraction: Weight (Grams) 82.8151
 Sand Fraction: Weight Recovered (Grams) 82.7387
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	105.248
Percent Solids	83.5
Weight Oven-Dried (Grams)	87.8821

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0452	0.05
Very Coarse Sand	0.850 mm	20	0.0320	0.04
Coarse Sand	0.425 mm	40	0.5295	0.60
Medium Sand	0.250 mm	60	25.8069	29.4
Fine Sand	0.106 mm	140	51.2720	58.3
Very Fine Sand	0.075 mm	200	3.1086	3.54
Clay			1.5800	1.80
Silt			5.6200	6.39
Total			87.9942	100

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB6SD01(01)
Lab Code: K9701202-003

Sand Fraction: Weight (Grams) 2.0336
 Sand Fraction: Weight Recovered (Grams) 1.9723
 Sand Fraction: Percent Recovery 97.0

Weight as received (Grams)	38.5563
Percent Solids	70.1
Weight Oven-Dried (Grams)	27.0280

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0034	0.01
Very Coarse Sand	0.850 mm	20	0.0248	0.09
Coarse Sand	0.425 mm	40	0.0393	0.15
Medium Sand	0.250 mm	60	0.0770	0.28
Fine Sand	0.106 mm	140	0.3171	1.17
Very Fine Sand	0.075 mm	200	0.5936	2.20
Clay			1.9450	7.20
Silt			23.8800	88.4
Total			26.8802	99.5

Approved By: _____

11715

Date: 2/13/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB6SD02(08)
Lab Code: K9701202-004

Sand Fraction: Weight (Grams) 3.0506
 Sand Fraction: Weight Recovered (Grams) 3.024
 Sand Fraction: Percent Recovery 99.1

Weight as received (Grams)	34.8972
Percent Solids	76.7
Weight Oven-Dried (Grams)	26.7662

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0080	0.03
Very Coarse Sand	0.850 mm	20	0.0088	0.03
Coarse Sand	0.425 mm	40	0.0338	0.13
Medium Sand	0.250 mm	60	0.0556	0.21
Fine Sand	0.106 mm	140	0.2879	1.08
Very Fine Sand	0.075 mm	200	0.4201	1.57
Clay			2.3250	8.69
Silt			23.2500	86.9
Total			26.3892	98.6

Approved By: 17715 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB10SD01(01)
Lab Code: K9701202-005

Sand Fraction: Weight (Grams) 8.0821
 Sand Fraction: Weight Recovered (Grams) 8.0039
 Sand Fraction: Percent Recovery 99.0

Weight as received (Grams)	39.5303
Percent Solids	75.8
Weight Oven-Dried (Grams)	29.9640

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0000	0.00
Coarse Sand	0.425 mm	40	0.1198	0.40
Medium Sand	0.250 mm	60	3.9839	13.3
Fine Sand	0.106 mm	140	3.5310	11.8
Very Fine Sand	0.075 mm	200	0.0837	0.28
Clay			6.9850	23.3
Silt			14.9350	49.8
Total			29.6384	98.9

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB8SD02(08)
Lab Code: K9701202-006

Sand Fraction: Weight (Grams) 14.4281
 Sand Fraction: Weight Recovered (Grams) 14.3143
 Sand Fraction: Percent Recovery 99.2

Weight as received (Grams)	61.6584
Percent Solids	67.5
Weight Oven-Dried (Grams)	41.6194

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0269	0.06
Very Coarse Sand	0.850 mm	20	0.1035	0.25
Coarse Sand	0.425 mm	40	0.4336	1.04
Medium Sand	0.250 mm	60	2.5856	6.21
Fine Sand	0.106 mm	140	5.3886	12.9
Very Fine Sand	0.075 mm	200	2.6863	6.45
Clay			5.7450	13.8
Silt			27.2950	65.6
Total			44.2645	106

Approved By: _____

17715

Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB8SD02(08)
Lab Code: K9701202-006d

Sand Fraction: Weight (Grams) 10.8452
 Sand Fraction: Weight Recovered (Grams) 10.6645
 Sand Fraction: Percent Recovery 98.3

Weight as received (Grams)	57.3659
Percent Solids	72.5
Weight Oven-Dried (Grams)	41.5903

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0114	0.03
Very Coarse Sand	0.850 mm	20	0.1450	0.35
Coarse Sand	0.425 mm	40	0.3947	0.95
Medium Sand	0.250 mm	60	1.0133	2.44
Fine Sand	0.106 mm	140	3.1458	7.56
Very Fine Sand	0.075 mm	200	1.8541	4.46
Clay			5.1100	12.3
Silt			27.2100	65.4
Total			38.8843	93.5

Approved By: MMIS Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB8SD02(08)
Lab Code: K9701202-006t

Sand Fraction: Weight (Grams) 11.8146
 Sand Fraction: Weight Recovered (Grams) 11.6371
 Sand Fraction: Percent Recovery 98.5

Weight as received (Grams)	54.5878
Percent Solids	70.0
Weight Oven-Dried (Grams)	38.2115

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0031	0.01
Very Coarse Sand	0.850 mm	20	0.1653	0.43
Coarse Sand	0.425 mm	40	0.2877	0.75
Medium Sand	0.250 mm	60	1.0398	2.72
Fine Sand	0.106 mm	140	2.9078	7.61
Very Fine Sand	0.075 mm	200	1.7589	4.60
Clay			4.7300	12.4
Silt			26.1700	68.5
Total			37.0626	97.0

Approved By: 117715 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB8SD01(01)
Lab Code: K9701202-007

Sand Fraction: Weight (Grams) 1.0224
 Sand Fraction: Weight Recovered (Grams) 0.9617
 Sand Fraction: Percent Recovery 94.1

Weight as received (Grams)	38.2747
Percent Solids	68.8
Weight Oven-Dried (Grams)	26.3330

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0012	0.00
Very Coarse Sand	0.850 mm	20	0.0168	0.06
Coarse Sand	0.425 mm	40	0.0257	0.10
Medium Sand	0.250 mm	60	0.0470	0.18
Fine Sand	0.106 mm	140	0.2271	0.86
Very Fine Sand	0.075 mm	200	0.2637	1.00
Clay			2.3600	8.96
Silt			23.6100	89.7
Total			26.5515	101

Approved By: MIS Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIB10SD02(08)
Lab Code: K9701202-008

B-10 E17

Sand Fraction: Weight (Grams) 2.0051
 Sand Fraction: Weight Recovered (Grams) 1.975
 Sand Fraction: Percent Recovery 98.5

Weight as received (Grams)	32.4177
Percent Solids	72.5
Weight Oven-Dried (Grams)	23.5028

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0060	0.03
Coarse Sand	0.425 mm	40	0.0321	0.14
Medium Sand	0.250 mm	60	0.3971	1.69
Fine Sand	0.106 mm	140	1.0078	4.29
Very Fine Sand	0.075 mm	200	0.2198	0.94
Clay			6.8450	29.1
Silt			14.9900	63.8
Total			23.4978	100

Approved By: _____ *1/115* Date: *3/3/97*

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIII1SD01(01)
Lab Code: K9701202-009

Sand Fraction: Weight (Grams) 35.3751
 Sand Fraction: Weight Recovered (Grams) 35.1601
 Sand Fraction: Percent Recovery 99.4

Weight as received (Grams)	67.4098
Percent Solids	81.5
Weight Oven-Dried (Grams)	54.9390

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0201	0.04
Very Coarse Sand	0.850 mm	20	0.1352	0.25
Coarse Sand	0.425 mm	40	0.1349	0.25
Medium Sand	0.250 mm	60	0.7251	1.32
Fine Sand	0.106 mm	140	16.9634	30.9
Very Fine Sand	0.075 mm	200	10.2088	18.6
Clay			3.6700	6.68
Silt			20.1850	36.7
Total			52.0425	94.7

Approved By: Mike Stelton Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLII1SD02(08)
Lab Code: K9701202-010

Sand Fraction: Weight (Grams) 0.3685
Sand Fraction: Weight Recovered (Grams) 0.323
Sand Fraction: Percent Recovery 87.7

Weight as received (Grams)	35.8749
Percent Solids	80.5
Weight Oven-Dried (Grams)	28.8793

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0031	0.01
Coarse Sand	0.425 mm	40	0.0018	0.01
Medium Sand	0.250 mm	60	0.0182	0.06
Fine Sand	0.106 mm	140	0.1221	0.42
Very Fine Sand	0.075 mm	200	0.0903	0.31
Clay			15.3100	53.0
Silt			13.0150	45.1
Total			28.5605	98.9

Approved By: _____

LJL Date: *3/3/97*

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIC2SD01(01)
Lab Code: K9701202-011

Sand Fraction: Weight (Grams) 1.4428
 Sand Fraction: Weight Recovered (Grams) 1.3263
 Sand Fraction: Percent Recovery 91.9

Weight as received (Grams)	59.9115
Percent Solids	70.9
Weight Oven-Dried (Grams)	42.4773

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0014	0.00
Coarse Sand	0.425 mm	40	0.0138	0.03
Medium Sand	0.250 mm	60	0.0328	0.08
Fine Sand	0.106 mm	140	0.2163	0.51
Very Fine Sand	0.075 mm	200	0.2545	0.60
Clay			3.5400	8.33
Silt			38.5150	90.7
Total			42.5738	100

Approved By: _____

1778

Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIC2SD02(08)
Lab Code: K9701202-012

Sand Fraction: Weight (Grams) 2.6933
 Sand Fraction: Weight Recovered (Grams) 2.673
 Sand Fraction: Percent Recovery 99.2

Weight as received (Grams)	25.012
Percent Solids	83.5
Weight Oven-Dried (Grams)	20.8850

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0099	0.05
Coarse Sand	0.425 mm	40	0.0283	0.14
Medium Sand	0.250 mm	60	0.2962	1.42
Fine Sand	0.106 mm	140	1.5188	7.27
Very Fine Sand	0.075 mm	200	0.5037	2.41
Clay			9.4800	45.4
Silt			8.3950	40.2
Total			20.2319	96.9

Approved By: 1778 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIC4SD02(08)
Lab Code: K9701202-013

Sand Fraction: Weight (Grams) 66.3786
 Sand Fraction: Weight Recovered (Grams) 66.2127
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	92.254
Percent Solids	79.7
Weight Oven-Dried (Grams)	73.5264

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0013	0.00
Very Coarse Sand	0.850 mm	20	0.0147	0.02
Coarse Sand	0.425 mm	40	0.0545	0.07
Medium Sand	0.250 mm	60	1.4404	1.96
Fine Sand	0.106 mm	140	48.7899	66.4
Very Fine Sand	0.075 mm	200	11.6167	15.8
Clay			1.7050	2.32
Silt			7.7850	10.6
Total			71.4075	97.1

Approved By: _____

11715

Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIC4SD01(01)
Lab Code: K9701202-014

Sand Fraction: Weight (Grams) 10.0257
 Sand Fraction: Weight Recovered (Grams) 9.8972
 Sand Fraction: Percent Recovery 98.7

Weight as received (Grams)	58.1901
Percent Solids	72.2
Weight Oven-Dried (Grams)	42.0133

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0210	0.05
Coarse Sand	0.425 mm	40	0.0389	0.09
Medium Sand	0.250 mm	60	0.5383	1.28
Fine Sand	0.106 mm	140	5.5294	13.2
Very Fine Sand	0.075 mm	200	1.7010	4.05
Clay			3.9050	9.29
Silt			31.8850	75.9
Total			43.6186	104

Approved By: 17715 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA4SD02(08)
Lab Code: K9701202-016

Sand Fraction: Weight (Grams) 90.4426
 Sand Fraction: Weight Recovered (Grams) 90.363
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	108.145
Percent Solids	85.1
Weight Oven-Dried (Grams)	92.0310

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	9.5634	10.4
Fine Gravel	2.00 mm	10	2.3032	2.50
Very Coarse Sand	0.850 mm	20	1.4641	1.59
Coarse Sand	0.425 mm	40	4.3069	4.68
Medium Sand	0.250 mm	60	43.0847	46.8
Fine Sand	0.106 mm	140	28.1088	30.5
Very Fine Sand	0.075 mm	200	1.0047	1.09
Clay			1.5150	1.65
Silt			2.0000	2.17
Total			93.3508	101

Approved By: 17715 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA4SD02(08)
Lab Code: K9701202-016d

Sand Fraction: Weight (Grams) 91.2509
 Sand Fraction: Weight Recovered (Grams) 91.0646
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	107.984
Percent Solids	84.8
Weight Oven-Dried (Grams)	91.5706

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	16.8718	18.4
Fine Gravel	2.00 mm	10	1.9209	2.10
Very Coarse Sand	0.850 mm	20	1.1428	1.25
Coarse Sand	0.425 mm	40	5.3384	5.83
Medium Sand	0.250 mm	60	35.1659	38.4
Fine Sand	0.106 mm	140	29.2320	31.9
Very Fine Sand	0.075 mm	200	0.7958	0.87
Clay			1.6000	1.75
Silt			2.0700	2.26
Total			94.1376	103

Approved By: _____

17715

Date: _____

3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

**Particle Size Determination
 ASTM Method D422 Modified**

Sample Name: 97BPXLIA4SD02(08)
Lab Code: K9701202-0161

Sand Fraction: Weight (Grams) 90.1459
Sand Fraction: Weight Recovered (Grams) 90.0547
Sand Fraction: Percent Recovery 100

Weight as received (Grams)	107.053
Percent Solids	85.0
Weight Oven-Dried (Grams)	90.9414

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	11.4577	12.6
Fine Gravel	2.00 mm	10	0.7290	0.80
Very Coarse Sand	0.850 mm	20	0.7757	0.85
Coarse Sand	0.425 mm	40	3.3704	3.71
Medium Sand	0.250 mm	60	40.0474	44.0
Fine Sand	0.106 mm	140	32.0653	35.3
Very Fine Sand	0.075 mm	200	0.8089	0.89
Clay			1.4050	1.54
Silt			2.1900	2.41
Total			92.8494	102

Approved By: 1778 Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA6SD01(01)
Lab Code: K9701202-017

Sand Fraction: Weight (Grams) 59.7172
 Sand Fraction: Weight Recovered (Grams) 59.5882
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	96.8374
Percent Solids	80.5
Weight Oven-Dried (Grams)	77.9541

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	1.0714	1.37
Fine Gravel	2.00 mm	10	0.2535	0.33
Very Coarse Sand	0.850 mm	20	0.1769	0.23
Coarse Sand	0.425 mm	40	0.4364	0.56
Medium Sand	0.250 mm	60	11.1410	14.3
Fine Sand	0.106 mm	140	39.1413	50.2
Very Fine Sand	0.075 mm	200	4.4337	5.69
Clay			3.1250	4.01
Silt			15.1700	19.5
Total			74.9492	96.1

Approved By: _____

1278

Date: _____

3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA6SD02(08)
Lab Code: K9701202-018

A-6 81

Sand Fraction: Weight (Grams) 29.5097
 Sand Fraction: Weight Recovered (Grams) 29.3858
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	70.0063
Percent Solids	72.3
Weight Oven-Dried (Grams)	50.6146

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.1635	0.32
Coarse Sand	0.425 mm	40	0.3399	0.67
Medium Sand	0.250 mm	60	0.7212	1.42
Fine Sand	0.106 mm	140	13.0103	25.7
Very Fine Sand	0.075 mm	200	7.1941	14.2
Clay			2.8250	5.58
Silt			25.0550	49.5
Total			49.3090	97.4

Approved By: _____ *17715* Date: *3/3/97*

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix: Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA8SD02(08)
Lab Code: K9701202-019

A 8 847

Sand Fraction: Weight (Grams) 17.723
Sand Fraction: Weight Recovered (Grams) 17.5632
Sand Fraction: Percent Recovery 99.1

Weight as received (Grams)	63.8683
Percent Solids	73.7
Weight Oven-Dried (Grams)	47.0709

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.1316	0.28
Coarse Sand	0.425 mm	40	0.1711	0.36
Medium Sand	0.250 mm	60	0.3260	0.69
Fine Sand	0.106 mm	140	4.6817	9.95
Very Fine Sand	0.075 mm	200	5.1741	11.0
Clay			4.9800	10.6
Silt			30.4200	64.6
Total			45.8845	97.5

Approved By: _____ *17715* Date: *3/3/97*

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA10SD01(01)
Lab Code: K9701202-021

A 110 1F7

Sand Fraction: Weight (Grams) 32.1191
 Sand Fraction: Weight Recovered (Grams) 32.0103
 Sand Fraction: Percent Recovery 100

Weight as received (Grams)	61.4534
Percent Solids	81.0
Weight Oven-Dried (Grams)	49.7773

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0394	0.08
Very Coarse Sand	0.850 mm	20	0.0863	0.17
Coarse Sand	0.425 mm	40	0.2890	0.58
Medium Sand	0.250 mm	60	3.4337	6.90
Fine Sand	0.106 mm	140	20.7419	41.7
Very Fine Sand	0.075 mm	200	2.8292	5.68
Clay			1.7400	3.50
Silt			18.6400	37.4
Total			47.7995	96.0

Approved By: _____ *11715* Date: *3/3/97*

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
 Project: Liberty Island/1189002.280101
 Sample Matrix Sediment

Service Request: K9701202
 Date Collected: 2/16/97
 Date Received: 2/24/97
 Date Analyzed: 2/28/97

Particle Size Determination
 ASTM Method D422 Modified

Sample Name: 97BPXLIA10SD02(08)
 Lab Code: K9701202-022

A-10 8 fr

Sand Fraction: Weight (Grams) 17.5188
 Sand Fraction: Weight Recovered (Grams) 17.1901
 Sand Fraction: Percent Recovery 98.1

Weight as received (Grams)	61.0743
Percent Solids	56.0
Weight Oven-Dried (Grams)	34.2016

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0838	0.25
Very Coarse Sand	0.850 mm	20	0.6112	1.79
Coarse Sand	0.425 mm	40	0.8858	2.59
Medium Sand	0.250 mm	60	0.6678	1.95
Fine Sand	0.106 mm	140	5.2105	15.2
Very Fine Sand	0.075 mm	200	3.1105	9.09
Clay			5.7050	16.7
Silt			19.7300	57.7
Total			36.0046	105

Approved By: _____ Date: _____

APPENDIX A

**CHAIN OF CUSTODY INFORMATION
COOLER RECEIPT FORM**

000029



MONTGOMERY WATSON

C of C # 97-C #LE3

Page 1 of 2

441000280

BP EXPLORATION (ALAS) INC.
LIBERTY ISLAND SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

000030

REPORT DUE IN 7 CALANDER DAYS

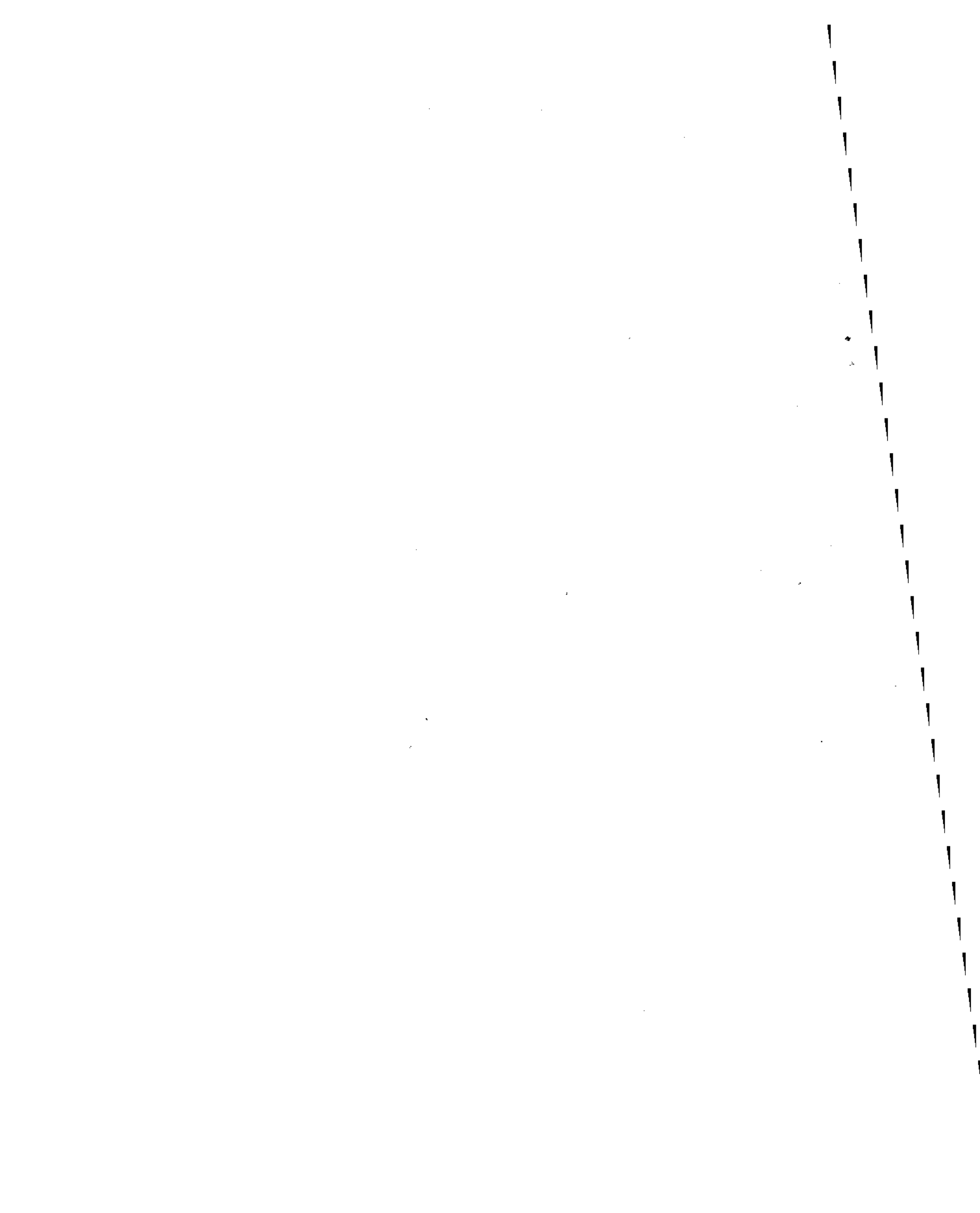
CHAIN OF CUSTODY FORM

PROJ. NO.		To:		TOTAL NO. OF CONTAINERS	GRAIN SIZE, ASTM D442				REMARKS
1189002.280101		CAS, ANCHORAGE							
SAMPLERS: (Signature)				1997					
<i>[Signature]</i>									
DATE	TIME	S/W	Sample ID						
2/14	2300	S	97 BPX LI B3 SD 01 (01)	1	✓				-1
2/14	2330	S	97 BPX LI B3 SD 02 (08)	1	✓				-2
2/15	0120	S	97 BPX LI B6 SD 01 (01)	1	✓				-3
2/15	0145	S	97 BPX LI B6 SD 02 (08)	1	✓				-4
2/15	900	S	97 BPX LI B10 SD 01 (01)	1	✓				-5
2/15	0500	S	97 BPX LI B8 SD 02 (08)	1	✓				-6
2/15	0430	S	97 BPX LI B8 SD 01 (01)	1	✓				-7
2/15	1000	S	97 BPX LI B10 SD (02) (08)	1	✓				02 (08) -8
2/15	1400	S	97 BPX LI I1 SD 01 (01)	1	✓				-9
2/15	1445	S	97 BPX LI I1 SD (02) (08)	1	✓				02 (08) -10
2/15	2220	S	97 BPX LI C2 SD 01 (01)	1	✓				-11
2/15	2240	S	97 BPX LI C2 SD 02 (08)	1	✓				-12
2/15	1800	S	97 BPX LI C4 SD 02 (08)	1	✓				-13
2/15	1730	S	97 BPX LI C4 SD 01 (01)	1	✓				-14
2/16	1130	S	97 BPX LI A4 SD 01 (01)	1	✓				-15
2/16	1200	S	97 BPX LI A4 SD 02 (08)	1	✓				-16
2/16	0930	S	97 BPX LI A6 SD 01 (01)	1	✓				-17
Relinquished by: 97 BPX		Date/Time		Shipped via:		Notified: N/A		Date/Time	
<i>[Signature]</i>		2/21/97 1455		<i>Delivered</i>					
Received for Laboratory by:			<i>[Signature]</i>		Date: 2-21-97		Time: 7: -		

Appendix D
Chain-of-Custody-Records



MONTGOMERY WATSON





MONTGOMERY WATSON

Michael Turner

BP EXPLORATION (ALASKA) INC.
LIBERTY ISLAND SEDIMENT AND WATER
SAMPLING

C of C # 97-C # LI |
Page 1 of 1

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska
(907) 248-8883

97.0760

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: CT & E - GAS, ANCHORAGE		TOTAL NO. OF CON- TAINERS	160.2 TSS AND TURB.				REMARKS
SAMPLERS: (Signature) 1997		Signature							
DATE	TIME	S/W	Sample ID						
2/16	1100	W	97 BPX LI A4 WA01 (05)	2	✓				
2/16	0900	W	97 BPX LI A6 WA01 (06)	2	✓				
2/16	0350	W	97 BPX LI A8 WA01 (2.5)	2	✓				
2/15	0400	W	97 BPX LI A8 WA02 (9.5)	2	✓				Turb TA
2/16	0110	W	97 BPX LI A10 WA01 (4.5)	2	✓				Turb TA
2/16	0120	W	97 BPX LI A10 WA02 (11)	2	✓				
2/14	2200	W	97 BPX LI 33 WA01 (3.2)	1	✓				Turb. TA
2/15	100	W	97 BPX LI B6 WA01 (2.0)	1	✓				Turb TA
2/15	0410	W	97 BPX LI B8 WA02 (3.5)	1	✓				Turb. TA
2/15	0400	W	97 BPX LI B8 WA01 (1.5)	1	✓				Turb. TA
2/15	0830	W	97 BPX LI B10 WA01 (48.0)	2	✓				Turb. TA
2/15	2100	W	97 BPX LI B10 WA01 (3.0)	2	✓				
			C2 WA01 (3.0)			NO entries			
2/15	2110	W	97 BPX LI C2 WA02 (8.0)	2	✓				
2/15	1700	W	97 BPX LI C4 WA01 (7.0)	2	✓				
2/15	1345	W	97 BPX LI E1 WA01 (11)	2	✓				
2/15	420	W	97 BPX LI B8 WA03 (6.9)	1	✓				Assesd: Burdick
Relinquished by: 97 BPX		Date/Time		Shipped via:		Notified:		Date/Time	
Burdick		2/17/97		Delivered					
Received for Laboratory by: Dana Beckett				Date: 2/17/97			Time: 1425		



February 19, 1997

Bonnie McLearn
Montgomery Watson Americas Inc
4100 Spenard Rd
Anchorage, AK 99517-2901

REGISTERED
FEB 24 1997
MONTGOMERY WATSON

Dear Bonnie McLearn:

Thank you for your recent request for analytical services. The sample(s) below will be analyzed per your request.

These samples will be disposed 30 days after completion of analysis. Your samples are assigned to the indicated project

Client: Montgomery Watson Americas Inc - JMMENGN
Project: 1189002.280101 Liberty Island - [970760]

Sample: 970760001 Client/CT&E ID: 97 BPX LI A4 WA 01(05)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 11:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760002 Client/CT&E ID: 97 BPX LI A6 WA 01(06)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 09:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760003 Client/CT&E ID: 97 BPX LI A8 WA 01(2-5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 03:50 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity



Sample: 970760004 Client/CT&E ID: 97 BPX LI A8 WA 02(9-5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 04:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760005 Client/CT&E ID: 97 BPX LI A10 WA 01(4.5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 01:10 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760006 Client/CT&E ID: 97 BPX LI A10 WA 02(11)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 01:20 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760007 Client/CT&E ID: 97 BPX LI B3 WA 01(3.2)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/14/97 22:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760008 Client/CT&E ID: 97 BPX LI B6 WA 01(2.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 01:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity



Sample: 970760009 Client/CT&E ID: 97 BPX LI B8 WA 02(3.5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 04:10 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760010 Client/CT&E ID: 97 BPX LI B8 WA 01(1.5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 04:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760011 Client/CT&E ID: 97 BPX LI B10 WA 01(8.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 08:30 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760012 Client/CT&E ID: 97 BPX LI C2 WA 01(3.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 21:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760013 Client/CT&E ID: 97 BPX LI C2 WA 02(8.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 21:10 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity



CT&E Environmental Services Inc.

Sample: 970760014 Client/CT&E ID: 97 BPX LI C4 WA 01(7.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 17:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760015 Client/CT&E ID: 97 BPX LI II WA 01(11)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 13:45 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760016 Client/CT&E ID: 97 BPX LI B8 WA 03(6.5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 04:20 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

For further information or assistance concerning samples, please contact:
Joyce Windebank at (907)562-2343



MONTGOMERY WATSON

C of C, #97-LI2

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BP EXPLORATION (ALASKA) INC.
LIBERTY ISLAND PIPELINE SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: LOCKHEED, Attn: MARY WOLFE		TOTAL NO. OF CON- TAINERS	WATER				REMARKS
SAMPLERS: (Signature) 1997 WJ [Signature]		[Signature]			TSS, EPA 160.2	VOC, 8260A 2.2 OZ	SVOC (8270B), DRO (8100M), TOC (415.1), 8 OZ.	As, Cd, Cr, Ba, Hg, Cr+6, BaSO4, 4 OZ.	
DATE	TIME	S/W	Sample ID						
2/14	2300	SED	97BPXLIB3SD01(01)	4	X	X	X		
2/14	2330	SED	97BPXLIB3SD01(08)	4					
2/15	0120	SED	97BPXLIB6SD01(01)	4					
2/15	0145	SED	97BPXLIB6SD02(08)	4					
2/15	0900	SED	97BPXLIB10SD01(07)	4					
2/15	0930	SED	97BPXLIB10SD02(08)	4					
2/15	1000	SED	97BPXLIB10SD62(08)	4					
2/15	1400	SED	97BPXLIT1SD01(01)	4					
2/15	1445	SED	97BPXLIT1SD02(08)	4					
2/15	2220	SED	97BPXLIC2SD01(01)	4					
2/15	2230	SED	97BPXLIC2SD02(08)	4					
2/15	2300	SED	97BPXLIC2SD06(08)	4				← 50 62 (08)	
2/15	1800	SED	97BPXLIC4SD02(08)	4				← Completed 2/20 (08) should be	
2/15	1730	SED	97BPXLIC4SD01(08)	4				(01) Bgm	
2/16	1130	SED	97BPXLIA4SD01(01)	3					
2/16	1200	SED	97BPXLIA4SD02(08)	4					
2/16	0930	SED	97BPXLIA6SD01(01)	4	X	X	X		
Relinquished by: [Signature]		Date/Time 2/10/97 1200		Shipped via: FedEx 3842059662		Notified: [Signature]		Date/Time	
Received for Laboratory by:				Date:		Time:			

WJW

correct (01) (08)

← 50 62 (08)
Completed 2/20
(08) should be
(01) Bgm



MONTGOMERY WATSON

C of C, #97-LI2

Page 2 of 2.

BP EXPLORATION (ALAS..A) INC.
LIBERY ISLAND PILELINE SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: LOCKHEED, Attn: MARY WOLFE		TOTAL NO. OF CON- TAINERS	WATER			REMARKS
SAMPLERS: (Signature) 1997 <i>W. [Signature]</i>		<i>Zunchea</i>			TSS, EPA 160.2	VOC, 8260A 2.2 OZ	SVOC (8270B), DRO (8100M), TOC (415.1), 8 OZ.	
DATE	TIME	S/W	Sample ID					
2/16	1000	SED	97BPX LIA6SD02(OE)	4	X	X	X	
2/16	1010	SED	97BPX LIA6SD62(OE)	4				
2/16	0440	SED	97BPX LIA8SD02(OE)	4				
2/16	0430	SED	97BPX LIA8SD01(O1)	4				
2/16	0130	SED	97BPX LIA10SD01(O1)	4				
2/16	0150	SED	97BPX LIA10SD02(OE)	4	X	X	X	
2/16	1900	W	97 BPX LI TB 21697	3	X			
2/14	1900	W	97 BPX LI 021497	3	X			
2/15	0430	SD	97 BPX LIA8SD01(O1)	4	X	X	X	JARS Rec'd
2/15	0500	SD	97BPX LIA8SD02(OE)	4	X	X	X	by LAB - Added to C of C 2/20 <i>[Signature]</i>

✓
✓
2/20
7:20
1/20/97

2009662

Relinquished by: *[Signature]* Date/Time: 2/18/97 (1200) Shipped via: FedEx 3842 Notified: 2009662 Date/Time:

Received for Laboratory by: Date: Time:



MONTGOMERY WATSON

C of C, #97-LI2

Page 1 of 2

BP EXPLORATION (ALASKA) INC.
LIBERTY ISLAND PIPELINE SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spanard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: LOCKHEED, Attn: MARY WOLFE		TOTAL NO. OF CON- TAINERS	WATER				REMARKS
SAMPLERS: (Signature) 1997 WL [Signature]		[Signature]			TSS, EPA 160.2 VOC, 8260A 2-2 OZ	SVOC (8270B), DRO (8100M), TOC (415.1), 8 OZ	As, Cd, Cr, Ba, Hg, Cr+6, BaSO4, 4 OZ		
DATE	TIME	S/W	Sample ID						
2/14	2300	SED	97BPXLIB3SD01(01)	4	X	X	X		
2/14	2330	SED	97BPXLIB3SD01(08)	4					
2/15	0120	SED	97BPXLIB6SD01(01)	4					
2/15	0145	SED	97BPXLIB6SD02(08)	4					
2/15	0900	SED	97BPXLIB10SD01(01)	4					
2/15	0930	SED	97BPXLIB10SD02(08)	4					
2/15	1000	SED	97BPXLIB10SD62(08)	4					
2/15	1400	SED	97BPXLI11SD01(01)	4					
2/15	1445	SED	97BPXLI11SD02(08)	4					
2/15	2220	SED	97BPXLIC2SD01(01)	4					
2/15	2240	SED	97BPXLIC2SD02(08)	4					
2/15	2300	SED	97BPXLIC2SD61(08)	4					
2/15	1800	SED	97BPXLIC4SD02(08)	4					
2/15	1730	SED	97BPXLIC4SD01(08)	4				One replicate 02/20 (08) should be (01) Bgm	
2/16	1130	SED	97BPXLIA4SD01(01)	3					
2/16	1200	SED	97BPXLIA4SD02(08)	4					
2/16	0930	SED	97BPXLIA6SD01(01)	4	X	X	X		
Retinquished by:		Date/Time		Shipped via:		Notified:		Date/Time	
[Signature]		2/10/97 1700		FedEx 38420		9662			
Received for Laboratory by:				Date:		Time:			

3
6
58
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16



MONTGOMERY WATSON

C of C, #97-LI2

Page 2 of 2

BP EXPLORATION (ALAS..A) INC.
LIBERTY ISLAND PIPELINE SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101		To: LOCKHEED, Attn: MARY WOLFE		TOTAL NO. OF CON- TAINERS	WATER			REMARKS	
SAMPLERS: (Signature) 1997 WC [Signature]		[Signature]			TSS, EPA 160.2 VOC, 8260A 2.2 OZ	SVOC (8270B), DRO (8100M), TOC (415.1), 8 OZ.	As, Cd, Cr, Ba, Hg, Cr+6, BaSO4, 4 OZ.		
DATE	TIME	S/W	Sample ID						
2/16	1000	SED	97BPX LIA6SD02(08)	4	X	X	X		
2/16	1010	SED	97BPX LIA6SD62(08)	4					
2/16	0440	SED	97BPX LIA8SD02(08)	4					
2/16	0430	SED	97BPX LIA8SD01(01)	4					
2/16	0130	SED	97BPX LIA10SD01(01)	4					
2/16	0150	SED	97BPX LIA10SD02(08)	4	X	X	X		
2/16	1900	W	97 BPX LI TB 21697	3	X				
2/14	1900	W	97 BPX LI 021497	3	X				
2/15	0430	SD	97 BPX LI B8SD01(01)	4	X	X	X	JARS Rec'd	
2/15	0500	SD	97BPX LI B8SD02(08)	4	X	X	X	by LAB - Added to C of C 2/20 [Signature]	
Relinquished by: [Signature]					Date/Time: 2/18/97 (200)	Shipped via: FedEx 384	2009652	Notified:	Date/Time:
Received for Laboratory by:					Date:	Time:			

3/20/97
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1 From (please print) _____
Date 2/18/97 Sender's FedEx Account Number 1387-3266-5

Sender Name omnie McLean Phone (907) 248-8883
Dept./Floor/Suite/Room _____

Company MONTGOMERY WATSON

Address 4100 SPENARD RD

City ANCHORAGE State AK Zip 99517

2 Your Internal Billing Reference Information (Optional) (First 30 characters will appear on invoice) 1189002.270101

3 To (please print) _____
Recipient's Name Mary Wolfe Phone (800) 582-7605
Dept./Floor/Suite/Room _____

Company LAS Lab

Address 975 Kelly Johnson Dr.
(We Cannot Deliver to P.O. Boxes or P.O. Zip Codes)

City Las Vegas State NV Zip 89119

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 Does this shipment contain dangerous goods? Yes (Major chemical, flammable, or other hazardous) No
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 Bill to: Sender (Account no. in Section 7b to bill) Recipient Third Party Credit Card Cash/Check
 (Enter FedEx, discount no. or Credit Card no. below)

FedEx Account No. _____ Exp. Date _____
 Credit Card No. _____

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MONTGOMERY WATSON

4100 Spenard Road
Anchorage, Alaska 99517

Tel: (907) 248-8883
Fax: (907) 248-8884

Date:

2/20/97

To:

Mary White

Fax No:

702 361-3137

From:

Bonnie McLean

Reference:

Subject:

Co C 97 LI 2
Corrected

No. of Pages:

3

(including cover)

If you do not receive all pages, or if there are any problems with this transmission, please call Jenny Farr at (907) 248-8883.

2/16/97

Time

ADD: 97 BPK LI B8 SD 01 (01) @ 0430
P92. 97 BPK LI B8 SD 02 (08) @ 0500

Correct

Pg 1. 2/15/97 @ 1730

97 BPK LI C4 SD 01 (08)

Should be

97 BPK LI C4 SD 0 2 (01)



MON. GOMERY WATSON

C of C # 97-C # L23

Page 1 of 2

BP EXPLORATION (ALAS) INC.
LIBERTY ISLAND SEDIMENT AND WATER
SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO.		To:		TOTAL NO. OF CON- TAINERS	GRAIN SIZE, ASTM D442					REMARKS
1189002.280101		CAS, ANCHORAGE								
SAMPLERS: (Signature)		1997								
DATE	TIME	S/W	Sample ID							
2/14	2300	S	97 BPX LI B3 SD 01 (01)	1	✓					
2/14	2330	S	97 BPX LI B3 SD 02 (08)	1	✓					
2/15	0120	S	97 BPX LI B6 SD 01 (01)	1	✓					
2/15	0145	S	97 BPX LI B6 SD 02 (08)	1	✓					
2/15	900	S	97 BPX LI B10 SD 01 (01)	1	✓					
2/15	0900	S	97 BPX LI B8 SD 02 (08)	1	✓					
2/15	0930	S	97 BPX LI B8 SD 01 (01)	1	✓					
2/15	1000	S	97 BPX LI B10 SD (02) (08)	1	✓					02 (08)
2/15	1400	S	97 BPX LI I1 SD 01 (01)	1	✓					
2/15	1445	S	97 BPX LI I1 SD (02) (08)	1	✓					02 (08)
2/15	2220	S	97 BPX LI C2 SD 01 (01)	1	✓					
2/15	2240	S	97 BPX LI C2 SD 02 (08)	1	✓					
2/15	1800	S	97 BPX LI C4 SD 02 (08)	1	✓					
2/15	1730	S	97 BPX LI C4 SD 01 (01)	1	✓					
2/16	1130	S	97 BPX LI A4 SD 01 (01)	1	✓					
2/16	1200	S	97 BPX LI A4 SD 02 (08)	1	✓					
2/16	0930	S	97 BPX LI A6 SD 01 (01)	1	✓					
Relinquished by: 97 BPX		Date/Time		Shipped via:		Notified: N/A		Date/Time		
<i>Anderson</i>		2/21/97 1455		<i>Delivered</i>						
Received for Laboratory by: <i>Shirley Watson</i>				Date: 2-21-97		Time: 2:50 PM				

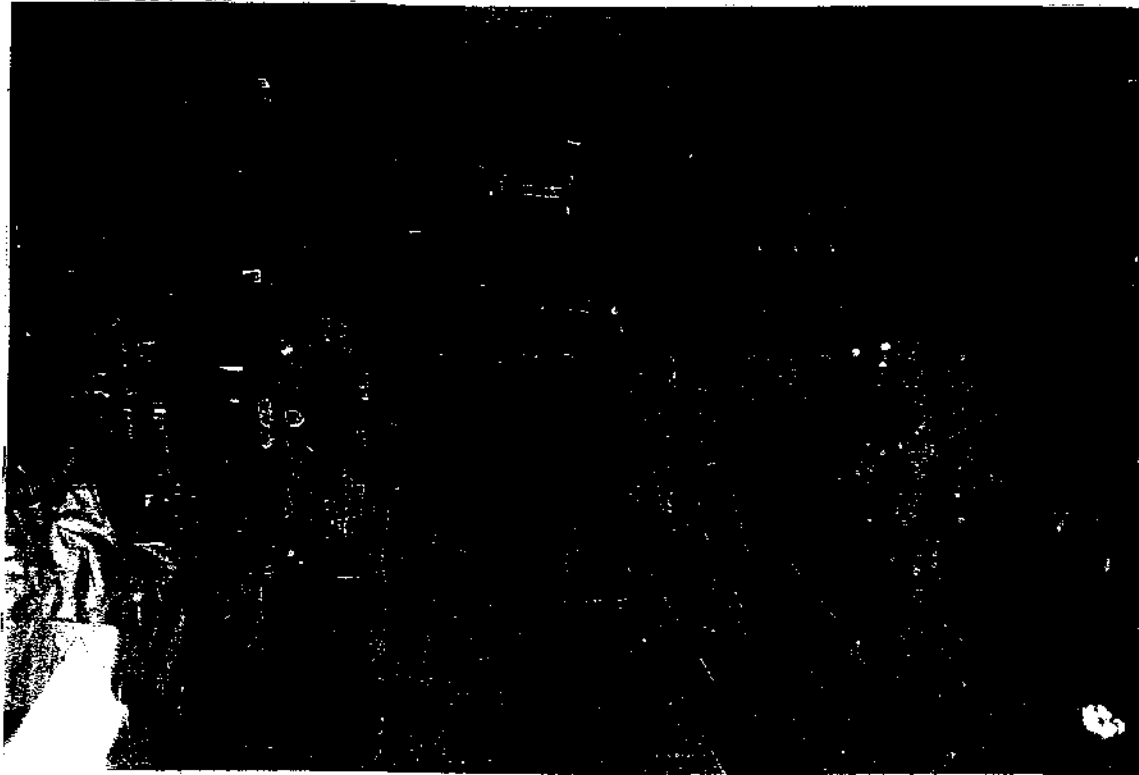
Appendix E

Photographs



MONTGOMERY WATSON

BP Exploration (Alaska), Inc
Liberty Island
Water and Sediment Sampling



Five Foot Split Spoon, Extracted From Hole, Preparing To Open



Collecting Soil Sample From Split Spoon By Bill Nettleton, MW

Appendix F
Health and Safety Plan
(Duane Miller & Associates)



MONTGOMERY WATSON

SOP FILE NO: 4119.22

DATE: Feb. 11, 1997

SIMULTANEOUS OPERATING PLAN BPX: Liberty Geotechnical Exploration

WORK PACKAGE: Drill and sample geotechnical borings

JOB TITLE: Liberty Geotechnical

LOCATION: Offshore in Foggy Island Bay between Endicott and Liberty #1 Ice Island

START DATE: Feb. 14, 1997

COMPLETION DATE: March 1, 1997

SPOC FOR THIS JOB: W. Phillips / E. Bashaw

Acknowledgment _____

OPERATOR: Duane Miller & Associates

Acknowledgment _____

1. List the areas and the individuals that will be impacted by this job.

AREA: offshore in Foggy Island Bay
east of Endicott

INDIVIDUAL: W. Phillips and E. Bashaw

2. Indicate any special worksite considerations that may impact this work:

Ice safety
Polar Bears

3. Provide a brief scope of work:

Drill and sample soil and permafrost conditions at about 30 different locations to depths of 30 to 100 feet below mudline. The drilling will be performed with a CME-75 soils drill mounted in an enclosed sled. A second sled with generator and survival shed will be towed in tandem with the drill sled. The sleds will be moved using a Catco RD-85 which will also carry a 3500 gallon fuel tank.

4. Have the following items been considered in the final work plan?

EMERGENCY ACTION PLAN
WORK PERMITS
LIFT PLANS
SPECIAL PROCEDURES
JOB HAZARD ANALYSIS

X
X
X
X
X

NOTE:

All information referred to in this SOP must be reviewed and approved by the individuals listed in section #1.

DM&A Originator: Duane Miller _____

DUANE MILLER & ASSOCIATES
HAZARD ANALYSIS

ACTIVITY: Geotechnical Exploration - Moving from site to site

ANALYZED BY/DATE: D L Miller 2/11/97

PRINCIPLE STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Movement of drill and support sleds between boring locations using CATCO RD-85	Weak ice Getting lost	Check ice conditions before start of work and after any significant storms Reflector set at each location by survey team Use GPS Have redundant GPS systems Check ice thickness at drilling location
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
RD-85 Hand Held GPS List of boring coordinates Ice auger	Inspect ice conditions prior to start of work Inspect ice conditions after storms Inspect interior of sled before moving	Ice safety Use of GPS
REQUIRED PERMITS	ENVIRONMENTAL REQUIREMENTS	EMERGENCY CONTACTS
DNR Misc land Use Permit NSB Development Permit MMS approval	Housekeeping Backfill boring with any remaining cuttings	Radio CATCO Cellular phone to BP Endicott EMERGENCY 659-2222 or SECURITY 659-6800

DUANE MILLER & ASSOCIATES
HAZARD ANALYSIS

ACTIVITY: Geotechnical Exploration - Drilling and sampling

ANALYZED BY/DATE: D L Miller 2/11/97

PRINCIPLE STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Drill sea ice and subsea soil Stop at depths and sample soil Recover samples, log and label Backfill boring	Equipment / personnel accident Fire in enclosure Polar bears Methane pocket Ice movement while drilling	Inspect equipment & rigging each day Practice safe operation of equipment Placement of fire extinguishers at both ends of enclosure Check operation of methane detector Proper exterior lighting for bear detection Awareness of auger binding as indicator of ice movement Plan for retreat from ice if severe movement
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Drill rig Sample extruder Fire extinguishers Methane detector Emergency survival gear on second sled	Inspect equipment & rigging eachday Qualified driller CATCO RD-85 watches for bears	Drilling safety Operation of fire extinguishers Fire drill w/ plan of evacuation Methane alarm and evacuation plan
REQUIRED PERMITS	ENVIRONMENTAL REQUIREMENTS	EMERGENCY CONTACTS
DNR Misc land Use Permit NSB Development Permit MMS approval	Housekeeping Liners in place for fueling & idling vehicles Good management refueling	Radio CATCO Cellular phone to BP Endicott EMERGENCY 659-2222 or SECURITY 659-6800

DUANE MILLER & ASSOCIATES

HAZARD ANALYSIS

ACTIVITY: Geotechnical Exploration - Personnel transport and temperature monitoring

ANALYZED BY/DATE: D L Miller 2/11/97

PRINCIPLE STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Transport on ice w/ CATCO RD-85 and on Ice-Road w/ 4-wheel drive crew cabs	Weak ice Getting lost	Check ice conditions after any significant storms Use GPS Have redundant GPS systems Convoy 4WD's when visibility is bad
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
RD-85 Hand Held GPS List of boring coordinates	Inspect ice conditions after storms CATCO RD-85 operator watches for bears	Ice safety Use of GPS
REQUIRED PERMITS	ENVIRONMENTAL REQUIREMENTS	EMERGENCY CONTACTS
DNR Misc land Use Permit NSB Development Permit MMS approval	Housekeeping Liners in place for fueling & idling vehicles Good management refueling	Radio CATCO Cellular phone to BP Endicott EMERGENCY 659-2222 or SECURITY 659-6800

MEMORANDUM

Duane Miller & Associates
(907) 346-1021 FAX 346-1636

To: Participating Parties (see distribution at end)
From: Duane Miller
Date: February 11, 1997 DM&A Job No. 4119.22
Subject: Liberty Geotechnical Program - Contingency Plan

Contingency Plan

This winter's geotechnical work for the Liberty Development project will be performed using a soils drill mounted on an enclosed sled and moved by a Catco RD-85 rolligon. The work will be performed on a 24-hour per day basis. Field supervisor and the geologist for one shift will be Walt Phillips of DM&A, the second geo-engineer will be Erin Bashaw, and Mike Hendee will assist during the day shift as expediter and engineering technician. Discovery Drilling will have a driller and helper on each shift. Our contingency planning relies heavily on Catco and BP support for communications and transport.

Environmental sampling will be performed by Bonnie McLean and Bill Nettleton of Montgomery Watson when the drill is cleanest and will be completed before the geotechnical work. Walt and Erin will assist. The work is expected to start Friday's day shift (2/14) and be completed in 2 or 3 shifts. The environmental work should start with Boring B-3 (it can be driven to on the ice road and a snow ramp is present where the drill-sled can be off-loaded).

The geotechnical drilling should start with the near shore borings (B-1, B-2, B-3, B-4 and B-5 and A-1, A-2, A-3 and A-4). These holes are all in shallow water and we might add additional holes depending on what permafrost we find. The work will then continue on to the holes in deeper water. A list of the borings (with coordinates) and a map (showing the ice road) are attached.

Communications Systems

Two systems will be available. The primary system is the Catco Network with radios in the RD-85, in the drill enclosure and at the Catco Base. This allows for communication with Catco Base which is operated on a 24-hour basis and between the drill and the Catco unit.

The second system is cellular phone. The three DM&A cell phones have the following numbers through Arctic Slope Telephone:

Erin Bashaw 448-1358

Walt Phillips 448-1357

Mike Hendee 448-1328

Emergency Notification

During the work for Liberty, if an incident/emergency occurs such as injury, fire or spill, the field party will contact Catco and BP Endicott. Catco will notify the other parties on this list as needed:

Catco Dispatch
Deborah Hamilton-Johnson (days)
Carmenlita Cothron (nights)
radio is expected to be the initial contact
659-2548 or 659-2526

Bill Kuper, Catco General Manager
659-2205 Room Number
659-3711 Pickup

BP Emergency @ Endicott 659-2222 (the "Red" phone)
BP Security @ Endicott 659-6800

Duane Miller, DM&A Anchorage
(907) 346-1021 office 24 hours
(907) 346-2563 home

Kyle Brown, owner/manager, Discovery Drilling
(907) 344-6431 office
(907) 346-2006 home
Mark Terry, operations manager, 346-4098 home
Dave Roes, chief mechanic, 562-6652 home

Fire Response

The drill operation will be equipped with Ansul style fire extinguishers near each exit door. If a fire destroys the drill, the crew will retreat to the RD-85 for weather protection and evacuation or to the secondary survival sled that is moved with the drill.

Injury Response

First aid equipment will be at the drill rig. The drillers and helpers have current first aid and CPR training. If an injury occurs that requires evacuation, BP Emergency should be notified and they will call for help to transport the injured to the emergency aid station at BP Base Camp.

Ice Safety

Robert Lewellen, PhD, has been monitoring the ice in this area for the Liberty Ice Island and ice road. Check with Bob @ Prudhoe Bay Hotel for current

conditions before start of work. If any ice movement is detected, he will provide further inspection to verify that we can still safely travel on the ice.

The holes drilled through the ice should be used to verify the thickness of the ice at each drill site, the initial freeboard and to monitor the change in freeboard as work progresses.

Oil Spill Response

Pickups parked on the ice road will be left running in most weather and a drip pan should be under the engine area of the pickup while it is parked.

Fueling of the operation will be from a 3,500 gallon fuel tank carried by the Rolligon. The fueling operations will be in accordance with best management practices; drip pans will be used and absorbent pads, shovels and collection bags will be available to contain and immediately respond to any small spills.

Catco and BP Emergency will be notified of any fuel spills.

Bear Awareness/Confrontation

All personnel will receive North Slope environmental and Cultural Awareness training in the form of BPX's "Achieving Environmental Excellence" program. All personnel will participate in a specific training program for Polar Bear awareness and safety.

A site layout that minimizes the possibility of polar bear interaction is planned. During drilling operations, the Catco RD-85 operator will watch for bears. A 12-gauge shotgun with buckshot and slugs will be kept at the drill rig for the extreme emergency.

Rolligon Breakdown

If the Rolligon breaks down at a remote location away from camp, the personnel will rely on the emergency equipment in the survival drum on the Rolligon. The Catco radio system will be used to call for help from Catco Prudhoe Operations.

Attachments:

Summary of Planned Borings
Map showing Planned Borings and Existing Ice Road

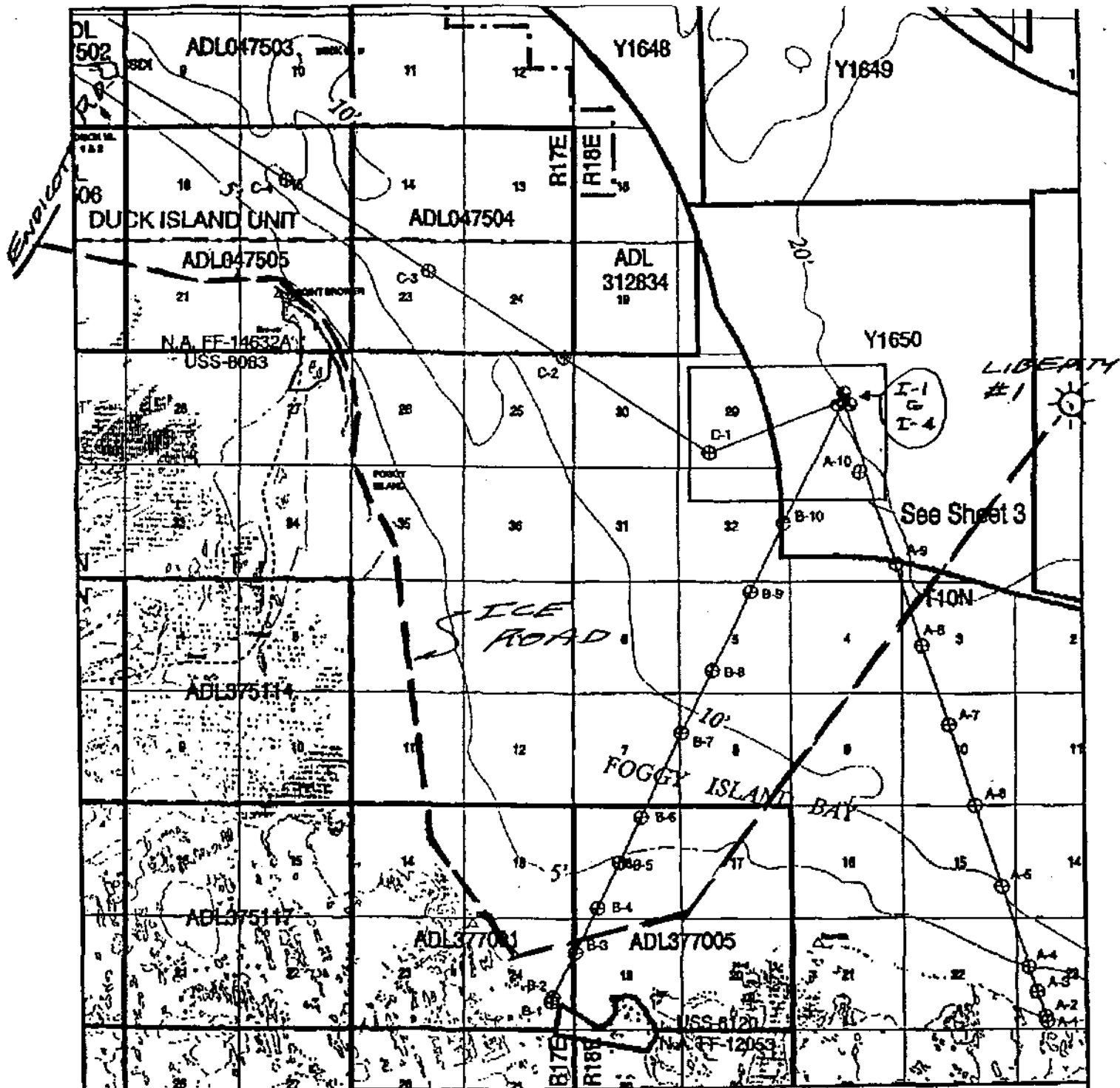
Distribution :

Walt Phillips and Erin Bashaw @ DM&A, Liberty Field
Bonnie McLean @ Montgomery Watson
Bill Kuper @ Catco, Prudhoe Bay
BP Endicott Security
Kyle Brown @ Discovery Drilling Anchorage
Jim Lewis @ BP Exploration (Alaska), Anchorage
José González Jáuregui @ INTEC Engineering c/o BP Anchorage
Rory Mayra @ BP Exploration (Alaska), Anchorage

LIBERTY GEOTECHNICAL EXPLORATION PLAN

Boring	Facility location	EASTING ASP zone 3, NAD 27	NORTHING ASP zone 3, NAD 27	Latitude	Longitude	Enviro. Sampling	Expected Water	Geotech Hole Depth
A1	SSE Badami route	313,271 ft.	5,925,151 ft.	70° 12.026'	147° 30.308'		on shore	30 ft.
A2	SSE Badami route	313,203 ft.	5,925,378 ft.	70° 12.063'	147° 30.343'		beach	30 ft.
A3	SSE Badami route	312,849 ft.	5,926,563 ft.	70° 12.255'	147° 30.528'		3 ft.	30 ft.
A4	SSE Badami route	312,496 ft.	5,927,747 ft.	70° 12.448'	147° 30.714'	yes	5 ft.	30 ft.
A5	SSE Badami route	311,356 ft.	5,931,567 ft.	70° 13.069'	147° 31.311'		9 ft.	30 ft.
A6	SSE Badami route	310,216 ft.	5,935,387 ft.	70° 13.690'	147° 31.909'	yes	16 ft.	30 ft.
A7	SSE Badami route	309,075 ft.	5,939,206 ft.	70° 14.312'	147° 32.508'		18 ft.	30 ft.
A8	SSE Badami route	307,935 ft.	5,943,026 ft.	70° 14.933'	147° 33.107'	yes	20 ft.	30 ft.
A9	SSE Badami route	306,795 ft.	5,946,845 ft.	70° 15.554'	147° 33.707'		19 ft.	30 ft.
A10	SSE Badami route	305,657 ft.	5,950,657 ft.	70° 16.174'	147° 34.307'	yes	18 ft.	30 ft.
B1	SSW Badami route	289,870 ft.	5,926,732 ft.	70° 12.184'	147° 41.641'		on shore	30 ft.
B2	SSW Badami route	289,963 ft.	5,926,908 ft.	70° 12.213'	147° 41.598'		beach	30 ft.
B3	SSW Badami route	291,067 ft.	5,929,001 ft.	70° 12.561'	147° 41.092'	yes	3 ft.	30 ft.
B4	SSW Badami route	292,171 ft.	5,931,093 ft.	70° 12.909'	147° 40.586'		3 ft.	30 ft.
B5	SSW Badami route	293,275 ft.	5,933,186 ft.	70° 13.257'	147° 40.080'		4 ft.	30 ft.
B6	SSW Badami route	294,380 ft.	5,935,278 ft.	70° 13.605'	147° 39.573'	yes	6 ft.	30 ft.
B7	SSW Badami route	296,427 ft.	5,939,158 ft.	70° 14.250'	147° 38.633'		7 ft.	30 ft.
B8	SSW Badami route	297,975 ft.	5,942,092 ft.	70° 14.737'	147° 37.921'	yes	14 ft.	30 ft.
B9	SSW Badami route	299,910 ft.	5,945,758 ft.	70° 15.346'	147° 37.031'		17 ft.	30 ft.
B10	SSW Badami route	301,581 ft.	5,948,926 ft.	70° 15.873'	147° 36.261'	yes	12 ft.	30 ft.
C1	Endicott route	298,096 ft.	5,952,260 ft.	70° 16.404'	147° 37.995'		15 ft.	30 ft.
C2	Endicott route	291,288 ft.	5,956,828 ft.	70° 17.122'	147° 41.359'	yes	15 ft.	30 ft.
C3	Endicott route	284,967 ft.	5,961,071 ft.	70° 17.788'	147° 44.486'		10 ft.	30 ft.
C4	Endicott route	278,336 ft.	5,965,522 ft.	70° 18.486'	147° 47.770'	yes	11 ft.	30 ft.
I1	center of island	304,514 ft.	5,954,484 ft.	70° 16.796'	147° 34.909'		20 ft.	100 ft.
I2	350' SE of island cen	304,815 ft.	5,954,311 ft.	70° 16.769'	147° 34.761'		20 ft.	50 ft.
I3	350' N of island cent	304,515 ft.	5,954,831 ft.	70° 16.853'	147° 34.913'	yes	20 ft.	50 ft.
I4	350' SW of island cer	304,215 ft.	5,954,311 ft.	70° 16.766'	147° 35.052'		20 ft.	50 ft.

Geotechnical hole depths are from mudline. All holes should end in gravel or gravelly sand and not in frozen silt, clay or sand.



This map is based on U.S.G.S. quad Beechy Point (B-2,B-1, A-2,A-1) and on the Unit Operator's Facility Maps.

NORTH

⊕ Boring less than 50' deep
 ⊙ Boring greater than 50' deep
 Within T11NR17E Sec. 8, 14, 15, 16, 23, 24, 25
 T11NR18E Sec. 29, 30, 32, 33
 T10NR17E Sec. 24
 T10NR18E Sec. 3, 4, 5, 7, 8, 10, 15, 16, 18, 22, 23

BP EXPLORATION (ALASKA) INC.

**LIBERTY
 GEOTECHNICAL
 BORE HOLE LOCATIONS
 PERMIT APPLICATION**

DATE:
1/28/87

SCALE:
1" = 1.25 Mile

SHEET:
2 OF 3