

**VOLUME III
Remedial Investigation Report
South Mesa WQARF Registry Site
Mesa, Arizona
ADEQ Task Assignment EV11-0084**

Prepared for:

**Arizona Department of Environmental Quality
Waste Programs Division
1110 West Washington Street
Phoenix, Arizona 85007**

Prepared by:

**AMEC Environment & Infrastructure, Inc.
Phoenix, Arizona**

June 7, 2013

AMEC Project No. 14-2012-2022.04.01

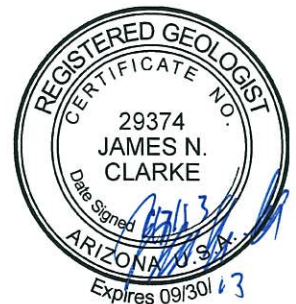
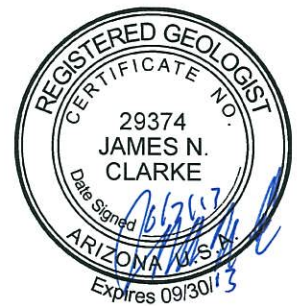


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APPENDIX D

UNDERGROUND DETECTION SERVICE GEOPHYSICAL REPORT



**Underground Detection
Services, Inc.**

6809 North 56th Ave.
Glendale, AZ 85301

623/939-4690, tel
623/955-3146, fax
888/822-4999, toll free

May 16, 2001

Jim Clarke
Law Engineering
4634 S. 36th Pl.
Phoenix, AZ 85040

Dear Jim:

This is a report on the equipment, procedures, and results of the geophysical survey performed at the north parking lot of the Gilbert Glass office in Gilbert, AZ. The survey was conducted on May 14, 2001.

The purpose of the survey was to determine the location of the septic tank and cesspool at the site. The east bay of the building was also surveyed for underground utility lines.

The equipment used for the survey included but was not limited to a GSSI Gem-300 multi-frequency electromagnetic (EM) profiler, and GSSI Sir System II ground penetrating radar (GPR) with 400 MHz antenna, Prototek RDF sewer locator, and a MetroTech 810 pipe and cable locator.

The EM produces a sinusoidal signal that is transmitted into the subsurface. This transmitted signal induces a flow of electrical current into the soil. These currents in turn induce a secondary electromagnetic field. The presence or absence of metallic objects and voids affects this secondary field. The secondary electromagnetic field is measured, collected, interpreted and stored for later processing.

The GPR utilizes high frequency radio waves to probe the subsurface. A radio wave is emitted from the antenna and travels through the soil, if there is an anomaly below the antenna; the radio wave is reflected back. The data that is collected is displayed both in real time, through a color display, and on a hard copy, thermal fax paper.

The data that is produced is a cross section of the geology directly below the antenna. The top of the data represents the ground surface while the bottom of the page is a known depth. The data is collected and displayed from left to right, with left being the beginning and right being the end of the particular survey line. Typical anomalies appear in white and gray coloring.

The depth of the signal penetration is dependant upon geological factors beyond the control of the surveyor. Conductive soils, clays and saturated, do not allow the GPR signal to penetrate as deeply as resistive soils,

sandy. The depth of penetration for this survey was determined to be approximately 3 feet.

The pipe and cable locator uses a defined radio frequency induced on the line from a transmitter attached to the line at the surface. The frequency travels the length of the line and acts as an antenna below the surface. A receiver tuned to that frequency is carried above the surface and locates the line with that frequency. Non-metallic pipes do not carry radio frequencies and therefore cannot be located with this equipment.

The sewer locator utilizes a radio transmitter that is inserted into the pipe. The transmitter is then pushed through the pipe and located from above ground with a receiver and various points along the pipes path.

The transmitter was inserted into the pipe through a wall cleanout behind the bathrooms. The transmitter was pushed out of the building and located at several places and marked on the surface. At a point consistent with the information provided by the environmental tech, the transmitter would not proceed further. This was determined to be the inlet baffle of the septic tank. That point was marked on the surface and labeled.

The EM was used first on the survey due to the ease and speed of data collection. If an anomaly appears in the data of the EM, the GPR may then be used to further delineate the area. To determine if the anomaly is iron based, the magnetic locator would be used.

The geophysical survey was setup north of the building from the west fence to a large delivery truck on the east side. There were several vehicles and debris in the lot that could not be moved that did not allow for full coverage for the survey. The survey area was setup with grid lines 5' apart running parallel to each other.

The EM was initially set up to record 4 separate frequencies for the survey, from 330Hz to 19950Hz in the continuous survey mode. The multiple frequencies allow for variable depth measurements. The lower the frequency, 330 Hz, the greater the depth penetration of the frequency. The higher the frequency, 19950 Hz, the shallower the depth penetration of the frequency. The continuous survey mode was set up to generate the frequencies every 1/2 second. The estimated depth penetration of the frequencies for this survey was 2 feet to 8 feet.

Each frequency is made up of two components, in-phase (I) and quadrature (Q). The in-phase response is typically high with metallic conductors while the quadrature response is typically high with non-metallic conductors. The grid maps are color-coded for easy interpretation. The green areas represent neutral readings while red areas represent high readings and possible anomalies.

The data collected, showed several areas of possible anomalies. The anomalies were marked on the corresponding EM map. Anomaly A1 was marked in both the 1290(I) and 1290(Q) grid maps of Area A. Anomaly A2 was marked in the 1290(I).

Anomaly A1 appears in the metallic and non-metallic phase of the EM data and appears to be the edge of the septic tank. Anomaly A2 is the large delivery truck at the east end of the survey area.

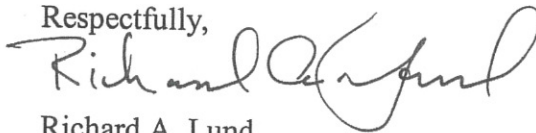
The GPR was used west and north of the septic tank, and the east side of the parking lot where the vapor extraction wells are located. The GPR data shows the possibility of the cesspool directly north of the tank. The dry well on the east side of the parking lot was not detected.

The site map was marked with the EM survey area, anomalies found and the GPR examination locations. The starting point of the EM survey was marked with an X.

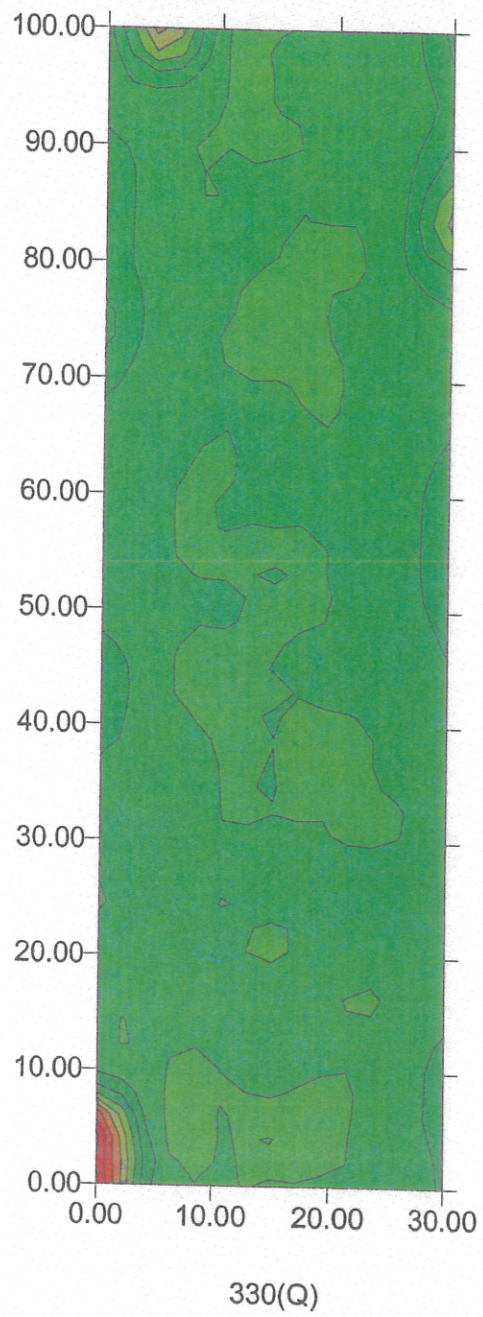
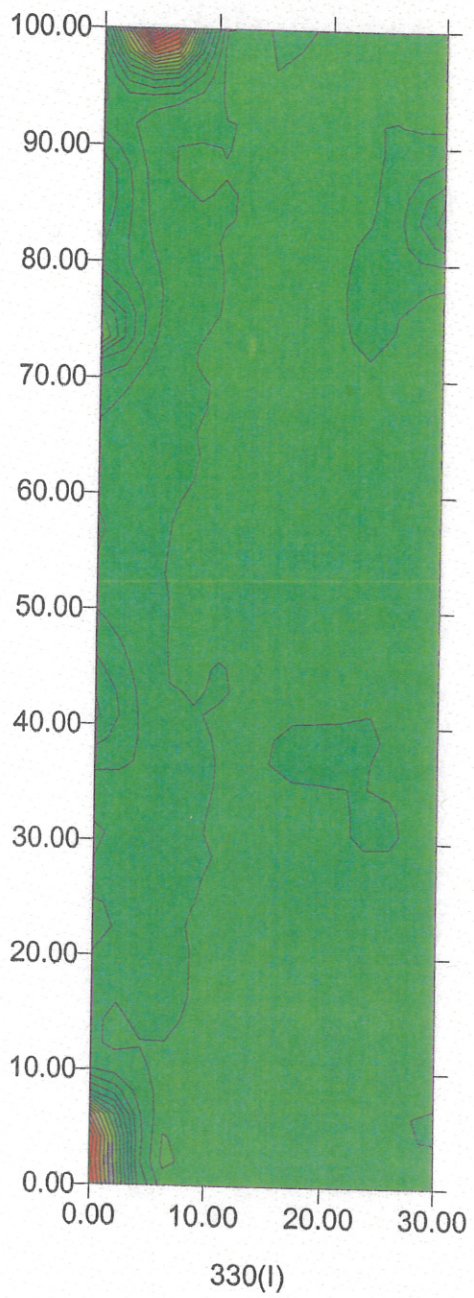
The raw data collected from the EM as well as the grid maps has been provided on a floppy disc. The GPR data is shown on hard copy color prints. Utilizing Microsoft Excel and Surfer software respectively can access the data.

If you have any questions, please feel free to call me.

Respectfully,

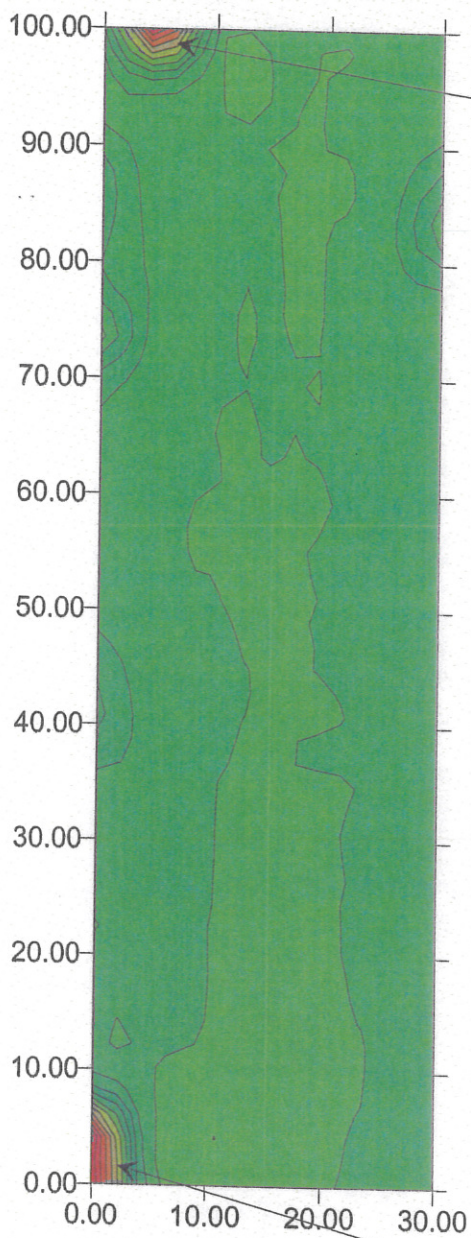
A handwritten signature in dark ink, appearing to read "Richard A. Lund". The signature is fluid and cursive, with the first name "Richard" being more prominent and the last name "Lund" following in a similar style.

Richard A. Lund

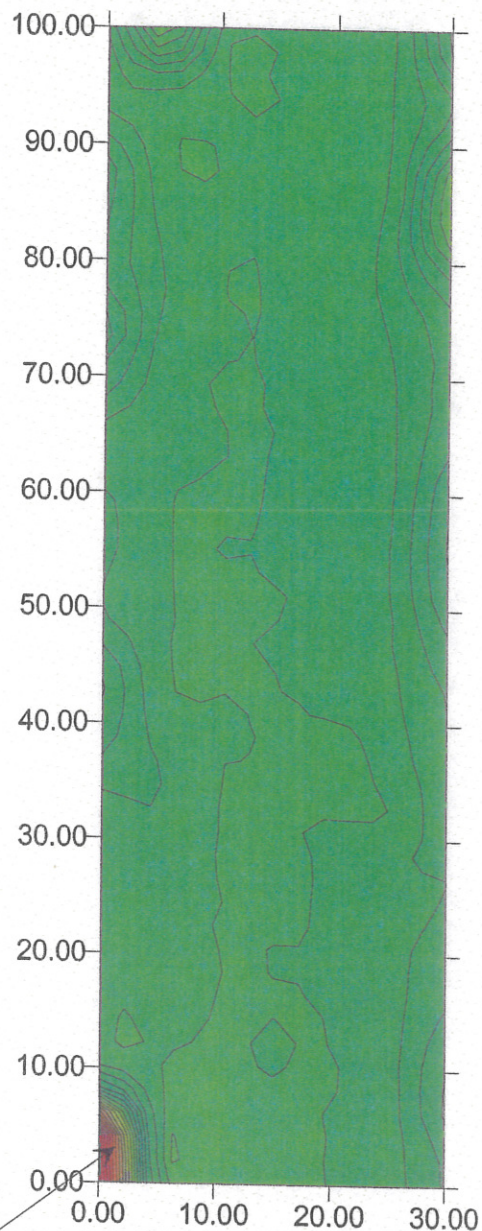


Area A





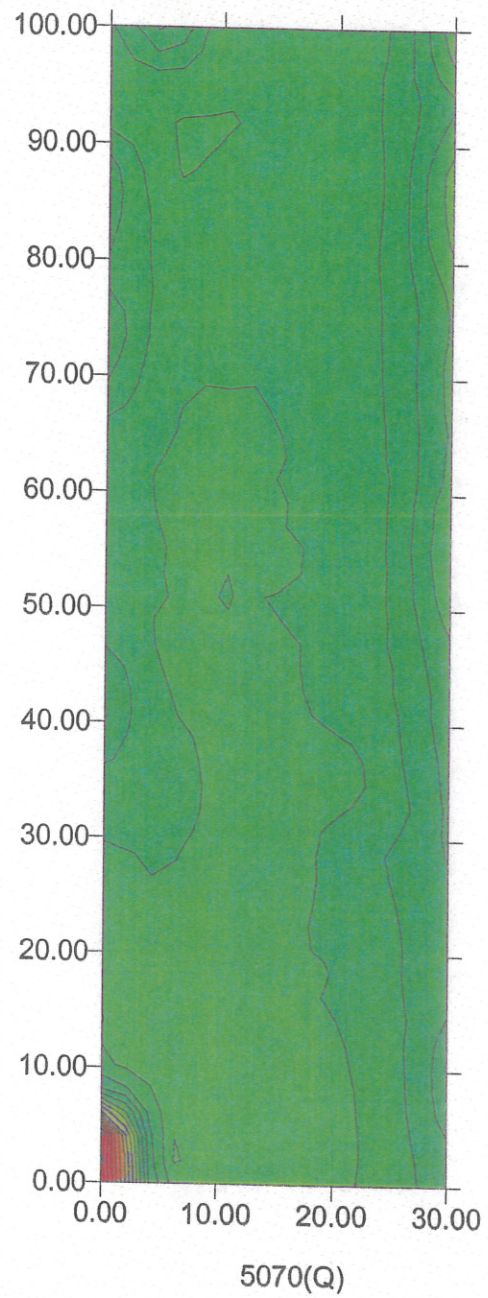
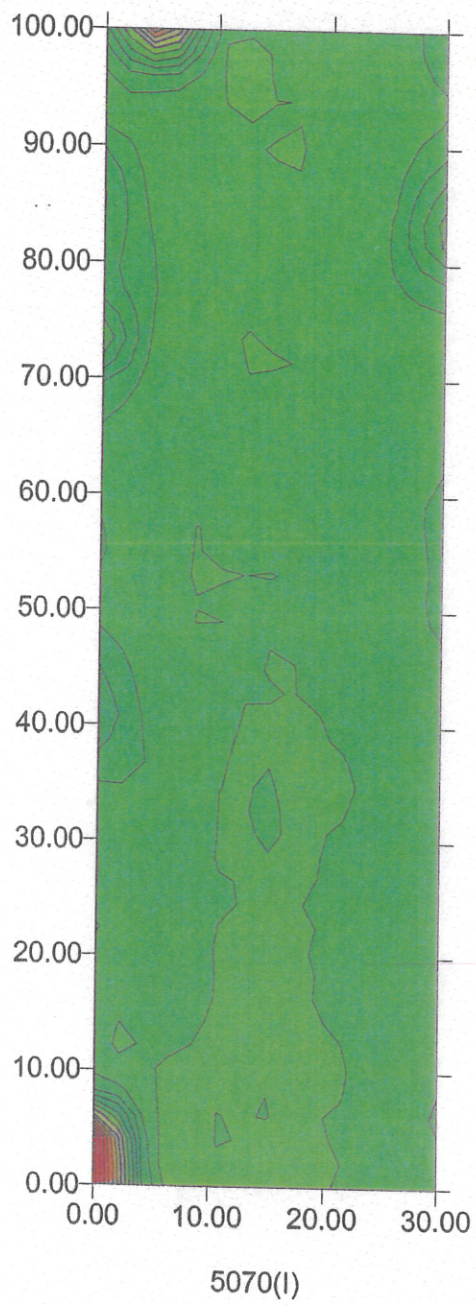
1290(I)



1290(Q)

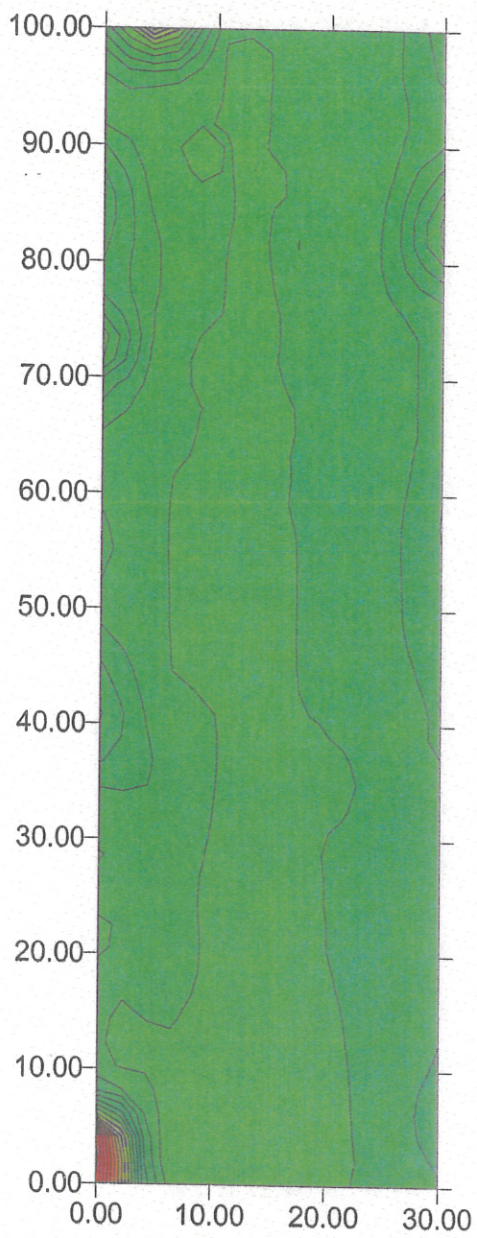
Area A



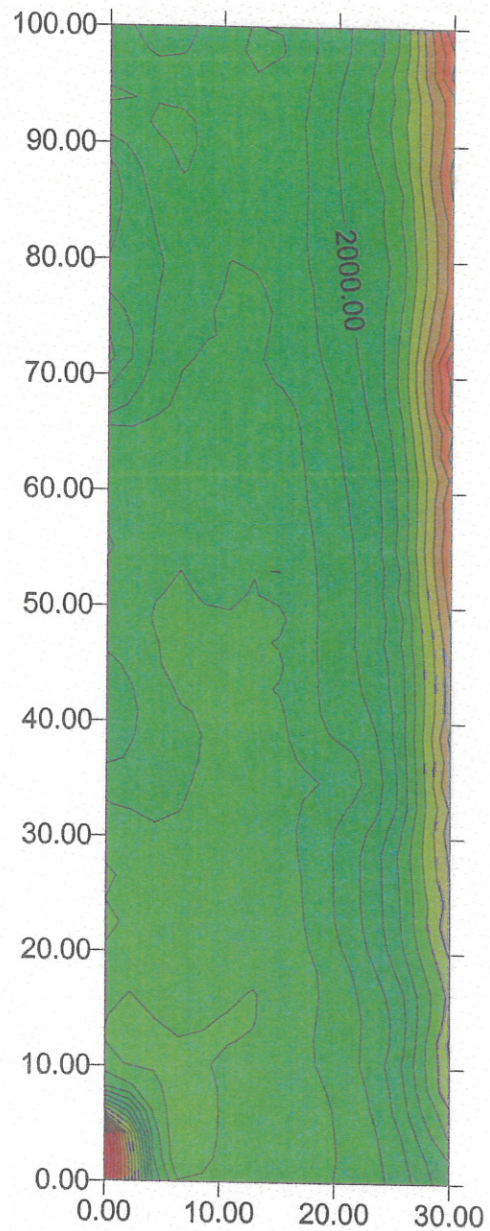


Area A





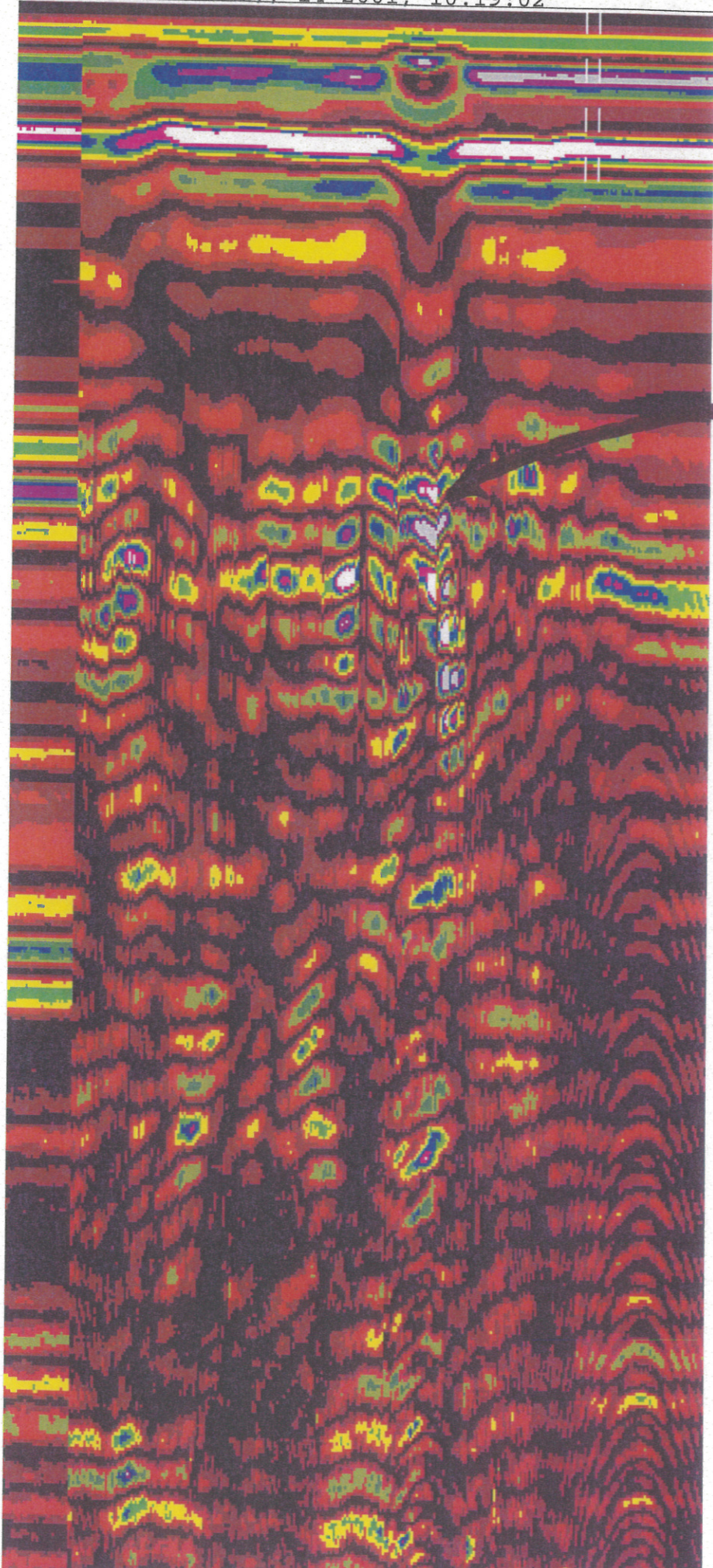
19950(I)



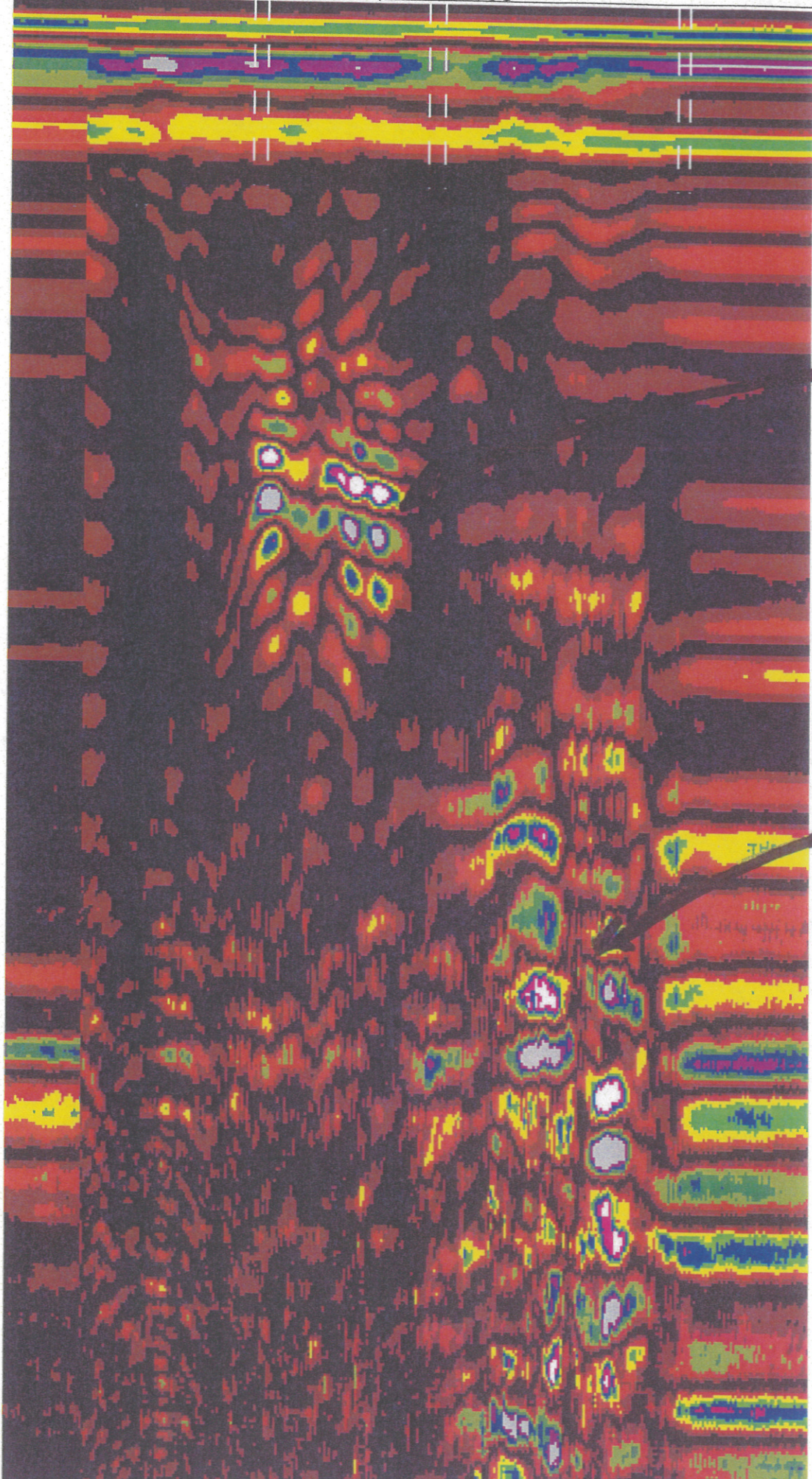
19950(Q)

Area A





Vapor Extraction
Pipe - East Parking
lot



Septic tank

Possible
Cross pool

Approximate Geophysical Survey Area - Not to Scale 7-11 STORE

MCQUEEN ROAD

SIDEWALK

APPROXIMATE
LOCATION
OF SEEPAGE PIT

PRESUMED
SEPTIC LEACH
FIELD

SOIL

SIDEWALK

OFFICE

BATHROOMS

STORAGE

WASTE OIL
DRUMS

APPROXIMATE
SEPTIC TANK
LOCATION

ASPHALT

Area A

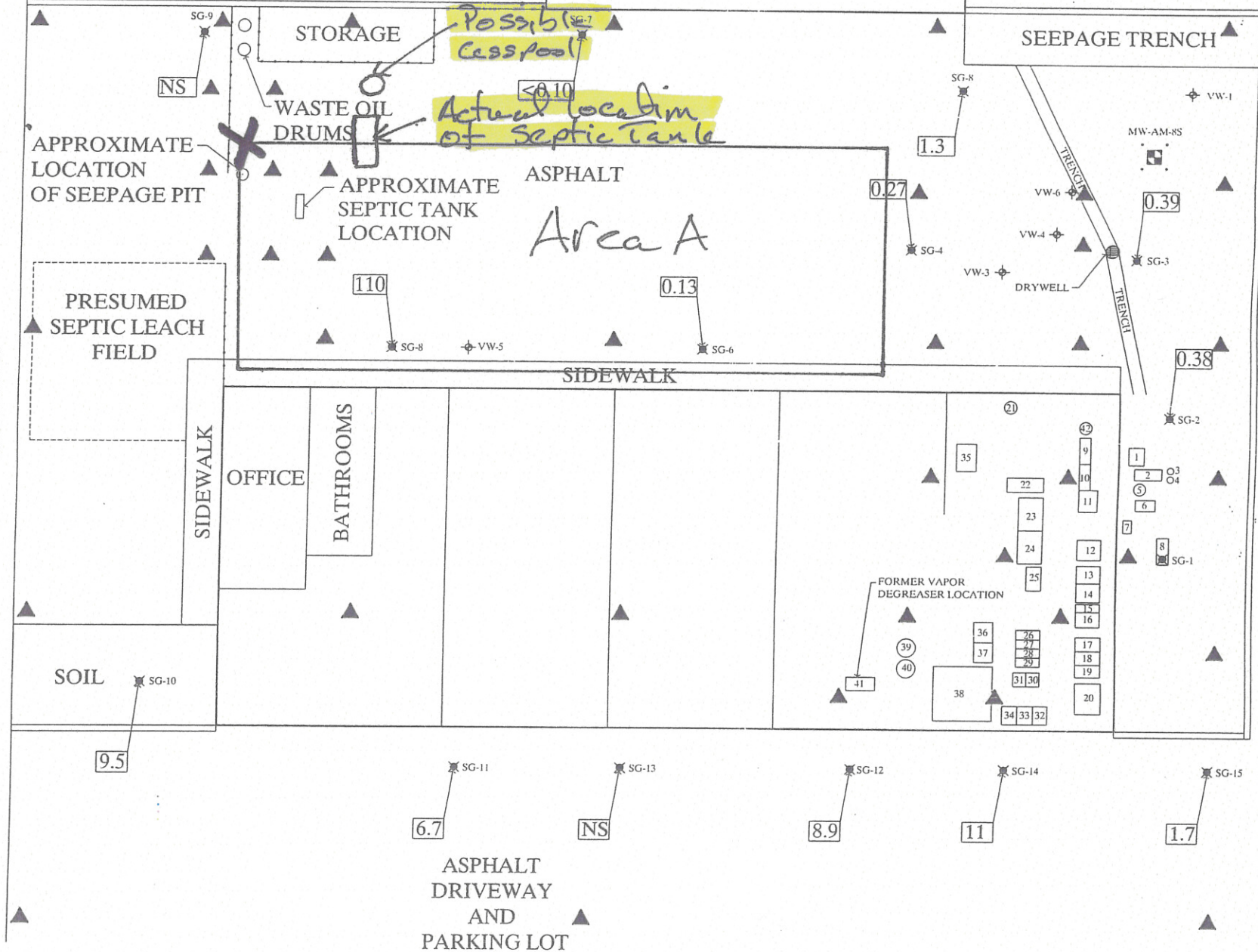
SIDEWALK

ASPHALT
DRIVEWAY
AND
PARKING LOT

SEEPAGE TRENCH

MW-AM-8S

FORMER VAPOR
DEGREASER LOCATION



APPENDIX E

**BEACON ENVIRONMENTAL ANALYTICAL REPORT
DATED JUNE 12, 2001**

BEACON Report No. EM1330

EMFLUX[®] Passive
Soil-Gas Survey

APPLIED METALLICS SITE
GILBERT, AZ

Prepared for

Law Engineering & Environmental Services
4634 South 36th Place
Phoenix, AZ 85040

by

BEACON Environmental Services, Inc.
19 Newport Drive
Suite 102
Forest Hill, MD 21050

June 12, 2001

Applying Results from Soil-Gas Surveys

The utility of soil-gas surveys is directly proportional to their accuracy in reflecting and representing changes in the subsurface concentrations of source compounds. Passive soil-gas survey results are the mass collected from the vapor-phase emanating from the source. The vapor-phase is merely a fractional trace of the source, so, as a matter of convenience, the units used in reporting detection values from EMFLUX® surveys are smaller than those employed for source-compound concentrations.

The critical fact is that, whatever the relative concentrations of source and associated soil gas, best results are realized when the ratio of soil-gas measurements to actual subsurface concentrations remains as close to constant as the real world permits. It is the reliability and consistency of this ratio, not the particular units of mass (*e.g.*, nanograms) that determine usefulness. Thus, BEACON emphasizes the necessity of conducting — at minimum — follow-on intrusive sampling at one or two points which show relatively high EMFLUX® values to obtain corresponding concentrations of soil and ground-water contaminants. These correspondent values furnish the basis for approximating the required ratio. Once that ratio is established, it can be used in conjunction with EMFLUX® measurements (regardless of the units adopted) to estimate subsurface contaminant concentrations across the survey field. It is important to keep in mind, however, that specific conditions at individual sample points, including soil porosity and permeability, depth to contamination, and perched ground water, can have significant impact on soil-gas measurements at those locations.

When EMFLUX® Surveys are handled in this way, the data provide information that can yield substantial savings in drilling costs and in time. They furnish, among other things, a checklist of compounds expected at each survey location and help to determine how and where drilling budgets can most effectively be spent.

EMFLUX® Survey Number: EM1330

**Applied Metallics Site
Gilbert, AZ**

This EMFLUX® Soil-Gas Survey Report has been prepared for Law Engineering & Environmental Services (LAW) by Beacon Environmental Services, Inc. (BEACON) in accordance with the terms of the signed Order Confirmation Form, dated May 16, 2001. BEACON's principal technical contact at LAW for this project has been Mr. Jim Clarke.

1. Objectives

Soil-gas samples were collected to determine the presence, identity, and relative strength of targeted contaminants in soil and/or ground water at the Applied Metallics Site. Survey results will be used to determine the distribution of contaminants and to guide further site investigation.

2. Target Compounds

This survey targeted the 10 compounds listed in **Attachment 1**, which supplies the resulting laboratory data in nanograms (ng) of specific compound per cartridge. **Table 1** provides the resulting laboratory data for those compounds identified at one or more locations.

3. Survey Description

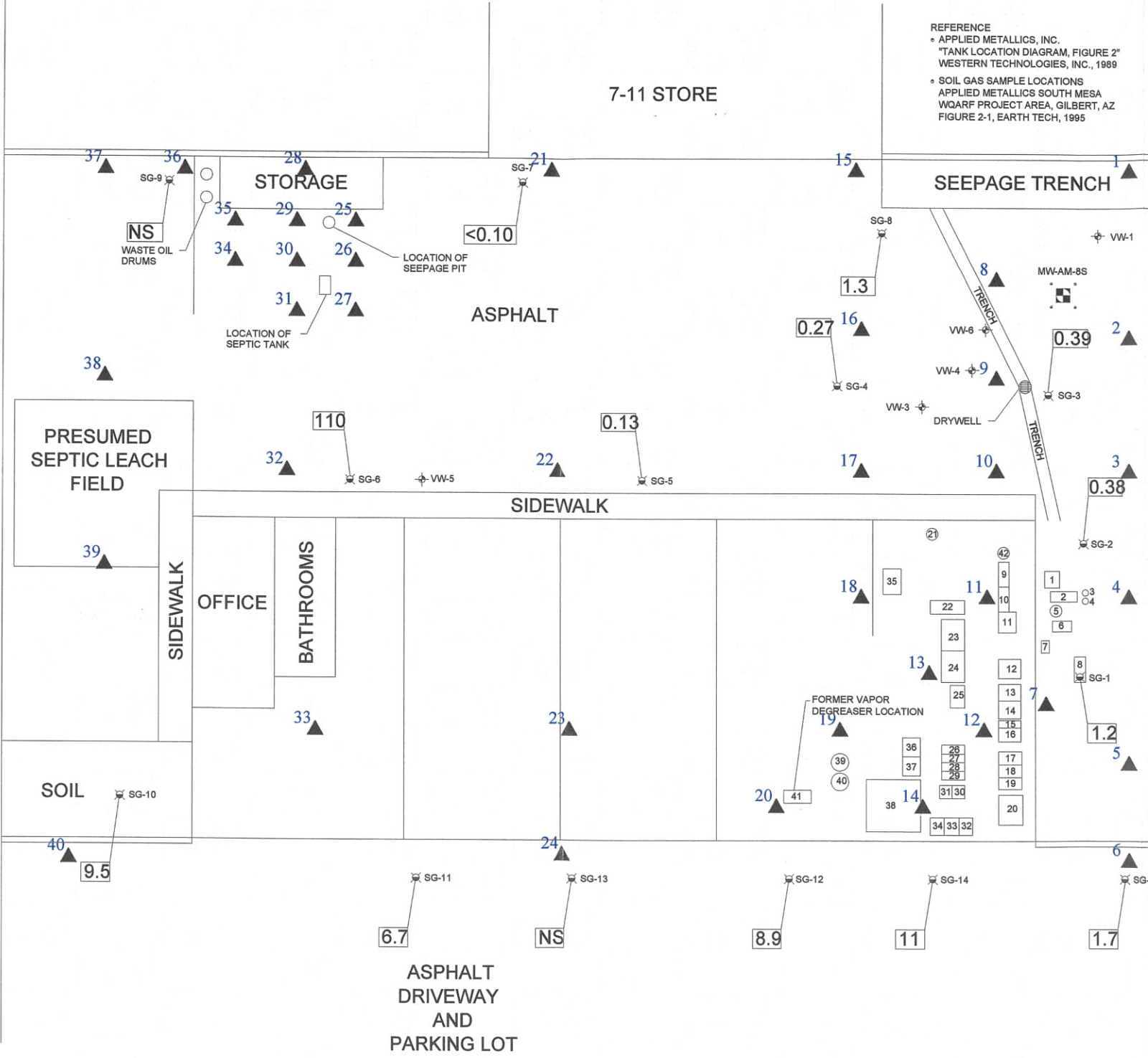
• No. of Field Sample Points:	40
• No. of Duplicate Field Samples:	2
• No. of Trip Blanks:	<u>2</u>
• Total No. of EMFLUX® Cartridges:	44
• Field sample locations are shown on Figure 1 .	

4. Field Work

LAW was provided an EMFLUX® Field Kit with the equipment needed to conduct a 40-point EMFLUX® Soil-Gas Survey. Collectors were deployed on May 25, 2001, and retrieved on May 30, 2001, in accordance with the EMFLUX® timing model. **Attachment 2** describes the field procedures used. Individual deployment and retrieval times will be found in the Field Deployment Report (**Attachment 3**).

MCQUEEN ROAD

SIDEWALK



REFERENCE

- APPLIED METALLICS, INC. "TANK LOCATION DIAGRAM, FIGURE 2" WESTERN TECHNOLOGIES, INC., 1989
- SOIL GAS SAMPLE LOCATIONS APPLIED METALLICS SOUTH MESA WQARF PROJECT AREA, GILBERT, AZ FIGURE 2-1, EARTH TECH, 1995

LEGEND

- SOIL GAS SAMPLE POINT WITH PCE CONCENTRATION IN MICROGRAMS/LITER
- DRYWELL
- VAPOR EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- EMFLUX SOIL GAS LOCATION

- TANK IDENTIFICATION**
- TIN STRIP TANK - USED TO STRIP TIN AND CLEAN PARTS
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 1, 3 AND 4.
 - HYDROCHLORIC ACID (50%) TANK - USED TO CLEAN STEEL PARTS.
 - SAME AS TANK 3
 - BRIGHT DIP TANK - MIXTURE OF NITRIC ACID AND PHOSPHORIC ACID, USED TO CLEAN COPPER OR BRASS PARTS.
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 5, 7 AND 8.
 - NICKEL STRIP TANK - PROPANE HEATED SOLUTION USED TO STRIP NICKEL.
 - NITRIC ACID TANK - USED TO CLEAN OR STRIP PARTS.
 - TIN/LEAD TANK - USED TO PLATE PARTS (TIN).
 - TIN PLATE TANK - USED TO PLATE PARTS (TIN).
 - COPPER/CYANIDE TANK - USED TO PLATE PARTS (COPPER).
 - COPPER/CYANIDE DRAGOUT TANK - USED TO PRE-RINSE PARTS PRIOR TO FINAL RINSE.
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 12, 13, 15 AND 16.
 - SULFURIC ACID (50%) TANK - USED TO CLEAN PARTS.
 - SULFURIC ACID TANK - USED TO MAKE-UP AND HOLD RAW SULFURIC ACID SOLUTION.
 - HYDROCHLORIC (MURIATIC) ACID TANK - USED TO CLEAN STEEL PARTS.
 - HYDROCHLORIC (MURIATIC) ACID TANK - USED TO CLEAN COPPER AND BRASS PARTS.
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 17, 18 AND 20.
 - OAKITE 90 TANK - USED TO CLEAN PARTS.
 - CENTRIFUGE - USED TO SPIN DRY PARTS.
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 9, 10, 11 AND 23.
 - FLUOROBORIC TIN TANK - USED TO PLATE PARTS (TIN).
 - BRIGHT TIN TANK - USED TO PLATE PARTS (BRIGHT TIN).
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 24 AND 35.
 - DEIONIZED WATER TANK - USED TO PRE-RINSE PARTS PRIOR TO TANK 35.
 - DEIONIZED WATER TANK - USED TO PRE-RINSE PARTS PRIOR TO TANK 35.
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 26, 27 AND 29.
 - ACETIC ACID TANK - USED TO PRE-CLEAN PRIOR TO TANK 35.
 - NITRIC ACID TANK - USED TO CLEAN ALUMINUM.
 - ZINCATE TANK - USED TO PRE-CONDITION ALUMINUM.
 - IRIDITE TANK - USED TO PUT CHROMATE FINISH ON ALUMINUM.
 - IRIDITE DRAGOUT TANK - USED TO PRE-RINSE PARTS PRIOR TO FINAL RINSE.
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 32 AND 33.
 - SULFURIC ACID/TIN TANK - USED TO PLATE PARTS (TIN).
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 37 AND 38.
 - ELECTROLESS NICKEL DRAGOUT TANK - USED TO PRE-RINSE PARTS PRIOR TO FINAL RINSE.
 - ELECTROLESS NICKEL TANK - USED TO PLATE PARTS (NICKEL).
 - ELECTROLESS NICKEL HOLDING TANK.
 - ELECTROLESS NICKEL HOLDING TANK.
 - TETRACHLOROETHYLENE VAPOR DEGREASER - USED TO DEGREASE PARTS TO BE PLATED.
 - SAME AS TANK 21.

Figure 1
Soil-Gas Sample Locations

EMFLUX Soil-Gas Survey
Applied Metallics
Gilbert, AZ

5. **Analysis and Reporting Dates**

- BEACON's laboratory received 44 sample cartridges for analysis on May 31, 2001.
- BEACON's laboratory analyzed the samples for the specified compounds, using thermal desorption and a capillary-column gas chromatograph (GC) with a photoionization detector (PID) in series with a dry electrolytic conductivity detector (DELCD) in accordance with EPA Method 8021 (**Attachment 4**).
- Analysis was completed on June 4, 2001. Following a laboratory review, results were provided to LAW on June 6, 2001.

6. **Report Notes and Quality Assurance/Quality Control Factors**

- **Table 1** provides survey results in nanograms per cartridge by sample-point number and compound name. The quantitation levels represent values above which quantitative laboratory results can be achieved within specified limits of precision and with a high degree of confidence. The quantitation level for each compound, therefore, provides a reliable basis for comparing the relative strength of any detection of that compound.
- **Data Compatibility.** It is important to note that when sample locations are covered with or near the edge of an artificial surface (e.g., asphalt or concrete), sample measurements are often distorted (increased) significantly. Such distortion can be attributed to the fact that gas rising from sources beneath impermeable caps tends to reach equilibrium underneath the cap. Thus, a reading taken below or near an impermeable surface is much higher than it would be in the absence of such a cap.
- The **Chain-of-Custody** form, which was shipped with the samples for this survey, is supplied as **Attachment 5**.
- **Laboratory QA/QC procedures** consist of control blanks and verifications, as well as system calibration, as specified for EPA Method 8021. Laboratory personnel conducted internal control blanks and internal control verification analyses daily to ensure that the system was contaminant free and properly calibrated. The system was calibrated using external-standard procedures to at least three different concentrations for each compound targeted.
- **QA/QC Contaminant Corrections.** Following EPA guidelines, EMFLUX[®] laboratory data is not corrected for method blank or trip blank sample contamination values; any contamination detected on QA/QC samples is reported in **Attachment 1**. Subsequent handling of QA/QC sample contamination depends upon the circumstances and origin of the sample; any corrective conventions noted below have proved highly useful in

deriving accurate and reproducible interpretations of survey data in prior EMFLUX[®] Surveys. *No other methods thus far tested have produced comparable levels of quality.*

- **Laboratory method blanks** are run each day with project samples to identify contamination present in the laboratory. If contamination is detected on a method blank, measurements of identical compounds on samples analyzed the same day are considered to be suspect and are flagged in the laboratory report. The laboratory method blank analyzed in connection with the present samples revealed no contamination.
- The **trip blank** is an EMFLUX[®] cartridge prepared, transported, and analyzed with other samples but intentionally not exposed. The trip blanks (labeled Trip-1 and Trip-2 in **Attachment 1**) recorded none of the targeted compounds, indicating that the survey site itself is the source of detected contamination.
- **Duplicates.** EMFLUX[®] collectors are prepared with two adsorbent cartridges for subsequent duplicates or confirmatory samples. The laboratory director performed duplicate analysis for sample locations 17 and 32. Because of finite differences between the cartridges, and the random nature of diffusive particle movement, comparisons between duplicates and primary samples should be made on a qualitative basis, as quantitative results may be subject to random distortions. In general, a duplicate correspondence should be defined as a difference of 50% or less between contaminant data for base and duplicate samples. Also, for the purpose of calculating correspondences, all non-detections should be assigned, as a baseline value, the quantitation level for the specific contaminant. Based on these assumptions, a 95% correlation was found between the duplicate samples and their base samples.
- **Survey findings** are relative exclusively to this project and should not routinely be compared with results of other EMFLUX[®] Surveys. *To establish a relationship between reported soil-gas measurements and actual subsurface contaminant concentrations, which will indicate those detections representing significant subsurface contamination, BEACON recommends the guidelines on the inside front cover of this report.*
- At the request of LAW, the following compound distribution maps have been provided:

Figure 2 — Tetrachloroethene

Figure 3 — Trichloroethene

Figure 4 — cis-1,2-Dichloroethene

- The following **Attachments** are included:

- 1- Laboratory Report
- 2- EMFLUX® Field Procedures
- 3- Field Deployment Report
- 4- Laboratory Procedures
- 5- Chain-of-Custody Form

EM1330

Table 1

Results in Nanograms (ng)
 Analysis Completed: June 4, 2001
 Applied Metallica
 Gilbert, AZ

SAMPLE NO.	1	2	3	4	5	6	7	8
COMPOUNDS								
1,1-Dichloroethene	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U
Trichloroethene	440	110	150	110	46	56	120	170
Tetrachloroethene	200	1,000	1,400	830	1,300	670	1,500	3,000

SAMPLE NO.	9	10	11	12	13	14	15	16
COMPOUNDS								
1,1-Dichloroethene	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U
1,1,1-Trichloroethane	U	U	U	U	U	48	U	U
Trichloroethene	160	240	200	270	220	200	63	340
Tetrachloroethene	2,500	1,100	3,100	2,800	3,100	3,000	980	260

Reported Quantitation Level = 25 nanograms
 U = Below Reported Quantitation Level

Table 1
(continued)
Results in Nanograms (ng)
Analysis Completed: June 4, 2001
Applied Metallics
Gilbert, AZ

SAMPLE NO.	17	17 D	18	19	20	21	22	23
COMPOUNDS								
1,1-Dichloroethene	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	180	250	U	U	U	U	U	U
1,1,1-Trichloroethane	U	U	U	56	140	U	U	U
Trichloroethene	380	520	530	330	300	180	100	330
Tetrachloroethene	430	750	4,700	3,700	4,900	2,600	570	8,700

SAMPLE NO.	24	25	26	27	28	29	30	31
COMPOUNDS								
1,1-Dichloroethene	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	U	U	210	92	U	U	160	U
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U
Trichloroethene	98	270	360	390	220	140	500	450
Tetrachloroethene	1,100	3,600	4,100	6,100	2,500	2,300	4,500	4,700

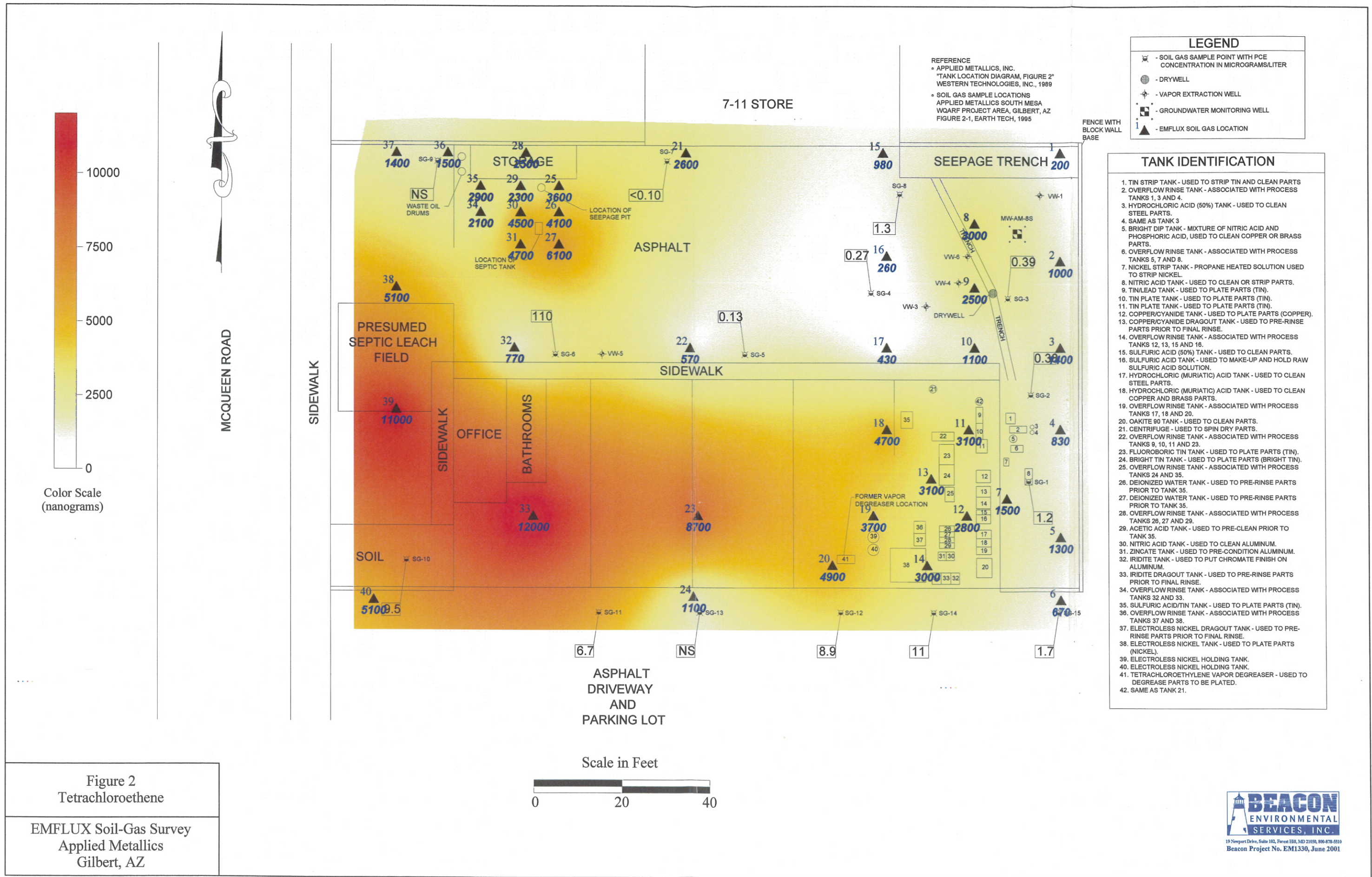
Reported Quantitation Level = 25 nanograms
U = Below Reported Quantitation Level

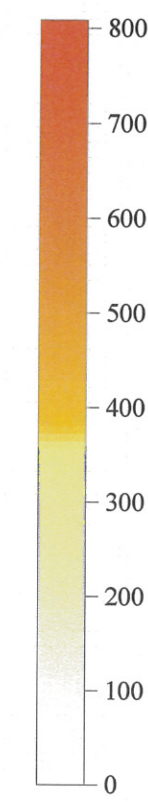
Table 1
(continued)
Results in Nanograms (ng)
Analysis Completed: June 4, 2001
Applied Metallics
Gilbert, AZ

SAMPLE NO.	32	32 D	33	34	35	36	37	38
COMPOUNDS								
1,1-Dichloroethene	U	U	U	U	U	43	U	U
cis-1,2-Dichloroethene	U	39	U	U	300	U	U	U
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U
Trichloroethene	310	340	330	210	580	77	370	480
Tetrachloroethene	770	660	12,000	2,100	2,900	1,500	1,400	5,100

SAMPLE NO.	39	40
COMPOUNDS		
1,1-Dichloroethene	U	U
cis-1,2-Dichloroethene	U	U
1,1,1-Trichloroethane	U	U
Trichloroethene	810	180
Tetrachloroethene	11,000	5,100

Reported Quantitation Level = 25 nanograms
U = Below Reported Quantitation Level

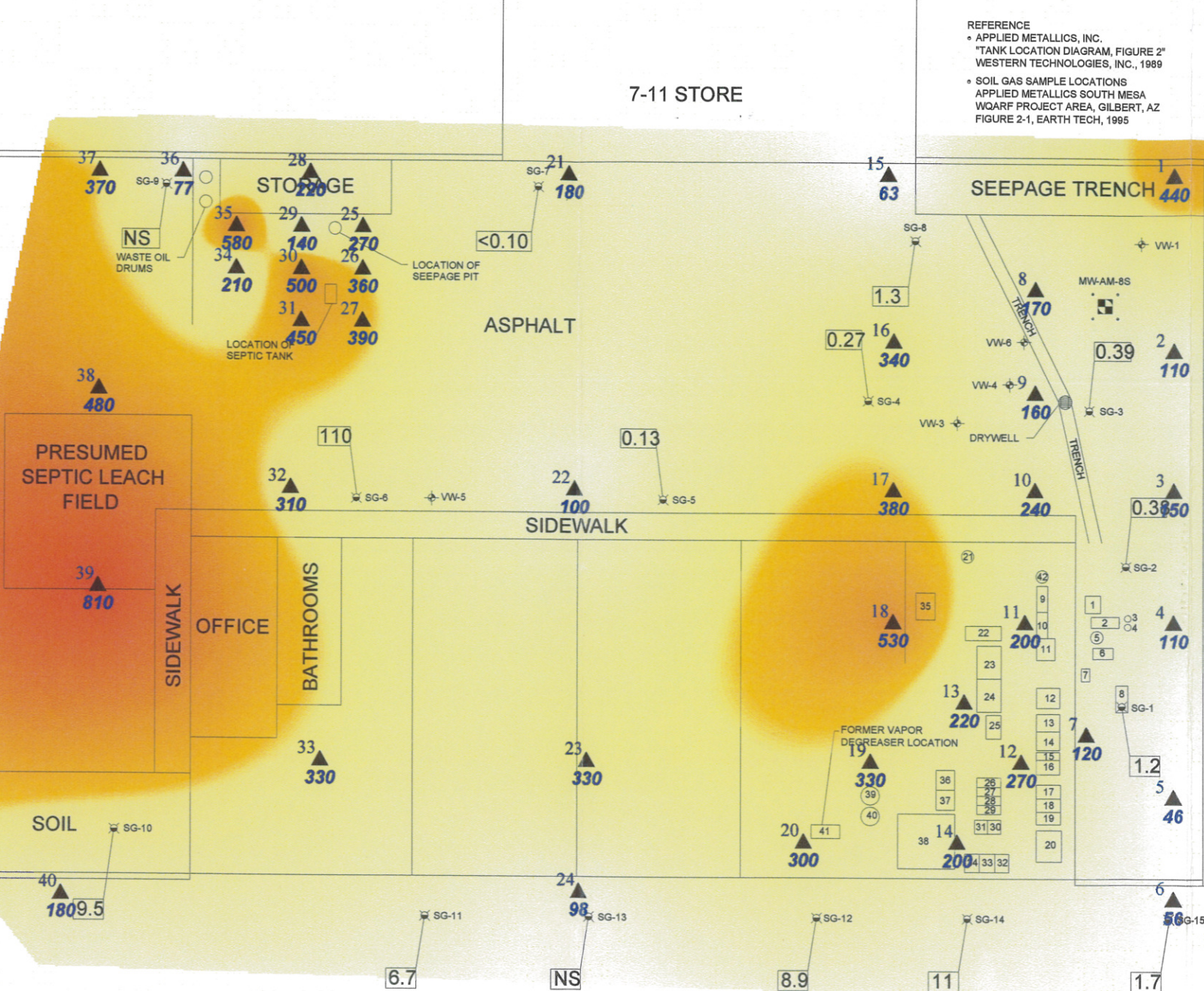




Color Scale
(nanograms)

MCQUEEN ROAD

SIDEWALK



FENCE WITH
BLOCK WALL
BASE

REFERENCE
• APPLIED METALLICS, INC.
"TANK LOCATION DIAGRAM, FIGURE 2"
WESTERN TECHNOLOGIES, INC., 1989
• SOIL GAS SAMPLE LOCATIONS
APPLIED METALLICS SOUTH MESA
WAREHOUSE PROJECT AREA, GILBERT, AZ
FIGURE 2-1, EARTH TECH, 1995

LEGEND

- SOIL GAS SAMPLE POINT WITH PCE CONCENTRATION IN MICROGRAMS/LITER
- DRYWELL
- VAPOR EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- EMFLUX SOIL GAS LOCATION

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 - SAME AS TANK 3
 - BRIGHT DIP TANK - MIXTURE OF NITRIC ACID AND PHOSPHORIC ACID, USED TO CLEAN COPPER OR BRASS PARTS.
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 5, 7 AND 8.
 - NICKEL STRIP TANK - PROPANE HEATED SOLUTION USED TO STRIP NICKEL.
 - NITRIC ACID TANK - USED TO CLEAN OR STRIP PARTS.
 - TIN/LEAD TANK - USED TO PLATE PARTS (TIN).
 - TIN PLATE TANK - USED TO PLATE PARTS (TIN).
 - TIN PLATE TANK - USED TO PLATE PARTS (TIN).
 - COPPER/CYANIDE TANK - USED TO PLATE PARTS (COPPER).
 - COPPER/CYANIDE DRAGOUT TANK - USED TO PRE-RINSE PARTS PRIOR TO FINAL RINSE.
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 12, 13, 15 AND 16.
 - SULFURIC ACID (50%) TANK - USED TO CLEAN PARTS.
 - SULFURIC ACID TANK - USED TO MAKE-UP AND HOLD RAW SULFURIC ACID SOLUTION.
 - HYDROCHLORIC (MURIATIC) ACID TANK - USED TO CLEAN STEEL PARTS.
 - HYDROCHLORIC (MURIATIC) ACID TANK - USED TO CLEAN COPPER AND BRASS PARTS.
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 17, 18 AND 20.
 - CAKITE 90 TANK - USED TO CLEAN PARTS.
 - CENTRIFUGE - USED TO SPIN DRY PARTS.
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 9, 10, 11 AND 23.
 - FLUOROBORIC TANK - USED TO PLATE PARTS (TIN).
 - BRIGHT TIN TANK - USED TO PLATE PARTS (BRIGHT TIN).
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 24 AND 35.
 - DEIONIZED WATER TANK - USED TO PRE-RINSE PARTS PRIOR TO TANK 35.
 - DEIONIZED WATER TANK - USED TO PRE-RINSE PARTS PRIOR TO TANK 35.
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 26, 27 AND 29.
 - ACETIC ACID TANK - USED TO PRE-CLEAN PRIOR TO TANK 35.
 - NITRIC ACID TANK - USED TO CLEAN ALUMINUM.
 - ZINCATE TANK - USED TO PRE-CONDITION ALUMINUM.
 - IRIDITE TANK - USED TO PUT CHROMATE FINISH ON ALUMINUM.
 - IRIDITE DRAGOUT TANK - USED TO PRE-RINSE PARTS PRIOR TO FINAL RINSE.
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 32 AND 33.
 - SULFURIC ACID/TIN TANK - USED TO PLATE PARTS (TIN).
 - OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 37 AND 38.
 - ELECTROLESS NICKEL DRAGOUT TANK - USED TO PRE-RINSE PARTS PRIOR TO FINAL RINSE.
 - ELECTROLESS NICKEL TANK - USED TO PLATE PARTS (NICKEL).
 - ELECTROLESS NICKEL HOLDING TANK.
 - ELECTROLESS NICKEL HOLDING TANK.
 - TETRACHLOROETHYLENE VAPOR DEGREASER - USED TO DEGREASE PARTS TO BE PLATED.
 - SAME AS TANK 21.

Scale in Feet

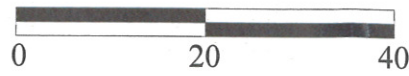
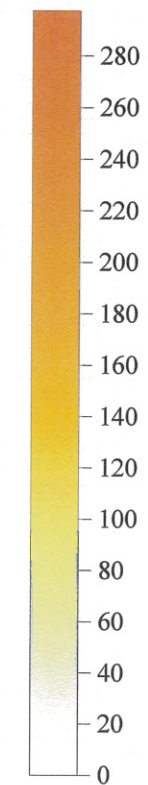


Figure 3
Trichloroethene
EMFLUX Soil-Gas Survey
Applied Metallics
Gilbert, AZ



Color Scale
(nanograms)

MCQUEEN ROAD

SIDEWALK

PRESUMED
SEPTIC LEACH
FIELD

SIDEWALK

OFFICE

BATHROOMS

SOIL

ASPHALT
DRIVEWAY
AND
PARKING LOT

7-11 STORE

REFERENCE
• APPLIED METALLICS, INC.
"TANK LOCATION DIAGRAM, FIGURE 2"
WESTERN TECHNOLOGIES, INC., 1989
• SOIL GAS SAMPLE LOCATIONS
APPLIED METALLICS SOUTH MESA
WQARF PROJECT AREA, GILBERT, AZ
FIGURE 2-1, EARTH TECH, 1995

SEEPAGE TRENCH

FENCE WITH
BLOCK WALL
BASE

LEGEND

- SOIL GAS SAMPLE POINT WITH PCE CONCENTRATION IN MICROGRAMS/LITER
- DRYWELL
- VAPOR EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- EMFLUX SOIL GAS LOCATION

TANK IDENTIFICATION

- TIN STRIP TANK - USED TO STRIP TIN AND CLEAN PARTS
- OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 1, 3 AND 4.
- HYDROCHLORIC ACID (50%) TANK - USED TO CLEAN STEEL PARTS.
- SAME AS TANK 3
- BRIGHT DIP TANK - MIXTURE OF NITRIC ACID AND PHOSPHORIC ACID, USED TO CLEAN COPPER OR BRASS PARTS.
- OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 5, 7 AND 8.
- NICKEL STRIP TANK - PROPANE HEATED SOLUTION USED TO STRIP NICKEL.
- NITRIC ACID TANK - USED TO CLEAN OR STRIP PARTS.
- TIN/LEAD TANK - USED TO PLATE PARTS (TIN).
- TIN PLATE TANK - USED TO PLATE PARTS (TIN).
- TIN PLATE TANK - USED TO PLATE PARTS (TIN).
- COPPER/CYANIDE TANK - USED TO PLATE PARTS (COPPER).
- COPPER/CYANIDE DRAUGHT TANK - USED TO PRE-RINSE PARTS PRIOR TO FINAL RINSE.
- OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 12, 13, 15 AND 16.
- SULFURIC ACID (50%) TANK - USED TO CLEAN PARTS.
- SULFURIC ACID TANK - USED TO MAKE-UP AND HOLD RAW SULFURIC ACID SOLUTION.
- HYDROCHLORIC (MURIATIC) ACID TANK - USED TO CLEAN STEEL PARTS.
- HYDROCHLORIC (MURIATIC) ACID TANK - USED TO CLEAN COPPER AND BRASS PARTS.
- OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 17, 18 AND 20.
- OKITE 90 TANK - USED TO CLEAN PARTS.
- CENTRIFUGE - USED TO SPIN DRY PARTS.
- OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 9, 10, 11 AND 23.
- FLUOROBORIC TIN TANK - USED TO PLATE PARTS (TIN).
- BRIGHT TIN TANK - USED TO PLATE PARTS (BRIGHT TIN).
- OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 24 AND 35.
- DEIONIZED WATER TANK - USED TO PRE-RINSE PARTS PRIOR TO TANK 35.
- DEIONIZED WATER TANK - USED TO PRE-RINSE PARTS PRIOR TO TANK 35.
- OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 26, 27 AND 29.
- ACETIC ACID TANK - USED TO PRE-CLEAN PRIOR TO TANK 35.
- NITRIC ACID TANK - USED TO CLEAN ALUMINUM.
- ZINCATE TANK - USED TO PRE-CONDITION ALUMINUM.
- IRIDITE TANK - USED TO PUT CHROMATE FINISH ON ALUMINUM.
- IRIDITE DRAUGHT TANK - USED TO PRE-RINSE PARTS PRIOR TO FINAL RINSE.
- OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 32 AND 33.
- SULFURIC ACID/TIN TANK - USED TO PLATE PARTS (TIN).
- OVERFLOW RINSE TANK - ASSOCIATED WITH PROCESS TANKS 37 AND 38.
- ELECTROLESS NICKEL DRAUGHT TANK - USED TO PRE-RINSE PARTS PRIOR TO FINAL RINSE.
- ELECTROLESS NICKEL TANK - USED TO PLATE PARTS (NICKEL).
- ELECTROLESS NICKEL HOLDING TANK.
- ELECTROLESS NICKEL HOLDING TANK.
- TETRACHLOROETHYLENE VAPOR DEGREASER - USED TO DEGREASE PARTS TO BE PLATED.
- SAME AS TANK 21.

Scale in Feet



Figure 4
cis-1,2-Dichloroethene

EMFLUX Soil-Gas Survey
Applied Metallics
Gilbert, AZ

Attachment 1
Laboratory Report

Attachment 1

Applied Metallics

Gilbert, AZ

Results in Nanograms (ng)

Analysis Completed: June 4, 2001

In this analysis 44 EMFLUX samples were analyzed under the requirements of EPA Method 8021 using an SRI 8610 Gas Chromatograph equipped with a thermal desorber, a photoionization detector, and a dry electrolytic conductivity detector.

SAMPLE NO.	1	2	3	4	5	6	7	8
COMPOUNDS								
1,1-Dichloroethene	U	U	U	U	U	U	U	U
Methylene Chloride	U	U	U	U	U	U	U	U
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U
1,1-Dichloroethane	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U
Carbon Tetrachloride	U	U	U	U	U	U	U	U
1,2-Dichloroethane	U	U	U	U	U	U	U	U
Trichloroethene	440	110	150	110	46	56	120	170
Tetrachloroethene	200	1,000	1,400	830	1,300	670	1,500	3,000

SAMPLE NO.	9	10	11	12	13	14	15	16
COMPOUNDS								
1,1-Dichloroethene	U	U	U	U	U	U	U	U
Methylene Chloride	U	U	U	U	U	U	U	U
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U
1,1-Dichloroethane	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U
1,1,1-Trichloroethane	U	U	U	U	U	48	U	U
Carbon Tetrachloride	U	U	U	U	U	U	U	U
1,2-Dichloroethane	U	U	U	U	U	U	U	U
Trichloroethene	160	240	200	270	220	200	63	340
Tetrachloroethene	2,500	1,100	3,100	2,800	3,100	3,000	980	260

Reported Quantitation Level = 25 nanograms

U = Below Reported Quantitation Level

Attachment 1
(continued)
Applied Metallics
Gilbert, AZ
Results in Nanograms (ng)
Analysis Completed: June 4, 2001

SAMPLE NO.	17	17 D	18	19	20	21	22	23
COMPOUNDS								
1,1-Dichloroethene	U	U	U	U	U	U	U	U
Methylene Chloride	U	U	U	U	U	U	U	U
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U
1,1-Dichloroethane	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	180	250	U	U	U	U	U	U
1,1,1-Trichloroethane	U	U	U	56	140	U	U	U
Carbon Tetrachloride	U	U	U	U	U	U	U	U
1,2-Dichloroethane	U	U	U	U	U	U	U	U
Trichloroethene	380	520	530	330	300	180	100	330
Tetrachloroethene	430	750	4,700	3,700	4,900	2,600	570	8,700

SAMPLE NO.	24	25	26	27	28	29	30	31
COMPOUNDS								
1,1-Dichloroethene	U	U	U	U	U	U	U	U
Methylene Chloride	U	U	U	U	U	U	U	U
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U
1,1-Dichloroethane	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	U	U	210	92	U	U	160	U
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U
Carbon Tetrachloride	U	U	U	U	U	U	U	U
1,2-Dichloroethane	U	U	U	U	U	U	U	U
Trichloroethene	98	270	360	390	220	140	500	450
Tetrachloroethene	1,100	3,600	4,100	6,100	2,500	2,300	4,500	4,700

Reported Quantitation Level = 25 nanograms

U = Below Reported Quantitation Level

Attachment 1
(continued)
Applied Metallics
Gilbert, AZ
Results in Nanograms (ng)
Analysis Completed: June 4, 2001

SAMPLE NO.	32	32 D	33	34	35	36	37	38
COMPOUNDS								
1,1-Dichloroethene	U	U	U	U	U	43	U	U
Methylene Chloride	U	U	U	U	U	U	U	U
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U
1,1-Dichloroethane	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	U	39	U	U	300	U	U	U
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U
Carbon Tetrachloride	U	U	U	U	U	U	U	U
1,2-Dichloroethane	U	U	U	U	U	U	U	U
Trichloroethene	310	340	330	210	580	77	370	480
Tetrachloroethene	770	660	12,000	2,100	2,900	1,500	1,400	5,100

SAMPLE NO.	39	40	Trip-1	Trip-2
COMPOUNDS				
1,1-Dichloroethene	U	U	U	U
Methylene Chloride	U	U	U	U
trans-1,2-Dichloroethene	U	U	U	U
1,1-Dichloroethane	U	U	U	U
cis-1,2-Dichloroethene	U	U	U	U
1,1,1-Trichloroethane	U	U	U	U
Carbon Tetrachloride	U	U	U	U
1,2-Dichloroethane	U	U	U	U
Trichloroethene	810	180	U	U
Tetrachloroethene	11,000	5,100	U	U

Reported Quantitation Level = 25 nanograms

U = Below Reported Quantitation Level

Attachment 2

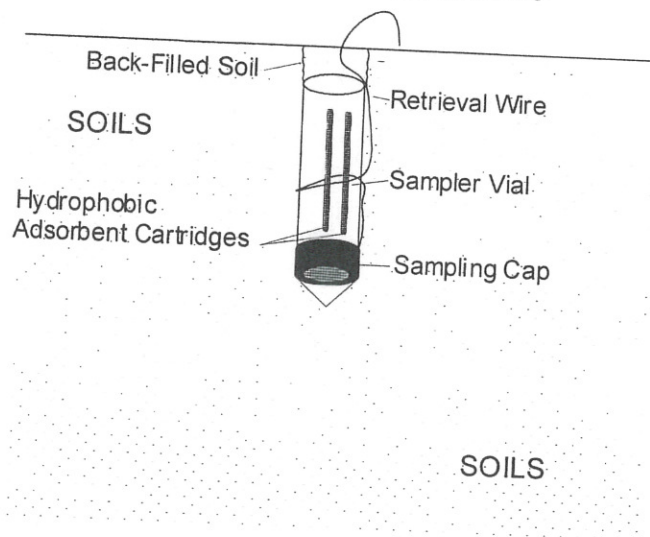
FIELD PROCEDURES FOR EMFLUX[®] SOIL-GAS SURVEYS

The following field procedures are routinely used during EMFLUX[®] Soil-Gas Surveys. Modifications can be and are incorporated from time to time in response to individual project requirements. In all instances, BEACON adheres to EPA-approved Quality Assurance and Quality Control practices.

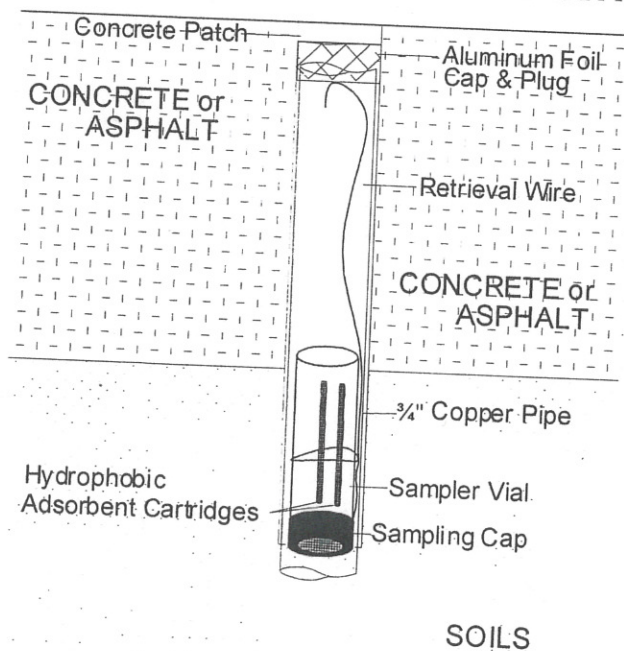
- A. Field personnel carry EMFLUX[®] system components and support equipment to the site and deploy the EMFLUX[®] Collectors in a prearranged survey pattern. An EMFLUX[®] Collector consists of a glass vial containing hydrophobic adsorbent cartridges with a length of wire attached to the vial for retrieval. Although EMFLUX[®] Collectors require only one person for emplacement and retrieval, the specific number of field personnel required depends upon the scope and schedule of the project. Each Collector emplacement generally takes less than two minutes.
- B. For those sample locations covered with soils or vegetation, a field technician clears vegetation and debris exposing the ground surface. Using a hammer and a 3/4"-diameter pointed metal stake, the technician creates a hole approximately three inches deep. For those locations covered with an asphalt or concrete cap, the field technician drills a 1 1/2"-diameter hole through the cap to the soils beneath. (If necessary, the Collector can be sleeved with a 3/4" i.d. copper pipe for either capped or uncapped locations).
- C. The technician then removes the solid plastic cap from an EMFLUX[®] Collector and replaces it with a Sampling Cap (a plastic cap with a hole covered by screen meshing). The technician inserts the Collector, with the Sampling Cap end facing down, into the hole (**see attached figure**). The Collector is then covered with either local soils for uncapped locations or, for capped locations, aluminum foil and a concrete patch. The Collector's location, time and date of emplacement, and other relevant information are recorded on the Field Deployment Form.
- D. One or more trip blanks are included as part of the quality-control procedures.
- E. Once all EMFLUX[®] Collectors have been deployed, field personnel schedule Collector recovery (typically 72 hours after emplacement) and depart, taking all no-longer-needed equipment and materials with them.
- F. Field personnel retrieve the Collectors at the end of the exposure period. At each location, a field technician withdraws the Collector from its hole, removes the retrieval wire, and wipes the outside of the vial clean using gauze cloth; following removal of the Sampling Cap, the threads of the vial are also cleaned. A solid plastic cap is screwed onto the vial and the sample location number is written on the label. The technician then records sample-point location, date, time, etc. on the Field Deployment Form.
- G. Sampling holes are refilled with soil, sand, or other suitable material. If Collectors have been installed through asphalt or concrete, the hole is filled to grade with a plug of cold patch or cement.
- H. Following retrieval, field personnel ship or carry the EMFLUX[®] Field Kit to a specified analytical laboratory.

EMFLUX[®] COLLECTOR

DEPLOYMENT IN SOILS



DEPLOYMENT THROUGH CONCRETE OR ASPHALT



Attachment 3
Field Deployment Report

BEACON ENVIRONMENTAL SERVICES, INC.
EMFLUX® SOIL-GAS SURVEY
FIELD DEPLOYMENT REPORT

PROJECT #: EM 1330	CLIENT: LAW Engineering & Environmental Services	SITE: Applied Metallica site, Gilbert, AZ
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INDIVIDUAL SAMPLE INFORMATION

EMPLACEMENT DATE: <u>5/25/07</u>		RETRIEVAL DATE: <u>05/30/01</u>	
SAMPLE NUMBER	TIME		FIELD NOTES (e.g., asphalt/concrete covering, description of sample location, cartridge/vial condition)
	Emplaced	Retrieved	
1	14:55	01:35	
2	15:57	10:40	
3	15:59	10:43	
4	16:00	10:45	
5	16:01	10:51	
6	16:04	12:26	
7	16:07	17:55	
8	16:04	10:57	
9	16:03	11:01	
10	15:57	11:05	
11	16:56	16:58	
12	16:05	16:53	
13	16:07	16:49	
14	16:09	16:45	

Attachment 4

LABORATORY PROCEDURES FOR EMFLUX[®] ADSORBENT CARTRIDGES

Following are laboratory procedures used with the EMFLUX[®] Soil-Gas System, a screening technology for expedited site investigation. After exposure, EMFLUX[®] cartridges are analyzed using U.S. EPA Method 8021 as described in the Solid Waste Manual (SW-846) for screening purposes. This method, which is modified to accommodate thermal desorption screening of the adsorbent cartridges, uses a gas chromatograph equipped with a capillary column and a photo ionization detector (PID) in series with a dry electrolytic conductivity detector (DELCD). This procedure is summarized below:

- A. EMFLUX[®] cartridges are placed in the thermal desorption chamber, where they are purged with carrier gas then desorbed into the capillary column. The capillary column separates the sample into single component analytes. Analytes in the carrier gas are detected with a PID then a DELCD.
- B. The laboratory uses a 105-m, 0.53-mm-i.d., 3 μ m-film-thickness MXT-624 capillary column for separation during analysis.
- C. The PID and DELCD are set on high gain; ultra zero grade dry air is used in the DELCD.
- D. Lab personnel conduct internal control blank and internal control verification analyses daily to ensure that the system is contaminant free and properly calibrated. The system is calibrated using the external standard calibration procedure to at least three different concentration levels for each compound targeted, with the lowest concentration level at or near the method detection limit.
- E. The instrumentation used for these analyses is an SRI 8610 Gas Chromatograph, connected to a PID in series with a DELCD and equipped with a manually actuated thermal desorber.

Attachment 5
Chain-of-Custody Form

BEACON ENVIRONMENTAL SERVICES, INC.
CHAIN-OF-CUSTODY FORM

PROJECT NUMBER: EM 1330

SITE: Applied Metallics site, Gilbert, AZ

CLIENT: LAW Engineering & Environmental Services

TARGET COMPOUNDS: EMFLUX EM 1330 Chlorinated Compound List

Sample Number	Lab ID No. (for lab use only)	Remarks (only necessary if problem or discrepancy)			
		Condition of sample or vial	Date	Time	Init.
1			9/30/01	1035	PC
2				1040	PC
3				1045	PC
4				1047	PC
5				1051	PC
6				1246	PC
7				1055	PC
8				1057	PC
9				1101	PC
10				1105	PC
11				1158	PC
12				1153	PC
13				1149	PC
14				1145	PC
15				1110	PC
16				1113	PC
17				1117	PC
18				1250	PC
19				1254	PC
20				1257	PC
21				1121	PC
22				1125	PC
23				1240	PC
24				1230	PC
25				1131	PC
26				1141	PC
27				1146	PC
28				1133	PC
29				1151	PC
30				1155	PC

RELINQUISHED BY		DATE	TIME	RECEIVED BY	
Signature	Printed Name			Signature	Printed Name
<i>Ryan Schneider</i>	Ryan Schneider	5-16-01	2000	<i>[Signature]</i>	Fedex
<i>[Signature]</i>	Fedex	5-17-01		<i>[Signature]</i>	Fedex
<i>[Signature]</i>		5-30-01	1800	<i>[Signature]</i>	Patrick Cook
<i>[Signature]</i>		5-31-01	1300	<i>[Signature]</i>	Steve Thornley

Shipment to site: Custody Seal # 00029857

Shipment to Laboratory Custody Seal # 00029898 I.O.R.

[Handwritten initials]

BEACON ENVIRONMENTAL SERVICES, INC.
CHAIN-OF-CUSTODY FORM

PROJECT NUMBER: EM 1330

SITE: Applied Metallica site, Gilbert, AZ

CLIENT: LAW Engineering & Environmental Services

TARGET COMPOUNDS: EMFLUX EM 1330 Chlorinated Compound List

[illegible]

Shipment to site: Custody Seal # 00029857

Shipment to Laboratory Custody Seal # 0029898

intact
on receipt &

APPENDIX F

**BEACON ENVIRONMENTAL REPORT
DATED JULY 30, 2002**

BEACON Report No. EM1330B

EMFLUX[®] Passive
Soil-Gas Survey

APPLIED METALLICS SITE
GILBERT, AZ

Prepared for

LAW Engineering & Environmental Services
4634 South 36th Place
Phoenix, AZ 85040

by

Beacon Environmental Services, Inc.
19 Newport Drive
Suite 102
Forest Hill, MD 21050

July 30, 2002

Applying Results from Soil-Gas Surveys

The utility of soil-gas surveys is directly proportional to their accuracy in reflecting and representing changes in the subsurface concentrations of source compounds. Passive soil-gas survey results are the mass collected from the vapor-phase emanating from the source. The vapor-phase is merely a fractional trace of the source, so, as a matter of convenience, the units used in reporting detection values from EMFLUX[®] surveys are smaller than those employed for source-compound concentrations.

The critical fact is that, whatever the relative concentrations of source and associated soil gas, best results are realized when the ratio of soil-gas measurements to actual subsurface concentrations remains as close to constant as the real world permits. It is the reliability and consistency of this ratio, not the particular units of mass (*e.g.*, nanograms) that determine usefulness. Thus, BEACON emphasizes the necessity of conducting — at minimum — follow-on intrusive sampling at one or two points which show relatively high EMFLUX[®] values to obtain corresponding concentrations of soil and ground-water contaminants. These correspondent values furnish the basis for approximating the required ratio. Once that ratio is established, it can be used in conjunction with EMFLUX[®] measurements (regardless of the units adopted) to estimate subsurface contaminant concentrations across the survey field. It is important to keep in mind, however, that specific conditions at individual sample points, including soil porosity and permeability, depth to contamination, and perched ground water, can have significant impact on soil-gas measurements at those locations.

When EMFLUX[®] Surveys are handled in this way, the data provide information that can yield substantial savings in drilling costs and in time. They furnish, among other things, a checklist of compounds expected at each survey location and help to determine how and where drilling budgets can most effectively be spent.

Table 1

**EMFLUX Passive Soil-Gas Survey
Applied Metallics
Gilbert, AZ**

**Results in Nanograms (ng)
Analysis Completed: July 15, 2002**

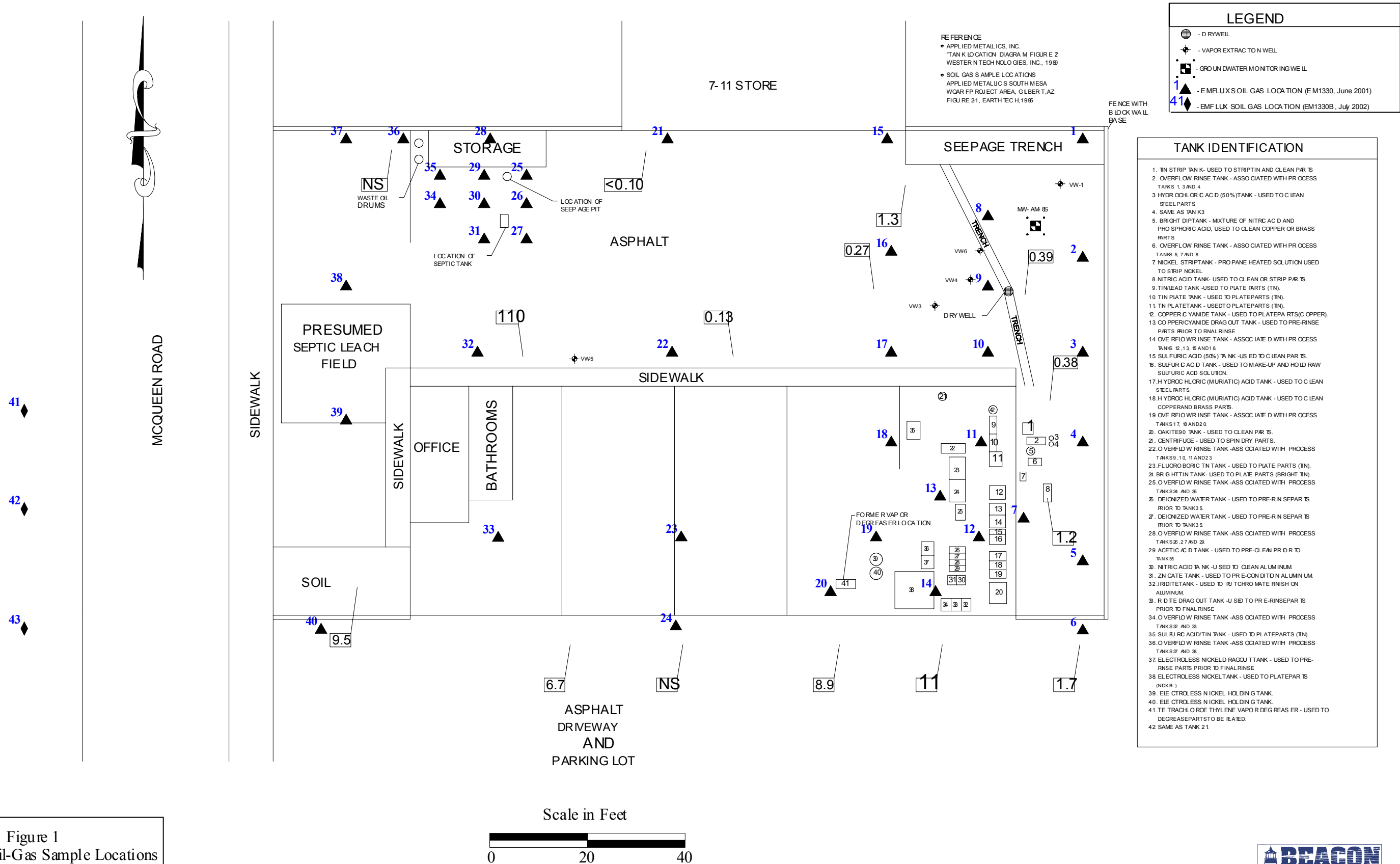
SAMPLE NO.	41	41-D	42	42-D	43	TRIP-1
COMPOUNDS						
1,1-Dichloroethene	U	U	U	U	U	U
Methylene Chloride	U	U	U	U	U	U
trans-1,2-Dichloroethene	U	U	U	U	U	U
1,1-Dichloroethane	U	U	U	U	U	U
cis-1,2-Dichloroethene	U	U	U	U	U	U
Chloroform	U	U	U	U	U	U
1,1,1-Trichloroethane	U	U	U	U	U	U
Carbon Tetrachloride	U	U	U	U	U	U
1,2-Dichloroethane	U	U	U	U	U	U
Trichloroethene	U	U	U	U	U	U
1,1,2-Trichloroethane	U	U	U	U	U	U
Tetrachloroethene	90	130	33	36	26	U

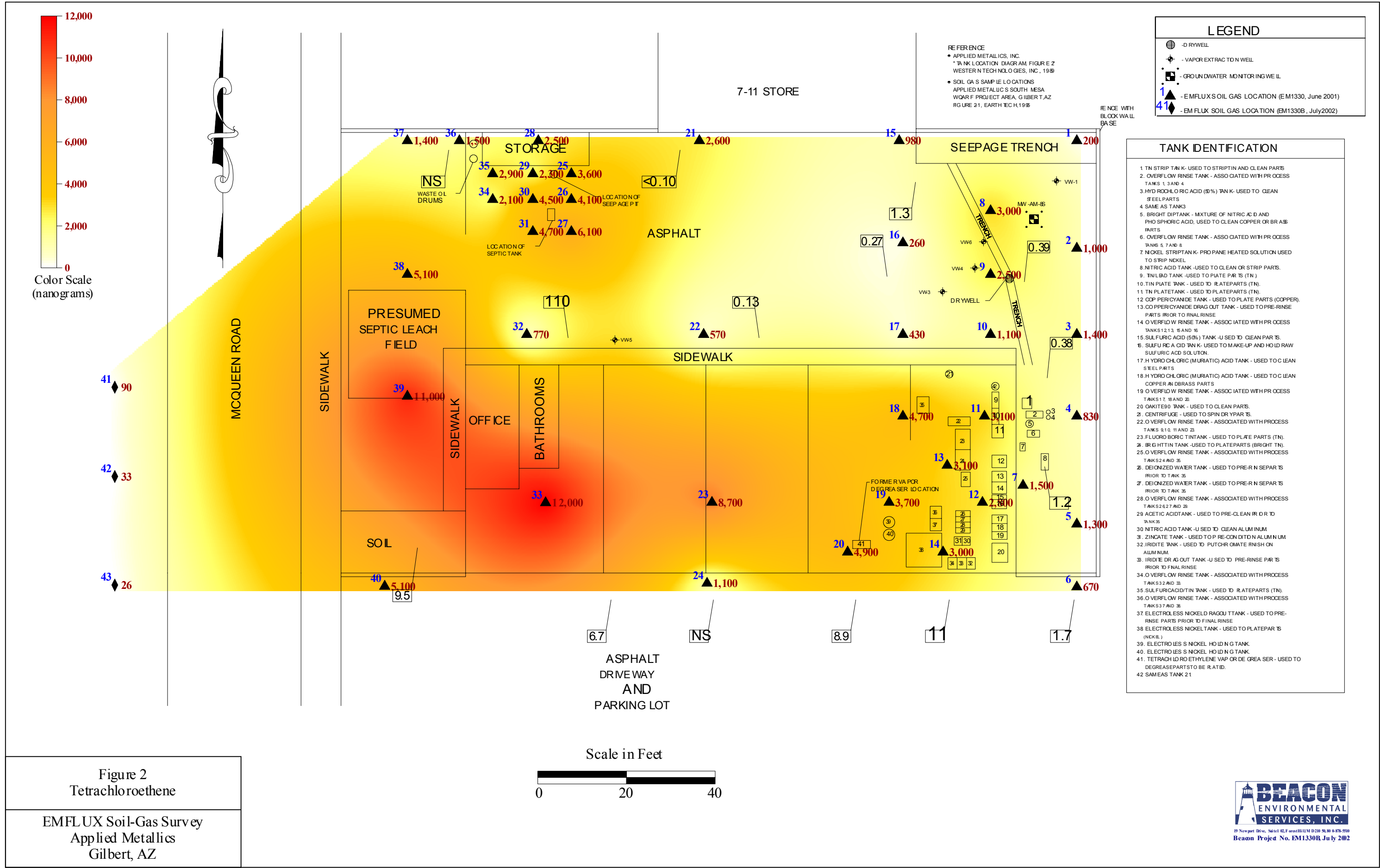
Reported Quantitation Level = 25 nanograms

U = Below Reported Quantitation Level

Figure 1
EMFLUX Soil-Gas Sample Locations

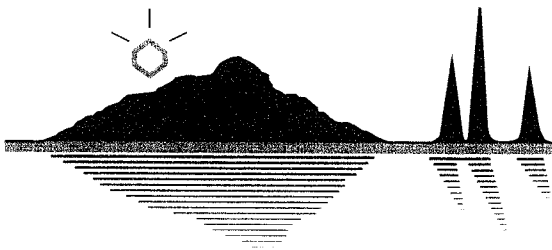
EMFLUX Soil-Gas Survey
Applied Metallics
Gilbert, AZ





APPENDIX G

TRANSWEST GEOCHEM, INC. SOIL, GROUNDWATER, AND SOIL VAPOR SAMPLE ANALYTICAL REPORTS



TRANSWEST
GEOCHEM

TGI ID: 0108149

September 24, 2001

Law Engineering Inc.
4634 S. 36th Pl.
Phoenix, AZ. 85040

Attention: Jim Clarke

Project Name/No: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 8/20-28/2001
Matrix: Soil/Vapor/Aqueous
Mobile Lab No.: TGI 05

Transwest Geochem, Inc. received and analyzed samples on the above date(s). The samples were analyzed by EPA Method 8021B-Modified, a field screening technique. The results of these analyses and the quality control data are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (602)437-0330.

Sincerely,

Michael E. Barber
Laboratory Director

ADHS License No.: AZM133/AZ0133

Transwest Geochem, Inc.
Analytical Results

Client Name:
Project Name/No.:
Samples Received:

Law Engineering Inc.
S. Mesa WQARF/70211-0-0150-2-2.10
8/20-28/2001



TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133

EPA Method 8021B-Modified									
Lab ID	0108149-1		0108149-3		0108149-5		0108149-7		
Sample ID	LB-1-SG-10		LB-1-SG-20		LB-1-SG-30		LB-1-SG-40		
Date Analyzed	8/21/01		8/21/01		8/21/01		8/21/01		
Dilution Factor	5		10		20		5		
Matrix	Vapor		Vapor		Vapor		Vapor		
ANALYTE	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	
trans-1,2-Dichloroethene	<5.0	<1.26	<10	<2.52	<20	<5.04	<5.0	<1.26	
cis-1,2-Dichloroethene	<5.0	<1.26	<10	<2.52	<20	<5.04	<5.0	<1.26	
Trichloroethene	<5.0	<0.93	<10	<1.87	<20	<3.73	<5.0	<0.93	
Tetrachloroethene	31	4.57	89	13.11	480	70.70	27	3.98	
Surrogate (70-130)- %	95%		96%		94%		94%		

EPA Method 8021B-Modified									
Lab ID	0108149-9		0108149-11		0108149-13		0108149-14		
Sample ID	LB-1-SG-50		LB-1-SG-60		LB-1-SG-70		LB-1-SG-80		
Date Analyzed	8/21/01		8/21/01		8/21/01		8/21/01		
Dilution Factor	1		1		1		1		
Matrix	Vapor		Vapor		Vapor		Vapor		
ANALYTE	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	
trans-1,2-Dichloroethene	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	
cis-1,2-Dichloroethene	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	
Trichloroethene	<1.0	<0.19	<1.0	<0.19	<1.0	<0.19	<1.0	<0.19	
Tetrachloroethene	310 D	45.66	11	1.62	1.2	0.18	1.5	0.22	
Surrogate (70-130)- %	96%		92%		89%		96%		

Transwest Geochem, Inc.
Analytical Results

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 8/20-28/2001



TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133

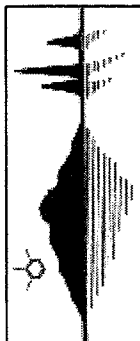
EPA Method 8021B-Modified									
Lab ID	0108149-15	0108149-16	0108149-17	0108149-24					
Sample ID	LB-1-SG-90	LB-1-SG-100	LB-1-SG-110	LB-2-SG-10					
Date Analyzed	8/21/01	8/21/01	8/21/01	8/25/01					
Dilution Factor	1	1	1	1					
Matrix	Vapor	Vapor	Vapor	Vapor					
ANALYTE	Units	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv
trans-1,2-Dichloroethene		<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25
cis-1,2-Dichloroethene		<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25
Trichloroethene		<1.0	<0.19	<1.0	<0.19	<1.0	<0.19	<1.0	<0.19
Tetrachloroethene		<1.0	<0.15	4.0	0.59	3.5	0.52	<1.0	<0.15
Surrogate (70-130)- %		92%		96%		96%		96%	

EPA Method 8021B-Modified									
Lab ID	0108149-26	0108149-28	0108149-30	0108149-32					
Sample ID	LB-2-SG-20	LB-2-SG-30	LB-2-SG-40	LB-2-SG-50					
Date Analyzed	8/25/01	8/25/01	8/25/01	8/25/01					
Dilution Factor	1	1	1	1					
Matrix	Vapor	Vapor	Vapor	Vapor					
ANALYTE	Units	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv
trans-1,2-Dichloroethene		<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25
cis-1,2-Dichloroethene		<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	1.0	0.25
Trichloroethene		<1.0	<0.19	<1.0	<0.19	<1.0	<0.19	<1.0	<0.19
Tetrachloroethene		1.6	0.24	18	2.65	<1.0	<0.15	18	2.65
Surrogate (70-130)- %		95%		95%		93%		93%	

Transwest Geochem, Inc.
Analytical Results

Client Name:
Project Name/No.:
Samples Received:

Law Engineering Inc.
S. Mesa WQARF/70211-0-0150-2-2.10
8/20-28/2001



TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133

EPA Method 8021B-Modified									
Lab ID	0108149-34	0108149-36	0108149-37	0108149-42					
Sample ID	LB-2-SG-60	LB-2-SG-70	LB-2-SG-80	LB-3-SG-10					
Date Analyzed	8/25/01	8/25/01	8/25/01	8/28/01					
Dilution Factor	1	1	1	1					
Matrix	Vapor	Vapor	Vapor	Vapor					
ANALYTE	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	
trans-1,2-Dichloroethene	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	
cis-1,2-Dichloroethene	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	
Trichloroethene	<1.0	<0.19	<1.0	<0.19	<1.0	<0.19	<1.0	<0.19	
Tetrachloroethene	<1.0	<0.15	<1.0	<0.15	<1.0	<0.15	<1.0	<0.15	
Surrogate (70-130)- %	98%		109%		111%		109%		

EPA Method 8021B-Modified									
Lab ID	0108149-44	0108149-46	0108149-48	0108149-50					
Sample ID	LB-3-SG-20	LB-2-SG-30	LB-3-SG-40	LB-3-SG-50					
Date Analyzed	8/28/01	8/28/01	8/28/01	8/28/01					
Dilution Factor	1	1	1	1					
Matrix	Vapor	Vapor	Vapor	Vapor					
ANALYTE	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	
trans-1,2-Dichloroethene	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	
cis-1,2-Dichloroethene	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	
Trichloroethene	<1.0	<0.19	<1.0	<0.19	<1.0	<0.19	<1.0	<0.19	
Tetrachloroethene	<1.0	<0.15	1.0	0.15	<1.0	<0.15	1.6	0.24	
Surrogate (70-130)- %	110%		110%		109%		113%		

Transwest Geochem, Inc.
Analytical Results

Client Name:

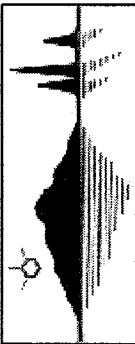
Law Engineering Inc.

Project Name/No.:

S. Mesa WQARF/70211-0-0150-2-2.10

Samples Received:

8/20-28/2001



TGI ID No.: 0108149

ADHS Cert. No.: AZM133/AZ0133

EPA Method 8021B-Modified									
Lab ID		0108149-52		0108149-54					
Sample ID		LB-3-SG-60		LB-2-SG-70					
Date Analyzed		8/29/01		8/29/01					
Dilution Factor		1		1					
Matrix		Vapor		Vapor					
ANALYTE	Units	mg/m3	ppmv	mg/m3	ppmv				
trans-1,2-Dichloroethene		<1.0	<0.25	<1.0	<0.25				
cis-1,2-Dichloroethene		<1.0	<0.25	<1.0	<0.25				
Trichloroethene		<1.0	<0.19	<1.0	<0.19				
Tetrachloroethene		<1.0	<0.15	<1.0	<0.15				
Surrogate (70-130)- %		113%		110%					

Notes:

The vapor analysis performed by Transwest Geochem, Inc. is a screening technique based on a modified EPA method. This data is not to be used in compliance situations.

Transwest Geochem, Inc.
Analytical Results

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 8/20-28/2001



TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133

TGI ID/ SAMPLE NUMBER	CLIENT ID	Matrix	Units	EPA 8021B-Modified/Solvent Screen									
				Date Extracted	Date Analyzed	Dil.	trans-1,2 DCE	cis-1,2 DCE	TCE	PCE	Sur. Rec. %	70-130% Flag	
0108149 -02	LB-1-S-10	Soil	mg/kg	8/20/01	8/22/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	104	
0108149 -04	LB-1-S-20	Soil	mg/kg	8/20/01	8/22/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	101	
0108149 -06	LB-1-S-30	Soil	mg/kg	8/20/01	8/23/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	113	
0108149 -08	LB-1-S-40	Soil	mg/kg	8/20/01	8/23/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	106	
0108149 -10	LB-1-S-50	Soil	mg/kg	8/20/01	8/23/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	115	
0108149 -12	LB-1-S-60	Soil	mg/kg	8/21/01	8/23/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	116	
0108149 -25	LB-2-S-10	Soil	mg/kg	8/25/01	8/25/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	99	
0108149 -27	LB-2-S-20	Soil	mg/kg	8/25/01	8/25/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	99	
0108149 -29	LB-2-S-30	Soil	mg/kg	8/25/01	8/25/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	108	
0108149 -31	LB-2-S-40	Soil	mg/kg	8/25/01	8/25/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	97	
0108149 -33	LB-2-S-50	Soil	mg/kg	8/25/01	8/25/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	108	
0108149 -35	LB-2-S-60	Soil	mg/kg	8/25/01	8/25/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	112	
0108149 -43	LB-3-S-10	Soil	mg/kg	8/28/01	8/29/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	116	
0108149 -45	LB-3-S-20	Soil	mg/kg	8/28/01	8/29/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	108	
0108149 -47	LB-3-S-30	Soil	mg/kg	8/28/01	8/29/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	111	
0108149 -49	LB-3-S-40	Soil	mg/kg	8/28/01	8/29/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	119	
0108149 -51	LB-3-S-50	Soil	mg/kg	8/28/01	8/29/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	116	
0108149 -53	LB-3-S-60	Soil	mg/kg	8/28/01	8/29/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	116	

Transwest Geochem, Inc.
Analytical Results

Client Name:

Law Engineering Inc.

Project Name/No.:

S. Mesa WQARF/70211-0-0150-2-2.10

Samples Received:

8/20-28/2001



TGI ID No.: 0108149

ADHS Cert. No.: AZM133/AZ0133

TGI ID/ SAMPLE NUMBER	CLIENT ID	Matrix	Units	EPA 8021B-Modified/Solvent Screen								
				Date Analyzed	Dil.	trans-1,2		cis-1,2		TCE	PCE	Sur. Rec. %
0108149 -18	LB-1-W-130	Aq	ug/L	8/22/01	1	<1.0		10	2.1	59 D	74	
0108149 -19	LB-1-W-140	Aq	ug/L	8/22/01	1	<1.0		<1.0	<1.0	<1.0	117	
0108149 -20	LB-1-W-188	Aq	ug/L	8/22/01	1	<1.0		3.1	<1.0	4.7	118	
0108149 -21	LB-1-W-205	Aq	ug/L	8/22/01	1	<1.0		3.0	<1.0	4.6	75	
0108149 -22	LB-1-W-222	Aq	ug/L	8/22/01	1	<1.0		<1.0	<1.0	<1.0	98	
0108149 -23	LB-1-W-240	Aq	ug/L	8/22/01	1	<1.0		<1.0	<1.0	<1.0	94	
0108149 -38	LB-2-GW-130	Aq	ug/L	8/26/01	1	<1.0		27	7.3	12	113	
0108149 -39	LB-2-GW-150	Aq	ug/L	8/26/01	1	<1.0		<1.0	<1.0	9.6	113	
0108149 -40	LB-2-GW-170	Aq	ug/L	8/26/01	1	<1.0		42	8.5	88 D	108	
0108149 -41	LB-2-GW-240	Aq	ug/L	8/26/01	1	<1.0		<1.0	<1.0	<1.0	108	
0108149 -55	LB-3-W-130	Aq	ug/L	8/30/01	1	<1.0		3.2	<1.0	2.7	86	
0108149 -56	LB-3-W-150	Aq	ug/L	8/30/01	1	<1.0		<1.0	<1.0	11	100	
0108149 -57	LB-3-W-170	Aq	ug/L	8/30/01	1	<1.0		4.4	<1.0	23	100	
0108149 -58	LB-3-W-200	Aq	ug/L	8/30/01	1	<1.0		4.2	<1.0	11	113	
0108149 -59	LB-3-W-240	Aq	ug/L	8/30/01	1	<1.0		<1.0	<1.0	2.3	94	

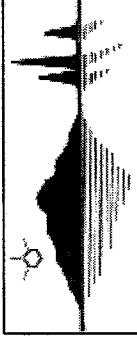
Notes:

EPA 8021 A representative sample from this project has been confirmed as required by the ADHS.

Transwest Geochem, Inc.
Analytical Quality Control Data
Reagent Blank 8021B-Modified

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 8/20-28/2001

TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133



Matrix:	mg/m3	Vapor
Units:		ppmv
trans-1,2-Dichloroethene:	<1.0	<0.25
cis-1,2-Dichloroethene:	<1.0	<0.25
Trichloroethene:	<1.0	<0.19
Tetrachloroethene:	<1.0	<0.15
Surrogate (70-130) %:		90
Date Analyzed:		8/21/01
Samples Linked:	0108149	-(1,3,5,7,9,11)
Samples Linked:	0108149	-(13-16)

Matrix:	mg/m3	Vapor
Units:		ppmv
trans-1,2-Dichloroethene:	<1.0	<0.25
cis-1,2-Dichloroethene:	<1.0	<0.25
Trichloroethene:	<1.0	<0.19
Tetrachloroethene:	<1.0	<0.15
Surrogate (70-130) %:		94
Date Analyzed:		8/25/01
Samples Linked:	0108149	-(24,26,28)
Samples Linked:	0108149	-(30,32,34)
Samples Linked:	0108149	-(36,37)

Matrix:	mg/m3	Vapor
Units:		ppmv
trans-1,2-Dichloroethene:	<1.0	<0.25
cis-1,2-Dichloroethene:	<1.0	<0.25
Trichloroethene:	<1.0	<0.19
Tetrachloroethene:	<1.0	<0.15
Surrogate (70-130) %:		110
Date Analyzed:		8/28/01
Samples Linked:	0108149	-(42,44,46,48)
Samples Linked:	0108149	-(50,52,54)

Transwest Geochem, Inc.
Analytical Quality Control Data
8021B-Modified



TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF70211-0-0150-2-2.10
Samples Received: 8/20-28/2001

Duplicate

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/m3	mg/m3	mg/m3	mg/m3
Matrix:	Vapor	Vapor	Vapor	Vapor
Sample Result:	<1.0	<1.0	<1.0	11
Duplicate Result:	<1.0	<1.0	<1.0	13
RPD:	N/A	N/A	N/A	17%
Surr Recovery (70-130)%:	92%	96%		
Date Analyzed:	8/21/01			
Sample Duplicated:	0108149 -11			
Samples Linked:	0108149 -(1,3,5,7,9,11,13)			

LCS

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/m3	mg/m3	mg/m3	mg/m3
Matrix:	Vapor	Vapor	Vapor	Vapor
LCS Amount:	5.0	5.0	5.0	5.0
LCS Result:	5.7	5.6	4.3	4.4
Percent Recovery:	114	112	86	88
LCS Surr. (70-130) %:	102%			
Date Analyzed:	8/21/01			
Samples Linked:	0108149 -(1,3,7,9,11,13)			
Samples Linked:	0108149 -(5,14-16)			

Transwest Geochem, Inc.
Analytical Quality Control Data
8021B-Modified



TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 8/20-28/2001

Duplicate

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/m3	mg/m3	mg/m3	mg/m3
Matrix:	Vapor	Vapor	Vapor	Vapor
Sample Result:	<20	<20	<20	480
Duplicate Result:	<20	<20	<20	390
RPD:	NA	NA	NA	21%
Surr Recovery (70-130)%:	94%	94%		
Date Analyzed:	8/21/01			
Sample Duplicated:	0108149 -05			
Samples Linked:	0108149 -(5,14-16)			

LCS

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/m3	mg/m3	mg/m3	mg/m3
Matrix:	Vapor	Vapor	Vapor	Vapor
LCS Amount:	5.0	5.0	5.0	5.0
LCS Result:	3.9	5.0	4.6	4.6
Percent Recovery:	78	100	92	92
LCS Surr. (70-130) %:	95%			
Date Analyzed:	8/25/01			
Samples Linked:	0108149 -(24,26,28,30)			
Samples Linked:	0108149 -(32,34,36,37)			

Transwest Geochem, Inc.
Analytical Quality Control Data
8021B-Modified

Client Name:

Law Engineering Inc.

Project Name/No.:

S. Mesa WQARF/70211-0-0150-2-2.10

Samples Received:

8/20-28/2001



TGI ID No.: 0108149

ADHS Cert. No.: AZM133/AZ0133

Duplicate

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/m3	mg/m3	mg/m3	mg/m3
Matrix:	Vapor	Vapor	Vapor	Vapor
Sample Result:	<1.0	1.0	<1.0	18
Duplicate Result:	<1.0	1.3	<1.0	18
RPD:	NA	26%	NA	0%
Surr Recovery (70-130)%:	93%	107%		
Date Analyzed:	8/25/01			
Sample Duplicated:	0108149 -32			
Samples Linked:	0108149 -(24,26,28,30)			
Samples Linked:	0108149 -(32,34,36,37)			

LCS

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/m3	mg/m3	mg/m3	mg/m3
Matrix:	Vapor	Vapor	Vapor	Vapor
LCS Amount:	5.0	5.0	5.0	5.0
LCS Result:	4.5	5.2	5.0	4.7
Percent Recovery:	90	104	100	94
LCS Surr. (70-130) %:	116%			
Date Analyzed:	8/28/01			
Samples Linked:	0108149 -(42,44,46,48)			
Samples Linked:	0108149 -(50,52,54)			

Transwest Geochem, Inc.
Analytical Quality Control Data
8021B-Modified



TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 8/20-28/2001

Duplicate

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/m3	mg/m3	mg/m3	mg/m3
Matrix:	Vapor	Vapor	Vapor	Vapor
Sample Result:	<1.0	<1.0	<1.0	1.6
Duplicate Result:	<1.0	<1.0	<1.0	1.7
RPD:	NA	N/A	NA	6%
Surr Recovery (70-130)%:	113%	116%		
Date Analyzed:	8/29/01			
Sample Duplicated:	0108149 -50			
Samples Linked:	0108149 -(42,44,46,48)			
Samples Linked:	0108149 -(50,52,54)			

Transwest Geochem, Inc.
Analytical Quality Control Data
Reagent Blank/LCS Method 8021B-Modified

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 8/20-28/2001



TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133

Reagent Blank

Units:	mg/kg
Matrix:	Soil
trans-1,2-Dichloroethene:	<0.10
cis-1,2-Dichloroethene:	<0.10
Trichloroethene:	<0.10
Tetrachloroethene:	<0.10
Surr Rec%(70-130):	114
Date Extracted:	8/20/01
Date Analyzed:	8/21/01
Samples Linked:	0108149 -(2,4,6,8,10)

LCS

trans-1,2-DCE	mg/kg	cis-1,2-DCE	mg/kg	TCE	mg/kg	PCE	mg/kg
Units:	Soil	mg/kg	Soil	mg/kg	Soil	mg/kg	Soil
Matrix:	Soil	0.50	0.50	0.50	0.50	0.50	0.50
LCS Amount:	0.36	0.47	0.40	0.45	0.45	0.45	0.45
LCS Result:	72	94	80	90	90	90	90
Percent Recovery:	70-130%	70-130%	70-130%	70-130%	70-130%	70-130%	70-130%
Limits	92%						
Surr Rec%(70-130):	8/20/01						
Date Extracted:	8/21/01						
Date Analyzed:	0108149						
Samples Linked:	-(2,4,6,8,10)						

Units:	ug/L
Matrix:	Soil
trans-1,2-Dichloroethene:	<0.10
cis-1,2-Dichloroethene:	<0.10
Trichloroethene:	<0.10
Tetrachloroethene:	<0.10
Surr Rec%(70-130):	118
Date Extracted:	8/21/01
Date Analyzed:	8/23/01
Samples Linked:	0108149 -(12)

trans-1,2-DCE	mg/kg	cis-1,2-DCE	mg/kg	TCE	mg/kg	PCE	mg/kg
Units:	Soil	mg/kg	Soil	mg/kg	Soil	mg/kg	Soil
Matrix:	Soil	0.50	0.50	0.50	0.50	0.50	0.50
LCS Amount:	0.40	0.47	0.45	0.51	0.51	0.51	0.51
LCS Result:	80	94	90	102	102	102	102
Percent Recovery:	70-130%	70-130%	70-130%	70-130%	70-130%	70-130%	70-130%
Limits	99%						
Surr Rec%(70-130):	8/21/01						
Date Extracted:	8/23/01						
Date Analyzed:	0108149						
Samples Linked:	-(12)						

Transwest Geochem, Inc.
Analytical Quality Control Data
Reagent Blank/LCS Method 8021B-Modified

Client Name: Law Engineering Inc.
 Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
 Samples Received: 8/20-28/2001



TGI ID No.: 0108149
 ADHS Cert. No.: AZM133/AZ0133

Reagent Blank

Units:	mg/kg
Matrix:	Soil
trans-1,2-Dichloroethene:	<0.10
cis-1,2-Dichloroethene:	<0.10
Trichloroethene:	<0.10
Tetrachloroethene:	<0.10
Surr Rec%(70-130):	101
Date Extracted:	8/25/01
Date Analyzed:	8/25/01
Samples Linked:	0108149 -(25,27,29)
Samples Linked:	0108149 -(31,33,35)

LCS

Units:	mg/kg	mg/kg	mg/kg
Matrix:	Soil	Soil	Soil
LCS Amount:	0.50	0.50	0.50
LCS Result:	0.43	0.53	0.48
Percent Recovery:	86	106	96
Limits	70-130%	70-130%	70-130%
Surr Rec%(70-130):	106%		
Date Extracted:	8/25/01		
Date Analyzed:	8/25/01		
Samples Linked:	0108149 -(25,27,29)		
Samples Linked:	0108149 -(31,33,35)		

Units:	ug/L
Matrix:	Aqueous
trans-1,2-Dichloroethene:	<1.0
cis-1,2-Dichloroethene:	<1.0
Trichloroethene:	<1.0
Tetrachloroethene:	<1.0
Surr Rec%(70-130):	97
Date Analyzed:	8/22/01
Samples Linked:	0108149 -(18-23)

Units:	ug/L	ug/L	ug/L
Matrix:	Aq	Aq	Aq
LCS Amount:	10	10	10
LCS Result:	9.0	9.7	9.1
Percent Recovery:	90	97	91
Limits	70-130%	70-130%	70-130%
Surr Rec%(70-130):	99%		
Date Analyzed:	8/22/01		
Samples Linked:	0108149 -(18-23)		

Transwest Geochem, Inc.
Analytical Quality Control Data
Reagent Blank/LCS Method 8021B-Modified

Client Name: Law Engineering Inc.
 Project Name/No.: S. Mesa WQARF702111-0-0150-2-2.10
 Samples Received: 8/20-28/2001



TGI ID No.: 0108149
 ADHS Cert. No.: AZM133/AZ0133

Reagent Blank

Units:	ug/L
Matrix:	Aqueous
trans-1,2-Dichloroethene:	<1.0
cis-1,2-Dichloroethene:	<1.0
Trichloroethene:	<1.0
Tetrachloroethene:	<1.0
Surr Rec%(70-130):	117
Date Analyzed:	8/26/01
Samples Linked:	0108149 -(38-41)

LCS

trans-1,2-DCE	ug/L	cis-1,2-DCE	ug/L	TCE	ug/L	PCE	ug/L
Units:	Aq	Aq	Aq	Aq	Aq	Aq	Aq
Matrix:	10	10	10	10	10	10	10
LCS Amount:	9.1	11.0	10.1	8.8			
LCS Result:	91	110	101	88			
Percent Recovery:	70-130%	70-130%	70-130%	70-130%			
Limits	112%						
Surr Rec%(70-130):	8/26/01						
Date Analyzed:	0108149 -(38-41)						
Samples Linked:							

Units:	mg/kg
Matrix:	Soil
trans-1,2-Dichloroethene:	<0.10
cis-1,2-Dichloroethene:	<0.10
Trichloroethene:	<0.10
Tetrachloroethene:	<0.10
Surr Rec%(70-130):	104
Date Extracted:	8/28/01
Date Analyzed:	8/28/01
Samples Linked:	0108149 -(43,45,47)
Samples Linked:	0108149 -(49,51,53)

trans-1,2-DCE	mg/kg	cis-1,2-DCE	mg/kg	TCE	mg/kg	PCE	mg/kg
Units:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Matrix:	0.50	0.50	0.50	0.50	0.50	0.50	0.50
LCS Amount:	0.48	0.55	0.48	0.41			
LCS Result:	96	110	96	82			
Percent Recovery:	70-130%	70-130%	70-130%	70-130%			
Limits	107%						
Surr Rec%(70-130):	8/28/01						
Date Extracted:	8/28/01						
Date Analyzed:	0108149 -(43,45,47)						
Samples Linked:	0108149 -(49,51,53)						
Samples Linked:							

Transwest Geochem, Inc.
Analytical Quality Control Data
Reagent Blank/LCS Method 8021B-Modified

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 8/20-28/2001

TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133



Reagent Blank

Units:	ug/L
Matrix:	Aqueous
trans-1,2-Dichloroethene:	1.5
cis-1,2-Dichloroethene:	<1.0
Trichloroethene:	<1.0
Tetrachloroethene:	<1.0
Surr Rec%(70-130):	95
Date Analyzed:	8/30/01
Samples Linked:	0108149 -(55-59)

LCS

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	ug/L	ug/L	ug/L	ug/L
Matrix:	Aq	Aq	Aq	Aq
LCS Amount:	10	10	10	10
LCS Result:	12.0	10.4	9.3	10.1
Percent Recovery:	120	104	93	101
Limits	70-130%	70-130%	70-130%	70-130%
Surr Rec%(70-130):	97%			
Date Analyzed:	8/30/01			
Samples Linked:	0108149 -(55-59)			

Transwest Geochem, Inc.
Analytical Quality Control Data
MS/MSD 8021B-Modified



Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 8/20-28/2001

TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133

	trans-1,2-DCE		cis-1,2-DCE		TCE		PCE	
	Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Matrix:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Result:	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Spike Amount:	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Spike Result:	0.38	0.47	0.42	0.45	0.45	0.45	0.45	0.45
Percent Recovery:	76%	94%	84%	90%	90%	90%	90%	90%
Duplicate Result:	0.40	0.48	0.45	0.5	0.5	0.5	0.5	0.5
Percent Recovery:	80%	96%	90%	100%	100%	100%	100%	100%
Limits	70-130%	70-130%	70-130%	70-130%	70-130%	70-130%	70-130%	70-130%
RPD:	5%	2%	7%	11%	11%	11%	11%	11%
Surr Rec%(70-130)	92%	102%						
Date Extracted:	8/20/01							
Date Analyzed:	8/23/01							
Sample Spiked:	0108149 -10							
Samples Linked:	0108149 -(2,4,6,8,10)							

	trans-1,2-DCE		cis-1,2-DCE		TCE		PCE	
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Matrix:	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
Sample Result:	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Spike Amount:	10	10	10	10	10	10	10	10
Spike Result:	7.1	9.1	9.1	8.1	8.1	8.1	8.1	8.1
Percent Recovery:	71%	91%	91%	81%	81%	81%	81%	81%
Duplicate Result:	7.5	9.2	9.2	8.2	8.2	8.2	8.2	8.2
Percent Recovery:	75%	92%	92%	82%	82%	82%	82%	82%
Limits	70-130%	70-130%	70-130%	70-130%	70-130%	70-130%	70-130%	70-130%
RPD:	5%	1%	1%	1%	1%	1%	1%	1%
Surr Rec%(70-130)	114%	111%						
Date Analyzed:	8/22/01							
Samples Linked:	0108149 -(18-23)							
Sample Spiked:	0108149 -19							

Transwest Geochem, Inc.
Analytical Quality Control Data
MS/MSD 8021B-Modified



Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 8/20-28/2001

TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133

	Units:	DCE	cis-1,2-DCE	TCE	PCE
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Matrix:	Soil	Soil	Soil	Soil	Soil
Sample Result:	<0.10	<0.10	<0.10	<0.10	<0.10
Spike Amount:	0.50	0.50	0.50	0.50	0.50
Spike Result:	0.39	0.46	0.47	0.48	0.48
Percent Recovery:	78%	92%	94%	96%	96%
Duplicate Result:	0.36	0.48	0.45	0.47	0.47
Percent Recovery:	72%	96%	90%	94%	94%
Limits	70-130%	70-130%	70-130%	70-130%	70-130%
RPD:	8%	4%	4%	2%	2%
Surr Rec%(70-130)	98%	98%			
Date Extracted:		8/21/01			
Date Analyzed:		8/23/01			
Sample Spiked:		0108149 -12			
Samples Linked:		0108149 -12			

	Units:	DCE	cis-1,2-DCE	TCE	PCE
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Matrix:	Soil	Soil	Soil	Soil	Soil
Sample Result:	<0.10	<0.10	<0.10	<0.10	<0.10
Spike Amount:	0.50	0.50	0.50	0.50	0.50
Spike Result:	0.45	0.50	0.50	0.48	0.42
Percent Recovery:	90%	100%	100%	96%	84%
Duplicate Result:	0.43	0.51	0.51	0.48	0.43
Percent Recovery:	86%	102%	102%	96%	86%
Limits	70-130%	70-130%	70-130%	70-130%	70-130%
RPD:	5%	2%	2%	0%	2%
Surr Rec%(70-130)	113%	117%			
Date Extracted:		8/25/01			
Date Analyzed:		8/25/01			
Sample Spiked:		0108149 -35			
Samples Linked:		0108149 -(25,27,29)			

Transwest Geochem, Inc.
Analytical Quality Control Data
MS/MSD 8021B-Modified



Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 8/20-28/2001

TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	ug/L	ug/L	ug/L	ug/L
Matrix:	Aqueous	Aqueous	Aqueous	Aqueous
Sample Result:	<1.0	<1.0	<1.0	9.6
Spike Amount:	10	10	10	10
Spike Result:	8.9	10.8	9.9	19.1
Percent Recovery:	89%	108%	99%	95%
Duplicate Result:	8.6	10.2	9.7	19.4
Percent Recovery:	86%	102%	97%	98%
Limits	70-130%	70-130%	70-130%	70-130%
RPD:	3%	5%	2%	2%
Surr Rec%(70-130)	112%	110%		
Date Analyzed:	8/26/01			
Sample Spiked:	0108149 -39			
Samples Linked:	0108149 -(38-41)			

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Matrix:	Soil	Soil	Soil	Soil
Sample Result:	<0.10	<0.10	<0.10	<0.10
Spike Amount:	0.50	0.50	0.50	0.50
Spike Result:	0.50	0.57	0.51	0.43
Percent Recovery:	100%	114%	102%	86%
Duplicate Result:	0.49	0.57	0.52	0.44
Percent Recovery:	98%	114%	104%	88%
Limits	70-130%	70-130%	70-130%	70-130%
RPD:	2%	0%	2%	2%
Surr Rec%(70-130)	113%	116%		
Date Extracted:	8/28/01			
Date Analyzed:	8/29/01			
Sample Spiked:	0108149 -53			
Samples Linked:	0108149 -(43,45,47)			
Samples Linked:	0108149 -(49,51,53)			

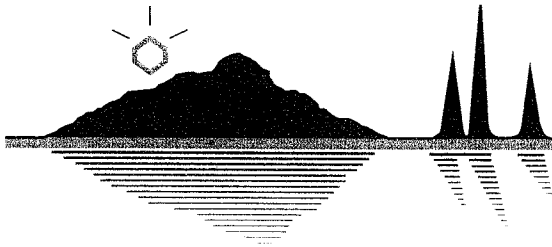
Transwest Geochem, Inc.
Analytical Quality Control Data
MS/MSD 8021B-Modified



TGI ID No.: 0108149
ADHS Cert. No.: AZM133/AZ0133

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 8/20-28/2001

		trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	ug/L	ug/L	ug/L	ug/L	ug/L
Matrix:	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
Sample Result:	<1.0	4.2	<1.0	11	10
Spike Amount:	10	10	10	10	10
Spike Result:	9.9	15.2	10.1	22.2	22.2
Percent Recovery:	99%	110%	101%	112%	112%
Duplicate Result:	11.3	14.9	10.1	22.4	22.4
Percent Recovery:	113%	107%	101%	114%	114%
Limits	70-130%	70-130%	70-130%	70-130%	70-130%
RPD:	13%	2%	0%	1%	1%
Surr Rec%(70-130)	96%	95%			
Date Analyzed:	8/30/01				
Sample Spiked:	0108149 -58				
Samples Linked:	0108149 -(55-59)				



TRANSWEST
GEOCHEM

TGI ID: 0109067

September 24, 2001

Law Engineering Inc.
4634 S. 36th Pl.
Phoenix, AZ. 85040

Attention: Jim Clarke

Project Name/No: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 9/11-13/2001
Matrix: Soil / Vapor
Mobile Lab No.: TGI02

Transwest Geochem, Inc. received and analyzed samples on the above date(s). The samples were analyzed by EPA Method 8021B-Modified, a field screening technique. The results of these analyses and the quality control data are enclosed.

The calibration data for trans-1,2-Dichloroethene did not meet TGI criteria and although there were no reportable hits for this compound, the effected data has been flagged as estimated values with a 'J' flag.

If you have any questions or comments, please do not hesitate to contact us at (602)437-0330.

Sincerely,

Michael E. Barber
Laboratory Director

ADHS License No.: AZM133/AZ0133

Transwest Geochem, Inc.
Analytical Results

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 9/11-13/2001



TGI ID No.: 0109067
ADHS Cert. No.: AZM133/AZ0133

EPA 8021B-Modified/Solvent Screen									
ANALYTE	Lab ID	0109067-1		0109067-2		0109067-3		0109067-4	
	Sample ID	LB4-SG-10		LB4-SG-20		LB4-SG-30		LB4-SG-40	
	Date Analyzed	9/11/01		9/11/01		9/11/01		9/11/01	
	Dilution Factor	1		1		1		1	
	Matrix	Vapor		Vapor		Vapor		Vapor	
	Units	mg/m3		mg/m3		mg/m3		mg/m3	
trans-1,2-Dichloroethene		<1.0 J		<1.0 J		<1.0 J		<1.0 J	
cis-1,2-Dichloroethene		<0.25 J		<0.25 J		<0.25 J		<0.25 J	
Trichloroethene		<1.0		<1.0		<1.0		<1.0	
Tetrachloroethene		<0.19		<0.19		<0.19		<0.19	
Surrogate (70-130)- %		1.7		0.25		8.1		8.3	
		108%		109%		106%		109%	

EPA 8021B-Modified/Solvent Screen									
ANALYTE	Lab ID	0109067-5		0109067-11		0109067-12		0109067-13	
	Sample ID	LB4-SG-50		LB4-SG-60		LB7-SG-10		LB7-SG-20	
	Date Analyzed	9/11/01		9/14/01		9/14/01		9/14/01	
	Dilution Factor	1		1		1		1	
	Matrix	Vapor		Vapor		Vapor		Vapor	
	Units	mg/m3		mg/m3		mg/m3		mg/m3	
trans-1,2-Dichloroethene		<1.0 J		<1.0 J		<1.0 J		<1.0 J	
cis-1,2-Dichloroethene		<0.25 J		<0.25 J		<0.25 J		<0.25 J	
Trichloroethene		<1.0		<1.0		<1.0		<1.0	
Tetrachloroethene		<0.19		<0.19		<0.19		<0.19	
Surrogate (70-130)- %		2.1		0.31		4.5		2.0	
		108%		117%		118%		118%	

Transwest Geochem, Inc.
Analytical Results

Client Name: Law Engineering Inc.

Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10

Samples Received: 9/11-13/2001



TGI ID No.: 0109067

ADHS Cert. No.: AZM133/AZ0133

EPA 8021B-Modified/Solvent Screen									
Lab ID	0109067-14	0109067-15	0109067-16	0109067-17					
Sample ID	LB7-SG-30	LB7-SG-40	LB7-SG-50	LB7-SG-60					
Date Analyzed	9/14/01	9/14/01	9/14/01	9/14/01					
Dilution Factor	1	1	1	1					
Matrix	Vapor	Vapor	Vapor	Vapor					
ANALYTE	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	
trans-1,2-Dichloroethene	<1.0 J	<0.25 J	<1.0 J	<0.25 J	<1.0 J	<0.25 J	<1.0 J	<0.25 J	
cis-1,2-Dichloroethene	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	
Trichloroethene	<1.0	<0.19	<1.0	<0.19	<1.0	<0.19	<1.0	<0.19	
Tetrachloroethene	16	2.36	3.3	0.49	19	2.80	21	3.09	
Surrogate (70-130)- %	115%	115%	116%	117%	120%				

EPA 8021B-Modified/Solvent Screen									
Lab ID	0109067-25	0109067-26	0109067-27	0109067-28					
Sample ID	LB6-SG-10	LB6-SG-20	LB6-SG-30	LB6-SG-40					
Date Analyzed	9/14/01	9/14/01	9/14/01	9/14/01					
Dilution Factor	1	1	1	1					
Matrix	Vapor	Vapor	Vapor	Vapor					
ANALYTE	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	mg/m3	ppmv	
trans-1,2-Dichloroethene	<1.0 J	<0.25 J	<1.0 J	<0.25 J	<1.0 J	<0.25 J	<1.0 J	<0.25 J	
cis-1,2-Dichloroethene	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	<1.0	<0.25	
Trichloroethene	<1.0	<0.19	<1.0	<0.19	<1.0	<0.19	<1.0	<0.19	
Tetrachloroethene	1.5	0.22	37 D	5.45	22	3.24	15	2.21	
Surrogate (70-130)- %	118%	118%	118%	117%	117%				

Transwest Geochem, Inc.
Analytical Results

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 9/11-13/2001



TGI ID No.: 0109067
ADHS Cert. No.: AZM133/AZ0133

EPA 8021B-Modified/Solvent Screen						
	Lab ID	0109067-29			0109067-30	
	Sample ID	LB6-SG-50			LB6-SG-60	
	Date Analyzed	9/14/01			9/14/01	
	Dilution Factor	1			1	
	Matrix	Vapor			Vapor	
ANALYTE	Units	mg/m3	ppmv	mg/m3	ppmv	
trans-1,2-Dichloroethene		<1.0 J	<0.25 J	<1.0 J	<0.25 J	
cis-1,2-Dichloroethene		<1.0	<0.25	<1.0	<0.25	
Trichloroethene		<1.0	<0.19	<1.0	<0.19	
Tetrachloroethene		65 D	9.57	82 D	12.08	
Surrogate (70-130)- %		112%			117%	

Notes:

- D Sample was analyzed at a greater dilution on the same day.
The vapor analysis performed by Transwest Geochem, Inc. is a screening technique based on a modified EPA method. This data is not to be used in compliance situations.
- J The reported concentration is estimated. See cover letter for narrative.

Transwest Geochem, Inc.
Analytical Results

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 9/11-13/2001



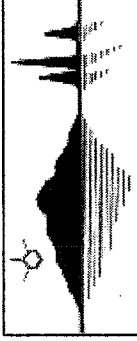
TGI ID No.: 0109067
ADHS Cert. No.: AZM133/AZ0133

TGI ID/ SAMPLE NUMBER	CLIENT ID	Matrix	Units	EPA 8021B-Modified/Solvent Screen										Sur. Rec. %	70-130% Flag
				Date Extracted	Date Analyzed	Dil.	trans-1,2 DCE	cis-1,2 DCE	TCE	PCE					
0109067 -06	LB4-S-10	Soil	mg/kg	9/11/01	9/12/01	1	<0.10 J	<0.10	<0.10	<0.10	<0.10	<0.10	99		
0109067 -07	LB4-S-20	Soil	mg/kg	9/11/01	9/12/01	1	<0.10 J	<0.10	<0.10	<0.10	<0.10	<0.10	107		
0109067 -08	LB4-S-30	Soil	mg/kg	9/11/01	9/12/01	1	<0.10 J	<0.10	<0.10	<0.10	<0.10	<0.10	101		
0109067 -09	LB4-S-40	Soil	mg/kg	9/11/01	9/12/01	1	<0.10 J	<0.10	<0.10	<0.10	<0.10	<0.10	102		
0109067 -10	LB4-S-50	Soil	mg/kg	9/11/01	9/12/01	1	<0.10 J	<0.10	<0.10	<0.10	<0.10	<0.10	99		
0109067 -18	LB4-S-60	Soil	mg/kg	9/13/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	96		
0109067 -19	LB7-S-10	Soil	mg/kg	9/13/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	91		
0109067 -20	LB7-S-20	Soil	mg/kg	9/13/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	98		
0109067 -21	LB7-S-30	Soil	mg/kg	9/13/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	107		
0109067 -22	LB7-S-40	Soil	mg/kg	9/13/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	104		
0109067 -23	LB7-S-50	Soil	mg/kg	9/13/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	94		
0109067 -24	LB7-S-60	Soil	mg/kg	9/13/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	99		
0109067 -31	LB6-S-10	Soil	mg/kg	9/14/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	102		
0109067 -32	LB6-S-20	Soil	mg/kg	9/14/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	99		
0109067 -33	LB6-S-30	Soil	mg/kg	9/14/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	98		
0109067 -34	LB6-S-40	Soil	mg/kg	9/14/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	106		
0109067 -35	LB6-S-50	Soil	mg/kg	9/14/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	96		
0109067 -36	LB6-S-60	Soil	mg/kg	9/14/01	9/14/01	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	86		

Notes:

J The reported concentration is estimated. See cover letter for narrative.

Transwest Geochem, Inc.
Analytical Quality Control Data
Reagent Blank 8021B-Modified



Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 9/11-13/2001

TGI ID No.: 0109067
ADHS Cert. No.: AZM133/AZ0133

Matrix:		Vapor	
Units:	mg/m3	ppmv	
trans-1,2-Dichloroethene:	<1.0	<0.25	
cis-1,2-Dichloroethene:	<1.0	<0.25	
Trichloroethene:	<1.0	<0.19	
Tetrachloroethene:	<1.0	<0.15	
Surrogate (70-130) %:		116	
Date Analyzed:	9/11/01		
Samples Linked:	0109067 -(1-5)		

Matrix:		Vapor	
Units:	mg/m3	ppmv	
trans-1,2-Dichloroethene:	<1.0	<0.25	
cis-1,2-Dichloroethene:	<1.0	<0.25	
Trichloroethene:	<1.0	<0.19	
Tetrachloroethene:	<1.0	<0.15	
Surrogate (70-130) %:		116	
Date Analyzed:	9/14/01		
Samples Linked:	0109067 -11-17,25-30		

Transwest Geochem, Inc.
Analytical Quality Control Data
8021B-Modified

Client Name:

Law Engineering Inc.

Project Name/No.:

S. Mesa WQARF/70211-0-0150-2-2.10

Samples Received:

9/11-13/2001



TGI ID No.: 0109067

ADHS Cert. No.: AZM133/AZ0133

Duplicate

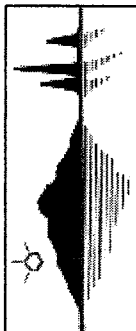
	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/m3	mg/m3	mg/m3	mg/m3
Matrix:	Vapor	Vapor	Vapor	Vapor
Sample Result:	<1.0	<1.0	<1.0	<1.0
Duplicate Result:	<1.0	<1.0	<1.0	<1.0
RPD:	N/A	N/A	N/A	N/A
Surr Recovery (70-130)%:	117%	120%		
Date Analyzed:	9/12/01			
Sample Duplicated:	0109058 -1			
Samples Linked:	0109067 -(1-5)			

LCS

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/m3	mg/m3	mg/m3	mg/m3
Matrix:	Vapor	Vapor	Vapor	Vapor
LCS Amount:	5.0	5.0	5.0	15
LCS Result:	5.0	5.8	5.3	5.4
Percent Recovery:	100	116	106	36
LCS Surr. (70-130) %:	108%			
Date Analyzed:	9/11/01			
Samples Linked:	0109067 -(1-5)			

Transwest Geochem, Inc.
Analytical Quality Control Data
8021B-Modified

TGI ID No.: 0109067
ADHS Cert. No.: AZM133/AZ0133



Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 9/11-13/2001

Duplicate

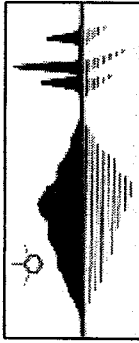
	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/m3	mg/m3	mg/m3	mg/m3
Matrix:	Vapor	Vapor	Vapor	Vapor
Sample Result:	<1.0	<1.0	<1.0	16
Duplicate Result:	<1.0	<1.0	<1.0	17
RPD:	N/A	N/A	N/A	6%
Surr Recovery (70-130)%:	115%	113%		
Date Analyzed:	9/14/01			
Sample Duplicated:	0109067 -14			
Samples Linked:	0109067 -11-17,25-30			

LCS

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/m3	mg/m3	mg/m3	mg/m3
Matrix:	Vapor	Vapor	Vapor	Vapor
LCS Amount:	5.0	5.0	5.0	15
LCS Result:	5	5.6	5.9	5.8
Percent Recovery:	100	112	118	39
LCS Surr. (70-130) %:	115%			
Date Analyzed:	9/14/01			
Samples Linked:	0109067 -11-17,25-30			

Transwest Geochem, Inc.
Analytical Quality Control Data
Reagent Blank/LCS Method 8021B-Modified

TGI ID No.: 0109067
 ADHS Cert. No.: AZM133/AZ0133



Client Name: Law Engineering Inc.
 Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
 Samples Received: 9/11-13/2001

Reagent Blank

Units:	mg/kg
Matrix:	Soil
trans-1,2-Dichloroethene:	<0.10
cis-1,2-Dichloroethene:	<0.10
Trichloroethene:	<0.10
Tetrachloroethene:	<0.10
Surr Rec%(70-130):	113
Date Extracted:	9/11/01
Date Analyzed:	9/12/01
Samples Linked:	0109067 -(6-10)

LCS

	Benzene	Toluene	Ethyl Benzene	Total Xylenes
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Matrix:	Soil	Soil	Soil	Soil
LCS Amount:	0.50	0.50	0.50	1.5
LCS Result:	0.50	0.58	0.51	1.6
Percent Recovery:	100	116	102	107
Limits	70-130%	70-130%	70-130%	70-130%
Surr Rec%(70-130):	110%			
Date Extracted:	9/11/01			
Date Analyzed:	9/12/01			
Samples Linked:	0109067 -(6-10)			

Units:	mg/kg
Matrix:	Soil
trans-1,2-Dichloroethene:	<0.10
cis-1,2-Dichloroethene:	<0.10
Trichloroethene:	<0.10
Tetrachloroethene:	<0.10
Surr Rec%(70-130):	96
Date Extracted:	9/13/01
Date Analyzed:	9/14/01
Samples Linked:	0109067 -(18-24)

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Matrix:	Soil	Soil	Soil	Soil
LCS Amount:	0.50	0.50	0.50	0.50
LCS Result:	0.57	0.52	0.45	0.43
Percent Recovery:	114	104	90	86
Limits	70-130%	70-130%	70-130%	70-130%
Surr Rec%(70-130):	94%			
Date Extracted:	9/13/01			
Date Analyzed:	9/14/01			
Samples Linked:	0109067 -(18-24)			

Transwest Geochem, Inc.
Analytical Quality Control Data
Reagent Blank/LCS Method 8021B-Modified

Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 9/11-13/2001



TGI ID No.: 0109067
ADHS Cert. No.: AZM133/AZ0133

Reagent Blank

Units:	mg/kg
Matrix:	Soil
trans-1,2-Dichloroethene:	<0.10
cis-1,2-Dichloroethene:	<0.10
Trichloroethene:	<0.10
Tetrachloroethene:	<0.10
Surr Rec%(70-130):	101
Date Extracted:	9/14/01
Date Analyzed:	9/14/01
Samples Linked:	0109067 -(31-36)

LCS

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Matrix:	Soil	Soil	Soil	Soil
LCS Amount:	0.50	0.50	0.50	0.50
LCS Result:	0.50	0.54	0.51	0.55
Percent Recovery:	100	108	102	110
Limits	70-130%	70-130%	70-130%	70-130%
Surr Rec%(70-130):	80%			
Date Extracted:	9/14/01			
Date Analyzed:	9/14/01			
Samples Linked:	0109067 -(31-36)			

Transwest Geochem, Inc.
Analytical Quality Control Data
MS/MSD 8021B-Modified



Client Name:

Law Engineering Inc.

Project Name/No.:

S. Mesa WQARF/70211-0-0150-2-2.10

Samples Received:

9/11-13/2001

TGI ID No.: 0109067

ADHS Cert. No.: AZM133/AZ0133

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Matrix:	Soil	Soil	Soil	Soil
Sample Result:	<0.10	<0.10	<0.10	<0.10
Spike Amount:	0.50	0.50	0.50	0.50
Spike Result:	0.50	0.58	0.54	0.54
Percent Recovery:	100%	116%	108%	108%
Duplicate Result:	0.50	0.58	0.52	0.52
Percent Recovery:	100%	116%	104%	104%
Limits:	70-130%	70-130%	70-130%	70-130%
RPD:	0%	0%	4%	4%
Surr Rec%(70-130)	100%	94%		
Date Extracted:	9/11/01			
Date Analyzed:	9/12/01			
Samples Linked:	0109067 -(6-10)			
Sample Spiked:	0109067 -10			

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Matrix:	Soil	Soil	Soil	Soil
Sample Result:	<0.10	<0.10	<0.10	<0.10
Spike Amount:	0.50	0.50	0.50	0.50
Spike Result:	0.55	0.53	0.47	0.43
Percent Recovery:	110%	106%	94%	86%
Duplicate Result:	0.48	0.46	0.44	0.48
Percent Recovery:	96%	92%	88%	96%
Limits:	70-130%	70-130%	70-130%	70-130%
RPD:	14%	14%	7%	11%
Surr Rec%(70-130)	92%	80%		
Date Extracted:	9/13/01			
Date Analyzed:	9/14/01			
Samples Linked:	0109067 -(18-24)			
Sample Spiked:	0109067 -24			

Transwest Geochem, Inc.
Analytical Quality Control Data
MS/MSD 8021B-Modified

TGI ID No.: 0109067
ADHS Cert. No.: AZM133/AZ0133



Client Name: Law Engineering Inc.
Project Name/No.: S. Mesa WQARF/70211-0-0150-2-2.10
Samples Received: 9/11-13/2001

	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Matrix:	Soil	Soil	Soil	Soil
Sample Result:	<0.10	<0.10	<0.10	<0.10
Spike Amount:	0.50	0.50	0.50	0.50
Spike Result:	0.54	0.52	0.48	0.49
Percent Recovery:	108%	104%	96%	98%
Duplicate Result:	0.55	0.55	0.46	0.44
Percent Recovery:	110%	110%	92%	88%
Limits:	70-130%	70-130%	70-130%	70-130%
RPD:	2%	6%	4%	11%
Surr Rec%(70-130)	84%	82%		
Date Extracted:	9/14/01			
Date Analyzed:	9/14/01			
Samples Linked:	0109067 -(31-36)			
Sample Spiked:	0109067 -35			



Del Mar Analytical

TEL

0108149

2802 AUTON AVE., Irvine, CA 92606 (949) 201-1122 FAX (949) 201-1126
1014 E. Cadeby Dr., Suite A, Colton, CA 92324 (909) 370-4867 FAX (909) 370-1046
7277 Highviewhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1644 FAX (818) 779-1843
9444 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-8585 FAX (619) 505-9589
9650 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd., Suite 3, Las Vegas, NV 89120 (702) 796-3620 FAX (702) 796-3621

CHAIN OF CUSTODY FORM

Page 1 of 1

Client Name/Address: LAN ENVA

Project/PO Number:

Analysis Required

Project Manager: Jim Clark

Phone Number: 702-111-0155

Sample: PATRICKSON

Fax Number: 437 3625

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives
LB3-W-150	W	150g	3	8/29/2010	14:01	X
LB3-W-170	W			8/29/2010	22:10	X
LB3-W-200	W			8/30/2010	01:00	X
LB3-W-220	W			8/30/2010	04:30	X

8021

Special Instructions

Relinquished By:	Date /Time:	Received by:	Date /Time:	Turnaround Time: (Check)
Ref	08/30/10	Ref	08/30/10	same day X 72 hours
Ref	08/30/10	Ref	08/30/10	24 hours 5 days
Ref	08/30/10	Ref	08/30/10	48 hours normal

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.



Quote #: _____ Page 1 of _____

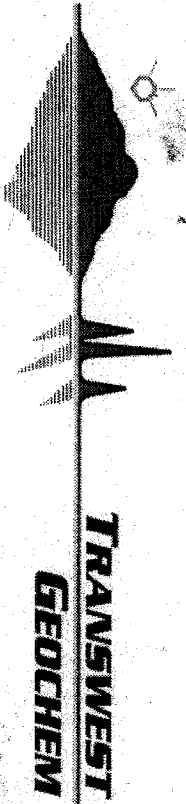
015019

0108245 8/1

[illegible]

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

COC-GB



3725 E. Atlanta Ave., Ste 2
Phoenix, AZ 85040
Phone: (602) 437-0330
Fax: (602) 437-0660

Mobile Lab - Chain of Custody

ML No: 5 TGI Work Order No: 0108149
Date: 5/25/01 Page 1 of 1

Project Manager:	<u>Jim Clarke</u>		
Client Name:	<u>Law Engineering, Inc.</u>		
Address:	<u>4634 S. 36th Place</u>		
City, State ZIP:	<u>Phoenix, AZ 85040</u>		
Phone:	<u>602-437-0350</u>	Fax:	<u>602-437-3675</u>

Bill to:	
Company:	
Address:	
City, State ZIP:	
Phone:	
Fax:	

P.O. No.:	
Project Name:	
Project Number:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	Containers:	Relinquished By:	Relinquished:	Relinquished:	Received By:	TRPH (418.1A2)	BTX (8021B)	TPH - (8015A2)	PCP, TCE, DCE	GCMS (8260B/624)	PAH, EPA 8310	RCRA METALS	Container Type/ Remarks	
LB-3-S6-10	Vapor	5/25/01	8035	42	1	✓	5/25/01	8100	✓				X					
LB-3-S-10	Soil		1	43	1			1					X					
LB-3-S6-20	Vapor		2155	44	1			2150					X					
LB-3-S-20	Soil		1	45	1			1					X					
LB-3-S6-30	Vapor		2155	46	1			2158					X					
LB-3-S-30	Soil		1	47	1			1					X					
LB-3-S6-40	Vapor		2230	48	1			2232					X					
LB-3-S-40	Soil		1	49	1			2250					X					
LB-3-S6-50	Vapor		2305	50	1			2318					X					
LB-3-S-50	Soil		1	51	1			1					X					
LB-3-S6-60	Vapor		2340	52	1			2342					X					
LB-3-S-60	Soil		1	53	1			2342					X					
LB-3-S6-70	Vapor	✓	2308	54	1	✓	✓	0010	✓				X					

Initials	Signature	Printed Name	Date:	Total Containers:	13
SA	<u>[Signature]</u>	<u>Shawn Fusura</u>	Start Time:	5/25/01	Received Intact: Y
PC	<u>[Signature]</u>	<u>Prock</u>	Stop Time:	0100	Custody Seals: N
			Hours:		Temperature: NA
			Client Sign-off:		Ice: Absent / Present
					Wet / Blue

White copy to TGI, Yellow copy for final report, Pink copy to field sampler

3725 E. Atlanta Ave., Ste 2
Phoenix, AZ 85040
Phone: (602) 437-0330
Fax: (602) 437-0660

Mobile Lab - Chain of Custody

ML No: 5 TGI Work Order No: 0108149



Date 8/26/01 Page 1 of 1

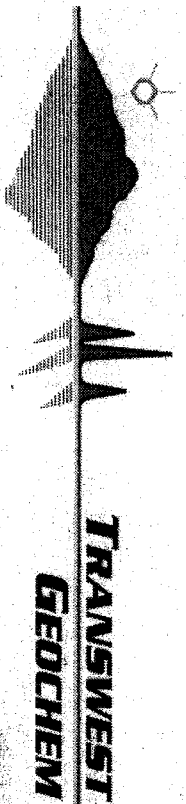
Project Manager:	Jim Clarke		
Client Name:	Law Engineering, Inc.		
Address:	4634 S. 36 th Place		
City, State ZIP:	Phoenix, AZ 85040		
Phone:	602-437-0250	Fax:	602-437-3675

Bill to:			
Company:			
Address:			
City, State ZIP:			
Phone:		Fax:	

P.O. No.:	
Project Name:	S. Mesa WAAFSite
Project Number:	

P.O. No.:		Project Name:		Project Number:		Analysis Requested														
Sample Identification		Matrix	Date Sampled	Time Sampled	Lab ID	No. Containers:	Relinquished By:	Date Relinquished:	Time Relinquished:	Received By:	TRPH (418.1AZ)	BTX (8021B)	TPH - (8015AZ)	KE, DCE, TCE	8021 & - Mod	GCMS (8260B/624)	PAH, EPA 8310	RCRA METALS	Container Type/ Remarks	
LB-2-GW-130	Ag	8/26/01	0650	38	3	JC	8/26/01	0707	SA					X						
LB-2-GW-150			0805	39	3									X						
LB-2-GW-170			1238	40	3									X						
LA-2-GW-240			1730	41	3										X					

Initials	Signature	Printed Name	Date:	Total Containers:	
SK		Sharon Kusma	Start Time:	5/26/01	Received Intact: Y
JC		J. Smith, Clerk	Stop Time:	1800	Custody Seals: N
			Hours:		Temperature: N/A
			Client Sign-off:		Ice: Absent / Present
					Wet / Blue



3725 E. Atlanta Ave., Ste 2
Phoenix, AZ 85040
Phone: (602) 437-0330
Fax: (602) 437-0660

Mobile Lab - Chain of Custody

ML No: 2 TGI Work Order No: 0108149
Date 8/25/01 Page 1 of 1

Project Manager:	Jim Clarke
Client Name:	Law Engineering, Inc.
Address:	4634 S. 36th Place
City, State ZIP:	Phoenix, AZ 85040
Phone:	602-437-0250
Fax:	

Bill to:	
Company:	
Address:	
City, State ZIP:	
Phone:	
Fax:	

P.O. No.:	
Project Name:	S. Mesa W/DAF Site
Project Number:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	Iners:	ed By:	shed:	shed:	ed By:	(11A2)	(201B)	(15A2)	d ACE	8/624)	8310	TALS	Container Type/ Remarks
LB-2-S-10	Vapor	8/25/01	0822	24	1	JC	8/25/01	0824	SA				X				
LB-2-S-10	Soil		0825	25	1			0832					X				
LB-2-S-20	Vapor		0859	26	1			0904					X				
LB-2-S-20	Soil		0905	27	1			0912					X				
LB-2-S-30	Vapor		0935	28	1			0936					X				
LB-2-S-30	Soil		0935	29	1			0944					X				
LB-2-S-40	Vapor		1010	30	1			1012					X				
LB-2-S-40	Soil		1010	31	1			1026					X				
LB-2-S-50	Vapor		1035	32	1			1037					X				
LB-2-S-50	Soil		1035	33	1			1047					X				
LB-2-S-60	Vapor		1115	34	1			1120					X				
LB-2-S-60	Soil		1115	35	1			1140					X				
LB-2-S-70	Vapor		1325	36	1			1336					X				
LB-2-S-80	Vapor		1400	37	1			1402					X				

Initials	Signature	Printed Name	Date:	Start Time:	Stop Time:	Hours:	Client Sign-off:	Total Containers:	Received Intact:	Custody Seals:	Temperature:	Ice:	Absent / Present	Wet / Blue
SA	<i>[Signature]</i>	Shawn Lyman	8/25/01	0600	1430	1430		14	Y	N	N/A			
JC	<i>[Signature]</i>	James N. Clarke												

While copy to TGI, Yellow copy for final report, Pink copy to field sampler



Mobile Lab - Chain of Custody



ML No: 2 TGI Work Order No: 0108149

Date 5/22/01 Page 1 of 1

Bill to:		
Company:		
Address:		
City, State ZIP:		
Phone:		Fax:

Analysis Requested		Recd	Time Relinquish	Date Relinquish	Relinquish	No. Copies	
RCRA	PAH,	GCMS (8)	8418 -	DCI, DCI	TPH -	BTE	TRPH

[illegible]

Initials	Signature	Printed Name	Date:	Total Containers:	
SR		Shawn Christy	Start Time: 0710	Received Intact: Y	
RI		Shawn Christy	Stop Time: 2200	Custody Seals: N	
			Hours:	Temperature: 20A	
			Client Sign-off:	Ice: Absent / Present	Wet / Blue



Mobile Lab - Chain of Custody



ML No: 5 TGI Work Order No: 0108149

Date 8/21/01 Page 1 of 1

Bill to:		
Company:		
Address:		
City, State ZIP:		
Phone:		
	Fax:	

P.O. No.:		No. C	Relinqu	Date Rel	Time Rel	Rel	Analysis Requested							
Project Name:	S. Mesa WAAE Side						TRPH	BTH	TPH	GCMS (C)	PAH,	RCR		
Project Number:							80216	DC, B						

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	Inners:	Packed By:	Shipped:	Shipped:	Packed By:	3.1(AZ)	0021B)	15(AZ)	ad TCF	B/6(2A)	A 8310	TALS	Container Type/ Remarks
LA-1-SG-60	Vapor	8/21/01	0735	11	1	PL	8/21/01	0736	SK				X				
LA-1-S-60	Sg:1		0738	12	'			0810					X				
LA-1-SG-70	Vapor		0805	13	'			0812					X				
LA-1-SG-80			0838	14	1			0842					X				
LA-1-SG-90			0912	15	1			0917					X				
LA-1-SG-100			1005	16	1			1012					X				
LA-1-SG-110			1049	17	1			1054					X				
															</		

Initials	Signature	Printed Name	Date:	Total Containers:	
SA		Shawn Husina	Start Time: 0700	Received Intact: Y	
PC		Tracy Clark	Stop Time: 1400	Custody Seals: N	
			Hours:	Temperature: N/A	
			Client Sign-off:	Ice: Absent / Present	Wet / Blue





Mobile Lab - Chain of Custody
ML No: 5 TGI Work Order No: 0108147
Date 8/20/01 Page 1 of 1

Bill to:			
Company:			
Address:			
City, State ZIP:			
Phone:		Fax:	

Analysis Requested		Rec	Time Relin	Date Relin	Relinqu	No. Co	
RCRA	PAH, I						GCMS (BZ

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	Containers:	PC	By:	Shed:	Shed:	By:	SA	14Z	2021B	15AZ	TC	6/24	8310	TALS	Container Type/ Remarks
LB-1-SG-10	Vapor	8/20/01	1130	1	1	PC		8/20/01	1134	SA					X				
LB-1-S-10	Soil		1155	2	1				1158						X				
LB-1-SG-20	Vapor		1255	3	1				1302						X				
LB-1-S-20	Soil		1515	4	1				1523						X				
LB-1-SG-30	Vapor		1558	5	1				1602						X				
LB-1-S-30	Soil		1600	6	1				1605						X				
LB-1-SG-40	Vapor		1648	7	1				1653						X				
LB-1-S-40	Soil		1625	8	1				1658						X				
LB-1-SG-50	Vapor		1650	9	1				1658						X				
LB-1-S-50	Soil		1650	10	1				1708						X				

Initials	Signature	Printed Name	Date:	Total Containers:	
SA		Sharon Medina	8/29/01	10	
PC		Patricia Clark	10:30	Received Intact: Y	
			Stop Time: 1:30	Custody Seals: N	
			Hours:	Temperature: N/A	
			Client Sign-off:	Ice: Absent / Present	Wet / Blue



Chain of Custody

TEI Work Order No: 0105067

Date 7/3/61 Page 1 of 1

Bill to:	
Company:	
Address:	
City, State ZIP	
Phone:	Fax:

ANALYSIS REQUEST[illegible]

No. of Co	TPH, (418.1 /4
TPH, 80%	
BTEX	
Plastics GCMS (624/4	
SDWA Volatiles	
(6)	
-l-Volatile Organics	
pesticides (6)	
PCB's	
PAH, EI	
8 RCRA	
3 Priority Pollutants	

Comments

[illegible][illegible][illegible]

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[illegible][illegible][illegible][illegible][illegible]

Date/Time	Received by: (Signature)	(Print Name)	Date/Time
/			

095011257300440666	PHILIP M. A. 12/10/10	325
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[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Chain of Custody

TGI Work Order No: 0109067

Date 09/11/01 Page 5 of 4

Bill to:		
Company:		
Address:		
City, State ZIP:		
Phone:		Fax:

[illegible]



Chain of Custody

TGI Work Order No: 0109067
Date 09/12/24 Page 1 of 2

SAMPLE RECEIPT

ANALYSIS REQUEST

[illegible]



Del Mar Analytical

TG1

Q109067

1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
7277 Heyvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 778-1844 FAX (818) 779-1848
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-8596 FAX (619) 505-8589
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd., Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

CHAIN OF CUSTODY FORM

Page 1 of 1

Client Name/Address:		Project/PO Number:		Analysis Required											
LAW PAX, AZ		70211-0-0150													
Project Manager: Jim Clark		Phone Number: 437-2250													
Sampler: Patrick Cobb		Fax Number: 437-3450													
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives							Lab #	Special Instructions	
LA-5A-20		V Bank	1	9/11/01	1115		X							1	
LA-5A-20														2	
LA-5A-30														3	
LA-5A-40														4	
LA-5A-50														5	
LA-5A-60															
LA-5A-70															
LA-5A-80															
LA-5A-90															
LA-5A-100															
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LA-5A-180															
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LA-5A-210															
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LA-5A-360															
LA-5A-370															
LA-5A-380															
LA-5A-390															
LA-5A-400															
LA-5A-410															
LA-5A-420															
LA-5A-430															
LA-5A-440															
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LA-5A-460															
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LA-5A-480															
LA-5A-490															
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LA-5A-950															
LA-5A-960															
LA-5A-970															
LA-5A-980															
LA-5A-990															
LA-5A-1000															

Relinquished By:	Date /Time:	Received by:	Date /Time:	Turnaround Time: (Check) same day _____ 24 hours _____ 48 hours _____ 72 hours _____ 5 days _____ normal _____
Relinquished By:	Date /Time:	Received by:	Date /Time:	Sample Integrity: (Check) Intact _____ on ice _____ 590

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

APPENDIX H

DEL MAR ANALYTICAL SOIL SAMPLE ANALYTICAL REPORT



Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

Issued: 8/31/01

CASE NARRATIVE

LABORATORY NUMBER

PKH0356-01
PKH0356-02
PKH0356-03
PKH0356-04
PKH0356-05
PKH0356-06
PKH0356-07

SAMPLE DESCRIPTION

LB1 Rinse
LB-1-S-10
LB-1-S-20
LB-1-S-30
LB-1-S-40
LB-1-S-50
Trip Blank

SAMPLE MATRIX

Water
Soil
Soil
Soil
Soil
Soil
Water

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: The N1 flag on Cyanide indicates that the samples are tested for the presence of sulfide in the lab within 24 hours of sampling. Samples were tested past the 24 hours.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

QA/QC CRITERIA: The R1 flag on Cyanide indicates that the RPD exceeded the method control limit. See Corrective Action Report.

EXPLANATION OF DATA QUALIFIERS: The L3 flag on 8260 and Cyanide indicates that the Laboratory Control Sample recovery was above the method control limits. Analyte not detected, data not impacted.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)


Melissa Evans
Project Manager

PKH0356
Page 1 of 35

CORRECTIVE ACTION REPORT

Department: Wet Chemistry Methods: 9014
Date: 08/29/2001 Matrix: Soil
Batch: P1H2911
Samples Affected: PKH0356-02 – PKH0356-06 & PKH0374-02

Identification and Definition of Problem:

The Matrix Spike Duplicate (MSD) recovered low (42%) and outside of the 70-130% acceptance limits. Because of the low recovery in the MSD the Relative Percent Difference (RPD) between the Matrix Spike (MS) and the MSD was high (52.1%) and outside of the 20% acceptance limits.

Determination of the Cause of the Problem:

A definitive cause for the low recovery has not been determined.

Corrective Action:

The MS as well as the Laboratory Control Sample recovered within acceptance limits, thus validating the batch. The MSD has been flagged "M2" to indicate the low recovery and "R1" to indicate that the RPD was outside of acceptance limits.

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 09/05/2001
Quality Assurance Manager



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0356-01 (LB1 Rinse - Water)								
Acetone	EPA 8260B	P1H3106	20	ND	1	8/30/01	8/30/01	
Benzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Bromobenzene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
Bromochloromethane	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
Bromodichloromethane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Bromoform	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
Bromomethane	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
2-Butanone (MEK)	EPA 8260B	P1H3106	10	ND	1	8/30/01	8/30/01	
n-Butylbenzene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
sec-Butylbenzene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
tert-Butylbenzene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
Carbon Disulfide	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
Carbon tetrachloride	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
Chlorobenzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Chloroethane	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
Chloroform	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Chloromethane	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
2-Chlorotoluene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
4-Chlorotoluene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
Dibromochloromethane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Dibromomethane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,2-Dichlorobenzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,3-Dichlorobenzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,4-Dichlorobenzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Dichlorodifluoromethane	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
1,1-Dichloroethane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,2-Dichloroethane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,1-Dichloroethene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
cis-1,2-Dichloroethene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
trans-1,2-Dichloroethene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,2-Dichloropropane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,3-Dichloropropane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
2,2-Dichloropropane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,1-Dichloropropene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
cis-1,3-Dichloropropene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
trans-1,3-Dichloropropene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Ethylbenzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Hexachlorobutadiene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
2-Hexanone	EPA 8260B	P1H3106	10	ND	1	8/30/01	8/30/01	
Iodomethane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Isopropylbenzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
p-Isopropyltoluene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	

Melissa Evans
 Project Manager

PKH0356
 Page 2 of 35

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01
 Received: 08/21/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0356-01 (LB1 Rinse - Water)								
Methylene chloride	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P1H3106	10	ND	1	8/30/01	8/30/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
Naphthalene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
n-Propylbenzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Styrene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Tetrachloroethene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Toluene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,2,3-Trichlorobenzene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
1,2,4-Trichlorobenzene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
1,1,1-Trichloroethane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,1,2-Trichloroethane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Trichloroethene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Trichlorofluoromethane	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
1,2,3-Trichloropropane	EPA 8260B	P1H3106	10	ND	1	8/30/01	8/30/01	
1,2,4-Trimethylbenzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,3,5-Trimethylbenzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Vinyl acetate	EPA 8260B	P1H3106	25	ND	1	8/30/01	8/30/01	V1,L3
Vinyl chloride	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
Xylenes, Total	EPA 8260B	P1H3106	10	ND	1	8/30/01	8/30/01	
Surrogate: Dibromofluoromethane (80-120%)				102 %				
Surrogate: Toluene-d8 (80-120%)				106 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				110 %				



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0356-04 (LB-1-S-30 - Soil)								
Acetone	EPA 8260B	P1H2201	1000	ND	1	8/22/01	8/28/01	
Benzene	EPA 8260B	P1H2201	50	ND	1	8/22/01	8/28/01	
Bromobenzene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Bromochloromethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Bromodichloromethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Bromoform	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Bromomethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
2-Butanone (MEK)	EPA 8260B	P1H2201	500	ND	1	8/22/01	8/28/01	
n-Butylbenzene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
sec-Butylbenzene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
tert-Butylbenzene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Carbon Disulfide	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Carbon tetrachloride	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Chlorobenzene	EPA 8260B	P1H2201	50	ND	1	8/22/01	8/28/01	
Chloroethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Chloroform	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Chloromethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
2-Chlorotoluene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
4-Chlorotoluene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Dibromochloromethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Dibromomethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,2-Dichlorobenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,3-Dichlorobenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,4-Dichlorobenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Dichlorodifluoromethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
1,1-Dichloroethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,2-Dichloroethane	EPA 8260B	P1H2201	50	ND	1	8/22/01	8/28/01	
1,1-Dichloroethene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
cis-1,2-Dichloroethene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
trans-1,2-Dichloroethene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,2-Dichloropropane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,3-Dichloropropane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
2,2-Dichloropropane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,1-Dichloropropene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
cis-1,3-Dichloropropene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
trans-1,3-Dichloropropene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Ethylbenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Hexachlorobutadiene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
2-Hexanone	EPA 8260B	P1H2201	500	ND	1	8/22/01	8/28/01	
Iodomethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Isopropylbenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
p-Isopropyltoluene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	

Melissa Evans
 Project Manager

PKH0356
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0356-04 (LB-1-S-30 - Soil)								
Methylene chloride	EPA 8260B	P1H2201	500	ND	1	8/22/01	8/28/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P1H2201	500	ND	1	8/22/01	8/28/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Naphthalene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
n-Propylbenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Styrene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Tetrachloroethene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Toluene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,2,3-Trichlorobenzene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
1,2,4-Trichlorobenzene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
1,1,1-Trichloroethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,1,2-Trichloroethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Trichloroethene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Trichlorofluoromethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
1,2,3-Trichloropropane	EPA 8260B	P1H2201	500	ND	1	8/22/01	8/28/01	
1,2,4-Trimethylbenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,3,5-Trimethylbenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Vinyl acetate	EPA 8260B	P1H2201	1200	ND	1	8/22/01	8/28/01	V1
Vinyl chloride	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Xylenes, Total	EPA 8260B	P1H2201	150	ND	1	8/22/01	8/28/01	

Surrogate: Dibromofluoromethane (70-125%)

91.2 %

Surrogate: Toluene-d8 (50-135%)

95.2 %

Surrogate: 4-Bromofluorobenzene (70-130%)

92.8 %

The reporting limit for this sample was adjusted by a factor of 0.996 to account for the applicable preparation factor.



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0356-06 (LB-1-S-50 - Soil)								
Acetone	EPA 8260B	P1H2201	1000	ND	1	8/22/01	8/28/01	
Benzene	EPA 8260B	P1H2201	50	ND	1	8/22/01	8/28/01	
Bromobenzene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Bromochloromethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Bromodichloromethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Bromoform	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Bromomethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
2-Butanone (MEK)	EPA 8260B	P1H2201	500	ND	1	8/22/01	8/28/01	
n-Butylbenzene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
sec-Butylbenzene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
tert-Butylbenzene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Carbon Disulfide	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Carbon tetrachloride	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Chlorobenzene	EPA 8260B	P1H2201	50	ND	1	8/22/01	8/28/01	
Chloroethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Chloroform	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Chloromethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
2-Chlorotoluene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
4-Chlorotoluene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Dibromochloromethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Dibromomethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,2-Dichlorobenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,3-Dichlorobenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,4-Dichlorobenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Dichlorodifluoromethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
1,1-Dichloroethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,2-Dichloroethane	EPA 8260B	P1H2201	50	ND	1	8/22/01	8/28/01	
1,1-Dichloroethene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
cis-1,2-Dichloroethene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
trans-1,2-Dichloroethene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,2-Dichloropropane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,3-Dichloropropane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
2,2-Dichloropropane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,1-Dichloropropene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
cis-1,3-Dichloropropene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
trans-1,3-Dichloropropene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Ethylbenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Hexachlorobutadiene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
2-Hexanone	EPA 8260B	P1H2201	500	ND	1	8/22/01	8/28/01	
Iodomethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Isopropylbenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
p-Isopropyltoluene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	

Melissa Evans
 Project Manager

PKH0356
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0356-06 (LB-1-S-50 - Soil)								
Methylene chloride	EPA 8260B	P1H2201	500	ND	1	8/22/01	8/28/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P1H2201	500	ND	1	8/22/01	8/28/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Naphthalene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
n-Propylbenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Styrene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Tetrachloroethene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Toluene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,2,3-Trichlorobenzene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
1,2,4-Trichlorobenzene	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
1,1,1-Trichloroethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,1,2-Trichloroethane	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Trichloroethene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Trichlorofluoromethane	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
1,2,3-Trichloropropane	EPA 8260B	P1H2201	500	ND	1	8/22/01	8/28/01	
1,2,4-Trimethylbenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
1,3,5-Trimethylbenzene	EPA 8260B	P1H2201	100	ND	1	8/22/01	8/28/01	
Vinyl acetate	EPA 8260B	P1H2201	1200	ND	1	8/22/01	8/28/01	V1
Vinyl chloride	EPA 8260B	P1H2201	250	ND	1	8/22/01	8/28/01	
Xylenes, Total	EPA 8260B	P1H2201	150	ND	1	8/22/01	8/28/01	

Surrogate: Dibromofluoromethane (70-125%)

80.2 %

Surrogate: Toluene-d8 (50-135%)

84.0 %

Surrogate: 4-Bromofluorobenzene (70-130%)

87.0 %

The reporting limit for this sample was adjusted by a factor of 1.05 to account for the applicable preparation factor.



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0356-07 (Trip Blank - Water)								
Acetone	EPA 8260B	PIH3106	20	ND	1	8/30/01	8/30/01	
Benzene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
Bromobenzene	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
Bromochloromethane	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
Bromodichloromethane	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
Bromoform	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
Bromomethane	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
2-Butanone (MEK)	EPA 8260B	PIH3106	10	ND	1	8/30/01	8/30/01	
n-Butylbenzene	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
sec-Butylbenzene	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
tert-Butylbenzene	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
Carbon Disulfide	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
Carbon tetrachloride	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
Chlorobenzene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
Chloroethane	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
Chloroform	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
Chloromethane	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
2-Chlorotoluene	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
4-Chlorotoluene	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
Dibromochloromethane	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
1,2-Dibromoethane (EDB)	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
Dibromomethane	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
1,2-Dichlorobenzene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
1,3-Dichlorobenzene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
1,4-Dichlorobenzene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
Dichlorodifluoromethane	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
1,1-Dichloroethane	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
1,2-Dichloroethane	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
1,1-Dichloroethene	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
cis-1,2-Dichloroethene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
trans-1,2-Dichloroethene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
1,2-Dichloropropane	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
1,3-Dichloropropane	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
2,2-Dichloropropane	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
1,1-Dichloropropene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
cis-1,3-Dichloropropene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
trans-1,3-Dichloropropene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
Ethylbenzene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
Hexachlorobutadiene	EPA 8260B	PIH3106	5.0	ND	1	8/30/01	8/30/01	
2-Hexanone	EPA 8260B	PIH3106	10	ND	1	8/30/01	8/30/01	
Iodomethane	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
Isopropylbenzene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	
p-Isopropyltoluene	EPA 8260B	PIH3106	2.0	ND	1	8/30/01	8/30/01	

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 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01
Received: 08/21/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0356-07 (Trip Blank - Water)								
Methylene chloride	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P1H3106	10	ND	1	8/30/01	8/30/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
Naphthalene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
n-Propylbenzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Styrene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Tetrachloroethene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Toluene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,2,3-Trichlorobenzene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
1,2,4-Trichlorobenzene	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
1,1,1-Trichloroethane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,1,2-Trichloroethane	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Trichloroethene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Trichlorofluoromethane	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
1,2,3-Trichloropropane	EPA 8260B	P1H3106	10	ND	1	8/30/01	8/30/01	
1,2,4-Trimethylbenzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
1,3,5-Trimethylbenzene	EPA 8260B	P1H3106	2.0	ND	1	8/30/01	8/30/01	
Vinyl acetate	EPA 8260B	P1H3106	25	ND	1	8/30/01	8/30/01	V1,L3
Vinyl chloride	EPA 8260B	P1H3106	5.0	ND	1	8/30/01	8/30/01	
Xylenes, Total	EPA 8260B	P1H3106	10	ND	1	8/30/01	8/30/01	
Surrogate: Dibromofluoromethane (80-120%)				98.4 %				
Surrogate: Toluene-d8 (80-120%)				105 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				104 %				

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Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01
Received: 08/21/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0356-02 (LB-1-S-10 - Soil)								
Arsenic	EPA 6010B	P1H2407	5.0	ND	1	8/24/01	8/28/01	
Chromium	EPA 6010B	P1H2407	1.0	21	1	8/24/01	8/28/01	
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1H2407	2.0	21	1	8/24/01	8/28/01	
Nickel	EPA 6010B	P1H2407	5.0	20	1	8/24/01	8/28/01	
Zinc	EPA 6010B	P1H2407	5.0	59	1	8/24/01	8/28/01	
Sample ID: PKH0356-03 (LB-1-S-20 - Soil)								
Arsenic	EPA 6010B	P1H2407	5.0	ND	1	8/24/01	8/28/01	
Chromium	EPA 6010B	P1H2407	1.0	15	1	8/24/01	8/28/01	
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1H2407	2.0	14	1	8/24/01	8/28/01	
Nickel	EPA 6010B	P1H2407	5.0	12	1	8/24/01	8/28/01	
Zinc	EPA 6010B	P1H2407	5.0	38	1	8/24/01	8/28/01	
Sample ID: PKH0356-04 (LB-1-S-30 - Soil)								
Arsenic	EPA 6010B	P1H2407	5.0	ND	1	8/24/01	8/28/01	
Chromium	EPA 6010B	P1H2407	1.0	19	1	8/24/01	8/28/01	
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1H2407	2.0	14	1	8/24/01	8/28/01	
Nickel	EPA 6010B	P1H2407	5.0	11	1	8/24/01	8/28/01	
Zinc	EPA 6010B	P1H2407	5.0	34	1	8/24/01	8/28/01	
Sample ID: PKH0356-05 (LB-1-S-40 - Soil)								
Arsenic	EPA 6010B	P1H2407	5.0	ND	1	8/24/01	8/28/01	
Chromium	EPA 6010B	P1H2407	1.0	15	1	8/24/01	8/28/01	
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1H2407	2.0	20	1	8/24/01	8/28/01	
Nickel	EPA 6010B	P1H2407	5.0	15	1	8/24/01	8/28/01	
Zinc	EPA 6010B	P1H2407	5.0	46	1	8/24/01	8/28/01	

Law Engineering
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 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

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TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0356-06 (LB-1-S-50 - Soil)								
Arsenic	EPA 6010B	P1H2407	5.0	ND	1	8/24/01	8/28/01	
Chromium	EPA 6010B	P1H2407	1.0	27	1	8/24/01	8/28/01	
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1H2407	2.0	18	1	8/24/01	8/28/01	
Nickel	EPA 6010B	P1H2407	5.0	17	1	8/24/01	8/28/01	
Zinc	EPA 6010B	P1H2407	5.0	52	1	8/24/01	8/28/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426

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2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Coldby Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9589
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01
Received: 08/21/01

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0356-01 (LB1 Rinse - Water)								
Arsenic	EPA 200.7	P1H2320	0.050	ND	1	8/23/01	8/28/01	M2
Chromium	EPA 200.7	P1H2320	0.010	ND	1	8/23/01	8/28/01	
Chromium VI	SM3500CR-D	P1H2119	0.025	ND	1	8/21/01	8/21/01	
Copper	EPA 200.7	P1H2320	0.020	ND	1	8/23/01	8/28/01	
Nickel	EPA 200.7	P1H2320	0.050	ND	1	8/23/01	8/28/01	
Zinc	EPA 200.7	P1H2320	0.050	ND	1	8/23/01	8/28/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426

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Law Engineering
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Phoenix, AZ 85040
Attention: Jim Clarke

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Report Number: PKH0356

Sampled: 08/20/01
Received: 08/21/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0356-01 (LB1 Rinse - Water)								
Total Cyanide	SM4500-CN,C-E	P1H2906	0.020 mg/kg	ND	1	8/28/01	8/29/01	L3,N1
Sample ID: PKH0356-02 (LB-1-S-10 - Soil)								
Total Cyanide	EPA 9014	P1H2911	0.50	ND	1	8/29/01	8/29/01	M2
Sample ID: PKH0356-03 (LB-1-S-20 - Soil)								
Total Cyanide	EPA 9014	P1H2911	0.50	ND	1	8/29/01	8/29/01	
Sample ID: PKH0356-04 (LB-1-S-30 - Soil)								
Total Cyanide	EPA 9014	P1H2911	0.50	ND	1	8/29/01	8/29/01	
Sample ID: PKH0356-05 (LB-1-S-40 - Soil)								
Total Cyanide	EPA 9014	P1H2911	0.50	ND	1	8/29/01	8/29/01	
Sample ID: PKH0356-06 (LB-1-S-50 - Soil)								
Total Cyanide	EPA 9014	P1H2911	0.50	ND	1	8/29/01	8/29/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426

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Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2201 Extracted: 08/22/01										
Blank Analyzed: 08/28/01 (P1H2201-BLK1)										
Acetone	ND	1000	ug/kg							
Benzene	ND	50	ug/kg							
Bromobenzene	ND	250	ug/kg							
Bromochloromethane	ND	250	ug/kg							
Bromodichloromethane	ND	100	ug/kg							
Bromoform	ND	250	ug/kg							
Bromomethane	ND	250	ug/kg							
2-Butanone (MEK)	ND	500	ug/kg							
n-Butylbenzene	ND	250	ug/kg							
sec-Butylbenzene	ND	250	ug/kg							
tert-Butylbenzene	ND	250	ug/kg							
Carbon Disulfide	ND	250	ug/kg							
Carbon tetrachloride	ND	250	ug/kg							
Chlorobenzene	ND	50	ug/kg							
Chloroethane	ND	250	ug/kg							
Chloroform	ND	100	ug/kg							
Chloromethane	ND	250	ug/kg							
2-Chlorotoluene	ND	250	ug/kg							
4-Chlorotoluene	ND	250	ug/kg							
Dibromochloromethane	ND	100	ug/kg							
1,2-Dibromo-3-chloropropane	ND	250	ug/kg							
1,2-Dibromoethane (EDB)	ND	100	ug/kg							
Dibromomethane	ND	100	ug/kg							
1,2-Dichlorobenzene	ND	100	ug/kg							
1,3-Dichlorobenzene	ND	100	ug/kg							
1,4-Dichlorobenzene	ND	100	ug/kg							
Dichlorodifluoromethane	ND	250	ug/kg							
1,1-Dichloroethane	ND	100	ug/kg							
1,2-Dichloroethane	ND	50	ug/kg							
1,1-Dichloroethene	ND	250	ug/kg							
cis-1,2-Dichloroethene	ND	100	ug/kg							
trans-1,2-Dichloroethene	ND	100	ug/kg							
1,2-Dichloropropane	ND	100	ug/kg							
1,3-Dichloropropane	ND	100	ug/kg							
2,2-Dichloropropane	ND	100	ug/kg							

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 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2201 Extracted: 08/22/01										
Blank Analyzed: 08/28/01 (P1H2201-BLK1)										
1,1-Dichloropropene	ND	100	ug/kg							
cis-1,3-Dichloropropene	ND	100	ug/kg							
trans-1,3-Dichloropropene	ND	100	ug/kg							
Ethylbenzene	ND	100	ug/kg							
Hexachlorobutadiene	ND	250	ug/kg							
2-Hexanone	ND	500	ug/kg							
Iodomethane	ND	100	ug/kg							
Isopropylbenzene	ND	100	ug/kg							
p-Isopropyltoluene	ND	100	ug/kg							
Methylene chloride	ND	500	ug/kg							
4-Methyl-2-pentanone (MIBK)	ND	500	ug/kg							
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg							
Naphthalene	ND	250	ug/kg							
n-Propylbenzene	ND	100	ug/kg							
Styrene	ND	100	ug/kg							
1,1,1,2-Tetrachloroethane	ND	250	ug/kg							
1,1,2,2-Tetrachloroethane	ND	100	ug/kg							
Tetrachloroethene	ND	100	ug/kg							
Toluene	ND	100	ug/kg							
1,2,3-Trichlorobenzene	ND	250	ug/kg							
1,2,4-Trichlorobenzene	ND	250	ug/kg							
1,1,1-Trichloroethane	ND	100	ug/kg							
1,1,2-Trichloroethane	ND	100	ug/kg							
Trichloroethene	ND	100	ug/kg							
Trichlorofluoromethane	ND	250	ug/kg							
1,2,3-Trichloropropane	ND	500	ug/kg							
1,2,4-Trimethylbenzene	ND	100	ug/kg							
1,3,5-Trimethylbenzene	ND	100	ug/kg							
Vinyl acetate	ND	1200	ug/kg							
Vinyl chloride	ND	250	ug/kg							
Xylenes, Total	ND	150	ug/kg							
Surrogate: Dibromofluoromethane	1270		ug/kg	1250		102	70-125			
Surrogate: Toluene-d8	1320		ug/kg	1250		106	50-135			
Surrogate: 4-Bromofluorobenzene	1260		ug/kg	1250		101	70-130			

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 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01
 Received: 08/21/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2201 Extracted: 08/22/01										
LCS Analyzed: 08/30/01 (P1H2201-BS1)										
Acetone	ND	1000	ug/kg	1000		89.9	5-200			
Benzene	802	50	ug/kg	1000		80.2	65-130			
Bromobenzene	874	250	ug/kg	1000		87.4	60-135			
Bromochloromethane	856	250	ug/kg	1000		85.6	60-135			
Bromodichloromethane	799	100	ug/kg	1000		79.9	30-135			
Bromoform	812	250	ug/kg	1000		81.2	60-140			
Bromomethane	345	250	ug/kg	1000		34.5	10-200			
2-Butanone (MEK)	885	500	ug/kg	1000		88.5	10-160			
n-Butylbenzene	912	250	ug/kg	1000		91.2	65-125			
sec-Butylbenzene	934	250	ug/kg	1000		93.4	70-135			
tert-Butylbenzene	956	250	ug/kg	1000		95.6	70-130			
Carbon Disulfide	730	250	ug/kg	1000		73.0	20-120			
Carbon tetrachloride	857	250	ug/kg	1000		85.7	70-140			
Chlorobenzene	937	50	ug/kg	1000		93.7	75-125			
Chloroethane	493	250	ug/kg	1000		49.3	10-200			
Chloroform	793	100	ug/kg	1000		79.3	35-135			
Chloromethane	753	250	ug/kg	1000		75.3	10-200			
2-Chlorotoluene	909	250	ug/kg	1000		90.9	70-135			
4-Chlorotoluene	921	250	ug/kg	1000		92.1	75-135			
Dibromochloromethane	842	100	ug/kg	1000		84.2	35-135			
1,2-Dibromo-3-chloropropane	695	250	ug/kg	1000		69.5	50-155			
1,2-Dibromoethane (EDB)	893	100	ug/kg	1000		89.3	70-130			
Dibromomethane	801	100	ug/kg	1000		80.1	65-130			
1,2-Dichlorobenzene	912	100	ug/kg	1000		91.2	70-125			
1,3-Dichlorobenzene	908	100	ug/kg	1000		90.8	70-125			
1,4-Dichlorobenzene	926	100	ug/kg	1000		92.6	70-135			
Dichlorodifluoromethane	475	250	ug/kg	1000		47.5	10-185			
1,1-Dichloroethane	971	100	ug/kg	1000		97.1	60-140			
1,2-Dichloroethane	786	50	ug/kg	1000		78.6	55-135			
1,1-Dichloroethene	863	250	ug/kg	1000		86.3	55-145			
cis-1,2-Dichloroethene	955	100	ug/kg	1000		95.5	60-125			
trans-1,2-Dichloroethene	902	100	ug/kg	1000		90.2	70-145			
1,2-Dichloropropane	845	100	ug/kg	1000		84.5	65-130			
1,3-Dichloropropane	904	100	ug/kg	1000		90.4	65-130			
2,2-Dichloropropane	959	100	ug/kg	1000		95.9	60-135			
1,1-Dichloropropene	866	100	ug/kg	1000		86.6	65-130			

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01
 Received: 08/21/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2201 Extracted: 08/22/01										
LCS Analyzed: 08/30/01 (P1H2201-BS1)										
cis-1,3-Dichloropropene	812	100	ug/kg	1000		81.2	60-125			
trans-1,3-Dichloropropene	810	100	ug/kg	1000		81.0	50-130			
Ethylbenzene	926	100	ug/kg	1000		92.6	70-125			
Hexachlorobutadiene	1130	250	ug/kg	1000		113	60-125			
2-Hexanone	846	500	ug/kg	1000		84.6	25-185			
Iodomethane	738	100	ug/kg	1000		73.8	30-155			
Isopropylbenzene	970	100	ug/kg	1000		97.0	70-135			
p-Isopropyltoluene	898	100	ug/kg	1000		89.8	65-130			
Methylene chloride	1050	500	ug/kg	1000		105	60-140			
4-Methyl-2-pentanone (MIBK)	831	500	ug/kg	1000		83.1	10-175			
Methyl-tert-butyl Ether (MTBE)	895	250	ug/kg	1000		89.5	55-135			
Naphthalene	866	250	ug/kg	1000		86.6	45-155			
n-Propylbenzene	904	100	ug/kg	1000		90.4	75-135			
Styrene	934	100	ug/kg	1000		93.4	70-130			
1,1,1,2-Tetrachloroethane	903	250	ug/kg	1000		90.3	70-130			
1,1,2,2-Tetrachloroethane	810	100	ug/kg	1000		81.0	60-140			
Tetrachloroethene	882	100	ug/kg	1000		88.2	65-130			
Toluene	885	100	ug/kg	1000		88.5	70-125			
1,2,3-Trichlorobenzene	892	250	ug/kg	1000		89.2	60-135			
1,2,4-Trichlorobenzene	966	250	ug/kg	1000		96.6	55-135			
1,1,1-Trichloroethane	804	100	ug/kg	1000		80.4	65-135			
1,1,2-Trichloroethane	861	100	ug/kg	1000		86.1	65-130			
Trichloroethene	873	100	ug/kg	1000		87.3	70-130			
Trichlorofluoromethane	652	250	ug/kg	1000		65.2	10-200			
1,2,3-Trichloropropane	830	500	ug/kg	1000		83.0	60-150			
1,2,4-Trimethylbenzene	887	100	ug/kg	1000		88.7	75-130			
1,3,5-Trimethylbenzene	875	100	ug/kg	1000		87.5	70-130			
Vinyl acetate	ND	1200	ug/kg	1000		100	25-130			
Vinyl chloride	807	250	ug/kg	1000		80.7	10-200			
Xylenes, Total	2870	150	ug/kg	3000		95.7	70-130			
Surrogate: Dibromofluoromethane	1200		ug/kg	1250		96.0	70-125			
Surrogate: Toluene-d8	1200		ug/kg	1250		96.0	50-135			
Surrogate: 4-Bromofluorobenzene	1230		ug/kg	1250		98.4	70-130			



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VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2201 Extracted: 08/22/01										
LCS Dup Analyzed: 08/30/01 (P1H2201-BSD1)										
Acetone	ND	1000	ug/kg	1000		88.3	5-200	1.80	35	
Benzene	854	50	ug/kg	1000		85.4	65-130	6.28	35	
Bromobenzene	901	250	ug/kg	1000		90.1	60-135	3.04	35	
Bromochloromethane	972	250	ug/kg	1000		97.2	60-135	12.7	35	
Bromodichloromethane	821	100	ug/kg	1000		82.1	30-135	2.72	35	
Bromoform	847	250	ug/kg	1000		84.7	60-140	4.22	35	
Bromomethane	384	250	ug/kg	1000		38.4	10-200	10.7	35	
2-Butanone (MEK)	961	500	ug/kg	1000		96.1	10-160	8.23	35	
n-Butylbenzene	908	250	ug/kg	1000		90.8	65-125	0.440	35	
sec-Butylbenzene	955	250	ug/kg	1000		95.5	70-135	2.22	35	
tert-Butylbenzene	962	250	ug/kg	1000		96.2	70-130	0.626	35	
Carbon Disulfide	744	250	ug/kg	1000		74.4	20-120	1.90	35	
Carbon tetrachloride	896	250	ug/kg	1000		89.6	70-140	4.45	35	
Chlorobenzene	965	50	ug/kg	1000		96.5	75-125	2.94	35	
Chloroethane	467	250	ug/kg	1000		46.7	10-200	5.42	35	
Chloroform	904	100	ug/kg	1000		90.4	35-135	13.1	35	
Chloromethane	766	250	ug/kg	1000		76.6	10-200	1.71	35	
2-Chlorotoluene	942	250	ug/kg	1000		94.2	70-135	3.57	35	
4-Chlorotoluene	942	250	ug/kg	1000		94.2	75-135	2.25	35	
Dibromochloromethane	861	100	ug/kg	1000		86.1	35-135	2.23	35	
1,2-Dibromo-3-chloropropane	773	250	ug/kg	1000		77.3	50-155	10.6	35	
1,2-Dibromoethane (EDB)	933	100	ug/kg	1000		93.3	70-130	4.38	35	
Dibromomethane	855	100	ug/kg	1000		85.5	65-130	6.52	35	
1,2-Dichlorobenzene	946	100	ug/kg	1000		94.6	70-125	3.66	35	
1,3-Dichlorobenzene	939	100	ug/kg	1000		93.9	70-125	3.36	35	
1,4-Dichlorobenzene	958	100	ug/kg	1000		95.8	70-135	3.40	35	
Dichlorodifluoromethane	483	250	ug/kg	1000		48.3	10-185	1.67	35	
1,1-Dichloroethane	952	100	ug/kg	1000		95.2	60-140	1.98	35	
1,2-Dichloroethane	814	50	ug/kg	1000		81.4	55-135	3.50	35	
1,1-Dichloroethene	859	250	ug/kg	1000		85.9	55-145	0.465	35	
cis-1,2-Dichloroethene	934	100	ug/kg	1000		93.4	60-125	2.22	35	
trans-1,2-Dichloroethene	898	100	ug/kg	1000		89.8	70-145	0.444	35	
1,2-Dichloropropane	860	100	ug/kg	1000		86.0	65-130	1.76	35	
1,3-Dichloropropane	944	100	ug/kg	1000		94.4	65-130	4.33	35	
2,2-Dichloropropane	936	100	ug/kg	1000		93.6	60-135	2.43	35	
1,1-Dichloropropene	900	100	ug/kg	1000		90.0	65-130	3.85	35	

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VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2201 Extracted: 08/22/01										
LCS Dup Analyzed: 08/30/01 (P1H2201-BSD1)										
cis-1,3-Dichloropropene	818	100	ug/kg	1000		81.8	60-125	0.736	35	
trans-1,3-Dichloropropene	822	100	ug/kg	1000		82.2	50-130	1.47	35	
Ethylbenzene	939	100	ug/kg	1000		93.9	70-125	1.39	35	
Hexachlorobutadiene	855	250	ug/kg	1000		85.5	60-125	27.7	35	
2-Hexanone	864	500	ug/kg	1000		86.4	25-185	2.11	35	
Iodomethane	876	100	ug/kg	1000		87.6	30-155	17.1	35	
Isopropylbenzene	957	100	ug/kg	1000		95.7	70-135	1.35	35	
p-Isopropyltoluene	910	100	ug/kg	1000		91.0	65-130	1.33	35	
Methylene chloride	1020	500	ug/kg	1000		102	60-140	2.90	35	
4-Methyl-2-pentanone (MIBK)	849	500	ug/kg	1000		84.9	10-175	2.14	35	
Methyl-tert-butyl Ether (MTBE)	899	250	ug/kg	1000		89.9	55-135	0.446	35	
Naphthalene	860	250	ug/kg	1000		86.0	45-155	0.695	35	
n-Propylbenzene	942	100	ug/kg	1000		94.2	75-135	4.12	35	
Styrene	933	100	ug/kg	1000		93.3	70-130	0.107	35	
1,1,1,2-Tetrachloroethane	925	250	ug/kg	1000		92.5	70-130	2.41	35	
1,1,2,2-Tetrachloroethane	848	100	ug/kg	1000		84.8	60-140	4.58	35	
Tetrachloroethene	913	100	ug/kg	1000		91.3	65-130	3.45	35	
Toluene	925	100	ug/kg	1000		92.5	70-125	4.42	35	
1,2,3-Trichlorobenzene	853	250	ug/kg	1000		85.3	60-135	4.47	35	
1,2,4-Trichlorobenzene	946	250	ug/kg	1000		94.6	55-135	2.09	35	
1,1,1-Trichloroethane	850	100	ug/kg	1000		85.0	65-135	5.56	35	
1,1,2-Trichloroethane	899	100	ug/kg	1000		89.9	65-130	4.32	35	
Trichloroethene	898	100	ug/kg	1000		89.8	70-130	2.82	35	
Trichlorofluoromethane	661	250	ug/kg	1000		66.1	10-200	1.37	35	
1,2,3-Trichloropropane	873	500	ug/kg	1000		87.3	60-150	5.05	35	
1,2,4-Trimethylbenzene	918	100	ug/kg	1000		91.8	75-130	3.43	35	
1,3,5-Trimethylbenzene	898	100	ug/kg	1000		89.8	70-130	2.59	35	
Vinyl acetate	ND	1200	ug/kg	1000		101	25-130	0.995	35	
Vinyl chloride	831	250	ug/kg	1000		83.1	10-200	2.93	35	
Xylenes, Total	2870	150	ug/kg	3000		95.7	70-130	0.00	35	
Surrogate: Dibromofluoromethane	1300		ug/kg	1250		104	70-125			
Surrogate: Toluene-d8	1270		ug/kg	1250		102	50-135			
Surrogate: 4-Bromofluorobenzene	1270		ug/kg	1250		102	70-130			



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VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: PIH2201 Extracted: 08/22/01										
Matrix Spike Analyzed: 08/30/01 (PIH2201-MS1)					Source: PKH0384-01					
Acetone	1120	1000	ug/kg	1000	ND	112	5-200			
Benzene	812	50	ug/kg	1000	ND	81.2	65-130			
Bromobenzene	918	250	ug/kg	1000	ND	91.8	60-135			
Bromochloromethane	794	250	ug/kg	1000	ND	79.4	60-135			
Bromodichloromethane	788	100	ug/kg	1000	ND	78.8	30-135			
Bromoform	914	250	ug/kg	1000	ND	91.4	60-140			
Bromomethane	ND	250	ug/kg	1000	ND	20.2	10-200			
2-Butanone (MEK)	1100	500	ug/kg	1000	ND	110	10-160			
n-Butylbenzene	910	250	ug/kg	1000	ND	91.0	65-125			
sec-Butylbenzene	937	250	ug/kg	1000	ND	93.7	70-135			
tert-Butylbenzene	972	250	ug/kg	1000	ND	97.2	70-130			
Carbon Disulfide	546	250	ug/kg	1000	ND	54.6	20-120			
Carbon tetrachloride	896	250	ug/kg	1000	ND	89.6	70-140			
Chlorobenzene	942	50	ug/kg	1000	ND	94.2	75-125			
Chloroethane	ND	250	ug/kg	1000	ND	17.7	10-200			
Chloroform	883	100	ug/kg	1000	ND	88.3	35-135			
Chloromethane	588	250	ug/kg	1000	ND	58.8	10-200			
2-Chlorotoluene	914	250	ug/kg	1000	ND	91.4	70-135			
4-Chlorotoluene	913	250	ug/kg	1000	ND	91.3	75-135			
Dibromochloromethane	922	100	ug/kg	1000	ND	92.2	35-135			
1,2-Dibromo-3-chloropropane	963	250	ug/kg	1000	ND	96.3	50-155			
1,2-Dibromoethane (EDB)	1010	100	ug/kg	1000	ND	101	70-130			
Dibromomethane	824	100	ug/kg	1000	ND	82.4	65-130			
1,2-Dichlorobenzene	923	100	ug/kg	1000	ND	92.3	70-125			
1,3-Dichlorobenzene	910	100	ug/kg	1000	ND	91.0	70-125			
1,4-Dichlorobenzene	932	100	ug/kg	1000	ND	93.2	70-135			
Dichlorodifluoromethane	283	250	ug/kg	1000	ND	28.3	10-185			
1,1-Dichloroethane	874	100	ug/kg	1000	ND	87.4	60-140			
1,2-Dichloroethane	782	50	ug/kg	1000	ND	78.2	55-135			
1,1-Dichloroethene	708	250	ug/kg	1000	ND	70.8	55-145			
cis-1,2-Dichloroethene	874	100	ug/kg	1000	ND	87.4	60-125			
trans-1,2-Dichloroethene	882	100	ug/kg	1000	ND	88.2	70-145			
1,2-Dichloropropane	780	100	ug/kg	1000	ND	78.0	65-130			
1,3-Dichloropropane	971	100	ug/kg	1000	ND	97.1	65-130			
2,2-Dichloropropane	860	100	ug/kg	1000	ND	86.0	60-135			
1,1-Dichloropropene	884	100	ug/kg	1000	ND	88.4	65-130			

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 Attention: Jim Clarke

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VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2201 Extracted: 08/22/01										
Matrix Spike Analyzed: 08/30/01 (P1H2201-MS1)					Source: PKH0384-01					
cis-1,3-Dichloropropene	755	100	ug/kg	1000	ND	75.5	60-125			
trans-1,3-Dichloropropene	864	100	ug/kg	1000	ND	86.4	50-130			
Ethylbenzene	932	100	ug/kg	1000	ND	93.2	70-125			
Hexachlorobutadiene	1070	250	ug/kg	1000	ND	107	60-125			
2-Hexanone	1180	500	ug/kg	1000	ND	118	25-185			
Iodomethane	409	100	ug/kg	1000	ND	40.9	30-155			
Isopropylbenzene	949	100	ug/kg	1000	ND	94.9	70-135			
p-Isopropyltoluene	883	100	ug/kg	1000	ND	88.3	65-130			
Methylene chloride	861	500	ug/kg	1000	ND	86.1	60-140			
4-Methyl-2-pentanone (MIBK)	1010	500	ug/kg	1000	ND	101	10-175			
Methyl-tert-butyl Ether (MTBE)	981	250	ug/kg	1000	ND	98.1	55-135			
Naphthalene	993	250	ug/kg	1000	ND	99.3	45-155			
n-Propylbenzene	913	100	ug/kg	1000	ND	91.3	75-135			
Styrene	899	100	ug/kg	1000	ND	89.9	70-130			
1,1,1,2-Tetrachloroethane	984	250	ug/kg	1000	ND	98.4	70-130			
1,1,2,2-Tetrachloroethane	1020	100	ug/kg	1000	ND	102	60-140			
Tetrachloroethene	971	100	ug/kg	1000	ND	97.1	65-130			
Toluene	948	100	ug/kg	1000	ND	94.8	70-125			
1,2,3-Trichlorobenzene	908	250	ug/kg	1000	ND	90.8	60-135			
1,2,4-Trichlorobenzene	990	250	ug/kg	1000	ND	99.0	55-135			
1,1,1-Trichloroethane	837	100	ug/kg	1000	ND	83.7	65-135			
1,1,2-Trichloroethane	953	100	ug/kg	1000	ND	95.3	65-130			
Trichloroethene	895	100	ug/kg	1000	ND	89.5	70-130			
Trichlorofluoromethane	268	250	ug/kg	1000	ND	26.8	10-200			
1,2,3-Trichloropropane	1060	500	ug/kg	1000	ND	106	60-150			
1,2,4-Trimethylbenzene	887	100	ug/kg	1000	ND	88.7	75-130			
1,3,5-Trimethylbenzene	883	100	ug/kg	1000	ND	88.3	70-130			
Vinyl acetate	ND	1200	ug/kg	1000	ND	29.1	25-130			
Vinyl chloride	596	250	ug/kg	1000	ND	59.6	10-200			
Xylenes, Total	2780	150	ug/kg	3000	ND	92.7	70-130			
Surrogate: Dibromofluoromethane	1230		ug/kg	1250		98.4	70-125			
Surrogate: Toluene-d8	1280		ug/kg	1250		102	50-135			
Surrogate: 4-Bromofluorobenzene	1240		ug/kg	1250		99.2	70-130			



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 Phoenix, AZ 85040
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VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3106 Extracted: 08/30/01									
Blank Analyzed: 08/30/01 (P1H3106-BLK1)									
Acetone	ND	20	ug/l						
Benzene	ND	2.0	ug/l						
Bromobenzene	ND	5.0	ug/l						
Bromochloromethane	ND	5.0	ug/l						
Bromodichloromethane	ND	2.0	ug/l						
Bromoform	ND	5.0	ug/l						
Bromomethane	ND	5.0	ug/l						
2-Butanone (MEK)	ND	10	ug/l						
n-Butylbenzene	ND	5.0	ug/l						
sec-Butylbenzene	ND	5.0	ug/l						
tert-Butylbenzene	ND	5.0	ug/l						
Carbon Disulfide	ND	5.0	ug/l						
Carbon tetrachloride	ND	5.0	ug/l						
Chlorobenzene	ND	2.0	ug/l						
Chloroethane	ND	5.0	ug/l						
Chloroform	ND	2.0	ug/l						
Chloromethane	ND	5.0	ug/l						
2-Chlorotoluene	ND	5.0	ug/l						
4-Chlorotoluene	ND	5.0	ug/l						
Dibromochloromethane	ND	2.0	ug/l						
1,2-Dibromo-3-chloropropane	ND	5.0	ug/l						
1,2-Dibromoethane (EDB)	ND	2.0	ug/l						
Dibromomethane	ND	2.0	ug/l						
1,2-Dichlorobenzene	ND	2.0	ug/l						
1,3-Dichlorobenzene	ND	2.0	ug/l						
1,4-Dichlorobenzene	ND	2.0	ug/l						
Dichlorodifluoromethane	ND	5.0	ug/l						
1,1-Dichloroethane	ND	2.0	ug/l						
1,2-Dichloroethane	ND	2.0	ug/l						
1,1-Dichloroethene	ND	5.0	ug/l						
cis-1,2-Dichloroethene	ND	2.0	ug/l						
trans-1,2-Dichloroethene	ND	2.0	ug/l						
1,2-Dichloropropane	ND	2.0	ug/l						
1,3-Dichloropropane	ND	2.0	ug/l						
2,2-Dichloropropane	ND	2.0	ug/l						

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 Project Manager

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Phoenix, AZ 85040
Attention: Jim Clarke

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VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3106 Extracted: 08/30/01										
Blank Analyzed: 08/30/01 (P1H3106-BLK1)										
1,1-Dichloropropene	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Hexachlorobutadiene	ND	5.0	ug/l							
2-Hexanone	ND	10	ug/l							
Iodomethane	ND	2.0	ug/l							
Isopropylbenzene	ND	2.0	ug/l							
p-Isopropyltoluene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
4-Methyl-2-pentanone (MIBK)	ND	10	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
Naphthalene	ND	5.0	ug/l							
n-Propylbenzene	ND	2.0	ug/l							
Styrene	ND	2.0	ug/l							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,2,3-Trichlorobenzene	ND	5.0	ug/l							
1,2,4-Trichlorobenzene	ND	5.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
1,2,3-Trichloropropane	ND	10	ug/l							
1,2,4-Trimethylbenzene	ND	2.0	ug/l							
1,3,5-Trimethylbenzene	ND	2.0	ug/l							
Vinyl acetate	ND	25	ug/l							V1,L3
Vinyl chloride	ND	5.0	ug/l							
Xylenes, Total	ND	10	ug/l							
Surrogate: Dibromofluoromethane	25.5		ug/l	25.0		102	80-120			
Surrogate: Toluene-d8	26.8		ug/l	25.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	26.6		ug/l	25.0		106	80-120			

Melissa Evans
Project Manager

PKH0356
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3106 Extracted: 08/30/01										
LCS Analyzed: 08/30/01 (P1H3106-BS1)										
Acetone	35.8	20	ug/l	25.0		143	30-200			
Benzene	22.1	2.0	ug/l	25.0		88.4	80-120			
Bromobenzene	25.0	5.0	ug/l	25.0		100	80-120			
Bromochloromethane	25.5	5.0	ug/l	25.0		102	80-120			
Bromodichloromethane	21.5	2.0	ug/l	25.0		86.0	80-130			
Bromoform	24.1	5.0	ug/l	25.0		96.4	60-140			
Bromomethane	25.5	5.0	ug/l	25.0		102	60-150			
2-Butanone (MEK)	29.9	10	ug/l	25.0		120	30-185			
n-Butylbenzene	23.6	5.0	ug/l	25.0		94.4	75-130			
sec-Butylbenzene	24.7	5.0	ug/l	25.0		98.8	80-125			
tert-Butylbenzene	25.7	5.0	ug/l	25.0		103	80-120			
Carbon Disulfide	24.4	5.0	ug/l	25.0		97.6	65-120			
Carbon tetrachloride	26.3	5.0	ug/l	25.0		105	75-150			
Chlorobenzene	26.0	2.0	ug/l	25.0		104	80-120			
Chloroethane	28.0	5.0	ug/l	25.0		112	80-125			
Chloroform	24.1	2.0	ug/l	25.0		96.4	80-120			
Chloromethane	21.2	5.0	ug/l	25.0		84.8	60-125			
2-Chlorotoluene	25.4	5.0	ug/l	25.0		102	80-120			
4-Chlorotoluene	24.8	5.0	ug/l	25.0		99.2	80-120			
Dibromochloromethane	24.4	2.0	ug/l	25.0		97.6	70-150			
1,2-Dibromo-3-chloropropane	23.3	5.0	ug/l	25.0		93.2	50-145			
1,2-Dibromoethane (EDB)	27.3	2.0	ug/l	25.0		109	75-120			
Dibromomethane	22.3	2.0	ug/l	25.0		89.2	80-120			
1,2-Dichlorobenzene	24.8	2.0	ug/l	25.0		99.2	80-120			
1,3-Dichlorobenzene	24.6	2.0	ug/l	25.0		98.4	80-120			
1,4-Dichlorobenzene	25.1	2.0	ug/l	25.0		100	80-120			
Dichlorodifluoromethane	19.4	5.0	ug/l	25.0		77.6	25-140			
1,1-Dichloroethane	28.6	2.0	ug/l	25.0		114	80-120			
1,2-Dichloroethane	21.5	2.0	ug/l	25.0		86.0	80-120			
1,1-Dichloroethene	27.1	5.0	ug/l	25.0		108	80-120			
cis-1,2-Dichloroethene	28.6	2.0	ug/l	25.0		114	80-120			
trans-1,2-Dichloroethene	29.2	2.0	ug/l	25.0		117	80-120			
1,2-Dichloropropane	22.2	2.0	ug/l	25.0		88.8	80-120			
1,3-Dichloropropane	26.0	2.0	ug/l	25.0		104	80-120			
2,2-Dichloropropane	24.1	2.0	ug/l	25.0		96.4	75-135			
1,1-Dichloropropene	25.4	2.0	ug/l	25.0		102	80-120			

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3106 Extracted: 08/30/01										
LCS Analyzed: 08/30/01 (P1H3106-BS1)										
cis-1,3-Dichloropropene	20.4	2.0	ug/l	25.0		81.6	80-120			
trans-1,3-Dichloropropene	22.3	2.0	ug/l	25.0		89.2	80-120			
Ethylbenzene	25.0	2.0	ug/l	25.0		100	80-120			
Hexachlorobutadiene	25.3	5.0	ug/l	25.0		101	60-145			
2-Hexanone	27.8	10	ug/l	25.0		111	50-170			
Iodomethane	34.7	2.0	ug/l	25.0		139	40-155			
Isopropylbenzene	25.2	2.0	ug/l	25.0		101	80-120			
p-Isopropyltoluene	23.7	2.0	ug/l	25.0		94.8	80-120			
Methylene chloride	29.5	5.0	ug/l	25.0		118	80-120			
4-Methyl-2-pentanone (MIBK)	25.4	10	ug/l	25.0		102	70-140			
Methyl-tert-butyl Ether (MTBE)	29.9	5.0	ug/l	25.0		120	75-135			
Naphthalene	27.1	5.0	ug/l	25.0		108	70-130			
n-Propylbenzene	23.9	2.0	ug/l	25.0		95.6	80-120			
Styrene	24.5	2.0	ug/l	25.0		98.0	80-120			
1,1,1,2-Tetrachloroethane	26.2	5.0	ug/l	25.0		105	65-150			
1,1,2,2-Tetrachloroethane	24.8	2.0	ug/l	25.0		99.2	70-130			
Tetrachloroethene	25.4	2.0	ug/l	25.0		102	80-125			
Toluene	25.1	2.0	ug/l	25.0		100	80-120			
1,2,3-Trichlorobenzene	25.7	5.0	ug/l	25.0		103	75-125			
1,2,4-Trichlorobenzene	26.4	5.0	ug/l	25.0		106	80-120			
1,1,1-Trichloroethane	23.2	2.0	ug/l	25.0		92.8	80-120			
1,1,2-Trichloroethane	25.8	2.0	ug/l	25.0		103	80-120			
Trichloroethene	23.6	2.0	ug/l	25.0		94.4	80-120			
Trichlorofluoromethane	24.8	5.0	ug/l	25.0		99.2	75-150			
1,2,3-Trichloropropane	26.0	10	ug/l	25.0		104	65-135			
1,2,4-Trimethylbenzene	23.8	2.0	ug/l	25.0		95.2	80-120			
1,3,5-Trimethylbenzene	23.5	2.0	ug/l	25.0		94.0	80-120			
Vinyl acetate	40.0	25	ug/l	25.0		160	40-120			V1,L3
Vinyl chloride	23.5	5.0	ug/l	25.0		94.0	80-120			
Xylenes, Total	75.2	10	ug/l	75.0		100	80-120			
Surrogate: Dibromofluoromethane	25.8		ug/l	25.0		103	80-120			
Surrogate: Toluene-d8	26.7		ug/l	25.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	25.5		ug/l	25.0		102	80-120			



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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3106 Extracted: 08/30/01										
Matrix Spike Analyzed: 08/31/01 (P1H3106-MS1)										
Source: PKH0441-03										
Acetone	27.5	20	ug/l	25.0	ND	110	5-200			
Benzene	21.0	2.0	ug/l	25.0	ND	84.0	80-120			
Bromobenzene	25.4	5.0	ug/l	25.0	ND	102	80-120			
Bromochloromethane	24.5	5.0	ug/l	25.0	ND	98.0	60-135			
Bromodichloromethane	20.0	2.0	ug/l	25.0	ND	80.0	80-120			
Bromoform	21.5	5.0	ug/l	25.0	ND	86.0	40-140			
Bromomethane	25.1	5.0	ug/l	25.0	ND	100	25-165			
2-Butanone (MEK)	26.1	10	ug/l	25.0	ND	104	10-160			
n-Butylbenzene	20.6	5.0	ug/l	25.0	ND	82.4	75-135			
sec-Butylbenzene	23.5	5.0	ug/l	25.0	ND	94.0	80-135			
tert-Butylbenzene	24.6	5.0	ug/l	25.0	ND	98.4	80-125			
Carbon Disulfide	21.8	5.0	ug/l	25.0	ND	87.2	20-120			
Carbon tetrachloride	23.4	5.0	ug/l	25.0	ND	93.6	80-145			
Chlorobenzene	24.8	2.0	ug/l	25.0	ND	99.2	80-120			
Chloroethane	27.2	5.0	ug/l	25.0	ND	109	30-150			
Chloroform	23.3	2.0	ug/l	25.0	ND	93.2	80-125			
Chloromethane	19.4	5.0	ug/l	25.0	ND	77.6	15-140			
2-Chlorotoluene	24.0	5.0	ug/l	25.0	ND	96.0	80-124			
4-Chlorotoluene	24.6	5.0	ug/l	25.0	ND	98.4	80-125			
Dibromochloromethane	22.3	2.0	ug/l	25.0	ND	89.2	75-135			
1,2-Dibromo-3-chloropropane	22.4	5.0	ug/l	25.0	ND	89.6	25-185			
1,2-Dibromoethane (EDB)	25.6	2.0	ug/l	25.0	ND	102	45-145			
Dibromomethane	20.8	2.0	ug/l	25.0	ND	83.2	55-140			
1,2-Dichlorobenzene	22.6	2.0	ug/l	25.0	ND	90.4	80-120			
1,3-Dichlorobenzene	23.0	2.0	ug/l	25.0	ND	92.0	80-120			
1,4-Dichlorobenzene	23.6	2.0	ug/l	25.0	ND	94.4	80-120			
Dichlorodifluoromethane	18.0	5.0	ug/l	25.0	ND	72.0	25-145			
1,1-Dichloroethane	24.7	2.0	ug/l	25.0	ND	98.8	75-120			
1,2-Dichloroethane	20.4	2.0	ug/l	25.0	ND	81.6	60-135			
1,1-Dichloroethene	24.3	5.0	ug/l	25.0	ND	97.2	55-120			
cis-1,2-Dichloroethene	24.6	2.0	ug/l	25.0	ND	98.4	75-120			
trans-1,2-Dichloroethene	25.3	2.0	ug/l	25.0	ND	101	65-120			
1,2-Dichloropropane	20.7	2.0	ug/l	25.0	ND	82.8	80-125			
1,3-Dichloropropane	24.2	2.0	ug/l	25.0	ND	96.8	55-140			
2,2-Dichloropropane	22.1	2.0	ug/l	25.0	ND	88.4	45-165			
1,1-Dichloropropene	22.4	2.0	ug/l	25.0	ND	89.6	80-120			

Melissa Evans
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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3106 Extracted: 08/30/01										
Matrix Spike Analyzed: 08/31/01 (P1H3106-MS1)				Source: PKH0441-03						
cis-1,3-Dichloropropene	18.6	2.0	ug/l	25.0	ND	74.4	80-120			M2
trans-1,3-Dichloropropene	21.0	2.0	ug/l	25.0	ND	84.0	70-120			
Ethylbenzene	23.0	2.0	ug/l	25.0	ND	92.0	80-120			
Hexachlorobutadiene	23.4	5.0	ug/l	25.0	ND	93.6	80-135			
2-Hexanone	24.9	10	ug/l	25.0	ND	99.6	25-185			
Iodomethane	31.8	2.0	ug/l	25.0	ND	127	30-155			
Isopropylbenzene	21.5	2.0	ug/l	25.0	ND	86.0	80-125			
p-Isopropyltoluene	21.3	2.0	ug/l	25.0	ND	85.2	80-125			
Methylene chloride	24.9	5.0	ug/l	25.0	ND	99.6	55-125			
4-Methyl-2-pentanone (MIBK)	21.1	10	ug/l	25.0	ND	84.4	10-175			
Methyl-tert-butyl Ether (MTBE)	22.3	5.0	ug/l	25.0	ND	89.2	55-135			
Naphthalene	20.7	5.0	ug/l	25.0	ND	82.8	15-160			
n-Propylbenzene	22.2	2.0	ug/l	25.0	ND	88.8	80-130			
Styrene	21.9	2.0	ug/l	25.0	ND	87.6	60-135			
1,1,1,2-Tetrachloroethane	24.0	5.0	ug/l	25.0	ND	96.0	80-135			
1,1,2,2-Tetrachloroethane	25.6	2.0	ug/l	25.0	ND	102	35-150			
Tetrachloroethene	23.3	2.0	ug/l	25.0	ND	93.2	80-120			
Toluene	24.8	2.0	ug/l	25.0	ND	99.2	80-120			
1,2,3-Trichlorobenzene	18.2	5.0	ug/l	25.0	ND	72.8	45-145			
1,2,4-Trichlorobenzene	20.0	5.0	ug/l	25.0	ND	80.0	65-130			
1,1,1-Trichloroethane	22.5	2.0	ug/l	25.0	ND	90.0	80-120			
1,1,2-Trichloroethane	24.4	2.0	ug/l	25.0	ND	97.6	55-145			
Trichloroethene	22.2	2.0	ug/l	25.0	ND	88.8	80-120			
Trichlorofluoromethane	23.1	5.0	ug/l	25.0	ND	92.4	70-145			
1,2,3-Trichloropropane	27.1	10	ug/l	25.0	ND	108	20-160			
1,2,4-Trimethylbenzene	21.6	2.0	ug/l	25.0	ND	86.4	70-135			
1,3,5-Trimethylbenzene	22.2	2.0	ug/l	25.0	ND	88.8	80-125			
Vinyl acetate	27.2	25	ug/l	25.0	ND	109	25-130			
Vinyl chloride	22.3	5.0	ug/l	25.0	ND	89.2	25-135			
Xylenes, Total	67.3	10	ug/l	75.0	ND	89.7	80-120			
Surrogate: Dibromofluoromethane	27.5		ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.9		ug/l	25.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	28.2		ug/l	25.0		113	80-120			



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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3106 Extracted: 08/30/01										
Matrix Spike Dup Analyzed: 08/31/01 (P1H3106-MSD1)					Source: PKH0441-03					
Acetone	25.4	20	ug/l	25.0	ND	102	5-200	7.94	20	
Benzene	23.0	2.0	ug/l	25.0	ND	92.0	80-120	9.09	20	
Bromobenzene	26.2	5.0	ug/l	25.0	ND	105	80-120	3.10	20	
Bromochloromethane	25.0	5.0	ug/l	25.0	ND	100	60-135	2.02	20	
Bromodichloromethane	23.1	2.0	ug/l	25.0	ND	92.4	80-120	14.4	20	
Bromoform	23.5	5.0	ug/l	25.0	ND	94.0	40-140	8.89	20	
Bromomethane	27.1	5.0	ug/l	25.0	ND	108	25-165	7.66	20	
2-Butanone (MEK)	24.9	10	ug/l	25.0	ND	99.6	10-160	4.71	20	
n-Butylbenzene	21.3	5.0	ug/l	25.0	ND	85.2	75-135	3.34	20	
sec-Butylbenzene	24.0	5.0	ug/l	25.0	ND	96.0	80-135	2.11	20	
tert-Butylbenzene	25.7	5.0	ug/l	25.0	ND	103	80-125	4.37	20	
Carbon Disulfide	23.5	5.0	ug/l	25.0	ND	94.0	20-120	7.51	20	
Carbon tetrachloride	25.6	5.0	ug/l	25.0	ND	102	80-145	8.98	20	
Chlorobenzene	26.9	2.0	ug/l	25.0	ND	108	80-120	8.12	20	
Chloroethane	29.3	5.0	ug/l	25.0	ND	117	30-150	7.43	20	
Chloroform	24.9	2.0	ug/l	25.0	ND	99.6	80-125	6.64	20	
Chloromethane	20.3	5.0	ug/l	25.0	ND	81.2	15-140	4.53	20	
2-Chlorotoluene	25.9	5.0	ug/l	25.0	ND	104	80-124	7.62	20	
4-Chlorotoluene	25.8	5.0	ug/l	25.0	ND	103	80-125	4.76	20	
Dibromochloromethane	24.8	2.0	ug/l	25.0	ND	99.2	75-135	10.6	20	
1,2-Dibromo-3-chloropropane	20.0	5.0	ug/l	25.0	ND	80.0	25-185	11.3	20	
1,2-Dibromoethane (EDB)	26.6	2.0	ug/l	25.0	ND	106	45-145	3.83	20	
Dibromomethane	23.3	2.0	ug/l	25.0	ND	93.2	55-140	11.3	20	
1,2-Dichlorobenzene	24.7	2.0	ug/l	25.0	ND	98.8	80-120	8.88	20	
1,3-Dichlorobenzene	24.8	2.0	ug/l	25.0	ND	99.2	80-120	7.53	20	
1,4-Dichlorobenzene	25.8	2.0	ug/l	25.0	ND	103	80-120	8.91	20	
Dichlorodifluoromethane	16.1	5.0	ug/l	25.0	ND	64.4	25-145	11.1	20	
1,1-Dichloroethane	28.4	2.0	ug/l	25.0	ND	114	75-120	13.9	20	
1,2-Dichloroethane	22.1	2.0	ug/l	25.0	ND	88.4	60-135	8.00	20	
1,1-Dichloroethene	26.2	5.0	ug/l	25.0	ND	105	55-120	7.52	20	
cis-1,2-Dichloroethene	28.4	2.0	ug/l	25.0	ND	114	75-120	14.3	20	
trans-1,2-Dichloroethene	28.6	2.0	ug/l	25.0	ND	114	65-120	12.2	20	
1,2-Dichloropropane	23.1	2.0	ug/l	25.0	ND	92.4	80-125	11.0	20	
1,3-Dichloropropane	25.6	2.0	ug/l	25.0	ND	102	55-140	5.62	20	
2,2-Dichloropropane	26.4	2.0	ug/l	25.0	ND	106	45-165	17.7	20	
1,1-Dichloropropene	24.6	2.0	ug/l	25.0	ND	98.4	80-120	9.36	20	

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VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3106 Extracted: 08/30/01										
Matrix Spike Dup Analyzed: 08/31/01 (P1H3106-MSD1)					Source: PKH0441-03					
cis-1,3-Dichloropropene	21.3	2.0	ug/l	25.0	ND	85.2	80-120	13.5	20	M2,Q11
trans-1,3-Dichloropropene	22.5	2.0	ug/l	25.0	ND	90.0	70-120	6.90	20	
Ethylbenzene	25.4	2.0	ug/l	25.0	ND	102	80-120	9.92	20	
Hexachlorobutadiene	14.2	5.0	ug/l	25.0	ND	56.8	80-135	48.9	20	
2-Hexanone	23.8	10	ug/l	25.0	ND	95.2	25-185	4.52	20	
Iodomethane	34.8	2.0	ug/l	25.0	ND	139	30-155	9.01	20	
Isopropylbenzene	24.6	2.0	ug/l	25.0	ND	98.4	80-125	13.4	20	
p-Isopropyltoluene	23.0	2.0	ug/l	25.0	ND	92.0	80-125	7.67	20	
Methylene chloride	29.1	5.0	ug/l	25.0	ND	116	55-125	15.6	20	
4-Methyl-2-pentanone (MIBK)	22.7	10	ug/l	25.0	ND	90.8	10-175	7.31	20	
Methyl-tert-butyl Ether (MTBE)	27.1	5.0	ug/l	25.0	ND	108	55-135	19.4	20	
Naphthalene	21.1	5.0	ug/l	25.0	ND	84.4	15-160	1.91	20	
n-Propylbenzene	24.0	2.0	ug/l	25.0	ND	96.0	80-130	7.79	20	
Styrene	24.4	2.0	ug/l	25.0	ND	97.6	60-135	10.8	20	
1,1,1,2-Tetrachloroethane	26.1	5.0	ug/l	25.0	ND	104	80-135	8.38	20	
1,1,2,2-Tetrachloroethane	23.4	2.0	ug/l	25.0	ND	93.6	35-150	8.98	20	
Tetrachloroethene	24.8	2.0	ug/l	25.0	ND	99.2	80-120	6.24	20	
Toluene	25.8	2.0	ug/l	25.0	ND	103	80-120	3.95	20	
1,2,3-Trichlorobenzene	18.1	5.0	ug/l	25.0	ND	72.4	45-145	0.551	20	
1,2,4-Trichlorobenzene	21.4	5.0	ug/l	25.0	ND	85.6	65-130	6.76	20	
1,1,1-Trichloroethane	24.2	2.0	ug/l	25.0	ND	96.8	80-120	7.28	20	
1,1,2-Trichloroethane	25.9	2.0	ug/l	25.0	ND	104	55-145	5.96	20	
Trichloroethene	24.5	2.0	ug/l	25.0	ND	98.0	80-120	9.85	20	
Trichlorofluoromethane	24.2	5.0	ug/l	25.0	ND	96.8	70-145	4.65	20	
1,2,3-Trichloropropane	22.6	10	ug/l	25.0	ND	90.4	20-160	18.1	20	
1,2,4-Trimethylbenzene	23.3	2.0	ug/l	25.0	ND	93.2	70-135	7.57	20	
1,3,5-Trimethylbenzene	23.6	2.0	ug/l	25.0	ND	94.4	80-125	6.11	20	
Vinyl acetate	31.2	25	ug/l	25.0	ND	125	25-130	13.7	20	
Vinyl chloride	23.6	5.0	ug/l	25.0	ND	94.4	25-135	5.66	20	
Xylenes, Total	76.0	10	ug/l	75.0	ND	101	80-120	12.1	20	
Surrogate: Dibromofluoromethane	27.8		ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	26.8		ug/l	25.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	26.8		ug/l	25.0		107	80-120			



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

METHOD BLANK QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2407 Extracted: 08/24/01										
Blank Analyzed: 08/28/01 (P1H2407-BLK1)										
Arsenic	ND	5.0	mg/kg							
Chromium	ND	1.0	mg/kg							
Copper	ND	2.0	mg/kg							
Nickel	ND	5.0	mg/kg							
Zinc	ND	5.0	mg/kg							
LCS Analyzed: 08/28/01 (P1H2407-BS1)										
Arsenic	91.6	5.0	mg/kg	100		91.6	80-120			
Chromium	93.3	1.0	mg/kg	100		93.3	80-120			
Copper	95.4	2.0	mg/kg	100		95.4	80-120			
Nickel	91.7	5.0	mg/kg	100		91.7	80-120			
Zinc	92.1	5.0	mg/kg	100		92.1	80-120			
Matrix Spike Analyzed: 08/28/01 (P1H2407-MS1)										
Arsenic	96.7	5.0	mg/kg	100	ND	94.6	75-125			
Chromium	106	1.0	mg/kg	100	12	94.0	75-125			
Copper	108	2.0	mg/kg	100	12	96.0	75-125			
Nickel	92.7	5.0	mg/kg	100	8.0	84.7	75-125			
Zinc	179	5.0	mg/kg	100	60	119	75-125			
Matrix Spike Dup Analyzed: 08/28/01 (P1H2407-MSD1)										
Arsenic	105	5.0	mg/kg	100	ND	103	75-125	8.23	20	
Chromium	108	1.0	mg/kg	100	12	96.0	75-125	1.87	20	
Copper	109	2.0	mg/kg	100	12	97.0	75-125	0.922	20	
Nickel	93.9	5.0	mg/kg	100	8.0	85.9	75-125	1.29	20	
Zinc	184	5.0	mg/kg	100	60	124	75-125	2.75	20	



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Received: 08/21/01

METHOD BLANK QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3004 Extracted: 08/29/01									
Blank Analyzed: 08/30/01 (P1H3004-BLK1)									
Chromium VI	ND	1.0	mg/kg						
LCS Analyzed: 08/30/01 (P1H3004-BS1)									
Chromium VI	9.73	1.0	mg/kg	10.0		97.3 85-115			
LCS Dup Analyzed: 08/30/01 (P1H3004-BSD1)									
Chromium VI	9.28	1.0	mg/kg	10.0		92.8 85-115	4.73	20	
Matrix Spike Analyzed: 08/30/01 (P1H3004-MS1)					Source: PKH0452-01				
Chromium VI	8.84	1.0	mg/kg	10.0	ND	88.4 85-115			
Matrix Spike Dup Analyzed: 08/30/01 (P1H3004-MSD1)					Source: PKH0452-01				
Chromium VI	9.98	1.0	mg/kg	10.0	ND	99.8 85-115	12.1	20	



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Sampled: 08/20/01

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METHOD BLANK QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2119 Extracted: 08/21/01										
Blank Analyzed: 08/21/01 (P1H2119-BLK1)										
Chromium VI	ND	0.025	mg/l							
LCS Analyzed: 08/21/01 (P1H2119-BS1)										
Chromium VI	0.102	0.050	mg/l	0.100		102	85-115			
Matrix Spike Analyzed: 08/21/01 (P1H2119-MS1)										
Chromium VI	0.0350	0.025	mg/l	0.0500	ND	70.0	85-115			M2
Matrix Spike Dup Analyzed: 08/21/01 (P1H2119-MSD1)										
Chromium VI	0.0412	0.025	mg/l	0.0500	ND	82.4	85-115	16.3	20	M2
Batch: P1H2320 Extracted: 08/23/01										
Blank Analyzed: 08/24/01 (P1H2320-BLK1)										
Arsenic	ND	0.050	mg/l							
Chromium	ND	0.010	mg/l							
Copper	ND	0.020	mg/l							
Nickel	ND	0.050	mg/l							
Zinc	ND	0.050	mg/l							
LCS Analyzed: 08/24/01 (P1H2320-BS1)										
Arsenic	1.06	0.050	mg/l	1.00		106	85-115			
Chromium	1.03	0.010	mg/l	1.00		103	85-115			
Copper	1.02	0.020	mg/l	1.00		102	85-115			
Nickel	1.02	0.050	mg/l	1.00		102	85-115			
Zinc	1.05	0.050	mg/l	1.00		105	85-115			

Melissa Evans
 Project Manager

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Law Engineering
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Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

METHOD BLANK QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2320 Extracted: 08/23/01										
Matrix Spike Analyzed: 08/24/01 (P1H2320-MS1)					Source: PKH0332-02					
Arsenic	1.09	0.050	mg/l	1.00	ND	109	70-130			
Chromium	1.03	0.010	mg/l	1.00	0.013	102	70-130			
Copper	1.08	0.020	mg/l	1.00	ND	107	70-130			
Nickel	1.01	0.050	mg/l	1.00	ND	101	70-130			
Zinc	1.09	0.050	mg/l	1.00	ND	108	70-130			
Matrix Spike Dup Analyzed: 08/24/01 (P1H2320-MSD1)					Source: PKH0332-02					
Arsenic	1.08	0.050	mg/l	1.00	ND	108	70-130	0.922	20	
Chromium	1.03	0.010	mg/l	1.00	0.013	102	70-130	0.00	20	
Copper	1.07	0.020	mg/l	1.00	ND	106	70-130	0.930	20	
Nickel	1.00	0.050	mg/l	1.00	ND	99.8	70-130	0.995	20	
Zinc	1.08	0.050	mg/l	1.00	ND	106	70-130	0.922	20	



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Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

METHOD BLANK QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2906 Extracted: 08/28/01										
Blank Analyzed: 08/29/01 (P1H2906-BLK1)										
Total Cyanide	ND	0.020	mg/l							
LCS Analyzed: 08/29/01 (P1H2906-BS1)										
Total Cyanide	0.115	0.020	mg/l	0.100		115	90-110			L3
Matrix Spike Analyzed: 08/29/01 (P1H2906-MS1)										
Total Cyanide	0.123	0.020	mg/l	0.100	ND	123	70-130			
Matrix Spike Dup Analyzed: 08/29/01 (P1H2906-MSD1)										
Total Cyanide	0.0944	0.020	mg/l	0.100	ND	94.4	70-130	26.3	20	R1
Batch: P1H2911 Extracted: 08/29/01										
Blank Analyzed: 08/29/01 (P1H2911-BLK1)										
Total Cyanide	ND	0.50	mg/kg							
Matrix Spike Analyzed: 08/29/01 (P1H2911-MS1)										
Total Cyanide	1.79	0.50	mg/kg	2.50	ND	71.6	70-130			
Matrix Spike Dup Analyzed: 08/29/01 (P1H2911-MSD1)										
Total Cyanide	1.05	0.50	mg/kg	2.50	ND	42.0	70-130	52.1	20	M2,R1
Reference Analyzed: 08/29/01 (P1H2911-SRM1)										
Total Cyanide	87.4	20	mg/kg	201		43.5	40-160			

Melissa Evans
 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0356

Sampled: 08/20/01

Received: 08/21/01

METHOD BLANK QC DATA

DATA QUALIFIERS AND DEFINITIONS

L3	The associated blank spike recovery was above method acceptance limits. See case narrative.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
N1	See case narrative.
Q11	Sample is heterogeneous. Sample homogeneity could not be readily achieved using routine laboratory practices.
R1	RPD exceeded the method control limit. See case narrative.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference



CHAIN OF CUSTODY FORM

Quote #: _____ Page _____ of _____

[illegible]

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

COC-GB

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-D-0150

Report Number: PKH0374

Sampled: 08/21/01
Received: 08/21/01
Issued: 9/11/01
Revised: 11/13/01

CASE NARRATIVE

LABORATORY NUMBER

PKH0374-02
PKH0374-03
PKH0374-04
PKH0374-05

SAMPLE DESCRIPTION

LB1-S-60
LB1-S-80
LB1-S-90
LB1-S-110

SAMPLE MATRIX

Soil
Soil
Soil
Soil

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

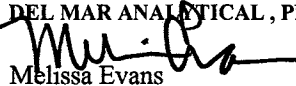
OBSERVATIONS: Report was revised 11/13/01 to correct sample identification.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

QA/QC CRITERIA: The R1 flag on Cyanide indicates that the RPD exceeded the method control limit. See Corrective Action Report.

**EXPLANATION OF DATA
QUALIFIERS:** No further explanation of data qualifiers needed.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)


Melissa Evans
Project Manager

PKH0374
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-D-0150

Report Number: PKH0374

Sampled: 08/21/01

Received: 08/21/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0374-02 (LB1-S-60 - Soil)								
Arsenic	EPA 6010B	P1H2407	5.0	ND	1	8/24/01	8/28/01	
Chromium	EPA 6010B	P1H2407	1.0	25	1	8/24/01	8/28/01	
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1H2407	2.0	10	1	8/24/01	8/28/01	
Nickel	EPA 6010B	P1H2407	5.0	12	1	8/24/01	8/28/01	
Zinc	EPA 6010B	P1H2407	5.0	30	1	8/24/01	8/28/01	
Sample ID: PKH0374-03 (LB1-S-80 - Soil)								
Arsenic	EPA 6010B	P1H2407	5.0	ND	1	8/24/01	8/28/01	
Chromium	EPA 6010B	P1H2407	1.0	1.6	1	8/24/01	8/28/01	
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1H2407	2.0	2.7	1	8/24/01	9/9/01	
Nickel	EPA 6010B	P1H2407	5.0	ND	1	8/24/01	8/28/01	
Zinc	EPA 6010B	P1H2407	5.0	9.8	1	8/24/01	8/28/01	
Sample ID: PKH0374-04 (LB1-S-90 - Soil)								
Arsenic	EPA 6010B	P1H2407	5.0	ND	1	8/24/01	8/28/01	
Chromium	EPA 6010B	P1H2407	1.0	11	1	8/24/01	8/28/01	
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1H2407	2.0	6.5	1	8/24/01	8/28/01	
Nickel	EPA 6010B	P1H2407	5.0	8.8	1	8/24/01	8/28/01	
Zinc	EPA 6010B	P1H2407	5.0	15	1	8/24/01	8/28/01	
Sample ID: PKH0374-05 (LB1-S-110 - Soil)								
Arsenic	EPA 6010B	P1H2407	5.0	ND	1	8/24/01	8/28/01	
Chromium	EPA 6010B	P1H2407	1.0	ND	1	8/24/01	8/28/01	
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1H2407	2.0	ND	1	8/24/01	8/28/01	
Nickel	EPA 6010B	P1H2407	5.0	ND	1	8/24/01	8/28/01	
Zinc	EPA 6010B	P1H2407	5.0	7.2	1	8/24/01	8/28/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Melissa Evans
 Project Manager

PKH0374
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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-D-0150

Report Number: PKH0374

Sampled: 08/21/01

Received: 08/21/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0374-02 (LB1-S-60 - Soil)								
Total Cyanide	EPA 9014	P1H2911	0.50	ND	1	8/29/01	8/29/01	
Sample ID: PKH0374-03 (LB1-S-80 - Soil)								
Total Cyanide	EPA 9014	P1H3007	0.50	ND	1	8/30/01	8/30/01	
Sample ID: PKH0374-04 (LB1-S-90 - Soil)								
Total Cyanide	EPA 9014	P1H3007	0.50	ND	1	8/30/01	8/30/01	
Sample ID: PKH0374-05 (LB1-S-110 - Soil)								
Total Cyanide	EPA 9014	P1H3007	0.50	ND	1	8/30/01	8/30/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426

Melissa Evans
Project Manager

PKH0374
Page 3 of 7

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Law Engineering
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 Attention: Jim Clarke

Client Project ID: 70211-D-0150

Report Number: PKH0374

Sampled: 08/21/01

Received: 08/21/01

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2407 Extracted: 08/24/01									
Blank Analyzed: 08/28/01 (P1H2407-BLK1)									
Arsenic	ND	5.0	mg/kg						
Chromium	ND	1.0	mg/kg						
Copper	ND	2.0	mg/kg						
Nickel	ND	5.0	mg/kg						
Zinc	ND	5.0	mg/kg						
LCS Analyzed: 08/28/01 (P1H2407-BS1)									
Arsenic	91.6	5.0	mg/kg	100		91.6 80-120			
Chromium	93.3	1.0	mg/kg	100		93.3 80-120			
Copper	95.4	2.0	mg/kg	100		95.4 80-120			
Nickel	91.7	5.0	mg/kg	100		91.7 80-120			
Zinc	92.1	5.0	mg/kg	100		92.1 80-120			
Matrix Spike Analyzed: 08/28/01 (P1H2407-MS1)									
Arsenic	96.7	5.0	mg/kg	100	ND	94.6 75-125			
Chromium	106	1.0	mg/kg	100	12	94.0 75-125			
Copper	108	2.0	mg/kg	100	12	96.0 75-125			
Nickel	92.7	5.0	mg/kg	100	8.0	84.7 75-125			
Zinc	179	5.0	mg/kg	100	60	119 75-125			
Matrix Spike Dup Analyzed: 08/28/01 (P1H2407-MSD1)									
Arsenic	105	5.0	mg/kg	100	ND	103 75-125	8.23	20	
Chromium	108	1.0	mg/kg	100	12	96.0 75-125	1.87	20	
Copper	109	2.0	mg/kg	100	12	97.0 75-125	0.922	20	
Nickel	93.9	5.0	mg/kg	100	8.0	85.9 75-125	1.29	20	
Zinc	184	5.0	mg/kg	100	60	124 75-125	2.75	20	

Law Engineering
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 Attention: Jim Clarke

Client Project ID: 70211-D-0150

Report Number: PKH0374

Sampled: 08/21/01

Received: 08/21/01

METHOD BLANK QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3004 Extracted: 08/29/01									
Blank Analyzed: 08/30/01 (P1H3004-BLK1)									
Chromium VI	ND	1.0	mg/kg						
LCS Analyzed: 08/30/01 (P1H3004-BS1)									
Chromium VI	9.73	1.0	mg/kg	10.0		97.3	85-115		
LCS Dup Analyzed: 08/30/01 (P1H3004-BSD1)									
Chromium VI	9.28	1.0	mg/kg	10.0		92.8	85-115	4.73	20
Matrix Spike Analyzed: 08/30/01 (P1H3004-MS1)									
Chromium VI	8.84	1.0	mg/kg	10.0	ND	88.4	85-115		
Matrix Spike Dup Analyzed: 08/30/01 (P1H3004-MSD1)									
Chromium VI	9.98	1.0	mg/kg	10.0	ND	99.8	85-115	12.1	20

Source: PKH0452-01

Source: PKH0452-01

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Client Project ID: 70211-D-0150

Report Number: PKH0374

Sampled: 08/21/01

Received: 08/21/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2911 Extracted: 08/29/01										
Blank Analyzed: 08/29/01 (P1H2911-BLK1)										
Total Cyanide	ND	0.50	mg/kg							
Matrix Spike Analyzed: 08/29/01 (P1H2911-MS1)										
Total Cyanide	1.79	0.50	mg/kg	2.50	ND	71.6	70-130			
Matrix Spike Dup Analyzed: 08/29/01 (P1H2911-MSD1)										
Total Cyanide	1.05	0.50	mg/kg	2.50	ND	42.0	70-130	52.1	20	M2,R1
Reference Analyzed: 08/29/01 (P1H2911-SRM1)										
Total Cyanide	87.4	20	mg/kg	201		43.5	40-160			
Batch: P1H3007 Extracted: 08/30/01										
Blank Analyzed: 08/30/01 (P1H3007-BLK1)										
Total Cyanide	ND	0.50	mg/kg							
Matrix Spike Analyzed: 08/30/01 (P1H3007-MS1)										
Total Cyanide	1.44	0.50	mg/kg	2.50	1.5	-2.40	70-130			M3
Matrix Spike Dup Analyzed: 08/30/01 (P1H3007-MSD1)										
Total Cyanide	1.54	0.50	mg/kg	2.50	1.5	1.60	70-130	6.71	20	M3
Reference Analyzed: 08/30/01 (P1H3007-SRM1)										
Total Cyanide	85.3	20	mg/kg	201		42.4	40-160			

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Report Number: PKH0374

Sampled: 08/21/01

Received: 08/21/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

- M2** Matrix spike recovery was low, the method control sample recovery was acceptable.
- M3** The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
- R1** RPD exceeded the method control limit. See case narrative.
- ND** Analyte NOT DETECTED at or above the reporting limit
- NR** Not reported.
- RPD** Relative Percent Difference



2852 Alton Ave., Irvine, CA 92606
(949) 261-1022 FAX (949) 261-1228

1014 E. Coolley Dr., Suite A, Colton, CA 92324
(909) 370-0647 FAX (909) 370-1046

16525 Sherman Way, Suite C-11, Van Nuys, CA 92206
(818) 779-1844 FAX (818) 779-1843

949484 Chesapeake Dr., Suite 805, San Diego, CA 92123
(619) 505-9596 FAX (619) 505-9689

9830 South 51st St., Suite B-120, Phoenix, AZ 85044
(480) 765-0043 FAX (480) 785-0851

CHAIN OF CUSTODY FORM

Quote #: _____ of _____

Client Name/Address:		Project/PO Number:		Analysis Required										Special Instructions		
LAW HX		70211'D-0150														
Project Manager: Jim Clarke		Phone Number: 4370250														
Sampler: Pat Clarke		Fax Number: 602 437 3675														
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives											Special Instructions
LB1-S-60	1	#	1	8/24/01												PKH 03740 HOLD
LB1-S-60	1	SS	1	8/20												02
LB1-S-60	1	SS	1	0825												03
LB1-S-90	1	SS	1	0915												04
LB1-S-110	1	SS	1	1055												05
Relinquished By: [Signature]		Date /Time: 8/21/01		Received by: [Signature]		Date /Time: 8/21/01		Turnaround Time: (Check)		same day		72 hours				
Relinquished By: [Signature]		Date /Time: 8/21/01		Received by: [Signature]		Date /Time: 8/21/01		Turnaround Time: (Check)		24 hours		5 days				
Relinquished By: [Signature]		Date /Time: 8/21/01		Received by: [Signature]		Date /Time: 8/21/01		Turnaround Time: (Check)		48 hours		normal				
Relinquished By: [Signature]		Date /Time: 8/21/01		Received by: [Signature]		Date /Time: 8/21/01		Turnaround Time: (Check)		Sample Integrity: intact		Sample Integrity: on ice				

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01
Received: 08/24/01
Issued: 9/11/01

CASE NARRATIVE

LABORATORY NUMBER

PKH0446-01
PKH0446-02
PKH0446-03

SAMPLE DESCRIPTION

LB1 RINSATE 8/22/01
Dumpster-1
Trip Blank

SAMPLE MATRIX

Water
Soil
Water

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

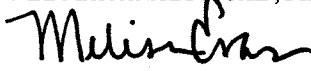
OBSERVATIONS: The N1 flag indicates that the samples are tested for the presence of sulfide in the lab within 24 hours of sampling. Samples were received and tested past the 24 hours.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

QA/QC CRITERIA: The N2 flag on 8260 indicates that the Matrix Spike recovery was outside the method control limits. See Corrective Action Report.

EXPLANATION OF DATA QUALIFIERS: The L3 flag on 8260 indicates that the Laboratory Control Sample recovery was above the method control limits. Analyte not detected, data not impacted.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)


Melissa Evans
Project Manager

PKH0446
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Del Mar Analytical

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1014 E. Coldby Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9589
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

CORRECTIVE ACTION REPORT

Department: GC/MS Method: 8260B
Date: 09/01/2001 Matrix: Water
Batch: P1I0301
Samples: PKH0411-04 – PKH0411-06, PKH0419-01, PKH0423-03, PKH0446-01,
PKH0446-03 & PKH0519-02

Identification and Definition of Problem:

The Laboratory Control Sample (LCS), Laboratory Control Sample Duplicate (LCSD), Matrix Spike (MS) and Matrix Spike (MS) recovered high and outside of acceptance limits for Vinyl acetate.

Determination of the Cause of the Problem:

A definitive cause for the high recoveries could not be determined.

Corrective Action:

All samples associated with this batch are non-detect and therefore are not impacted by the high recoveries. The associated samples as well as the LCS and LCSD have been flagged "L3" to indicate the high recovery. The MS, MSD and the source samples have also been flagged "N2".

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 09/20/2001
Quality Assurance Manager

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01

Received: 08/24/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0446-01 (LB1 RINSATE 8/22/01 - Water)								
Acetone	EPA 8260B	P110301	20	ND	1	9/1/01	9/1/01	
Benzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Bromobenzene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Bromochloromethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Bromodichloromethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Bromoform	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Bromomethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
2-Butanone (MEK)	EPA 8260B	P110301	10	ND	1	9/1/01	9/1/01	
n-Butylbenzene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
sec-Butylbenzene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
tert-Butylbenzene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Carbon Disulfide	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Carbon tetrachloride	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Chlorobenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Chloroethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Chloroform	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Chloromethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
2-Chlorotoluene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
4-Chlorotoluene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Dibromochloromethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Dibromomethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,2-Dichlorobenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,3-Dichlorobenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,4-Dichlorobenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Dichlorodifluoromethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
1,1-Dichloroethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,2-Dichloroethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,1-Dichloroethene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
cis-1,2-Dichloroethene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
trans-1,2-Dichloroethene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,2-Dichloropropane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,3-Dichloropropane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
2,2-Dichloropropane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,1-Dichloropropene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
cis-1,3-Dichloropropene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	M2
trans-1,3-Dichloropropene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Ethylbenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Hexachlorobutadiene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	M2
2-Hexanone	EPA 8260B	P110301	10	ND	1	9/1/01	9/1/01	
Iodomethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Isopropylbenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
p-Isopropyltoluene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	

Melissa Evans
 Project Manager

PKH0446
 Page 2 of 35



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01

Received: 08/24/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0446-01 (LB1 RINSATE 8/22/01 - Water)								
Methylene chloride	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P110301	10	ND	1	9/1/01	9/1/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Naphthalene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
n-Propylbenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Styrene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Tetrachloroethene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Toluene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,2,3-Trichlorobenzene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
1,2,4-Trichlorobenzene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
1,1,1-Trichloroethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,1,2-Trichloroethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Trichloroethene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Trichlorofluoromethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
1,2,3-Trichloropropane	EPA 8260B	P110301	10	ND	1	9/1/01	9/1/01	
1,2,4-Trimethylbenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,3,5-Trimethylbenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Vinyl acetate	EPA 8260B	P110301	25	ND	1	9/1/01	9/1/01	V1,L3,N2
Vinyl chloride	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Xylenes, Total	EPA 8260B	P110301	10	ND	1	9/1/01	9/1/01	
Surrogate: Dibromofluoromethane (80-120%)				107 %				
Surrogate: Toluene-d8 (80-120%)				110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				108 %				

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01

Received: 08/24/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0446-02 (Dumpster-1 - Soil)								
Acetone	EPA 8260B	P1H2501	1000	ND	1	8/25/01	9/6/01	
Benzene	EPA 8260B	P1H2501	50	ND	1	8/25/01	9/6/01	
Bromobenzene	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
Bromochloromethane	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
Bromodichloromethane	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Bromoform	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
Bromomethane	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
2-Butanone (MEK)	EPA 8260B	P1H2501	500	ND	1	8/25/01	9/6/01	
n-Butylbenzene	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
sec-Butylbenzene	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
tert-Butylbenzene	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
Carbon Disulfide	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
Carbon tetrachloride	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
Chlorobenzene	EPA 8260B	P1H2501	50	ND	1	8/25/01	9/6/01	
Chloroethane	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
Chloroform	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Chloromethane	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
2-Chlorotoluene	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
4-Chlorotoluene	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
Dibromochloromethane	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Dibromomethane	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
1,2-Dichlorobenzene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
1,3-Dichlorobenzene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
1,4-Dichlorobenzene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Dichlorodifluoromethane	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
1,1-Dichloroethane	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
1,2-Dichloroethane	EPA 8260B	P1H2501	50	ND	1	8/25/01	9/6/01	
1,1-Dichloroethene	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
cis-1,2-Dichloroethene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
trans-1,2-Dichloroethene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
1,2-Dichloropropane	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
1,3-Dichloropropane	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
2,2-Dichloropropane	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
1,1-Dichloropropene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
cis-1,3-Dichloropropene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
trans-1,3-Dichloropropene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Ethylbenzene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Hexachlorobutadiene	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
2-Hexanone	EPA 8260B	P1H2501	500	ND	1	8/25/01	9/6/01	
Iodomethane	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Isopropylbenzene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
p-Isopropyltoluene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	

Melissa Evans
 Project Manager

PKH0446
 Page 4 of 35

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01

Received: 08/24/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0446-02 (Dumpster-1 - Soil)								
Methylene chloride	EPA 8260B	P1H2501	500	ND	1	8/25/01	9/6/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P1H2501	500	ND	1	8/25/01	9/6/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
Naphthalene	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
n-Propylbenzene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Styrene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Tetrachloroethene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Toluene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
1,2,3-Trichlorobenzene	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
1,2,4-Trichlorobenzene	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
1,1,1-Trichloroethane	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
1,1,2-Trichloroethane	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Trichloroethene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Trichlorofluoromethane	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
1,2,3-Trichloropropane	EPA 8260B	P1H2501	500	ND	1	8/25/01	9/6/01	
1,2,4-Trimethylbenzene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
1,3,5-Trimethylbenzene	EPA 8260B	P1H2501	100	ND	1	8/25/01	9/6/01	
Vinyl acetate	EPA 8260B	P1H2501	1200	ND	1	8/25/01	9/6/01	
Vinyl chloride	EPA 8260B	P1H2501	250	ND	1	8/25/01	9/6/01	
Xylenes, Total	EPA 8260B	P1H2501	150	ND	1	8/25/01	9/6/01	
Surrogate: Dibromofluoromethane (70-125%)				73.4 %				
Surrogate: Toluene-d8 (50-135%)				76.8 %				
Surrogate: 4-Bromofluorobenzene (70-130%)				78.3 %				

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01

Received: 08/24/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0446-03 (Trip Blank - Water)								
Acetone	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Benzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Bromobenzene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Bromochloromethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Bromodichloromethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Bromoform	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Bromomethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
2-Butanone (MEK)	EPA 8260B	P110301	10	ND	1	9/1/01	9/1/01	
n-Butylbenzene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
sec-Butylbenzene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
tert-Butylbenzene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Carbon Disulfide	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Carbon tetrachloride	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Chlorobenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Chloroethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Chloroform	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Chloromethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
2-Chlorotoluene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
4-Chlorotoluene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Dibromochloromethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Dibromomethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,2-Dichlorobenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,3-Dichlorobenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,4-Dichlorobenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Dichlorodifluoromethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
1,1-Dichloroethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,2-Dichloroethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,1-Dichloroethene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
cis-1,2-Dichloroethene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
trans-1,2-Dichloroethene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,2-Dichloropropane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,3-Dichloropropane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
2,2-Dichloropropane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,1-Dichloropropene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
cis-1,3-Dichloropropene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
trans-1,3-Dichloropropene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Ethylbenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Hexachlorobutadiene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
2-Hexanone	EPA 8260B	P110301	10	ND	1	9/1/01	9/1/01	
Iodomethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Isopropylbenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
p-Isopropyltoluene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	

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 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01
 Received: 08/24/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0446-03 (Trip Blank - Water)								
Methylene chloride	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P110301	10	ND	1	9/1/01	9/1/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Naphthalene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
n-Propylbenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Styrene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Tetrachloroethene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Toluene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,2,3-Trichlorobenzene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
1,2,4-Trichlorobenzene	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
1,1,1-Trichloroethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,1,2-Trichloroethane	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Trichloroethene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Trichlorofluoromethane	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
1,2,3-Trichloropropane	EPA 8260B	P110301	10	ND	1	9/1/01	9/1/01	
1,2,4-Trimethylbenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
1,3,5-Trimethylbenzene	EPA 8260B	P110301	2.0	ND	1	9/1/01	9/1/01	
Vinyl acetate	EPA 8260B	P110301	25	ND	1	9/1/01	9/1/01	V1,L3
Vinyl chloride	EPA 8260B	P110301	5.0	ND	1	9/1/01	9/1/01	
Xylenes, Total	EPA 8260B	P110301	10	ND	1	9/1/01	9/1/01	
Surrogate: Dibromofluoromethane (80-120%)				106 %				
Surrogate: Toluene-d8 (80-120%)				109 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				109 %				

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01
 Received: 08/24/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0446-02 (Dumpster-1 - Soil)								
Arsenic	EPA 6010B	P1I0616	5.0	ND	1	9/6/01	9/9/01	
Barium	EPA 6010B	P1I0616	1.0	56	1	9/6/01	9/9/01	
Cadmium	EPA 6010B	P1I0616	0.50	ND	1	9/6/01	9/9/01	
Chromium	EPA 6010B	P1I0616	1.0	9.6	1	9/6/01	9/9/01	
Lead	EPA 6010B	P1I0616	5.0	ND	1	9/6/01	9/9/01	
Mercury	EPA 7471A	P1H2923	0.020	ND	1	8/29/01	8/30/01	
Selenium	EPA 6010B	P1I0616	5.0	ND	1	9/6/01	9/9/01	
Silver	EPA 6010B	P1I0616	0.50	ND	1	9/6/01	9/9/01	

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Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01

Received: 08/24/01

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0446-01 (LB1 RINSATE 8/22/01 - Water)								
Arsenic	EPA 200.7	P1H2827	0.050	ND	1	8/28/01	8/29/01	
Chromium	EPA 200.7	P1H2827	0.010	ND	1	8/28/01	8/29/01	
Copper	EPA 200.7	P1H2827	0.020	ND	1	8/28/01	8/29/01	
Nickel	EPA 200.7	P1H2827	0.050	ND	1	8/28/01	8/29/01	
Zinc	EPA 200.7	P1H2827	0.050	ND	1	8/28/01	8/29/01	

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Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Coldby Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9589
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01

Received: 08/24/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0446-01 (LB1 RINSATE 8/22/01 - Water)								
Total Cyanide	SM4500-CN,C-E	P1I0418	0.020 P/NP	ND P/NP	1	9/4/01	9/4/01	N1
Sample ID: PKH0446-02 (Dumpster-1 - Soil)								
Paint Filter Liquids Test	EPA 9095A	P1H2805	NA mg/kg	Present mg/kg	1	8/27/01	8/28/01	
Sample ID: PKH0446-02 (Dumpster-1 - Soil)								
Total Cyanide	EPA 9014	P1I0513	0.50	ND	1	9/5/01	9/5/01	

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Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01
 Received: 08/24/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01									
Blank Analyzed: 09/04/01 (P1H2501-BLK1)									
Acetone	ND	1000	ug/kg						
Benzene	ND	50	ug/kg						
Bromobenzene	ND	250	ug/kg						
Bromochloromethane	ND	250	ug/kg						
Bromodichloromethane	ND	100	ug/kg						
Bromoform	ND	250	ug/kg						
Bromomethane	ND	250	ug/kg						
2-Butanone (MEK)	ND	500	ug/kg						
n-Butylbenzene	ND	250	ug/kg						
sec-Butylbenzene	ND	250	ug/kg						
tert-Butylbenzene	ND	250	ug/kg						
Carbon Disulfide	ND	250	ug/kg						
Carbon tetrachloride	ND	250	ug/kg						
Chlorobenzene	ND	50	ug/kg						
Chloroethane	ND	250	ug/kg						
Chloroform	ND	100	ug/kg						
Chloromethane	ND	250	ug/kg						
2-Chlorotoluene	ND	250	ug/kg						
4-Chlorotoluene	ND	250	ug/kg						
Dibromochloromethane	ND	100	ug/kg						
1,2-Dibromo-3-chloropropane	ND	250	ug/kg						
1,2-Dibromoethane (EDB)	ND	100	ug/kg						
Dibromomethane	ND	100	ug/kg						
1,2-Dichlorobenzene	ND	100	ug/kg						
1,3-Dichlorobenzene	ND	100	ug/kg						
1,4-Dichlorobenzene	ND	100	ug/kg						
Dichlorodifluoromethane	ND	250	ug/kg						
1,1-Dichloroethane	ND	100	ug/kg						
1,2-Dichloroethane	ND	50	ug/kg						
1,1-Dichloroethene	ND	250	ug/kg						
cis-1,2-Dichloroethene	ND	100	ug/kg						
trans-1,2-Dichloroethene	ND	100	ug/kg						
1,2-Dichloropropane	ND	100	ug/kg						
1,3-Dichloropropane	ND	100	ug/kg						
2,2-Dichloropropane	ND	100	ug/kg						

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 Project Manager

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Report Number: PKH0446

Sampled: 08/22/01-08/24/01

Received: 08/24/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
Blank Analyzed: 09/04/01 (P1H2501-BLK1)										
1,1-Dichloropropene	ND	100	ug/kg							
cis-1,3-Dichloropropene	ND	100	ug/kg							
trans-1,3-Dichloropropene	ND	100	ug/kg							
Ethylbenzene	ND	100	ug/kg							
Hexachlorobutadiene	ND	250	ug/kg							
2-Hexanone	ND	500	ug/kg							
Iodomethane	ND	100	ug/kg							
Isopropylbenzene	ND	100	ug/kg							
p-Isopropyltoluene	ND	100	ug/kg							
Methylene chloride	ND	500	ug/kg							
4-Methyl-2-pentanone (MIBK)	ND	500	ug/kg							
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg							
Naphthalene	ND	250	ug/kg							
n-Propylbenzene	ND	100	ug/kg							
Styrene	ND	100	ug/kg							
1,1,1,2-Tetrachloroethane	ND	250	ug/kg							
1,1,2,2-Tetrachloroethane	ND	100	ug/kg							
Tetrachloroethene	ND	100	ug/kg							
Toluene	ND	100	ug/kg							
1,2,3-Trichlorobenzene	ND	250	ug/kg							
1,2,4-Trichlorobenzene	ND	250	ug/kg							
1,1,1-Trichloroethane	ND	100	ug/kg							
1,1,2-Trichloroethane	ND	100	ug/kg							
Trichloroethene	ND	100	ug/kg							
Trichlorofluoromethane	ND	250	ug/kg							
1,2,3-Trichloropropane	ND	500	ug/kg							
1,2,4-Trimethylbenzene	ND	100	ug/kg							
1,3,5-Trimethylbenzene	ND	100	ug/kg							
Vinyl acetate	ND	1200	ug/kg							
Vinyl chloride	ND	250	ug/kg							
Xylenes, Total	ND	150	ug/kg							
Surrogate: Dibromofluoromethane	1350		ug/kg	1250		108	70-125			
Surrogate: Toluene-d8	1450		ug/kg	1250		116	50-135			
Surrogate: 4-Bromofluorobenzene	1380		ug/kg	1250		110	70-130			

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 Project Manager

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Report Number: PKH0446

Sampled: 08/22/01-08/24/01

Received: 08/24/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01									
LCS Analyzed: 09/06/01 (P1H2501-BS1)									
Acetone	ND	1000	ug/kg	1000		40.0	5-200		
Benzene	1010	50	ug/kg	1000		101	65-130		
Bromobenzene	1020	250	ug/kg	1000		102	60-135		
Bromochloromethane	1070	250	ug/kg	1000		107	60-135		
Bromodichloromethane	971	100	ug/kg	1000		97.1	30-135		
Bromoform	753	250	ug/kg	1000		75.3	60-140		
Bromomethane	570	250	ug/kg	1000		57.0	10-200		
2-Butanone (MEK)	514	500	ug/kg	1000		51.4	10-160		
n-Butylbenzene	999	250	ug/kg	1000		99.9	65-125		
sec-Butylbenzene	1040	250	ug/kg	1000		104	70-135		
tert-Butylbenzene	1040	250	ug/kg	1000		104	70-130		
Carbon Disulfide	797	250	ug/kg	1000		79.7	20-120		
Carbon tetrachloride	923	250	ug/kg	1000		92.3	70-140		
Chlorobenzene	1060	50	ug/kg	1000		106	75-125		
Chloroethane	564	250	ug/kg	1000		56.4	10-200		
Chloroform	1030	100	ug/kg	1000		103	35-135		
Chloromethane	594	250	ug/kg	1000		59.4	10-200		
2-Chlorotoluene	1030	250	ug/kg	1000		103	70-135		
4-Chlorotoluene	1030	250	ug/kg	1000		103	75-135		
Dibromochloromethane	908	100	ug/kg	1000		90.8	35-135		
1,2-Dibromo-3-chloropropane	696	250	ug/kg	1000		69.6	50-155		
1,2-Dibromoethane (EDB)	910	100	ug/kg	1000		91.0	70-130		
Dibromomethane	995	100	ug/kg	1000		99.5	65-130		
1,2-Dichlorobenzene	1040	100	ug/kg	1000		104	70-125		
1,3-Dichlorobenzene	1040	100	ug/kg	1000		104	70-125		
1,4-Dichlorobenzene	1060	100	ug/kg	1000		106	70-135		
Dichlorodifluoromethane	385	250	ug/kg	1000		38.5	10-185		
1,1-Dichloroethane	1030	100	ug/kg	1000		103	60-140		
1,2-Dichloroethane	1000	50	ug/kg	1000		100	55-135		
1,1-Dichloroethene	991	250	ug/kg	1000		99.1	55-145		
cis-1,2-Dichloroethene	1030	100	ug/kg	1000		103	60-125		
trans-1,2-Dichloroethene	1040	100	ug/kg	1000		104	70-145		
1,2-Dichloropropane	1040	100	ug/kg	1000		104	65-130		
1,3-Dichloropropane	936	100	ug/kg	1000		93.6	65-130		
2,2-Dichloropropane	666	100	ug/kg	1000		66.6	60-135		
1,1-Dichloropropene	1020	100	ug/kg	1000		102	65-130		

Melissa Evans
 Project Manager

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Phoenix, AZ 85040
Attention: Jim Clarke

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Report Number: PKH0446

Sampled: 08/22/01-08/24/01
Received: 08/24/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
LCS Analyzed: 09/06/01 (P1H2501-BS1)										
cis-1,3-Dichloropropene	947	100	ug/kg	1000		94.7	60-125			
trans-1,3-Dichloropropene	871	100	ug/kg	1000		87.1	50-130			
Ethylbenzene	1060	100	ug/kg	1000		106	70-125			
Hexachlorobutadiene	905	250	ug/kg	1000		90.5	60-125			
2-Hexanone	636	500	ug/kg	1000		63.6	25-185			
Iodomethane	1060	100	ug/kg	1000		106	30-155			
Isopropylbenzene	1080	100	ug/kg	1000		108	70-135			
p-Isopropyltoluene	991	100	ug/kg	1000		99.1	65-130			
Methylene chloride	990	500	ug/kg	1000		99.0	60-140			
4-Methyl-2-pentanone (MIBK)	719	500	ug/kg	1000		71.9	10-175			
Methyl-tert-butyl Ether (MTBE)	846	250	ug/kg	1000		84.6	55-135			
Naphthalene	875	250	ug/kg	1000		87.5	45-155			
n-Propylbenzene	1080	100	ug/kg	1000		108	75-135			
Styrene	1060	100	ug/kg	1000		106	70-130			
1,1,1,2-Tetrachloroethane	977	250	ug/kg	1000		97.7	70-130			
1,1,2,2-Tetrachloroethane	807	100	ug/kg	1000		80.7	60-140			
Tetrachloroethene	1060	100	ug/kg	1000		106	65-130			
Toluene	1010	100	ug/kg	1000		101	70-125			
1,2,3-Trichlorobenzene	965	250	ug/kg	1000		96.5	60-135			
1,2,4-Trichlorobenzene	991	250	ug/kg	1000		99.1	55-135			
1,1,1-Trichloroethane	977	100	ug/kg	1000		97.7	65-135			
1,1,2-Trichloroethane	961	100	ug/kg	1000		96.1	65-130			
Trichloroethene	1100	100	ug/kg	1000		110	70-130			
Trichlorofluoromethane	692	250	ug/kg	1000		69.2	10-200			
1,2,3-Trichloropropane	809	500	ug/kg	1000		80.9	60-150			
1,2,4-Trimethylbenzene	1060	100	ug/kg	1000		106	75-130			
1,3,5-Trimethylbenzene	1020	100	ug/kg	1000		102	70-130			
Vinyl acetate	ND	1200	ug/kg	1000		28.8	25-130			
Vinyl chloride	575	250	ug/kg	1000		57.5	10-200			
Xylenes, Total	3160	150	ug/kg	3000		105	70-130			
Surrogate: Dibromofluoromethane	1290		ug/kg	1250		103	70-125			
Surrogate: Toluene-d8	1310		ug/kg	1250		105	50-135			
Surrogate: 4-Bromofluorobenzene	1320		ug/kg	1250		106	70-130			



Law Engineering
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 Attention: Jim Clarke

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Received: 08/24/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
LCS Dup Analyzed: 09/07/01 (P1H2501-BSD1)										
Acetone	ND	1000	ug/kg	1000		44.2	5-200	9.98	35	
Benzene	916	50	ug/kg	1000		91.6	65-130	9.76	35	
Bromobenzene	972	250	ug/kg	1000		97.2	60-135	4.82	35	
Bromochloromethane	996	250	ug/kg	1000		99.6	60-135	7.16	35	
Bromodichloromethane	924	100	ug/kg	1000		92.4	30-135	4.96	35	
Bromoform	812	250	ug/kg	1000		81.2	60-140	7.54	35	
Bromomethane	489	250	ug/kg	1000		48.9	10-200	15.3	35	
2-Butanone (MEK)	572	500	ug/kg	1000		57.2	10-160	10.7	35	
n-Butylbenzene	970	250	ug/kg	1000		97.0	65-125	2.95	35	
sec-Butylbenzene	969	250	ug/kg	1000		96.9	70-135	7.07	35	
tert-Butylbenzene	971	250	ug/kg	1000		97.1	70-130	6.86	35	
Carbon Disulfide	698	250	ug/kg	1000		69.8	20-120	13.2	35	
Carbon tetrachloride	924	250	ug/kg	1000		92.4	70-140	0.108	35	
Chlorobenzene	1010	50	ug/kg	1000		101	75-125	4.83	35	
Chloroethane	492	250	ug/kg	1000		49.2	10-200	13.6	35	
Chloroform	953	100	ug/kg	1000		95.3	35-135	7.77	35	
Chloromethane	475	250	ug/kg	1000		47.5	10-200	22.3	35	
2-Chlorotoluene	968	250	ug/kg	1000		96.8	70-135	6.21	35	
4-Chlorotoluene	961	250	ug/kg	1000		96.1	75-135	6.93	35	
Dibromochloromethane	931	100	ug/kg	1000		93.1	35-135	2.50	35	
1,2-Dibromo-3-chloropropane	745	250	ug/kg	1000		74.5	50-155	6.80	35	
1,2-Dibromoethane (EDB)	930	100	ug/kg	1000		93.0	70-130	2.17	35	
Dibromomethane	942	100	ug/kg	1000		94.2	65-130	5.47	35	
1,2-Dichlorobenzene	961	100	ug/kg	1000		96.1	70-125	7.90	35	
1,3-Dichlorobenzene	990	100	ug/kg	1000		99.0	70-125	4.93	35	
1,4-Dichlorobenzene	1010	100	ug/kg	1000		101	70-135	4.83	35	
Dichlorodifluoromethane	253	250	ug/kg	1000		25.3	10-185	41.4	35	
1,1-Dichloroethane	940	100	ug/kg	1000		94.0	60-140	9.14	35	R6
1,2-Dichloroethane	921	50	ug/kg	1000		92.1	55-135	8.22	35	
1,1-Dichloroethene	902	250	ug/kg	1000		90.2	55-145	9.40	35	
cis-1,2-Dichloroethene	973	100	ug/kg	1000		97.3	60-125	5.69	35	
trans-1,2-Dichloroethene	951	100	ug/kg	1000		95.1	70-145	8.94	35	
1,2-Dichloropropane	967	100	ug/kg	1000		96.7	65-130	7.27	35	
1,3-Dichloropropane	956	100	ug/kg	1000		95.6	65-130	2.11	35	
2,2-Dichloropropane	855	100	ug/kg	1000		85.5	60-135	24.9	35	
1,1-Dichloropropene	939	100	ug/kg	1000		93.9	65-130	8.27	35	

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 Project Manager

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4634 S. 36th Place
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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
LCS Dup Analyzed: 09/07/01 (P1H2501-BSD1)										
cis-1,3-Dichloropropene	948	100	ug/kg	1000		94.8	60-125	0.106	35	
trans-1,3-Dichloropropene	896	100	ug/kg	1000		89.6	50-130	2.83	35	
Ethylbenzene	997	100	ug/kg	1000		99.7	70-125	6.13	35	
Hexachlorobutadiene	927	250	ug/kg	1000		92.7	60-125	2.40	35	
2-Hexanone	698	500	ug/kg	1000		69.8	25-185	9.30	35	
Iodomethane	965	100	ug/kg	1000		96.5	30-155	9.38	35	
Isopropylbenzene	1020	100	ug/kg	1000		102	70-135	5.71	35	
p-Isopropyltoluene	942	100	ug/kg	1000		94.2	65-130	5.07	35	
Methylene chloride	952	500	ug/kg	1000		95.2	60-140	3.91	35	
4-Methyl-2-pentanone (MIBK)	752	500	ug/kg	1000		75.2	10-175	4.49	35	
Methyl-tert-butyl Ether (MTBE)	876	250	ug/kg	1000		87.6	55-135	3.48	35	
Naphthalene	893	250	ug/kg	1000		89.3	45-155	2.04	35	
n-Propylbenzene	1030	100	ug/kg	1000		103	75-135	4.74	35	
Styrene	1010	100	ug/kg	1000		101	70-130	4.83	35	
1,1,1,2-Tetrachloroethane	987	250	ug/kg	1000		98.7	70-130	1.02	35	
1,1,2,2-Tetrachloroethane	872	100	ug/kg	1000		87.2	60-140	7.74	35	
Tetrachloroethene	1010	100	ug/kg	1000		101	65-130	4.83	35	
Toluene	958	100	ug/kg	1000		95.8	70-125	5.28	35	
1,2,3-Trichlorobenzene	968	250	ug/kg	1000		96.8	60-135	0.310	35	
1,2,4-Trichlorobenzene	959	250	ug/kg	1000		95.9	55-135	3.28	35	
1,1,1-Trichloroethane	935	100	ug/kg	1000		93.5	65-135	4.39	35	
1,1,2-Trichloroethane	944	100	ug/kg	1000		94.4	65-130	1.78	35	
Trichloroethene	987	100	ug/kg	1000		98.7	70-130	10.8	35	
Trichlorofluoromethane	593	250	ug/kg	1000		59.3	10-200	15.4	35	
1,2,3-Trichloropropane	845	500	ug/kg	1000		84.5	60-150	4.35	35	
1,2,4-Trimethylbenzene	988	100	ug/kg	1000		98.8	75-130	7.03	35	
1,3,5-Trimethylbenzene	963	100	ug/kg	1000		96.3	70-130	5.75	35	
Vinyl acetate	ND	1200	ug/kg	1000		77.2	25-130	91.3	35	R6
Vinyl chloride	433	250	ug/kg	1000		43.3	10-200	28.2	35	
Xylenes, Total	3040	150	ug/kg	3000		101	70-130	3.87	35	
Surrogate: Dibromofluoromethane	1240		ug/kg	1250		99.2	70-125			
Surrogate: Toluene-d8	1290		ug/kg	1250		103	50-135			
Surrogate: 4-Bromofluorobenzene	1240		ug/kg	1250		99.2	70-130			



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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01					Source: PKH0445-01					
Matrix Spike Analyzed: 09/05/01 (P1H2501-MS1)										
Acetone	ND	1000	ug/kg	1000	ND	87.5	5-200			
Benzene	811	50	ug/kg	1000	ND	81.1	65-130			
Bromobenzene	804	250	ug/kg	1000	ND	80.4	60-135			
Bromochloromethane	811	250	ug/kg	1000	ND	81.1	60-135			
Bromodichloromethane	792	100	ug/kg	1000	ND	79.2	30-135			
Bromoform	756	250	ug/kg	1000	ND	75.6	60-140			
Bromomethane	ND	250	ug/kg	1000	ND	12.0	10-200			
2-Butanone (MEK)	872	500	ug/kg	1000	ND	87.2	10-160			
n-Butylbenzene	753	250	ug/kg	1000	ND	75.3	65-125			
sec-Butylbenzene	826	250	ug/kg	1000	ND	82.6	70-135			
tert-Butylbenzene	802	250	ug/kg	1000	ND	80.2	70-130			
Carbon Disulfide	638	250	ug/kg	1000	ND	63.8	20-120			
Carbon tetrachloride	782	250	ug/kg	1000	ND	78.2	70-140			
Chlorobenzene	796	50	ug/kg	1000	ND	79.6	75-125			
Chloroethane	ND	250	ug/kg	1000	ND	20.5	10-200			
Chloroform	764	100	ug/kg	1000	ND	76.4	35-135			
Chloromethane	594	250	ug/kg	1000	ND	59.4	10-200			
2-Chlorotoluene	817	250	ug/kg	1000	ND	81.7	70-135			
4-Chlorotoluene	832	250	ug/kg	1000	ND	83.2	75-135			
Dibromochloromethane	748	100	ug/kg	1000	ND	74.8	35-135			
1,2-Dibromo-3-chloropropane	737	250	ug/kg	1000	ND	73.7	50-155			
1,2-Dibromoethane (EDB)	750	100	ug/kg	1000	ND	75.0	70-130			
Dibromomethane	790	100	ug/kg	1000	ND	79.0	65-130			
1,2-Dichlorobenzene	789	100	ug/kg	1000	ND	78.9	70-125			
1,3-Dichlorobenzene	810	100	ug/kg	1000	ND	81.0	70-125			
1,4-Dichlorobenzene	822	100	ug/kg	1000	ND	82.2	70-135			
Dichlorodifluoromethane	303	250	ug/kg	1000	ND	30.3	10-185			
1,1-Dichloroethane	731	100	ug/kg	1000	ND	73.1	60-140			
1,2-Dichloroethane	777	50	ug/kg	1000	ND	77.7	55-135			
1,1-Dichloroethene	752	250	ug/kg	1000	ND	75.2	55-145			
cis-1,2-Dichloroethene	807	100	ug/kg	1000	ND	80.7	60-125			
trans-1,2-Dichloroethene	776	100	ug/kg	1000	ND	77.6	70-145			
1,2-Dichloropropane	821	100	ug/kg	1000	ND	82.1	65-130			
1,3-Dichloropropane	792	100	ug/kg	1000	ND	79.2	65-130			
2,2-Dichloropropane	707	100	ug/kg	1000	ND	70.7	60-135			
1,1-Dichloropropene	780	100	ug/kg	1000	ND	78.0	65-130			

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 Project Manager

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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
Matrix Spike Analyzed: 09/05/01 (P1H2501-MS1)				Source: PKH0445-01						
cis-1,3-Dichloropropene	811	100	ug/kg	1000	ND	81.1	60-125			
trans-1,3-Dichloropropene	737	100	ug/kg	1000	ND	73.7	50-130			
Ethylbenzene	816	100	ug/kg	1000	ND	81.6	70-125			
Hexachlorobutadiene	521	250	ug/kg	1000	ND	52.1	60-125			M2
2-Hexanone	768	500	ug/kg	1000	ND	76.8	25-185			
Iodomethane	624	100	ug/kg	1000	ND	62.4	30-155			
Isopropylbenzene	801	100	ug/kg	1000	ND	80.1	70-135			
p-Isopropyltoluene	778	100	ug/kg	1000	ND	77.8	65-130			
Methylene chloride	864	500	ug/kg	1000	ND	86.4	60-140			
4-Methyl-2-pentanone (MIBK)	765	500	ug/kg	1000	ND	76.5	10-175			
Methyl-tert-butyl Ether (MTBE)	772	250	ug/kg	1000	ND	77.2	55-135			
Naphthalene	705	250	ug/kg	1000	ND	70.5	45-155			
n-Propylbenzene	844	100	ug/kg	1000	ND	84.4	75-135			
Styrene	805	100	ug/kg	1000	ND	80.5	70-130			
1,1,1,2-Tetrachloroethane	778	250	ug/kg	1000	ND	77.8	70-130			
1,1,2,2-Tetrachloroethane	774	100	ug/kg	1000	ND	77.4	60-140			
Tetrachloroethene	800	100	ug/kg	1000	ND	80.0	65-130			
Toluene	792	100	ug/kg	1000	ND	79.2	70-125			
1,2,3-Trichlorobenzene	646	250	ug/kg	1000	ND	64.6	60-135			
1,2,4-Trichlorobenzene	703	250	ug/kg	1000	ND	70.3	55-135			
1,1,1-Trichloroethane	770	100	ug/kg	1000	ND	77.0	65-135			
1,1,2-Trichloroethane	764	100	ug/kg	1000	ND	76.4	65-130			
Trichloroethene	824	100	ug/kg	1000	ND	82.4	70-130			
Trichlorofluoromethane	555	250	ug/kg	1000	ND	55.5	10-200			
1,2,3-Trichloropropane	798	500	ug/kg	1000	ND	79.8	60-150			
1,2,4-Trimethylbenzene	842	100	ug/kg	1000	ND	84.2	75-130			
1,3,5-Trimethylbenzene	830	100	ug/kg	1000	ND	83.0	70-130			
Vinyl acetate	ND	1200	ug/kg	1000	ND	34.4	25-130			
Vinyl chloride	640	250	ug/kg	1000	ND	64.0	10-200			
Xylenes, Total	2420	150	ug/kg	3000	ND	80.7	70-130			
Surrogate: Dibromofluoromethane	917		ug/kg	1250		73.4	70-125			
Surrogate: Toluene-d8	920		ug/kg	1250		73.6	50-135			
Surrogate: 4-Bromofluorobenzene	1030		ug/kg	1250		82.4	70-130			



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VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
Matrix Spike Dup Analyzed: 09/05/01 (P1H2501-MSD1)										
Source: PKH0445-01										
Acetone	ND	1000	ug/kg	1000	ND	78.8	5-200	10.5	35	
Benzene	829	50	ug/kg	1000	ND	82.9	65-130	2.20	35	
Bromobenzene	815	250	ug/kg	1000	ND	81.5	60-135	1.36	35	
Bromochloromethane	797	250	ug/kg	1000	ND	79.7	60-135	1.74	35	
Bromodichloromethane	818	100	ug/kg	1000	ND	81.8	30-135	3.23	35	
Bromoform	748	250	ug/kg	1000	ND	74.8	60-140	1.06	35	
Bromomethane	ND	250	ug/kg	1000	ND	10.0	10-200	18.2	35	
2-Butanone (MEK)	822	500	ug/kg	1000	ND	82.2	10-160	5.90	35	
n-Butylbenzene	731	250	ug/kg	1000	ND	73.1	65-125	2.96	35	
sec-Butylbenzene	789	250	ug/kg	1000	ND	78.9	70-135	4.58	35	
tert-Butylbenzene	805	250	ug/kg	1000	ND	80.5	70-130	0.373	35	
Carbon Disulfide	656	250	ug/kg	1000	ND	65.6	20-120	2.78	35	
Carbon tetrachloride	788	250	ug/kg	1000	ND	78.8	70-140	0.764	35	
Chlorobenzene	833	50	ug/kg	1000	ND	83.3	75-125	4.54	35	
Chloroethane	ND	250	ug/kg	1000	ND	20.7	10-200	0.971	35	
Chloroform	745	100	ug/kg	1000	ND	74.5	35-135	2.52	35	
Chloromethane	611	250	ug/kg	1000	ND	61.1	10-200	2.82	35	
2-Chlorotoluene	813	250	ug/kg	1000	ND	81.3	70-135	0.491	35	
4-Chlorotoluene	828	250	ug/kg	1000	ND	82.8	75-135	0.482	35	
Dibromochloromethane	766	100	ug/kg	1000	ND	76.6	35-135	2.38	35	
1,2-Dibromo-3-chloropropane	652	250	ug/kg	1000	ND	65.2	50-155	12.2	35	
1,2-Dibromoethane (EDB)	751	100	ug/kg	1000	ND	75.1	70-130	0.133	35	
Dibromomethane	793	100	ug/kg	1000	ND	79.3	65-130	0.379	35	
1,2-Dichlorobenzene	802	100	ug/kg	1000	ND	80.2	70-125	1.63	35	
1,3-Dichlorobenzene	829	100	ug/kg	1000	ND	82.9	70-125	2.32	35	
1,4-Dichlorobenzene	829	100	ug/kg	1000	ND	82.9	70-135	0.848	35	
Dichlorodifluoromethane	368	250	ug/kg	1000	ND	36.8	10-185	19.4	35	
1,1-Dichloroethane	735	100	ug/kg	1000	ND	73.5	60-140	0.546	35	
1,2-Dichloroethane	806	50	ug/kg	1000	ND	80.6	55-135	3.66	35	
1,1-Dichloroethene	780	250	ug/kg	1000	ND	78.0	55-145	3.66	35	
cis-1,2-Dichloroethene	816	100	ug/kg	1000	ND	81.6	60-125	1.11	35	
trans-1,2-Dichloroethene	807	100	ug/kg	1000	ND	80.7	70-145	3.92	35	
1,2-Dichloropropane	847	100	ug/kg	1000	ND	84.7	65-130	3.12	35	
1,3-Dichloropropane	778	100	ug/kg	1000	ND	77.8	65-130	1.78	35	
2,2-Dichloropropane	765	100	ug/kg	1000	ND	76.5	60-135	7.88	35	
1,1-Dichloropropene	785	100	ug/kg	1000	ND	78.5	65-130	0.639	35	

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 Project Manager

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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
Matrix Spike Dup Analyzed: 09/05/01 (P1H2501-MSD1)					Source: PKH0445-01					
cis-1,3-Dichloropropene	841	100	ug/kg	1000	ND	84.1	60-125	3.63	35	Q11
trans-1,3-Dichloropropene	727	100	ug/kg	1000	ND	72.7	50-130	1.37	35	
Ethylbenzene	854	100	ug/kg	1000	ND	85.4	70-125	4.55	35	
Hexachlorobutadiene	827	250	ug/kg	1000	ND	82.7	60-125	45.4	35	
2-Hexanone	718	500	ug/kg	1000	ND	71.8	25-185	6.73	35	
Iodomethane	689	100	ug/kg	1000	ND	68.9	30-155	9.90	35	
Isopropylbenzene	830	100	ug/kg	1000	ND	83.0	70-135	3.56	35	
p-Isopropyltoluene	752	100	ug/kg	1000	ND	75.2	65-130	3.40	35	
Methylene chloride	862	500	ug/kg	1000	ND	86.2	60-140	0.232	35	
4-Methyl-2-pentanone (MIBK)	730	500	ug/kg	1000	ND	73.0	10-175	4.68	35	
Methyl-tert-butyl Ether (MTBE)	746	250	ug/kg	1000	ND	74.6	55-135	3.43	35	
Naphthalene	688	250	ug/kg	1000	ND	68.8	45-155	2.44	35	
n-Propylbenzene	832	100	ug/kg	1000	ND	83.2	75-135	1.43	35	
Styrene	824	100	ug/kg	1000	ND	82.4	70-130	2.33	35	
1,1,1,2-Tetrachloroethane	780	250	ug/kg	1000	ND	78.0	70-130	0.257	35	
1,1,2,2-Tetrachloroethane	722	100	ug/kg	1000	ND	72.2	60-140	6.95	35	
Tetrachloroethene	819	100	ug/kg	1000	ND	81.9	65-130	2.35	35	
Toluene	811	100	ug/kg	1000	ND	81.1	70-125	2.37	35	
1,2,3-Trichlorobenzene	709	250	ug/kg	1000	ND	70.9	60-135	9.30	35	
1,2,4-Trichlorobenzene	730	250	ug/kg	1000	ND	73.0	55-135	3.77	35	
1,1,1-Trichloroethane	788	100	ug/kg	1000	ND	78.8	65-135	2.31	35	
1,1,2-Trichloroethane	768	100	ug/kg	1000	ND	76.8	65-130	0.522	35	
Trichloroethene	858	100	ug/kg	1000	ND	85.8	70-130	4.04	35	
Trichlorofluoromethane	626	250	ug/kg	1000	ND	62.6	10-200	12.0	35	
1,2,3-Trichloropropane	718	500	ug/kg	1000	ND	71.8	60-150	10.6	35	
1,2,4-Trimethylbenzene	846	100	ug/kg	1000	ND	84.6	75-130	0.474	35	
1,3,5-Trimethylbenzene	818	100	ug/kg	1000	ND	81.8	70-130	1.46	35	
Vinyl acetate	ND	1200	ug/kg	1000	ND	30.4	25-130	12.3	35	
Vinyl chloride	672	250	ug/kg	1000	ND	67.2	10-200	4.88	35	
Xylenes, Total	2470	150	ug/kg	3000	ND	82.3	70-130	2.04	35	
Surrogate: Dibromofluoromethane	900		ug/kg	1250		72.0	70-125			
Surrogate: Toluene-d8	913		ug/kg	1250		73.0	50-135			
Surrogate: 4-Bromofluorobenzene	1030		ug/kg	1250		82.4	70-130			

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Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01
 Received: 08/24/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110301 Extracted: 09/01/01									
Blank Analyzed: 09/01/01 (P110301-BLK1)									
Acetone	ND	20	ug/l						
Benzene	ND	2.0	ug/l						
Bromobenzene	ND	5.0	ug/l						
Bromochloromethane	ND	5.0	ug/l						
Bromodichloromethane	ND	2.0	ug/l						
Bromoform	ND	5.0	ug/l						
Bromomethane	ND	5.0	ug/l						
2-Butanone (MEK)	ND	10	ug/l						
n-Butylbenzene	ND	5.0	ug/l						
sec-Butylbenzene	ND	5.0	ug/l						
tert-Butylbenzene	ND	5.0	ug/l						
Carbon Disulfide	ND	5.0	ug/l						
Carbon tetrachloride	ND	5.0	ug/l						
Chlorobenzene	ND	2.0	ug/l						
Chloroethane	ND	5.0	ug/l						
Chloroform	ND	2.0	ug/l						
Chloromethane	ND	5.0	ug/l						
2-Chlorotoluene	ND	5.0	ug/l						
4-Chlorotoluene	ND	5.0	ug/l						
Dibromochloromethane	ND	2.0	ug/l						
1,2-Dibromo-3-chloropropane	ND	5.0	ug/l						
1,2-Dibromoethane (EDB)	ND	2.0	ug/l						
Dibromomethane	ND	2.0	ug/l						
1,2-Dichlorobenzene	ND	2.0	ug/l						
1,3-Dichlorobenzene	ND	2.0	ug/l						
1,4-Dichlorobenzene	ND	2.0	ug/l						
Dichlorodifluoromethane	ND	5.0	ug/l						
1,1-Dichloroethane	ND	2.0	ug/l						
1,2-Dichloroethane	ND	2.0	ug/l						
1,1-Dichloroethene	ND	5.0	ug/l						
cis-1,2-Dichloroethene	ND	2.0	ug/l						
trans-1,2-Dichloroethene	ND	2.0	ug/l						
1,2-Dichloropropane	ND	2.0	ug/l						
1,3-Dichloropropane	ND	2.0	ug/l						
2,2-Dichloropropane	ND	2.0	ug/l						

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

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Received: 08/24/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0301 Extracted: 09/01/01										
Blank Analyzed: 09/01/01 (P1I0301-BLK1)										
1,1-Dichloropropene	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Hexachlorobutadiene	ND	5.0	ug/l							
2-Hexanone	ND	10	ug/l							
Iodomethane	ND	2.0	ug/l							
Isopropylbenzene	ND	2.0	ug/l							
p-Isopropyltoluene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
4-Methyl-2-pentanone (MIBK)	ND	10	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
Naphthalene	ND	5.0	ug/l							
n-Propylbenzene	ND	2.0	ug/l							
Styrene	ND	2.0	ug/l							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,2,3-Trichlorobenzene	ND	5.0	ug/l							
1,2,4-Trichlorobenzene	ND	5.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
1,2,3-Trichloropropane	ND	10	ug/l							
1,2,4-Trimethylbenzene	ND	2.0	ug/l							
1,3,5-Trimethylbenzene	ND	2.0	ug/l							
Vinyl acetate	ND	25	ug/l							V1,L3
Vinyl chloride	ND	5.0	ug/l							
Xylenes, Total	ND	10	ug/l							
Surrogate: Dibromofluoromethane	26.8		ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	27.6		ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	27.7		ug/l	25.0		111	80-120			

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110301 Extracted: 09/01/01									
LCS Analyzed: 09/01/01 (P110301-BS1)									
Acetone	30.6	20	ug/l	25.0		122 30-200			
Benzene	21.3	2.0	ug/l	25.0		85.2 80-120			
Bromobenzene	23.8	5.0	ug/l	25.0		95.2 80-120			
Bromochloromethane	25.2	5.0	ug/l	25.0		101 80-120			
Bromodichloromethane	21.0	2.0	ug/l	25.0		84.0 80-130			
Bromoform	24.7	5.0	ug/l	25.0		98.8 60-140			
Bromomethane	23.8	5.0	ug/l	25.0		95.2 60-150			
2-Butanone (MEK)	26.5	10	ug/l	25.0		106 30-185			
n-Butylbenzene	22.8	5.0	ug/l	25.0		91.2 75-130			
sec-Butylbenzene	23.9	5.0	ug/l	25.0		95.6 80-125			
tert-Butylbenzene	24.1	5.0	ug/l	25.0		96.4 80-120			
Carbon Disulfide	21.2	5.0	ug/l	25.0		84.8 65-120			
Carbon tetrachloride	23.4	5.0	ug/l	25.0		93.6 75-150			
Chlorobenzene	25.3	2.0	ug/l	25.0		101 80-120			
Chloroethane	25.8	5.0	ug/l	25.0		103 80-125			
Chloroform	23.1	2.0	ug/l	25.0		92.4 80-120			
Chloromethane	19.6	5.0	ug/l	25.0		78.4 60-125			
2-Chlorotoluene	24.2	5.0	ug/l	25.0		96.8 80-120			
4-Chlorotoluene	24.2	5.0	ug/l	25.0		96.8 80-120			
Dibromochloromethane	24.5	2.0	ug/l	25.0		98.0 70-150			
1,2-Dibromo-3-chloropropane	22.3	5.0	ug/l	25.0		89.2 50-145			
1,2-Dibromoethane (EDB)	26.8	2.0	ug/l	25.0		107 75-120			
Dibromomethane	22.4	2.0	ug/l	25.0		89.6 80-120			
1,2-Dichlorobenzene	23.7	2.0	ug/l	25.0		94.8 80-120			
1,3-Dichlorobenzene	23.6	2.0	ug/l	25.0		94.4 80-120			
1,4-Dichlorobenzene	24.0	2.0	ug/l	25.0		96.0 80-120			
Dichlorodifluoromethane	18.5	5.0	ug/l	25.0		74.0 25-140			
1,1-Dichloroethane	24.0	2.0	ug/l	25.0		96.0 80-120			
1,2-Dichloroethane	20.8	2.0	ug/l	25.0		83.2 80-120			
1,1-Dichloroethene	23.4	5.0	ug/l	25.0		93.6 80-120			
cis-1,2-Dichloroethene	24.4	2.0	ug/l	25.0		97.6 80-120			
trans-1,2-Dichloroethene	24.2	2.0	ug/l	25.0		96.8 80-120			
1,2-Dichloropropane	21.2	2.0	ug/l	25.0		84.8 80-120			
1,3-Dichloropropane	25.4	2.0	ug/l	25.0		102 80-120			
2,2-Dichloropropane	23.6	2.0	ug/l	25.0		94.4 75-135			
1,1-Dichloropropene	22.5	2.0	ug/l	25.0		90.0 80-120			

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 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

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Report Number: PKH0446

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 Received: 08/24/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110301 Extracted: 09/01/01										
LCS Analyzed: 09/01/01 (P110301-BS1)										
cis-1,3-Dichloropropene	20.3	2.0	ug/l	25.0		81.2	80-120			
trans-1,3-Dichloropropene	22.0	2.0	ug/l	25.0		88.0	80-120			
Ethylbenzene	24.5	2.0	ug/l	25.0		98.0	80-120			
Hexachlorobutadiene	28.1	5.0	ug/l	25.0		112	60-145			
2-Hexanone	28.2	10	ug/l	25.0		113	50-170			
Iodomethane	29.5	2.0	ug/l	25.0		118	40-155			
Isopropylbenzene	24.5	2.0	ug/l	25.0		98.0	80-120			
p-Isopropyltoluene	22.9	2.0	ug/l	25.0		91.6	80-120			
Methylene chloride	23.2	5.0	ug/l	25.0		92.8	80-120			
4-Methyl-2-pentanone (MIBK)	25.7	10	ug/l	25.0		103	70-140			
Methyl-tert-butyl Ether (MTBE)	24.5	5.0	ug/l	25.0		98.0	75-135			
Naphthalene	26.5	5.0	ug/l	25.0		106	70-130			
n-Propylbenzene	23.3	2.0	ug/l	25.0		93.2	80-120			
Styrene	23.8	2.0	ug/l	25.0		95.2	80-120			
1,1,1,2-Tetrachloroethane	25.3	5.0	ug/l	25.0		101	65-150			
1,1,2,2-Tetrachloroethane	25.0	2.0	ug/l	25.0		100	70-130			
Tetrachloroethene	24.8	2.0	ug/l	25.0		99.2	80-125			
Toluene	24.3	2.0	ug/l	25.0		97.2	80-120			
1,2,3-Trichlorobenzene	24.8	5.0	ug/l	25.0		99.2	75-125			
1,2,4-Trichlorobenzene	25.3	5.0	ug/l	25.0		101	80-120			
1,1,1-Trichloroethane	21.9	2.0	ug/l	25.0		87.6	80-120			
1,1,2-Trichloroethane	25.4	2.0	ug/l	25.0		102	80-120			
Trichloroethene	22.5	2.0	ug/l	25.0		90.0	80-120			
Trichlorofluoromethane	21.5	5.0	ug/l	25.0		86.0	75-150			
1,2,3-Trichloropropane	26.4	10	ug/l	25.0		106	65-135			
1,2,4-Trimethylbenzene	22.6	2.0	ug/l	25.0		90.4	80-120			
1,3,5-Trimethylbenzene	22.5	2.0	ug/l	25.0		90.0	80-120			
Vinyl acetate	34.2	25	ug/l	25.0		137	40-120			V1,L3
Vinyl chloride	21.4	5.0	ug/l	25.0		85.6	80-120			
Xylenes, Total	73.9	10	ug/l	75.0		98.5	80-120			
Surrogate: Dibromofluoromethane	27.1		ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	27.7		ug/l	25.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	26.5		ug/l	25.0		106	80-120			



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110301 Extracted: 09/01/01										
LCS Dup Analyzed: 09/01/01 (P110301-BSD1)										
Acetone	30.7	20	ug/l	25.0		123	30-200	0.326	20	
Benzene	22.2	2.0	ug/l	25.0		88.8	80-120	4.14	20	
Bromobenzene	24.8	5.0	ug/l	25.0		99.2	80-120	4.12	20	
Bromochloromethane	26.5	5.0	ug/l	25.0		106	80-120	5.03	20	
Bromodichloromethane	21.9	2.0	ug/l	25.0		87.6	80-130	4.20	20	
Bromoform	26.3	5.0	ug/l	25.0		105	60-140	6.27	20	
Bromomethane	26.4	5.0	ug/l	25.0		106	60-150	10.4	20	
2-Butanone (MEK)	29.1	10	ug/l	25.0		116	30-185	9.35	20	
n-Butylbenzene	23.5	5.0	ug/l	25.0		94.0	75-130	3.02	20	
sec-Butylbenzene	24.4	5.0	ug/l	25.0		97.6	80-125	2.07	20	
tert-Butylbenzene	24.5	5.0	ug/l	25.0		98.0	80-120	1.65	20	
Carbon Disulfide	22.1	5.0	ug/l	25.0		88.4	65-120	4.16	20	
Carbon tetrachloride	24.7	5.0	ug/l	25.0		98.8	75-150	5.41	20	
Chlorobenzene	26.5	2.0	ug/l	25.0		106	80-120	4.63	20	
Chloroethane	26.6	5.0	ug/l	25.0		106	80-125	3.05	20	
Chloroform	24.5	2.0	ug/l	25.0		98.0	80-120	5.88	20	
Chloromethane	20.4	5.0	ug/l	25.0		81.6	60-125	4.00	20	
2-Chlorotoluene	24.8	5.0	ug/l	25.0		99.2	80-120	2.45	20	
4-Chlorotoluene	24.9	5.0	ug/l	25.0		99.6	80-120	2.85	20	
Dibromochloromethane	25.5	2.0	ug/l	25.0		102	70-150	4.00	20	
1,2-Dibromo-3-chloropropane	23.7	5.0	ug/l	25.0		94.8	50-145	6.09	20	
1,2-Dibromoethane (EDB)	28.7	2.0	ug/l	25.0		115	75-120	6.85	20	
Dibromomethane	23.4	2.0	ug/l	25.0		93.6	80-120	4.37	20	
1,2-Dichlorobenzene	25.1	2.0	ug/l	25.0		100	80-120	5.74	20	
1,3-Dichlorobenzene	24.2	2.0	ug/l	25.0		96.8	80-120	2.51	20	
1,4-Dichlorobenzene	24.9	2.0	ug/l	25.0		99.6	80-120	3.68	20	
Dichlorodifluoromethane	19.2	5.0	ug/l	25.0		76.8	25-140	3.71	20	
1,1-Dichloroethane	25.3	2.0	ug/l	25.0		101	80-120	5.27	20	
1,2-Dichloroethane	21.3	2.0	ug/l	25.0		85.2	80-120	2.38	20	
1,1-Dichloroethene	24.2	5.0	ug/l	25.0		96.8	80-120	3.36	20	
cis-1,2-Dichloroethene	25.4	2.0	ug/l	25.0		102	80-120	4.02	20	
trans-1,2-Dichloroethene	25.6	2.0	ug/l	25.0		102	80-120	5.62	20	
1,2-Dichloropropane	22.2	2.0	ug/l	25.0		88.8	80-120	4.61	20	
1,3-Dichloropropane	26.6	2.0	ug/l	25.0		106	80-120	4.62	20	
2,2-Dichloropropane	24.3	2.0	ug/l	25.0		97.2	75-135	2.92	20	
1,1-Dichloropropene	23.8	2.0	ug/l	25.0		95.2	80-120	5.62	20	

Melissa Evans
 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
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Report Number: PKH0446

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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110301 Extracted: 09/01/01										
LCS Dup Analyzed: 09/01/01 (P110301-BSD1)										
cis-1,3-Dichloropropene	21.0	2.0	ug/l	25.0		84.0	80-120	3.39	20	
trans-1,3-Dichloropropene	23.3	2.0	ug/l	25.0		93.2	80-120	5.74	20	
Ethylbenzene	25.6	2.0	ug/l	25.0		102	80-120	4.39	20	
Hexachlorobutadiene	24.1	5.0	ug/l	25.0		96.4	60-145	15.3	20	
2-Hexanone	30.8	10	ug/l	25.0		123	50-170	8.81	20	
Iodomethane	30.8	2.0	ug/l	25.0		123	40-155	4.31	20	
Isopropylbenzene	25.3	2.0	ug/l	25.0		101	80-120	3.21	20	
p-Isopropyltoluene	23.6	2.0	ug/l	25.0		94.4	80-120	3.01	20	
Methylene chloride	24.8	5.0	ug/l	25.0		99.2	80-120	6.67	20	
4-Methyl-2-pentanone (MIBK)	26.9	10	ug/l	25.0		108	70-140	4.56	20	
Methyl-tert-butyl Ether (MTBE)	26.3	5.0	ug/l	25.0		105	75-135	7.09	20	
Naphthalene	26.0	5.0	ug/l	25.0		104	70-130	1.90	20	
n-Propylbenzene	24.3	2.0	ug/l	25.0		97.2	80-120	4.20	20	
Styrene	25.1	2.0	ug/l	25.0		100	80-120	5.32	20	
1,1,1,2-Tetrachloroethane	26.4	5.0	ug/l	25.0		106	65-150	4.26	20	
1,1,2,2-Tetrachloroethane	26.4	2.0	ug/l	25.0		106	70-130	5.45	20	
Tetrachloroethene	26.1	2.0	ug/l	25.0		104	80-125	5.11	20	
Toluene	25.4	2.0	ug/l	25.0		102	80-120	4.43	20	
1,2,3-Trichlorobenzene	24.1	5.0	ug/l	25.0		96.4	75-125	2.86	20	
1,2,4-Trichlorobenzene	25.3	5.0	ug/l	25.0		101	80-120	0.00	20	
1,1,1-Trichloroethane	22.8	2.0	ug/l	25.0		91.2	80-120	4.03	20	
1,1,2-Trichloroethane	26.7	2.0	ug/l	25.0		107	80-120	4.99	20	
Trichloroethene	23.2	2.0	ug/l	25.0		92.8	80-120	3.06	20	
Trichlorofluoromethane	22.9	5.0	ug/l	25.0		91.6	75-150	6.31	20	
1,2,3-Trichloropropane	27.8	10	ug/l	25.0		111	65-135	5.17	20	
1,2,4-Trimethylbenzene	23.9	2.0	ug/l	25.0		95.6	80-120	5.59	20	
1,3,5-Trimethylbenzene	23.6	2.0	ug/l	25.0		94.4	80-120	4.77	20	
Vinyl acetate	36.0	25	ug/l	25.0		144	40-120	5.13	20	L3
Vinyl chloride	22.7	5.0	ug/l	25.0		90.8	80-120	5.90	20	
Xylenes, Total	76.7	10	ug/l	75.0		102	80-120	3.72	20	
Surrogate: Dibromofluoromethane	27.4		ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.8		ug/l	25.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	26.4		ug/l	25.0		106	80-120			



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

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Received: 08/24/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110301 Extracted: 09/01/01										
Matrix Spike Analyzed: 09/01/01 (P110301-MS1)					Source: PKH0446-01					
Acetone	31.9	20	ug/l	25.0	ND	128	5-200			
Benzene	21.0	2.0	ug/l	25.0	ND	84.0	80-120			
Bromobenzene	23.6	5.0	ug/l	25.0	ND	94.4	80-120			
Bromochloromethane	23.2	5.0	ug/l	25.0	ND	92.8	60-135			
Bromodichloromethane	20.3	2.0	ug/l	25.0	ND	81.2	80-120			
Bromoform	23.7	5.0	ug/l	25.0	ND	94.8	40-140			
Bromomethane	24.1	5.0	ug/l	25.0	ND	96.4	25-165			
2-Butanone (MEK)	27.3	10	ug/l	25.0	ND	109	10-160			
n-Butylbenzene	22.7	5.0	ug/l	25.0	ND	90.8	75-135			
sec-Butylbenzene	23.9	5.0	ug/l	25.0	ND	95.6	80-135			
tert-Butylbenzene	24.2	5.0	ug/l	25.0	ND	96.8	80-125			
Carbon Disulfide	23.0	5.0	ug/l	25.0	ND	92.0	20-120			
Carbon tetrachloride	23.5	5.0	ug/l	25.0	ND	94.0	80-145			
Chlorobenzene	25.6	2.0	ug/l	25.0	ND	102	80-120			
Chloroethane	27.0	5.0	ug/l	25.0	ND	108	30-150			
Chloroform	21.8	2.0	ug/l	25.0	ND	87.2	80-125			
Chloromethane	20.2	5.0	ug/l	25.0	ND	80.8	15-140			
2-Chlorotoluene	24.1	5.0	ug/l	25.0	ND	96.4	80-124			
4-Chlorotoluene	24.2	5.0	ug/l	25.0	ND	96.8	80-125			
Dibromochloromethane	23.8	2.0	ug/l	25.0	ND	95.2	75-135			
1,2-Dibromo-3-chloropropane	19.9	5.0	ug/l	25.0	ND	79.6	25-185			
1,2-Dibromoethane (EDB)	25.8	2.0	ug/l	25.0	ND	103	45-145			
Dibromomethane	21.5	2.0	ug/l	25.0	ND	86.0	55-140			
1,2-Dichlorobenzene	23.0	2.0	ug/l	25.0	ND	92.0	80-120			
1,3-Dichlorobenzene	23.0	2.0	ug/l	25.0	ND	92.0	80-120			
1,4-Dichlorobenzene	23.6	2.0	ug/l	25.0	ND	94.4	80-120			
Dichlorodifluoromethane	19.2	5.0	ug/l	25.0	ND	76.8	25-145			
1,1-Dichloroethane	26.4	2.0	ug/l	25.0	ND	106	75-120			
1,2-Dichloroethane	20.9	2.0	ug/l	25.0	ND	83.6	60-135			
1,1-Dichloroethene	25.0	5.0	ug/l	25.0	ND	100	55-120			
cis-1,2-Dichloroethene	26.4	2.0	ug/l	25.0	ND	106	75-120			
trans-1,2-Dichloroethene	26.8	2.0	ug/l	25.0	ND	107	65-120			
1,2-Dichloropropane	20.6	2.0	ug/l	25.0	ND	82.4	80-125			
1,3-Dichloropropane	24.9	2.0	ug/l	25.0	ND	99.6	55-140			
2,2-Dichloropropane	25.6	2.0	ug/l	25.0	ND	102	45-165			
1,1-Dichloropropene	22.9	2.0	ug/l	25.0	ND	91.6	80-120			

Melissa Evans
 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01
Received: 08/24/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0301 Extracted: 09/01/01										
Matrix Spike Analyzed: 09/01/01 (P1I0301-MS1)					Source: PKH0446-01					
cis-1,3-Dichloropropene	19.6	2.0	ug/l	25.0	ND	78.4	80-120			M2
trans-1,3-Dichloropropene	21.0	2.0	ug/l	25.0	ND	84.0	70-120			
Ethylbenzene	25.2	2.0	ug/l	25.0	ND	101	80-120			
Hexachlorobutadiene	19.4	5.0	ug/l	25.0	ND	77.6	80-135			M2
2-Hexanone	26.4	10	ug/l	25.0	ND	106	25-185			
Iodomethane	31.9	2.0	ug/l	25.0	ND	128	30-155			
Isopropylbenzene	25.0	2.0	ug/l	25.0	ND	100	80-125			
p-Isopropyltoluene	22.9	2.0	ug/l	25.0	ND	91.6	80-125			
Methylene chloride	25.4	5.0	ug/l	25.0	ND	102	55-125			
4-Methyl-2-pentanone (MIBK)	23.4	10	ug/l	25.0	ND	93.6	10-175			
Methyl-tert-butyl Ether (MTBE)	25.4	5.0	ug/l	25.0	ND	102	55-135			
Naphthalene	19.3	5.0	ug/l	25.0	ND	77.2	15-160			
n-Propylbenzene	23.6	2.0	ug/l	25.0	ND	94.4	80-130			
Styrene	24.1	2.0	ug/l	25.0	ND	96.4	60-135			
1,1,1,2-Tetrachloroethane	24.9	5.0	ug/l	25.0	ND	99.6	80-135			
1,1,2,2-Tetrachloroethane	23.5	2.0	ug/l	25.0	ND	94.0	35-150			
Tetrachloroethene	25.1	2.0	ug/l	25.0	ND	100	80-120			
Toluene	24.8	2.0	ug/l	25.0	ND	99.2	80-120			
1,2,3-Trichlorobenzene	17.9	5.0	ug/l	25.0	ND	71.6	45-145			
1,2,4-Trichlorobenzene	21.9	5.0	ug/l	25.0	ND	87.6	65-130			
1,1,1-Trichloroethane	22.3	2.0	ug/l	25.0	ND	89.2	80-120			
1,1,2-Trichloroethane	25.0	2.0	ug/l	25.0	ND	100	55-145			
Trichloroethene	22.2	2.0	ug/l	25.0	ND	88.8	80-120			
Trichlorofluoromethane	22.9	5.0	ug/l	25.0	ND	91.6	70-145			
1,2,3-Trichloropropane	24.6	10	ug/l	25.0	ND	98.4	20-160			
1,2,4-Trimethylbenzene	22.6	2.0	ug/l	25.0	ND	90.4	70-135			
1,3,5-Trimethylbenzene	22.7	2.0	ug/l	25.0	ND	90.8	80-125			
Vinyl acetate	34.1	25	ug/l	25.0	ND	136	25-130			N2
Vinyl chloride	22.6	5.0	ug/l	25.0	ND	90.4	25-135			
Xylenes, Total	75.1	10	ug/l	75.0	ND	100	80-120			
Surrogate: Dibromofluoromethane	27.2		ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	27.8		ug/l	25.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	26.7		ug/l	25.0		107	80-120			



Law Engineering
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 Phoenix, AZ 85040
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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110301 Extracted: 09/01/01										
Matrix Spike Dup Analyzed: 09/01/01 (P110301-MSD1)					Source: PKH0446-01					
Acetone	34.0	20	ug/l	25.0	ND	136	5-200	6.37	20	
Benzene	21.4	2.0	ug/l	25.0	ND	85.6	80-120	1.89	20	
Bromobenzene	23.8	5.0	ug/l	25.0	ND	95.2	80-120	0.844	20	
Bromochloromethane	23.6	5.0	ug/l	25.0	ND	94.4	60-135	1.71	20	
Bromodichloromethane	20.8	2.0	ug/l	25.0	ND	83.2	80-120	2.43	20	
Bromoform	24.2	5.0	ug/l	25.0	ND	96.8	40-140	2.09	20	
Bromomethane	22.4	5.0	ug/l	25.0	ND	89.6	25-165	7.31	20	
2-Butanone (MEK)	28.6	10	ug/l	25.0	ND	114	10-160	4.65	20	
n-Butylbenzene	21.3	5.0	ug/l	25.0	ND	85.2	75-135	6.36	20	
sec-Butylbenzene	23.1	5.0	ug/l	25.0	ND	92.4	80-135	3.40	20	
tert-Butylbenzene	24.0	5.0	ug/l	25.0	ND	96.0	80-125	0.830	20	
Carbon Disulfide	22.8	5.0	ug/l	25.0	ND	91.2	20-120	0.873	20	
Carbon tetrachloride	23.8	5.0	ug/l	25.0	ND	95.2	80-145	1.27	20	
Chlorobenzene	25.7	2.0	ug/l	25.0	ND	103	80-120	0.390	20	
Chloroethane	26.2	5.0	ug/l	25.0	ND	105	30-150	3.01	20	
Chloroform	22.0	2.0	ug/l	25.0	ND	88.0	80-125	0.913	20	
Chloromethane	20.2	5.0	ug/l	25.0	ND	80.8	15-140	0.00	20	
2-Chlorotoluene	24.4	5.0	ug/l	25.0	ND	97.6	80-124	1.24	20	
4-Chlorotoluene	24.7	5.0	ug/l	25.0	ND	98.8	80-125	2.04	20	
Dibromochloromethane	24.1	2.0	ug/l	25.0	ND	96.4	75-135	1.25	20	
1,2-Dibromo-3-chloropropane	25.6	5.0	ug/l	25.0	ND	102	25-185	25.1	20	R4
1,2-Dibromoethane (EDB)	26.2	2.0	ug/l	25.0	ND	105	45-145	1.54	20	
Dibromomethane	22.1	2.0	ug/l	25.0	ND	88.4	55-140	2.75	20	
1,2-Dichlorobenzene	23.4	2.0	ug/l	25.0	ND	93.6	80-120	1.72	20	
1,3-Dichlorobenzene	23.5	2.0	ug/l	25.0	ND	94.0	80-120	2.15	20	
1,4-Dichlorobenzene	23.9	2.0	ug/l	25.0	ND	95.6	80-120	1.26	20	
Dichlorodifluoromethane	19.2	5.0	ug/l	25.0	ND	76.8	25-145	0.00	20	
1,1-Dichloroethane	26.0	2.0	ug/l	25.0	ND	104	75-120	1.53	20	
1,2-Dichloroethane	21.5	2.0	ug/l	25.0	ND	86.0	60-135	2.83	20	
1,1-Dichloroethene	25.0	5.0	ug/l	25.0	ND	100	55-120	0.00	20	
cis-1,2-Dichloroethene	26.4	2.0	ug/l	25.0	ND	106	75-120	0.00	20	
trans-1,2-Dichloroethene	26.6	2.0	ug/l	25.0	ND	106	65-120	0.749	20	
1,2-Dichloropropane	21.6	2.0	ug/l	25.0	ND	86.4	80-125	4.74	20	
1,3-Dichloropropane	24.9	2.0	ug/l	25.0	ND	99.6	55-140	0.00	20	
2,2-Dichloropropane	25.4	2.0	ug/l	25.0	ND	102	45-165	0.784	20	
1,1-Dichloropropene	22.7	2.0	ug/l	25.0	ND	90.8	80-120	0.877	20	

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
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Report Number: PKH0446

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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110301 Extracted: 09/01/01										
Matrix Spike Dup Analyzed: 09/01/01 (P110301-MSD1)					Source: PKH0446-01					
cis-1,3-Dichloropropene	19.9	2.0	ug/l	25.0	ND	79.6	80-120	1.52	20	
trans-1,3-Dichloropropene	21.4	2.0	ug/l	25.0	ND	85.6	70-120	1.89	20	
Ethylbenzene	24.8	2.0	ug/l	25.0	ND	99.2	80-120	1.60	20	
Hexachlorobutadiene	17.5	5.0	ug/l	25.0	ND	70.0	80-135	10.3	20	M2
2-Hexanone	27.6	10	ug/l	25.0	ND	110	25-185	4.44	20	
Iodomethane	32.2	2.0	ug/l	25.0	ND	129	30-155	0.936	20	
Isopropylbenzene	24.6	2.0	ug/l	25.0	ND	98.4	80-125	1.61	20	
p-Isopropyltoluene	22.1	2.0	ug/l	25.0	ND	88.4	80-125	3.56	20	
Methylene chloride	25.5	5.0	ug/l	25.0	ND	102	55-125	0.393	20	
4-Methyl-2-pentanone (MIBK)	24.6	10	ug/l	25.0	ND	98.4	10-175	5.00	20	
Methyl-tert-butyl Ether (MTBE)	25.8	5.0	ug/l	25.0	ND	103	55-135	1.56	20	
Naphthalene	24.9	5.0	ug/l	25.0	ND	99.6	15-160	25.3	20	R4
n-Propylbenzene	23.6	2.0	ug/l	25.0	ND	94.4	80-130	0.00	20	
Styrene	24.2	2.0	ug/l	25.0	ND	96.8	60-135	0.414	20	
1,1,1,2-Tetrachloroethane	25.4	5.0	ug/l	25.0	ND	102	80-135	1.99	20	
1,1,2,2-Tetrachloroethane	24.7	2.0	ug/l	25.0	ND	98.8	35-150	4.98	20	
Tetrachloroethene	25.1	2.0	ug/l	25.0	ND	100	80-120	0.00	20	
Toluene	24.9	2.0	ug/l	25.0	ND	99.6	80-120	0.402	20	
1,2,3-Trichlorobenzene	20.4	5.0	ug/l	25.0	ND	81.6	45-145	13.1	20	
1,2,4-Trichlorobenzene	22.6	5.0	ug/l	25.0	ND	90.4	65-130	3.15	20	
1,1,1-Trichloroethane	21.8	2.0	ug/l	25.0	ND	87.2	80-120	2.27	20	
1,1,2-Trichloroethane	25.1	2.0	ug/l	25.0	ND	100	55-145	0.399	20	
Trichloroethene	22.4	2.0	ug/l	25.0	ND	89.6	80-120	0.897	20	
Trichlorofluoromethane	22.8	5.0	ug/l	25.0	ND	91.2	70-145	0.438	20	
1,2,3-Trichloropropane	26.0	10	ug/l	25.0	ND	104	20-160	5.53	20	
1,2,4-Trimethylbenzene	23.1	2.0	ug/l	25.0	ND	92.4	70-135	2.19	20	
1,3,5-Trimethylbenzene	23.0	2.0	ug/l	25.0	ND	92.0	80-125	1.31	20	
Vinyl acetate	34.4	25	ug/l	25.0	ND	138	25-130	0.876	20	N2
Vinyl chloride	22.6	5.0	ug/l	25.0	ND	90.4	25-135	0.00	20	
Xylenes, Total	74.8	10	ug/l	75.0	ND	99.7	80-120	0.400	20	
Surrogate: Dibromofluoromethane	26.8		ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	27.5		ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	27.0		ug/l	25.0		108	80-120			



Law Engineering
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 Phoenix, AZ 85040
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METHOD BLANK QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2923 Extracted: 08/29/01									
Blank Analyzed: 08/30/01 (P1H2923-BLK1)									
Mercury	ND	0.020	mg/kg						
LCS Analyzed: 08/30/01 (P1H2923-BS1)									
Mercury	0.379	0.020	mg/kg	0.417		90.9 85-115			M2
Matrix Spike Analyzed: 08/30/01 (P1H2923-MS1)									
Mercury	4.45	0.20	mg/kg	0.417	3.1	324 85-115			M2
Matrix Spike Dup Analyzed: 08/30/01 (P1H2923-MSD1)									
Mercury	4.33	0.20	mg/kg	0.417	3.1	295 85-115	2.73	20	M2
Batch: P1I0616 Extracted: 09/06/01									
Blank Analyzed: 09/06/01 (P1I0616-BLK1)									
Arsenic	ND	5.0	mg/kg						
Barium	ND	1.0	mg/kg						
Cadmium	ND	0.50	mg/kg						
Chromium	ND	1.0	mg/kg						
Lead	ND	5.0	mg/kg						
Selenium	ND	5.0	mg/kg						
Silver	ND	0.50	mg/kg						
LCS Analyzed: 09/06/01 (P1I0616-BS1)									
Arsenic	92.0	5.0	mg/kg	100		92.0 80-120			
Barium	92.5	1.0	mg/kg	100		92.5 80-120			
Cadmium	91.8	0.50	mg/kg	100		91.8 80-120			
Chromium	92.4	1.0	mg/kg	100		92.4 80-120			
Lead	93.1	5.0	mg/kg	100		93.1 80-120			
Selenium	88.9	5.0	mg/kg	100		88.9 80-120			
Silver	93.4	0.50	mg/kg	100		93.4 80-120			

Melissa Evans
 Project Manager

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Law Engineering
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METHOD BLANK QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0616 Extracted: 09/06/01										
LCS Dup Analyzed: 09/06/01 (P1I0616-BSD1)										
Arsenic	90.7	5.0	mg/kg	100		90.7	80-120	1.42	20	
Barium	90.1	1.0	mg/kg	100		90.1	80-120	2.63	20	
Cadmium	89.6	0.50	mg/kg	100		89.6	80-120	2.43	20	
Chromium	90.4	1.0	mg/kg	100		90.4	80-120	2.19	20	
Lead	90.2	5.0	mg/kg	100		90.2	80-120	3.16	20	
Selenium	88.1	5.0	mg/kg	100		88.1	80-120	0.904	20	
Silver	92.6	0.50	mg/kg	100		92.6	80-120	0.860	20	
Matrix Spike Analyzed: 09/06/01 (P1I0616-MS1)					Source: PKH0486-02					
Arsenic	95.2	5.0	mg/kg	100	ND	90.8	75-125			
Barium	152	1.0	mg/kg	100	61	91.0	75-125			
Cadmium	89.3	0.50	mg/kg	100	ND	89.3	75-125			
Chromium	118	1.0	mg/kg	100	14	104	75-125			
Lead	95.4	5.0	mg/kg	100	5.5	89.9	75-125			
Selenium	94.3	5.0	mg/kg	100	ND	92.8	75-125			
Silver	92.5	0.50	mg/kg	100	ND	92.5	75-125			
Matrix Spike Dup Analyzed: 09/06/01 (P1I0616-MSD1)					Source: PKH0486-02					
Arsenic	100	5.0	mg/kg	100	ND	95.6	75-125	4.92	20	
Barium	162	1.0	mg/kg	100	61	101	75-125	6.37	20	
Cadmium	92.0	0.50	mg/kg	100	ND	92.0	75-125	2.98	20	
Chromium	110	1.0	mg/kg	100	14	96.0	75-125	7.02	20	
Lead	98.5	5.0	mg/kg	100	5.5	93.0	75-125	3.20	20	
Selenium	96.9	5.0	mg/kg	100	ND	95.4	75-125	2.72	20	
Silver	96.0	0.50	mg/kg	100	ND	96.0	75-125	3.71	20	



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01

Received: 08/24/01

METHOD BLANK QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2827 Extracted: 08/28/01										
Blank Analyzed: 08/29/01 (P1H2827-BLK1)										
Arsenic	ND	0.050	mg/l							
Chromium	ND	0.010	mg/l							
Copper	ND	0.020	mg/l							
Nickel	ND	0.050	mg/l							
Zinc	ND	0.050	mg/l							
LCS Analyzed: 08/29/01 (P1H2827-BS1)										
Arsenic	0.961	0.050	mg/l	1.00		96.1	85-115			
Chromium	0.970	0.010	mg/l	1.00		97.0	85-115			
Copper	0.993	0.020	mg/l	1.00		99.3	85-115			
Nickel	0.960	0.050	mg/l	1.00		96.0	85-115			
Zinc	0.969	0.050	mg/l	1.00		96.9	85-115			
LCS Dup Analyzed: 08/30/01 (P1H2827-BSD1)										
Arsenic	1.05	0.050	mg/l	1.00		105	85-115	8.85	20	
Chromium	1.03	0.010	mg/l	1.00		103	85-115	6.00	20	
Copper	1.10	0.020	mg/l	1.00		110	85-115	10.2	20	
Nickel	1.02	0.050	mg/l	1.00		102	85-115	6.06	20	
Zinc	1.04	0.050	mg/l	1.00		104	85-115	7.07	20	
Matrix Spike Analyzed: 08/29/01 (P1H2827-MS1)										
					Source: PKH0446-01					
Arsenic	0.988	0.050	mg/l	1.00	ND	98.8	70-130			
Chromium	0.971	0.010	mg/l	1.00	ND	97.1	70-130			
Copper	1.00	0.020	mg/l	1.00	ND	100	70-130			
Nickel	0.960	0.050	mg/l	1.00	ND	96.0	70-130			
Zinc	0.974	0.050	mg/l	1.00	ND	96.0	70-130			
Matrix Spike Dup Analyzed: 08/29/01 (P1H2827-MSD1)										
					Source: PKH0446-01					
Arsenic	0.948	0.050	mg/l	1.00	ND	94.8	70-130	4.13	20	
Chromium	0.952	0.010	mg/l	1.00	ND	95.2	70-130	1.98	20	
Copper	0.986	0.020	mg/l	1.00	ND	98.6	70-130	1.41	20	
Nickel	0.942	0.050	mg/l	1.00	ND	94.2	70-130	1.89	20	
Zinc	0.952	0.050	mg/l	1.00	ND	93.8	70-130	2.28	20	

Melissa Evans
 Project Manager

PKH0446
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The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKH0446

Sampled: 08/22/01-08/24/01
 Received: 08/24/01

METHOD BLANK QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0418 Extracted: 09/04/01										
Blank Analyzed: 09/04/01 (P1I0418-BLK1)										
Total Cyanide	ND	0.020	mg/l							
LCS Analyzed: 09/04/01 (P1I0418-BS1)										
Total Cyanide	0.0931	0.020	mg/l	0.100		93.1	90-110			
Matrix Spike Analyzed: 09/04/01 (P1I0418-MS1)										
Total Cyanide	0.156	0.020	mg/l	0.100	ND	156	70-130			M1
Matrix Spike Dup Analyzed: 09/04/01 (P1I0418-MSD1)										
Total Cyanide	0.130	0.020	mg/l	0.100	ND	130	70-130	18.2	20	
Batch: P1I0513 Extracted: 09/05/01										
Blank Analyzed: 09/05/01 (P1I0513-BLK1)										
Total Cyanide	ND	0.50	mg/kg							
Matrix Spike Analyzed: 09/05/01 (P1I0513-MS1)										
Total Cyanide	2.61	0.50	mg/kg	2.50	ND	104	70-130			
Matrix Spike Dup Analyzed: 09/05/01 (P1I0513-MSD1)										
Total Cyanide	2.24	0.50	mg/kg	2.50	ND	89.6	70-130	15.3	20	
Reference Analyzed: 09/05/01 (P1I0513-SRM1)										
Total Cyanide	116	20	mg/kg	201		57.7	40-160			



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Report Number: PKH0446

Sampled: 08/22/01-08/24/01

Received: 08/24/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

B4	Target analyte detected in blank at/above method acceptance criteria.
L3	The associated blank spike recovery was above method acceptance limits. See case narrative.
M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
N1	See case narrative.
N2	See corrective action report.
Q11	Sample is heterogeneous. Sample homogeneity could not be readily achieved using routine laboratory practices.
R4	MS/MSD RPD exceeded the method control limit. Recovery met acceptance criteria.
R6	LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference



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due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Temp 40



Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: [none]
Report Number: PKH0448

Sampled: 08/25/01
Received: 08/25/01
Issued: 10/2/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKH0448-01	LB2-S-10	Soil
PKH0448-02	LB2-S-20	Soil
PKH0448-03	LB2-S-30	Soil
PKH0448-03RE8	LB2-S-30	Soil
PKH0448-04	LB2-S-30	Soil
PKH0448-05	LB2-S-40	Soil
PKH0448-06	LB2-S-50	Soil
PKH0448-06RE8	LB2-S-50	Soil
PKH0448-07	LB2-S-50	Soil
PKH0448-08	Rinsate-3	Water

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: The N1 flag on ICP Metals indicates that the analyte was detected in the associated Method Blank. Analyte concentration in the sample is greater than 10X the concentration found in the Method Blank.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

QA/QC CRITERIA: The N2 flag on 8260 indicates that the Matrix Spike recovery was outside the method control limits. See Corrective Action Report.

EXPLANATION OF DATA QUALIFIERS: The L3 flag on Cyanide and 8260 indicates that the Laboratory Control Sample recovery was above the method control limits. Analyte not detected, data not impacted.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Melissa Evans
Project Manager

PKH0448
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Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Coldby Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9589
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

CORRECTIVE ACTION REPORT

Department: GC/MS Method: 8260B
Date: 09/03/2001 Matrix: Water
Batch: P1I0102
Samples: PKH0432-01, PKH0433-01 – PKH0433-07, PKH0439-03, PKH0443-01
& PKH0448-01

Identification and Definition of Problem:

The Laboratory Control Sample (LCS) and Matrix Spike (MS) recovered high and outside of acceptance limits for Vinyl acetate.

Determination of the Cause of the Problem:

A definitive cause for the high recoveries could not be determined.

Corrective Action:

The Matrix Spike Duplicate was within acceptance limits for Vinyl acetate. All samples associated with this batch are non-detect and therefore are not impacted by the high recoveries. The associated samples as well as the LCS have been flagged "L3" to indicate the high recovery. The MS and the source samples have also been flagged "N2".

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 10/5/2001
Quality Assurance Manager

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0448-04 (LB2-S-30 - Soil)								
Acetone	EPA 8260B	P1H2501	890	ND	1	8/25/01	9/6/01	
Benzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Bromobenzene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Bromochloromethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Bromodichloromethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Bromoform	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Bromomethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
2-Butanone (MEK)	EPA 8260B	P1H2501	450	ND	1	8/25/01	9/6/01	
n-Butylbenzene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
sec-Butylbenzene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
tert-Butylbenzene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Carbon Disulfide	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Carbon tetrachloride	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Chlorobenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Chloroethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Chloroform	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Chloromethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
2-Chlorotoluene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
4-Chlorotoluene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Dibromochloromethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Dibromomethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,2-Dichlorobenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,3-Dichlorobenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,4-Dichlorobenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Dichlorodifluoromethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
1,1-Dichloroethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,2-Dichloroethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,1-Dichloroethene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
cis-1,2-Dichloroethene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
trans-1,2-Dichloroethene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,2-Dichloropropane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,3-Dichloropropane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
2,2-Dichloropropane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,1-Dichloropropene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
cis-1,3-Dichloropropene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
trans-1,3-Dichloropropene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Ethylbenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Hexachlorobutadiene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
2-Hexanone	EPA 8260B	P1H2501	450	ND	1	8/25/01	9/6/01	
Iodomethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Isopropylbenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
p-Isopropyltoluene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	

Melissa Evans
 Project Manager

PKH0448
 Page 2 of 37

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0448-04 (LB2-S-30 - Soil)								
Methylene chloride	EPA 8260B	P1H2501	450	ND	1	8/25/01	9/6/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P1H2501	450	ND	1	8/25/01	9/6/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Naphthalene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
n-Propylbenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Styrene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Tetrachloroethene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Toluene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,2,3-Trichlorobenzene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
1,2,4-Trichlorobenzene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
1,1,1-Trichloroethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,1,2-Trichloroethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Trichloroethene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Trichlorofluoromethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
1,2,3-Trichloropropane	EPA 8260B	P1H2501	450	ND	1	8/25/01	9/6/01	
1,2,4-Trimethylbenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,3,5-Trimethylbenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Vinyl acetate	EPA 8260B	P1H2501	1100	ND	1	8/25/01	9/6/01	
Vinyl chloride	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Xylenes, Total	EPA 8260B	P1H2501	270	ND	1	8/25/01	9/6/01	

Surrogate: Dibromofluoromethane (70-125%) 81.9 %

Surrogate: Toluene-d8 (50-135%) 86.6 %

Surrogate: 4-Bromofluorobenzene (70-130%) 91.1 %

The reporting limit for this sample was adjusted by a factor of 0.893 to account for the applicable preparation factor.



Law Engineering
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 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0448-07 (LB2-S-50 - Soil)								
Acetone	EPA 8260B	P1H2501	890	ND	1	8/25/01	9/6/01	
Benzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Bromobenzene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Bromochloromethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Bromodichloromethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Bromoform	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Bromomethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
2-Butanone (MEK)	EPA 8260B	P1H2501	440	ND	1	8/25/01	9/6/01	
n-Butylbenzene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
sec-Butylbenzene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
tert-Butylbenzene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Carbon Disulfide	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Carbon tetrachloride	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Chlorobenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Chloroethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Chloroform	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Chloromethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
2-Chlorotoluene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
4-Chlorotoluene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Dibromochloromethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Dibromomethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,2-Dichlorobenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,3-Dichlorobenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,4-Dichlorobenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Dichlorodifluoromethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
1,1-Dichloroethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,2-Dichloroethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,1-Dichloroethene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
cis-1,2-Dichloroethene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
trans-1,2-Dichloroethene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,2-Dichloropropane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,3-Dichloropropane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
2,2-Dichloropropane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,1-Dichloropropene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
cis-1,3-Dichloropropene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
trans-1,3-Dichloropropene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Ethylbenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Hexachlorobutadiene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
2-Hexanone	EPA 8260B	P1H2501	440	ND	1	8/25/01	9/6/01	
Iodomethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Isopropylbenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
p-Isopropyltoluene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	

Melissa Evans
 Project Manager

PKH0448
 Page 4 of 37

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0448-07 (LB2-S-50 - Soil)								
Methylene chloride	EPA 8260B	P1H2501	440	ND	1	8/25/01	9/6/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P1H2501	440	ND	1	8/25/01	9/6/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Naphthalene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
n-Propylbenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Styrene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Tetrachloroethene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Toluene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,2,3-Trichlorobenzene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
1,2,4-Trichlorobenzene	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
1,1,1-Trichloroethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,1,2-Trichloroethane	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Trichloroethene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Trichlorofluoromethane	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
1,2,3-Trichloropropane	EPA 8260B	P1H2501	440	ND	1	8/25/01	9/6/01	
1,2,4-Trimethylbenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
1,3,5-Trimethylbenzene	EPA 8260B	P1H2501	89	ND	1	8/25/01	9/6/01	
Vinyl acetate	EPA 8260B	P1H2501	1100	ND	1	8/25/01	9/6/01	
Vinyl chloride	EPA 8260B	P1H2501	220	ND	1	8/25/01	9/6/01	
Xylenes, Total	EPA 8260B	P1H2501	270	ND	1	8/25/01	9/6/01	

Surrogate: Dibromofluoromethane (70-125%)

74.0 %

Surrogate: Toluene-d8 (50-135%)

81.3 %

Surrogate: 4-Bromofluorobenzene (70-130%)

83.8 %

The reporting limit for this sample was adjusted by a factor of 0.89 to account for the applicable preparation factor.



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0448-08 (Rinsate-3 - Water)								
Acetone	EPA 8260B	P110102	20	ND	1	9/3/01	9/4/01	
Benzene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Bromobenzene	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
Bromochloromethane	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
Bromodichloromethane	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Bromoform	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
Bromomethane	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
2-Butanone (MEK)	EPA 8260B	P110102	10	ND	1	9/3/01	9/4/01	
n-Butylbenzene	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
sec-Butylbenzene	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
tert-Butylbenzene	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
Carbon Disulfide	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
Carbon tetrachloride	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
Chlorobenzene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Chloroethane	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
Chloroform	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Chloromethane	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
2-Chlorotoluene	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
4-Chlorotoluene	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
Dibromochloromethane	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Dibromomethane	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,2-Dichlorobenzene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,3-Dichlorobenzene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,4-Dichlorobenzene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Dichlorodifluoromethane	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
1,1-Dichloroethane	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,2-Dichloroethane	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,1-Dichloroethene	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
cis-1,2-Dichloroethene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
trans-1,2-Dichloroethene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,2-Dichloropropane	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,3-Dichloropropane	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
2,2-Dichloropropane	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,1-Dichloropropene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
cis-1,3-Dichloropropene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
trans-1,3-Dichloropropene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Ethylbenzene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Hexachlorobutadiene	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
2-Hexanone	EPA 8260B	P110102	10	ND	1	9/3/01	9/4/01	
Iodomethane	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Isopropylbenzene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
p-Isopropyltoluene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	

Melissa Evans
 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: [none]
Report Number: PKH0448

Sampled: 08/25/01
Received: 08/25/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0448-08 (Rinsate-3 - Water)								
Methylene chloride	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P110102	10	ND	1	9/3/01	9/4/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
Naphthalene	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
n-Propylbenzene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Styrene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Tetrachloroethene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Toluene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,2,3-Trichlorobenzene	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
1,2,4-Trichlorobenzene	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
1,1,1-Trichloroethane	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,1,2-Trichloroethane	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Trichloroethene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Trichlorofluoromethane	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
1,2,3-Trichloropropane	EPA 8260B	P110102	10	ND	1	9/3/01	9/4/01	
1,2,4-Trimethylbenzene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
1,3,5-Trimethylbenzene	EPA 8260B	P110102	2.0	ND	1	9/3/01	9/4/01	
Vinyl acetate	EPA 8260B	P110102	25	ND	1	9/3/01	9/4/01	V1,L3
Vinyl chloride	EPA 8260B	P110102	5.0	ND	1	9/3/01	9/4/01	
Xylenes, Total	EPA 8260B	P110102	10	ND	1	9/3/01	9/4/01	
Surrogate: Dibromofluoromethane (80-120%)				107 %				
Surrogate: Toluene-d8 (80-120%)				112 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				119 %				

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Melissa Evans
Project Manager

PKH0448
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0448-01 (LB2-S-10 - Soil)								
Arsenic	EPA 6010B	P1I0517	5.0	ND	1	9/5/01	9/8/01	
Chromium	EPA 6010B	P1I0517	1.0	30	1	9/5/01	9/8/01	N1
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1I0517	2.0	19	1	9/5/01	9/9/01	
Nickel	EPA 6010B	P1I0517	5.0	19	1	9/5/01	9/8/01	
Zinc	EPA 6010B	P1I0517	5.0	62	1	9/5/01	9/8/01	N1
Sample ID: PKH0448-02 (LB2-S-20 - Soil)								
Arsenic	EPA 6010B	P1I0517	5.0	ND	1	9/5/01	9/8/01	
Chromium	EPA 6010B	P1I0517	1.0	18	1	9/5/01	9/8/01	N1
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1I0517	2.0	15	1	9/5/01	9/9/01	
Nickel	EPA 6010B	P1I0517	5.0	15	1	9/5/01	9/8/01	
Zinc	EPA 6010B	P1I0517	5.0	45	1	9/5/01	9/8/01	N1
Sample ID: PKH0448-03 (LB2-S-30 - Soil)								
Arsenic	EPA 6010B	P1I0517	5.0	ND	1	9/5/01	9/8/01	
Chromium	EPA 6010B	P1I0517	1.0	18	1	9/5/01	9/8/01	N1
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1I0517	2.0	11	1	9/5/01	9/9/01	
Nickel	EPA 6010B	P1I0517	5.0	12	1	9/5/01	9/8/01	
Sample ID: PKH0448-03RE8 (LB2-S-30 - Soil)								
Zinc	EPA 6010B	P1J0103	5.0	36	1	10/1/01	10/2/01	

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 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0448-05 (LB2-S-40 - Soil)								
Arsenic	EPA 6010B	P1I0517	5.0	ND	1	9/5/01	9/8/01	
Chromium	EPA 6010B	P1I0517	1.0	18	1	9/5/01	9/8/01	N1
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1I0517	2.0	19	1	9/5/01	9/9/01	
Nickel	EPA 6010B	P1I0517	5.0	17	1	9/5/01	9/8/01	
Zinc	EPA 6010B	P1I0517	5.0	48	1	9/5/01	9/8/01	N1
Sample ID: PKH0448-06 (LB2-S-50 - Soil)								
Arsenic	EPA 6010B	P1I0517	5.0	ND	1	9/5/01	9/8/01	
Chromium	EPA 6010B	P1I0517	1.0	21	1	9/5/01	9/8/01	N1
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1I0517	2.0	10	1	9/5/01	9/9/01	
Nickel	EPA 6010B	P1I0517	5.0	11	1	9/5/01	9/8/01	
Sample ID: PKH0448-06RE8 (LB2-S-50 - Soil)								
Zinc	EPA 6010B	P1J0103	5.0	28	1	10/1/01	10/2/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426

Melissa Evans
 Project Manager

PKH0448
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0448-08 (Rinsate-3 - Water)								
Arsenic	EPA 200.7	P1H2827	0.050	ND	1	8/28/01	8/29/01	
Chromium	EPA 200.7	P1H2827	0.010	ND	1	8/28/01	8/29/01	
Chromium VI	SM3500CR-D	P1H2706	0.025	ND	1	8/25/01	8/25/01	
Copper	EPA 200.7	P1H2827	0.020	ND	1	8/28/01	8/29/01	
Nickel	EPA 200.7	P1H2827	0.050	ND	1	8/28/01	8/29/01	
Zinc	EPA 200.7	P1H2827	0.050	ND	1	8/28/01	8/29/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426

Melissa Evans
 Project Manager

PKH0448
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 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0448-01 (LB2-S-10 - Soil)								
Total Cyanide	EPA 9014	P1I0513	0.50	ND	1	9/5/01	9/5/01	
Sample ID: PKH0448-02 (LB2-S-20 - Soil)								
Total Cyanide	EPA 9014	P1I0513	0.50	ND	1	9/5/01	9/5/01	
Sample ID: PKH0448-03 (LB2-S-30 - Soil)								
Total Cyanide	EPA 9014	P1I0513	0.50	ND	1	9/5/01	9/5/01	
Sample ID: PKH0448-05 (LB2-S-40 - Soil)								
Total Cyanide	EPA 9014	P1I0611	0.50	ND	1	9/6/01	9/6/01	M2
Sample ID: PKH0448-06 (LB2-S-50 - Soil)								
Total Cyanide	EPA 9014	P1I0611	0.50 mg/l	ND mg/l	1	9/6/01	9/6/01	
Sample ID: PKH0448-08 (Rinsate-3 - Water)								
Total Cyanide	SM4500-CN,C-E	P1I0619	0.020	ND	1	9/6/01	9/6/01	L3

DEL MAR ANALYTICAL, PHOENIX (AZ0426

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 Project Manager

PKH0448
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]

Report Number: PKH0448

Sampled: 08/25/01

Received: 08/25/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
Blank Analyzed: 09/04/01 (P1H2501-BLK1)										
Acetone	ND	1000	ug/kg							
Benzene	ND	100	ug/kg							
Bromobenzene	ND	250	ug/kg							
Bromochloromethane	ND	250	ug/kg							
Bromodichloromethane	ND	100	ug/kg							
Bromoform	ND	250	ug/kg							
Bromomethane	ND	250	ug/kg							
2-Butanone (MEK)	ND	500	ug/kg							
n-Butylbenzene	ND	250	ug/kg							
sec-Butylbenzene	ND	250	ug/kg							
tert-Butylbenzene	ND	250	ug/kg							
Carbon Disulfide	ND	250	ug/kg							
Carbon tetrachloride	ND	250	ug/kg							
Chlorobenzene	ND	100	ug/kg							
Chloroethane	ND	250	ug/kg							
Chloroform	ND	100	ug/kg							
Chloromethane	ND	250	ug/kg							
2-Chlorotoluene	ND	250	ug/kg							
4-Chlorotoluene	ND	250	ug/kg							
Dibromochloromethane	ND	100	ug/kg							
1,2-Dibromo-3-chloropropane	ND	250	ug/kg							
1,2-Dibromoethane (EDB)	ND	100	ug/kg							
Dibromomethane	ND	100	ug/kg							
1,2-Dichlorobenzene	ND	100	ug/kg							
1,3-Dichlorobenzene	ND	100	ug/kg							
1,4-Dichlorobenzene	ND	100	ug/kg							
Dichlorodifluoromethane	ND	250	ug/kg							
1,1-Dichloroethane	ND	100	ug/kg							
1,2-Dichloroethane	ND	100	ug/kg							
1,1-Dichloroethene	ND	250	ug/kg							
cis-1,2-Dichloroethene	ND	100	ug/kg							
trans-1,2-Dichloroethene	ND	100	ug/kg							
1,2-Dichloropropane	ND	100	ug/kg							
1,3-Dichloropropane	ND	100	ug/kg							
2,2-Dichloropropane	ND	100	ug/kg							

Melissa Evans
 Project Manager

PKH0448
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK/OC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
Blank Analyzed: 09/04/01 (P1H2501-BLK1)										
1,1-Dichloropropene	ND	100	ug/kg							
cis-1,3-Dichloropropene	ND	100	ug/kg							
trans-1,3-Dichloropropene	ND	100	ug/kg							
Ethylbenzene	ND	100	ug/kg							
Hexachlorobutadiene	ND	250	ug/kg							
2-Hexanone	ND	500	ug/kg							
Iodomethane	ND	100	ug/kg							
Isopropylbenzene	ND	100	ug/kg							
p-Isopropyltoluene	ND	100	ug/kg							
Methylene chloride	ND	500	ug/kg							
4-Methyl-2-pentanone (MIBK)	ND	500	ug/kg							
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg							
Naphthalene	ND	250	ug/kg							
n-Propylbenzene	ND	100	ug/kg							
Styrene	ND	100	ug/kg							
1,1,1,2-Tetrachloroethane	ND	250	ug/kg							
1,1,2,2-Tetrachloroethane	ND	100	ug/kg							
Tetrachloroethene	ND	100	ug/kg							
Toluene	ND	100	ug/kg							
1,2,3-Trichlorobenzene	ND	250	ug/kg							
1,2,4-Trichlorobenzene	ND	250	ug/kg							
1,1,1-Trichloroethane	ND	100	ug/kg							
1,1,2-Trichloroethane	ND	100	ug/kg							
Trichloroethene	ND	100	ug/kg							
Trichlorofluoromethane	ND	250	ug/kg							
1,2,3-Trichloropropane	ND	500	ug/kg							
1,2,4-Trimethylbenzene	ND	100	ug/kg							
1,3,5-Trimethylbenzene	ND	100	ug/kg							
Vinyl acetate	ND	1200	ug/kg							
Vinyl chloride	ND	250	ug/kg							
Xylenes, Total	ND	300	ug/kg							
Surrogate: Dibromofluoromethane	1350		ug/kg	1250		108	70-125			
Surrogate: Toluene-d8	1450		ug/kg	1250		116	50-135			
Surrogate: 4-Bromofluorobenzene	1380		ug/kg	1250		110	70-130			

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
LCS Analyzed: 09/06/01 (P1H2501-BS1)										
Acetone	ND	1000	ug/kg	1000		40.0	5-200			
Benzene	1010	100	ug/kg	1000		101	65-130			
Bromobenzene	1020	250	ug/kg	1000		102	60-135			
Bromochloromethane	1070	250	ug/kg	1000		107	60-135			
Bromodichloromethane	971	100	ug/kg	1000		97.1	30-135			
Bromoform	753	250	ug/kg	1000		75.3	60-140			
Bromomethane	570	250	ug/kg	1000		57.0	10-200			
2-Butanone (MEK)	514	500	ug/kg	1000		51.4	10-160			
n-Butylbenzene	999	250	ug/kg	1000		99.9	65-125			
sec-Butylbenzene	1040	250	ug/kg	1000		104	70-135			
tert-Butylbenzene	1040	250	ug/kg	1000		104	70-130			
Carbon Disulfide	797	250	ug/kg	1000		79.7	20-120			
Carbon tetrachloride	923	250	ug/kg	1000		92.3	70-140			
Chlorobenzene	1060	100	ug/kg	1000		106	70-125			
Chloroethane	564	250	ug/kg	1000		56.4	10-200			
Chloroform	1030	100	ug/kg	1000		103	35-135			
Chloromethane	594	250	ug/kg	1000		59.4	10-200			
2-Chlorotoluene	1030	250	ug/kg	1000		103	70-135			
4-Chlorotoluene	1030	250	ug/kg	1000		103	75-135			
Dibromochloromethane	908	100	ug/kg	1000		90.8	35-135			
1,2-Dibromo-3-chloropropane	696	250	ug/kg	1000		69.6	50-155			
1,2-Dibromoethane (EDB)	911	100	ug/kg	1000		91.1	70-130			
Dibromomethane	995	100	ug/kg	1000		99.5	65-130			
1,2-Dichlorobenzene	1040	100	ug/kg	1000		104	70-125			
1,3-Dichlorobenzene	1040	100	ug/kg	1000		104	70-125			
1,4-Dichlorobenzene	1060	100	ug/kg	1000		106	70-135			
Dichlorodifluoromethane	385	250	ug/kg	1000		38.5	10-185			
1,1-Dichloroethane	1030	100	ug/kg	1000		103	60-140			
1,2-Dichloroethane	1000	100	ug/kg	1000		100	55-135			
1,1-Dichloroethene	991	250	ug/kg	1000		99.1	55-145			
cis-1,2-Dichloroethene	1030	100	ug/kg	1000		103	60-125			
trans-1,2-Dichloroethene	1040	100	ug/kg	1000		104	70-145			
1,2-Dichloropropane	1040	100	ug/kg	1000		104	65-130			
1,3-Dichloropropane	936	100	ug/kg	1000		93.6	65-130			
2,2-Dichloropropane	666	100	ug/kg	1000		66.6	60-135			
1,1-Dichloropropene	1020	100	ug/kg	1000		102	65-130			

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 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
LCS Analyzed: 09/06/01 (P1H2501-BS1)										
cis-1,3-Dichloropropene	947	100	ug/kg	1000		94.7	60-125			
trans-1,3-Dichloropropene	871	100	ug/kg	1000		87.1	50-130			
Ethylbenzene	1060	100	ug/kg	1000		106	70-125			
Hexachlorobutadiene	905	250	ug/kg	1000		90.5	60-125			
2-Hexanone	636	500	ug/kg	1000		63.6	25-185			
Iodomethane	1060	100	ug/kg	1000		106	30-155			
Isopropylbenzene	1080	100	ug/kg	1000		108	70-135			
p-Isopropyltoluene	991	100	ug/kg	1000		99.1	65-130			
Methylene chloride	990	500	ug/kg	1000		99.0	60-140			
4-Methyl-2-pentanone (MIBK)	719	500	ug/kg	1000		71.9	10-175			
Methyl-tert-butyl Ether (MTBE)	846	250	ug/kg	1000		84.6	55-135			
Naphthalene	875	250	ug/kg	1000		87.5	45-155			
n-Propylbenzene	1080	100	ug/kg	1000		108	75-135			
Styrene	1060	100	ug/kg	1000		106	70-130			
1,1,1,2-Tetrachloroethane	977	250	ug/kg	1000		97.7	70-130			
1,1,2,2-Tetrachloroethane	807	100	ug/kg	1000		80.7	60-140			
Tetrachloroethene	1060	100	ug/kg	1000		106	65-130			
Toluene	1010	100	ug/kg	1000		101	70-125			
1,2,3-Trichlorobenzene	965	250	ug/kg	1000		96.5	60-135			
1,2,4-Trichlorobenzene	991	250	ug/kg	1000		99.1	55-135			
1,1,1-Trichloroethane	977	100	ug/kg	1000		97.7	65-135			
1,1,2-Trichloroethane	961	100	ug/kg	1000		96.1	65-130			
Trichloroethene	1100	100	ug/kg	1000		110	70-130			
Trichlorofluoromethane	692	250	ug/kg	1000		69.2	10-200			
1,2,3-Trichloropropane	809	500	ug/kg	1000		80.9	60-150			
1,2,4-Trimethylbenzene	1060	100	ug/kg	1000		106	75-130			
1,3,5-Trimethylbenzene	1020	100	ug/kg	1000		102	70-130			
Vinyl acetate	ND	1200	ug/kg	1000		28.8	25-130			
Vinyl chloride	575	250	ug/kg	1000		57.5	10-200			
Xylenes, Total	3160	300	ug/kg	3000		105	70-130			
Surrogate: Dibromofluoromethane	1290		ug/kg	1250		103	70-125			
Surrogate: Toluene-d8	1310		ug/kg	1250		105	50-135			
Surrogate: 4-Bromofluorobenzene	1320		ug/kg	1250		106	70-130			



Law Engineering
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 Phoenix, AZ 85040
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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
LCS Dup Analyzed: 09/07/01 (P1H2501-BSD1)										
Acetone	ND	1000	ug/kg	1000		44.2	5-200	9.98	35	
Benzene	916	100	ug/kg	1000		91.6	65-130	9.76	35	
Bromobenzene	972	250	ug/kg	1000		97.2	60-135	4.82	35	
Bromochloromethane	996	250	ug/kg	1000		99.6	60-135	7.16	35	
Bromodichloromethane	924	100	ug/kg	1000		92.4	30-135	4.96	35	
Bromoform	812	250	ug/kg	1000		81.2	60-140	7.54	35	
Bromomethane	489	250	ug/kg	1000		48.9	10-200	15.3	35	
2-Butanone (MEK)	572	500	ug/kg	1000		57.2	10-160	10.7	35	
n-Butylbenzene	970	250	ug/kg	1000		97.0	65-125	2.95	35	
sec-Butylbenzene	969	250	ug/kg	1000		96.9	70-135	7.07	35	
tert-Butylbenzene	971	250	ug/kg	1000		97.1	70-130	6.86	35	
Carbon Disulfide	698	250	ug/kg	1000		69.8	20-120	13.2	35	
Carbon tetrachloride	924	250	ug/kg	1000		92.4	70-140	0.108	35	
Chlorobenzene	1010	100	ug/kg	1000		101	70-125	4.83	35	
Chloroethane	492	250	ug/kg	1000		49.2	10-200	13.6	35	
Chloroform	953	100	ug/kg	1000		95.3	35-135	7.77	35	
Chloromethane	475	250	ug/kg	1000		47.5	10-200	22.3	35	
2-Chlorotoluene	968	250	ug/kg	1000		96.8	70-135	6.21	35	
4-Chlorotoluene	961	250	ug/kg	1000		96.1	75-135	6.93	35	
Dibromochloromethane	931	100	ug/kg	1000		93.1	35-135	2.50	35	
1,2-Dibromo-3-chloropropane	745	250	ug/kg	1000		74.5	50-155	6.80	35	
1,2-Dibromoethane (EDB)	931	100	ug/kg	1000		93.1	70-130	2.17	35	
Dibromomethane	942	100	ug/kg	1000		94.2	65-130	5.47	35	
1,2-Dichlorobenzene	961	100	ug/kg	1000		96.1	70-125	7.90	35	
1,3-Dichlorobenzene	990	100	ug/kg	1000		99.0	70-125	4.93	35	
1,4-Dichlorobenzene	1010	100	ug/kg	1000		101	70-135	4.83	35	
Dichlorodifluoromethane	253	250	ug/kg	1000		25.3	10-185	41.4	35	R6
1,1-Dichloroethane	940	100	ug/kg	1000		94.0	60-140	9.14	35	
1,2-Dichloroethane	921	100	ug/kg	1000		92.1	55-135	8.22	35	
1,1-Dichloroethene	902	250	ug/kg	1000		90.2	55-145	9.40	35	
cis-1,2-Dichloroethene	973	100	ug/kg	1000		97.3	60-125	5.69	35	
trans-1,2-Dichloroethene	951	100	ug/kg	1000		95.1	70-145	8.94	35	
1,2-Dichloropropane	967	100	ug/kg	1000		96.7	65-130	7.27	35	
1,3-Dichloropropane	956	100	ug/kg	1000		95.6	65-130	2.11	35	
2,2-Dichloropropane	855	100	ug/kg	1000		85.5	60-135	24.9	35	
1,1-Dichloropropene	939	100	ug/kg	1000		93.9	65-130	8.27	35	

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
LCS Dup Analyzed: 09/07/01 (P1H2501-BSD1)										
cis-1,3-Dichloropropene	948	100	ug/kg	1000		94.8	60-125	0.106	35	
trans-1,3-Dichloropropene	896	100	ug/kg	1000		89.6	50-130	2.83	35	
Ethylbenzene	997	100	ug/kg	1000		99.7	70-125	6.13	35	
Hexachlorobutadiene	927	250	ug/kg	1000		92.7	60-125	2.40	35	
2-Hexanone	698	500	ug/kg	1000		69.8	25-185	9.30	35	
Iodomethane	965	100	ug/kg	1000		96.5	30-155	9.38	35	
Isopropylbenzene	1020	100	ug/kg	1000		102	70-135	5.71	35	
p-Isopropyltoluene	942	100	ug/kg	1000		94.2	65-130	5.07	35	
Methylene chloride	952	500	ug/kg	1000		95.2	60-140	3.91	35	
4-Methyl-2-pentanone (MIBK)	752	500	ug/kg	1000		75.2	10-175	4.49	35	
Methyl-tert-butyl Ether (MTBE)	876	250	ug/kg	1000		87.6	55-135	3.48	35	
Naphthalene	893	250	ug/kg	1000		89.3	45-155	2.04	35	
n-Propylbenzene	1030	100	ug/kg	1000		103	75-135	4.74	35	
Styrene	1010	100	ug/kg	1000		101	70-130	4.83	35	
1,1,1,2-Tetrachloroethane	987	250	ug/kg	1000		98.7	70-130	1.02	35	
1,1,2,2-Tetrachloroethane	872	100	ug/kg	1000		87.2	60-140	7.74	35	
Tetrachloroethene	1010	100	ug/kg	1000		101	65-130	4.83	35	
Toluene	958	100	ug/kg	1000		95.8	70-125	5.28	35	
1,2,3-Trichlorobenzene	968	250	ug/kg	1000		96.8	60-135	0.310	35	
1,2,4-Trichlorobenzene	959	250	ug/kg	1000		95.9	55-135	3.28	35	
1,1,1-Trichloroethane	935	100	ug/kg	1000		93.5	65-135	4.39	35	
1,1,2-Trichloroethane	944	100	ug/kg	1000		94.4	65-130	1.78	35	
Trichloroethene	987	100	ug/kg	1000		98.7	70-130	10.8	35	
Trichlorofluoromethane	593	250	ug/kg	1000		59.3	10-200	15.4	35	
1,2,3-Trichloropropane	845	500	ug/kg	1000		84.5	60-150	4.35	35	
1,2,4-Trimethylbenzene	988	100	ug/kg	1000		98.8	75-130	7.03	35	
1,3,5-Trimethylbenzene	963	100	ug/kg	1000		96.3	70-130	5.75	35	
Vinyl acetate	ND	1200	ug/kg	1000		77.2	25-130	91.3	35	R6
Vinyl chloride	433	250	ug/kg	1000		43.3	10-200	28.2	35	
Xylenes, Total	3040	300	ug/kg	3000		101	70-130	3.87	35	
Surrogate: Dibromofluoromethane	1240		ug/kg	1250		99.2	70-125			
Surrogate: Toluene-d8	1290		ug/kg	1250		103	50-135			
Surrogate: 4-Bromofluorobenzene	1240		ug/kg	1250		99.2	70-130			



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

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 Report Number: PKH0448

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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
Matrix Spike Analyzed: 09/05/01 (P1H2501-MS1)										
Source: PKH0445-01										
Acetone	ND	1000	ug/kg	1000	ND	87.5	5-200			
Benzene	811	100	ug/kg	1000	ND	81.1	65-130			
Bromobenzene	804	250	ug/kg	1000	ND	80.4	60-135			
Bromochloromethane	811	250	ug/kg	1000	ND	81.1	60-135			
Bromodichloromethane	792	100	ug/kg	1000	ND	79.2	30-135			
Bromoform	756	250	ug/kg	1000	ND	75.6	60-140			
Bromomethane	ND	250	ug/kg	1000	ND	12.0	10-200			
2-Butanone (MEK)	872	500	ug/kg	1000	ND	87.2	10-160			
n-Butylbenzene	753	250	ug/kg	1000	ND	75.3	65-125			
sec-Butylbenzene	826	250	ug/kg	1000	ND	82.6	70-135			
tert-Butylbenzene	802	250	ug/kg	1000	ND	80.2	70-130			
Carbon Disulfide	638	250	ug/kg	1000	ND	63.8	20-120			
Carbon tetrachloride	782	250	ug/kg	1000	ND	78.2	70-140			
Chlorobenzene	796	100	ug/kg	1000	ND	79.6	75-125			
Chloroethane	ND	250	ug/kg	1000	ND	20.5	10-200			
Chloroform	764	100	ug/kg	1000	ND	76.4	35-135			
Chloromethane	594	250	ug/kg	1000	ND	59.4	10-200			
2-Chlorotoluene	817	250	ug/kg	1000	ND	81.7	70-135			
4-Chlorotoluene	832	250	ug/kg	1000	ND	83.2	75-135			
Dibromochloromethane	748	100	ug/kg	1000	ND	74.8	35-135			
1,2-Dibromo-3-chloropropane	737	250	ug/kg	1000	ND	73.7	50-155			
1,2-Dibromoethane (EDB)	750	100	ug/kg	1000	ND	75.0	70-130			
Dibromomethane	790	100	ug/kg	1000	ND	79.0	65-130			
1,2-Dichlorobenzene	789	100	ug/kg	1000	ND	78.9	70-125			
1,3-Dichlorobenzene	810	100	ug/kg	1000	ND	81.0	70-125			
1,4-Dichlorobenzene	822	100	ug/kg	1000	ND	82.2	70-135			
Dichlorodifluoromethane	303	250	ug/kg	1000	ND	30.3	10-185			
1,1-Dichloroethane	731	100	ug/kg	1000	ND	73.1	60-140			
1,2-Dichloroethane	777	100	ug/kg	1000	ND	77.7	55-135			
1,1-Dichloroethene	752	250	ug/kg	1000	ND	75.2	55-145			
cis-1,2-Dichloroethene	807	100	ug/kg	1000	ND	80.7	60-125			
trans-1,2-Dichloroethene	776	100	ug/kg	1000	ND	77.6	70-145			
1,2-Dichloropropane	821	100	ug/kg	1000	ND	82.1	65-130			
1,3-Dichloropropane	792	100	ug/kg	1000	ND	79.2	65-130			
2,2-Dichloropropane	707	100	ug/kg	1000	ND	70.7	60-135			
1,1-Dichloropropene	780	100	ug/kg	1000	ND	78.0	65-130			

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
Matrix Spike Analyzed: 09/05/01 (P1H2501-MS1)				Source: PKH0445-01						
cis-1,3-Dichloropropene	811	100	ug/kg	1000	ND	81.1	60-125			
trans-1,3-Dichloropropene	737	100	ug/kg	1000	ND	73.7	50-130			
Ethylbenzene	816	100	ug/kg	1000	ND	81.6	70-125			
Hexachlorobutadiene	521	250	ug/kg	1000	ND	52.1	60-125			M2
2-Hexanone	768	500	ug/kg	1000	ND	76.8	25-185			
Iodomethane	624	100	ug/kg	1000	ND	62.4	30-155			
Isopropylbenzene	801	100	ug/kg	1000	ND	80.1	70-135			
p-Isopropyltoluene	778	100	ug/kg	1000	ND	77.8	65-130			
Methylene chloride	864	500	ug/kg	1000	ND	86.4	60-140			
4-Methyl-2-pentanone (MIBK)	765	500	ug/kg	1000	ND	76.5	10-175			
Methyl-tert-butyl Ether (MTBE)	772	250	ug/kg	1000	ND	77.2	55-135			
Naphthalene	705	250	ug/kg	1000	ND	70.5	45-155			
n-Propylbenzene	844	100	ug/kg	1000	ND	84.4	75-135			
Styrene	805	100	ug/kg	1000	ND	80.5	70-130			
1,1,1,2-Tetrachloroethane	778	250	ug/kg	1000	ND	77.8	70-130			
1,1,2,2-Tetrachloroethane	774	100	ug/kg	1000	ND	77.4	60-140			
Tetrachloroethene	800	100	ug/kg	1000	ND	80.0	65-130			
Toluene	792	100	ug/kg	1000	ND	79.2	70-125			
1,2,3-Trichlorobenzene	646	250	ug/kg	1000	ND	64.6	60-135			
1,2,4-Trichlorobenzene	703	250	ug/kg	1000	ND	70.3	55-135			
1,1,1-Trichloroethane	770	100	ug/kg	1000	ND	77.0	65-135			
1,1,2-Trichloroethane	764	100	ug/kg	1000	ND	76.4	65-130			
Trichloroethene	824	100	ug/kg	1000	ND	82.4	70-130			
Trichlorofluoromethane	555	250	ug/kg	1000	ND	55.5	10-200			
1,2,3-Trichloropropane	798	500	ug/kg	1000	ND	79.8	60-150			
1,2,4-Trimethylbenzene	842	100	ug/kg	1000	ND	84.2	75-130			
1,3,5-Trimethylbenzene	830	100	ug/kg	1000	ND	83.0	70-130			
Vinyl acetate	ND	1200	ug/kg	1000	ND	34.4	25-130			
Vinyl chloride	640	250	ug/kg	1000	ND	64.0	10-200			
Xylenes, Total	2420	300	ug/kg	3000	ND	80.7	70-130			
Surrogate: Dibromofluoromethane	917		ug/kg	1250		73.4	70-125			
Surrogate: Toluene-d8	920		ug/kg	1250		73.6	50-135			
Surrogate: 4-Bromofluorobenzene	1030		ug/kg	1250		82.4	70-130			

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 Project Manager

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 Phoenix, AZ 85040
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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
Matrix Spike Dup Analyzed: 09/05/01 (P1H2501-MSD1)										
Source: PKH0445-01										
Acetone	ND	1000	ug/kg	1000	ND	78.8	5-200	10.5	35	
Benzene	829	100	ug/kg	1000	ND	82.9	65-130	2.20	35	
Bromobenzene	815	250	ug/kg	1000	ND	81.5	60-135	1.36	35	
Bromochloromethane	797	250	ug/kg	1000	ND	79.7	60-135	1.74	35	
Bromodichloromethane	818	100	ug/kg	1000	ND	81.8	30-135	3.23	35	
Bromoform	748	250	ug/kg	1000	ND	74.8	60-140	1.06	35	
Bromomethane	ND	250	ug/kg	1000	ND	10.0	10-200	18.2	35	
2-Butanone (MEK)	822	500	ug/kg	1000	ND	82.2	10-160	5.90	35	
n-Butylbenzene	731	250	ug/kg	1000	ND	73.1	65-125	2.96	35	
sec-Butylbenzene	789	250	ug/kg	1000	ND	78.9	70-135	4.58	35	
tert-Butylbenzene	805	250	ug/kg	1000	ND	80.5	70-130	0.373	35	
Carbon Disulfide	656	250	ug/kg	1000	ND	65.6	20-120	2.78	35	
Carbon tetrachloride	788	250	ug/kg	1000	ND	78.8	70-140	0.764	35	
Chlorobenzene	833	100	ug/kg	1000	ND	83.3	75-125	4.54	35	
Chloroethane	ND	250	ug/kg	1000	ND	20.7	10-200	0.971	35	
Chloroform	745	100	ug/kg	1000	ND	74.5	35-135	2.52	35	
Chloromethane	611	250	ug/kg	1000	ND	61.1	10-200	2.82	35	
2-Chlorotoluene	813	250	ug/kg	1000	ND	81.3	70-135	0.491	35	
4-Chlorotoluene	828	250	ug/kg	1000	ND	82.8	75-135	0.482	35	
Dibromochloromethane	766	100	ug/kg	1000	ND	76.6	35-135	2.38	35	
1,2-Dibromo-3-chloropropane	652	250	ug/kg	1000	ND	65.2	50-155	12.2	35	
1,2-Dibromoethane (EDB)	751	100	ug/kg	1000	ND	75.1	70-130	0.133	35	
Dibromomethane	793	100	ug/kg	1000	ND	79.3	65-130	0.379	35	
1,2-Dichlorobenzene	802	100	ug/kg	1000	ND	80.2	70-125	1.63	35	
1,3-Dichlorobenzene	829	100	ug/kg	1000	ND	82.9	70-125	2.32	35	
1,4-Dichlorobenzene	829	100	ug/kg	1000	ND	82.9	70-135	0.848	35	
Dichlorodifluoromethane	368	250	ug/kg	1000	ND	36.8	10-185	19.4	35	
1,1-Dichloroethane	735	100	ug/kg	1000	ND	73.5	60-140	0.546	35	
1,2-Dichloroethane	806	100	ug/kg	1000	ND	80.6	55-135	3.66	35	
1,1-Dichloroethene	780	250	ug/kg	1000	ND	78.0	55-145	3.66	35	
cis-1,2-Dichloroethene	816	100	ug/kg	1000	ND	81.6	60-125	1.11	35	
trans-1,2-Dichloroethene	807	100	ug/kg	1000	ND	80.7	70-145	3.92	35	
1,2-Dichloropropane	847	100	ug/kg	1000	ND	84.7	65-130	3.12	35	
1,3-Dichloropropane	778	100	ug/kg	1000	ND	77.8	65-130	1.78	35	
2,2-Dichloropropane	765	100	ug/kg	1000	ND	76.5	60-135	7.88	35	
1,1-Dichloropropene	785	100	ug/kg	1000	ND	78.5	65-130	0.639	35	

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2501 Extracted: 08/25/01										
Matrix Spike Dup Analyzed: 09/05/01 (P1H2501-MSD1)					Source: PKH0445-01					
cis-1,3-Dichloropropene	841	100	ug/kg	1000	ND	84.1	60-125	3.63	35	Q11
trans-1,3-Dichloropropene	727	100	ug/kg	1000	ND	72.7	50-130	1.37	35	
Ethylbenzene	854	100	ug/kg	1000	ND	85.4	70-125	4.55	35	
Hexachlorobutadiene	827	250	ug/kg	1000	ND	82.7	60-125	45.4	35	
2-Hexanone	718	500	ug/kg	1000	ND	71.8	25-185	6.73	35	
Iodomethane	689	100	ug/kg	1000	ND	68.9	30-155	9.90	35	
Isopropylbenzene	830	100	ug/kg	1000	ND	83.0	70-135	3.56	35	
p-Isopropyltoluene	752	100	ug/kg	1000	ND	75.2	65-130	3.40	35	
Methylene chloride	862	500	ug/kg	1000	ND	86.2	60-140	0.232	35	
4-Methyl-2-pentanone (MIBK)	730	500	ug/kg	1000	ND	73.0	10-175	4.68	35	
Methyl-tert-butyl Ether (MTBE)	746	250	ug/kg	1000	ND	74.6	55-135	3.43	35	
Naphthalene	688	250	ug/kg	1000	ND	68.8	45-155	2.44	35	
n-Propylbenzene	832	100	ug/kg	1000	ND	83.2	75-135	1.43	35	
Styrene	824	100	ug/kg	1000	ND	82.4	70-130	2.33	35	
1,1,1,2-Tetrachloroethane	780	250	ug/kg	1000	ND	78.0	70-130	0.257	35	
1,1,2,2-Tetrachloroethane	722	100	ug/kg	1000	ND	72.2	60-140	6.95	35	
Tetrachloroethene	819	100	ug/kg	1000	ND	81.9	65-130	2.35	35	
Toluene	811	100	ug/kg	1000	ND	81.1	70-125	2.37	35	
1,2,3-Trichlorobenzene	709	250	ug/kg	1000	ND	70.9	60-135	9.30	35	
1,2,4-Trichlorobenzene	730	250	ug/kg	1000	ND	73.0	55-135	3.77	35	
1,1,1-Trichloroethane	788	100	ug/kg	1000	ND	78.8	65-135	2.31	35	
1,1,2-Trichloroethane	768	100	ug/kg	1000	ND	76.8	65-130	0.522	35	
Trichloroethene	858	100	ug/kg	1000	ND	85.8	70-130	4.04	35	
Trichlorofluoromethane	626	250	ug/kg	1000	ND	62.6	10-200	12.0	35	
1,2,3-Trichloropropane	718	500	ug/kg	1000	ND	71.8	60-150	10.6	35	
1,2,4-Trimethylbenzene	846	100	ug/kg	1000	ND	84.6	75-130	0.474	35	
1,3,5-Trimethylbenzene	818	100	ug/kg	1000	ND	81.8	70-130	1.46	35	
Vinyl acetate	ND	1200	ug/kg	1000	ND	30.4	25-130	12.3	35	
Vinyl chloride	672	250	ug/kg	1000	ND	67.2	10-200	4.88	35	
Xylenes, Total	2470	300	ug/kg	3000	ND	82.3	70-130	2.04	35	
Surrogate: Dibromofluoromethane	900		ug/kg	1250		72.0	70-125			
Surrogate: Toluene-d8	913		ug/kg	1250		73.0	50-135			
Surrogate: 4-Bromofluorobenzene	1030		ug/kg	1250		82.4	70-130			

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110102 Extracted: 09/03/01										
Blank Analyzed: 09/03/01 (P110102-BLK1)										
Acetone	ND	20	ug/l							
Benzene	ND	2.0	ug/l							
Bromobenzene	ND	5.0	ug/l							
Bromochloromethane	ND	5.0	ug/l							
Bromodichloromethane	ND	2.0	ug/l							
Bromoform	ND	5.0	ug/l							
Bromomethane	ND	5.0	ug/l							
2-Butanone (MEK)	ND	10	ug/l							
n-Butylbenzene	ND	5.0	ug/l							
sec-Butylbenzene	ND	5.0	ug/l							
tert-Butylbenzene	ND	5.0	ug/l							
Carbon Disulfide	ND	5.0	ug/l							
Carbon tetrachloride	ND	5.0	ug/l							
Chlorobenzene	ND	2.0	ug/l							
Chloroethane	ND	5.0	ug/l							
Chloroform	ND	2.0	ug/l							
Chloromethane	ND	5.0	ug/l							
2-Chlorotoluene	ND	5.0	ug/l							
4-Chlorotoluene	ND	5.0	ug/l							
Dibromochloromethane	ND	2.0	ug/l							
1,2-Dibromo-3-chloropropane	ND	5.0	ug/l							
1,2-Dibromoethane (EDB)	ND	2.0	ug/l							
Dibromomethane	ND	2.0	ug/l							
1,2-Dichlorobenzene	ND	2.0	ug/l							
1,3-Dichlorobenzene	ND	2.0	ug/l							
1,4-Dichlorobenzene	ND	2.0	ug/l							
Dichlorodifluoromethane	ND	5.0	ug/l							
1,1-Dichloroethane	ND	2.0	ug/l							
1,2-Dichloroethane	ND	2.0	ug/l							
1,1-Dichloroethene	ND	5.0	ug/l							
cis-1,2-Dichloroethene	ND	2.0	ug/l							
trans-1,2-Dichloroethene	ND	2.0	ug/l							
1,2-Dichloropropane	ND	2.0	ug/l							
1,3-Dichloropropane	ND	2.0	ug/l							
2,2-Dichloropropane	ND	2.0	ug/l							

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0102 Extracted: 09/03/01										
Blank Analyzed: 09/03/01 (P1I0102-BLK1)										
1,1-Dichloropropene	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Hexachlorobutadiene	ND	5.0	ug/l							
2-Hexanone	ND	10	ug/l							
Iodomethane	ND	2.0	ug/l							
Isopropylbenzene	ND	2.0	ug/l							
p-Isopropyltoluene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
4-Methyl-2-pentanone (MIBK)	ND	10	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
Naphthalene	ND	5.0	ug/l							
n-Propylbenzene	ND	2.0	ug/l							
Styrene	ND	2.0	ug/l							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,2,3-Trichlorobenzene	ND	5.0	ug/l							
1,2,4-Trichlorobenzene	ND	5.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
1,2,3-Trichloropropane	ND	10	ug/l							
1,2,4-Trimethylbenzene	ND	2.0	ug/l							
1,3,5-Trimethylbenzene	ND	2.0	ug/l							
Vinyl acetate	ND	25	ug/l							V1,L3
Vinyl chloride	ND	5.0	ug/l							
Xylenes, Total	ND	10	ug/l							
Surrogate: Dibromofluoromethane	27.1		ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	28.2		ug/l	25.0		113	80-120			
Surrogate: 4-Bromofluorobenzene	26.6		ug/l	25.0		106	80-120			

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]

Report Number: PKH0448

Sampled: 08/25/01

Received: 08/25/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0102 Extracted: 09/03/01										
LCS Analyzed: 09/03/01 (P1I0102-BS1)										
Acetone	44.9	20	ug/l	25.0		180	30-200			
Benzene	23.3	2.0	ug/l	25.0		93.2	80-120			
Bromobenzene	23.4	5.0	ug/l	25.0		93.6	80-120			
Bromochloromethane	25.6	5.0	ug/l	25.0		102	80-120			
Bromodichloromethane	23.4	2.0	ug/l	25.0		93.6	80-130			
Bromoform	26.2	5.0	ug/l	25.0		105	60-140			
Bromomethane	28.1	5.0	ug/l	25.0		112	60-150			
2-Butanone (MEK)	31.8	10	ug/l	25.0		127	30-185			
n-Butylbenzene	22.8	5.0	ug/l	25.0		91.2	75-130			
sec-Butylbenzene	23.4	5.0	ug/l	25.0		93.6	80-125			
tert-Butylbenzene	24.0	5.0	ug/l	25.0		96.0	80-120			
Carbon Disulfide	25.6	5.0	ug/l	25.0		102	65-120			
Carbon tetrachloride	26.4	5.0	ug/l	25.0		106	75-150			
Chlorobenzene	26.0	2.0	ug/l	25.0		104	80-120			
Chloroethane	29.2	5.0	ug/l	25.0		117	80-125			
Chloroform	24.0	2.0	ug/l	25.0		96.0	80-120			
Chloromethane	21.1	5.0	ug/l	25.0		84.4	60-125			
2-Chlorotoluene	23.6	5.0	ug/l	25.0		94.4	80-120			
4-Chlorotoluene	23.7	5.0	ug/l	25.0		94.8	80-120			
Dibromochloromethane	25.0	2.0	ug/l	25.0		100	70-150			
1,2-Dibromo-3-chloropropane	23.9	5.0	ug/l	25.0		95.6	50-145			
1,2-Dibromoethane (EDB)	27.2	2.0	ug/l	25.0		109	75-120			
Dibromomethane	24.3	2.0	ug/l	25.0		97.2	80-120			
1,2-Dichlorobenzene	23.8	2.0	ug/l	25.0		95.2	80-120			
1,3-Dichlorobenzene	23.2	2.0	ug/l	25.0		92.8	80-120			
1,4-Dichlorobenzene	24.0	2.0	ug/l	25.0		96.0	80-120			
Dichlorodifluoromethane	20.8	5.0	ug/l	25.0		83.2	25-140			
1,1-Dichloroethane	28.8	2.0	ug/l	25.0		115	80-120			
1,2-Dichloroethane	22.2	2.0	ug/l	25.0		88.8	80-120			
1,1-Dichloroethene	27.9	5.0	ug/l	25.0		112	80-120			
cis-1,2-Dichloroethene	29.8	2.0	ug/l	25.0		119	80-120			
trans-1,2-Dichloroethene	29.4	2.0	ug/l	25.0		118	80-120			
1,2-Dichloropropane	23.3	2.0	ug/l	25.0		93.2	80-120			
1,3-Dichloropropane	25.5	2.0	ug/l	25.0		102	80-120			
2,2-Dichloropropane	28.3	2.0	ug/l	25.0		113	75-135			
1,1-Dichloropropene	24.6	2.0	ug/l	25.0		98.4	80-120			

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110102 Extracted: 09/03/01										
LCS Analyzed: 09/03/01 (P110102-BS1)										
cis-1,3-Dichloropropene	22.1	2.0	ug/l	25.0		88.4	80-120			
trans-1,3-Dichloropropene	22.8	2.0	ug/l	25.0		91.2	80-120			
Ethylbenzene	25.1	2.0	ug/l	25.0		100	80-120			
Hexachlorobutadiene	28.5	5.0	ug/l	25.0		114	60-145			
2-Hexanone	30.4	10	ug/l	25.0		122	50-170			
Iodomethane	33.6	2.0	ug/l	25.0		134	40-155			
Isopropylbenzene	24.8	2.0	ug/l	25.0		99.2	80-120			
p-Isopropyltoluene	22.5	2.0	ug/l	25.0		90.0	80-120			
Methylene chloride	27.5	5.0	ug/l	25.0		110	80-120			
4-Methyl-2-pentanone (MIBK)	28.8	10	ug/l	25.0		115	70-140			
Methyl-tert-butyl Ether (MTBE)	30.2	5.0	ug/l	25.0		121	75-135			
Naphthalene	27.2	5.0	ug/l	25.0		109	70-130			
n-Propylbenzene	22.7	2.0	ug/l	25.0		90.8	80-120			
Styrene	24.3	2.0	ug/l	25.0		97.2	80-120			
1,1,1,2-Tetrachloroethane	26.3	5.0	ug/l	25.0		105	65-150			
1,1,2,2-Tetrachloroethane	25.4	2.0	ug/l	25.0		102	70-130			
Tetrachloroethene	25.7	2.0	ug/l	25.0		103	80-125			
Toluene	25.1	2.0	ug/l	25.0		100	80-120			
1,2,3-Trichlorobenzene	25.0	5.0	ug/l	25.0		100	75-125			
1,2,4-Trichlorobenzene	25.7	5.0	ug/l	25.0		103	80-120			
1,1,1-Trichloroethane	22.8	2.0	ug/l	25.0		91.2	80-120			
1,1,2-Trichloroethane	26.3	2.0	ug/l	25.0		105	80-120			
Trichloroethene	25.3	2.0	ug/l	25.0		101	80-120			
Trichlorofluoromethane	24.8	5.0	ug/l	25.0		99.2	75-150			
1,2,3-Trichloropropane	26.4	10	ug/l	25.0		106	65-135			
1,2,4-Trimethylbenzene	22.1	2.0	ug/l	25.0		88.4	80-120			
1,3,5-Trimethylbenzene	22.2	2.0	ug/l	25.0		88.8	80-120			
Vinyl acetate	41.4	25	ug/l	25.0		166	40-120			V1,L3
Vinyl chloride	24.0	5.0	ug/l	25.0		96.0	80-120			
Xylenes, Total	74.2	10	ug/l	75.0		98.9	80-120			
Surrogate: Dibromofluoromethane	27.7		ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	28.3		ug/l	25.0		113	80-120			
Surrogate: 4-Bromofluorobenzene	26.3		ug/l	25.0		105	80-120			



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110102 Extracted: 09/03/01										
Matrix Spike Analyzed: 09/03/01 (P110102-MS1)					Source: PKH0432-01					
Acetone	26.9	20	ug/l	25.0	ND	108	5-200			
Benzene	21.8	2.0	ug/l	25.0	ND	87.2	80-120			
Bromobenzene	24.3	5.0	ug/l	25.0	ND	97.2	80-120			
Bromochloromethane	24.0	5.0	ug/l	25.0	ND	96.0	60-135			
Bromodichloromethane	21.6	2.0	ug/l	25.0	ND	86.4	80-120			
Bromoform	25.2	5.0	ug/l	25.0	ND	101	40-140			
Bromomethane	26.1	5.0	ug/l	25.0	ND	104	25-165			
2-Butanone (MEK)	25.8	10	ug/l	25.0	ND	103	10-160			
n-Butylbenzene	22.7	5.0	ug/l	25.0	ND	90.8	75-135			
sec-Butylbenzene	23.9	5.0	ug/l	25.0	ND	95.6	80-135			
tert-Butylbenzene	24.5	5.0	ug/l	25.0	ND	98.0	80-125			
Carbon Disulfide	23.6	5.0	ug/l	25.0	ND	94.4	20-120			
Carbon tetrachloride	24.5	5.0	ug/l	25.0	ND	98.0	80-145			
Chlorobenzene	26.7	2.0	ug/l	25.0	ND	107	80-120			
Chloroethane	27.4	5.0	ug/l	25.0	ND	110	30-150			
Chloroform	22.7	2.0	ug/l	25.0	ND	90.8	80-125			
Chloromethane	19.5	5.0	ug/l	25.0	ND	78.0	15-140			
2-Chlorotoluene	24.7	5.0	ug/l	25.0	ND	98.8	80-125			
4-Chlorotoluene	24.6	5.0	ug/l	25.0	ND	98.4	80-125			
Dibromochloromethane	25.2	2.0	ug/l	25.0	ND	101	75-135			
1,2-Dibromo-3-chloropropane	20.7	5.0	ug/l	25.0	ND	82.8	25-185			
1,2-Dibromoethane (EDB)	27.6	2.0	ug/l	25.0	ND	110	45-145			
Dibromomethane	22.6	2.0	ug/l	25.0	ND	90.4	55-140			
1,2-Dichlorobenzene	24.2	2.0	ug/l	25.0	ND	96.8	80-120			
1,3-Dichlorobenzene	23.9	2.0	ug/l	25.0	ND	95.6	80-120			
1,4-Dichlorobenzene	24.5	2.0	ug/l	25.0	ND	98.0	80-120			
Dichlorodifluoromethane	18.0	5.0	ug/l	25.0	ND	72.0	25-145			
1,1-Dichloroethane	26.8	2.0	ug/l	25.0	ND	107	75-120			
1,2-Dichloroethane	21.0	2.0	ug/l	25.0	ND	84.0	60-135			
1,1-Dichloroethene	25.9	5.0	ug/l	25.0	ND	104	55-120			
cis-1,2-Dichloroethene	27.2	2.0	ug/l	25.0	ND	109	75-120			
trans-1,2-Dichloroethene	27.7	2.0	ug/l	25.0	ND	111	65-120			
1,2-Dichloropropane	22.0	2.0	ug/l	25.0	ND	88.0	80-125			
1,3-Dichloropropane	26.1	2.0	ug/l	25.0	ND	104	55-140			
2,2-Dichloropropane	27.1	2.0	ug/l	25.0	ND	108	45-165			
1,1-Dichloropropene	23.1	2.0	ug/l	25.0	ND	92.4	80-120			

Melissa Evans
 Project Manager

PKH0448
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0102 Extracted: 09/03/01										
Matrix Spike Analyzed: 09/03/01 (P1I0102-MS1)					Source: PKH0432-01					
cis-1,3-Dichloropropene	20.5	2.0	ug/l	25.0	ND	82.0	80-120			
trans-1,3-Dichloropropene	23.0	2.0	ug/l	25.0	ND	92.0	70-120			
Ethylbenzene	25.6	2.0	ug/l	25.0	ND	102	80-120			
Hexachlorobutadiene	21.1	5.0	ug/l	25.0	ND	84.4	80-135			
2-Hexanone	26.6	10	ug/l	25.0	ND	106	25-185			
Iodomethane	33.3	2.0	ug/l	25.0	ND	133	30-155			
Isopropylbenzene	25.4	2.0	ug/l	25.0	ND	102	80-125			
p-Isopropyltoluene	23.0	2.0	ug/l	25.0	ND	92.0	80-125			
Methylene chloride	26.6	5.0	ug/l	25.0	ND	106	55-125			
4-Methyl-2-pentanone (MIBK)	24.0	10	ug/l	25.0	ND	96.0	10-175			
Methyl-tert-butyl Ether (MTBE)	27.0	5.0	ug/l	25.0	ND	108	55-135			
Naphthalene	23.0	5.0	ug/l	25.0	ND	92.0	15-160			
n-Propylbenzene	23.7	2.0	ug/l	25.0	ND	94.8	80-130			
Styrene	22.9	2.0	ug/l	25.0	ND	91.6	60-135			
1,1,1,2-Tetrachloroethane	27.2	5.0	ug/l	25.0	ND	109	80-135			
1,1,2,2-Tetrachloroethane	24.6	2.0	ug/l	25.0	ND	98.4	35-150			
Tetrachloroethene	25.8	2.0	ug/l	25.0	ND	103	80-120			
Toluene	25.5	2.0	ug/l	25.0	ND	102	80-120			
1,2,3-Trichlorobenzene	22.5	5.0	ug/l	25.0	ND	90.0	45-145			
1,2,4-Trichlorobenzene	24.5	5.0	ug/l	25.0	ND	98.0	65-130			
1,1,1-Trichloroethane	22.9	2.0	ug/l	25.0	ND	91.6	80-120			
1,1,2-Trichloroethane	26.2	2.0	ug/l	25.0	ND	105	55-145			
Trichloroethene	23.2	2.0	ug/l	25.0	ND	92.8	80-120			
Trichlorofluoromethane	22.7	5.0	ug/l	25.0	ND	90.8	70-145			
1,2,3-Trichloropropane	25.3	10	ug/l	25.0	ND	101	20-160			
1,2,4-Trimethylbenzene	22.9	2.0	ug/l	25.0	ND	91.6	70-135			
1,3,5-Trimethylbenzene	23.2	2.0	ug/l	25.0	ND	92.8	80-125			
Vinyl acetate	34.4	25	ug/l	25.0	ND	138	25-130			N2
Vinyl chloride	22.2	5.0	ug/l	25.0	ND	88.8	25-135			
Xylenes, Total	75.9	10	ug/l	75.0	ND	101	80-120			
Surrogate: Dibromofluoromethane	27.0		ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	28.2		ug/l	25.0		113	80-120			
Surrogate: 4-Bromofluorobenzene	26.2		ug/l	25.0		105	80-120			



Law Engineering
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 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0102 Extracted: 09/03/01										
Matrix Spike Dup Analyzed: 09/03/01 (P1I0102-MSD1)						Source: PKH0432-01				
Acetone	28.4	20	ug/l	25.0	ND	114	5-200	5.42	20	
Benzene	21.8	2.0	ug/l	25.0	ND	87.2	80-120	0.00	20	
Bromobenzene	24.5	5.0	ug/l	25.0	ND	98.0	80-120	0.820	20	
Bromochloromethane	23.7	5.0	ug/l	25.0	ND	94.8	60-135	1.26	20	
Bromodichloromethane	21.8	2.0	ug/l	25.0	ND	87.2	80-120	0.922	20	
Bromoform	24.9	5.0	ug/l	25.0	ND	99.6	40-140	1.20	20	
Bromomethane	26.0	5.0	ug/l	25.0	ND	104	25-165	0.384	20	
2-Butanone (MEK)	25.2	10	ug/l	25.0	ND	101	10-160	2.35	20	
n-Butylbenzene	22.8	5.0	ug/l	25.0	ND	91.2	75-135	0.440	20	
sec-Butylbenzene	24.2	5.0	ug/l	25.0	ND	96.8	80-135	1.25	20	
tert-Butylbenzene	24.5	5.0	ug/l	25.0	ND	98.0	80-125	0.00	20	
Carbon Disulfide	23.3	5.0	ug/l	25.0	ND	93.2	20-120	1.28	20	
Carbon tetrachloride	24.7	5.0	ug/l	25.0	ND	98.8	80-145	0.813	20	
Chlorobenzene	26.2	2.0	ug/l	25.0	ND	105	80-120	1.89	20	
Chloroethane	27.4	5.0	ug/l	25.0	ND	110	30-150	0.00	20	
Chloroform	22.5	2.0	ug/l	25.0	ND	90.0	80-125	0.885	20	
Chloromethane	19.6	5.0	ug/l	25.0	ND	78.4	15-140	0.512	20	
2-Chlorotoluene	24.9	5.0	ug/l	25.0	ND	99.6	80-125	0.806	20	
4-Chlorotoluene	24.9	5.0	ug/l	25.0	ND	99.6	80-125	1.21	20	
Dibromochloromethane	25.2	2.0	ug/l	25.0	ND	101	75-135	0.00	20	
1,2-Dibromo-3-chloropropane	21.3	5.0	ug/l	25.0	ND	85.2	25-185	2.86	20	
1,2-Dibromoethane (EDB)	27.1	2.0	ug/l	25.0	ND	108	45-145	1.83	20	
Dibromomethane	22.2	2.0	ug/l	25.0	ND	88.8	55-140	1.79	20	
1,2-Dichlorobenzene	24.5	2.0	ug/l	25.0	ND	98.0	80-120	1.23	20	
1,3-Dichlorobenzene	24.2	2.0	ug/l	25.0	ND	96.8	80-120	1.25	20	
1,4-Dichlorobenzene	24.8	2.0	ug/l	25.0	ND	99.2	80-120	1.22	20	
Dichlorodifluoromethane	17.8	5.0	ug/l	25.0	ND	71.2	25-145	1.12	20	
1,1-Dichloroethane	26.8	2.0	ug/l	25.0	ND	107	75-120	0.00	20	
1,2-Dichloroethane	21.6	2.0	ug/l	25.0	ND	86.4	60-135	2.82	20	
1,1-Dichloroethene	24.9	5.0	ug/l	25.0	ND	99.6	55-120	3.94	20	
cis-1,2-Dichloroethene	27.7	2.0	ug/l	25.0	ND	111	75-120	1.82	20	
trans-1,2-Dichloroethene	26.9	2.0	ug/l	25.0	ND	108	65-120	2.93	20	
1,2-Dichloropropane	22.2	2.0	ug/l	25.0	ND	88.8	80-125	0.905	20	
1,3-Dichloropropane	25.6	2.0	ug/l	25.0	ND	102	55-140	1.93	20	
2,2-Dichloropropane	26.4	2.0	ug/l	25.0	ND	106	45-165	2.62	20	
1,1-Dichloropropene	23.2	2.0	ug/l	25.0	ND	92.8	80-120	0.432	20	

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110102 Extracted: 09/03/01										
Matrix Spike Dup Analyzed: 09/03/01 (P110102-MSD1)					Source: PKH0432-01					
cis-1,3-Dichloropropene	20.6	2.0	ug/l	25.0	ND	82.4	80-120	0.487	20	
trans-1,3-Dichloropropene	22.3	2.0	ug/l	25.0	ND	89.2	70-120	3.09	20	
Ethylbenzene	25.8	2.0	ug/l	25.0	ND	103	80-120	0.778	20	
Hexachlorobutadiene	22.9	5.0	ug/l	25.0	ND	91.6	80-135	8.18	20	
2-Hexanone	26.4	10	ug/l	25.0	ND	106	25-185	0.755	20	
Iodomethane	33.1	2.0	ug/l	25.0	ND	132	30-155	0.602	20	
Isopropylbenzene	24.8	2.0	ug/l	25.0	ND	99.2	80-125	2.39	20	
p-Isopropyltoluene	22.7	2.0	ug/l	25.0	ND	90.8	80-125	1.31	20	
Methylene chloride	26.3	5.0	ug/l	25.0	ND	105	55-125	1.13	20	
4-Methyl-2-pentanone (MIBK)	23.9	10	ug/l	25.0	ND	95.6	10-175	0.418	20	
Methyl-tert-butyl Ether (MTBE)	27.1	5.0	ug/l	25.0	ND	108	55-135	0.370	20	
Naphthalene	22.5	5.0	ug/l	25.0	ND	90.0	15-160	2.20	20	
n-Propylbenzene	23.7	2.0	ug/l	25.0	ND	94.8	80-130	0.00	20	
Styrene	11.6	2.0	ug/l	25.0	ND	46.4	60-135	65.5	20	M2,Q11
1,1,1,2-Tetrachloroethane	26.0	5.0	ug/l	25.0	ND	104	80-135	4.51	20	
1,1,2,2-Tetrachloroethane	24.6	2.0	ug/l	25.0	ND	98.4	35-150	0.00	20	
Tetrachloroethene	25.9	2.0	ug/l	25.0	ND	104	80-120	0.387	20	
Toluene	25.1	2.0	ug/l	25.0	ND	100	80-120	1.58	20	
1,2,3-Trichlorobenzene	23.5	5.0	ug/l	25.0	ND	94.0	45-145	4.35	20	
1,2,4-Trichlorobenzene	25.4	5.0	ug/l	25.0	ND	102	65-130	3.61	20	
1,1,1-Trichloroethane	23.0	2.0	ug/l	25.0	ND	92.0	80-120	0.436	20	
1,1,2-Trichloroethane	25.8	2.0	ug/l	25.0	ND	103	55-145	1.54	20	
Trichloroethene	23.3	2.0	ug/l	25.0	ND	93.2	80-120	0.430	20	
Trichlorofluoromethane	23.2	5.0	ug/l	25.0	ND	92.8	70-145	2.18	20	
1,2,3-Trichloropropane	24.7	10	ug/l	25.0	ND	98.8	20-160	2.40	20	
1,2,4-Trimethylbenzene	18.4	2.0	ug/l	25.0	ND	73.6	70-135	21.8	20	R4
1,3,5-Trimethylbenzene	22.0	2.0	ug/l	25.0	ND	88.0	80-125	5.31	20	
Vinyl acetate	29.6	25	ug/l	25.0	ND	118	25-130	15.0	20	
Vinyl chloride	22.2	5.0	ug/l	25.0	ND	88.8	25-135	0.00	20	
Xylenes, Total	74.8	10	ug/l	75.0	ND	99.7	80-120	1.46	20	
Surrogate: Dibromofluoromethane	27.6		ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	28.0		ug/l	25.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	26.5		ug/l	25.0		106	80-120			

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3004 Extracted: 08/29/01										
Blank Analyzed: 08/30/01 (P1H3004-BLK1)										
Chromium VI	ND	1.0	mg/kg							
LCS Analyzed: 08/30/01 (P1H3004-BS1)										
Chromium VI	9.73	1.0	mg/kg	10.0		97.3	85-115			
LCS Dup Analyzed: 08/30/01 (P1H3004-BSD1)										
Chromium VI	9.28	1.0	mg/kg	10.0		92.8	85-115	4.73	20	
Matrix Spike Analyzed: 08/30/01 (P1H3004-MS1)										
Chromium VI	8.84	1.0	mg/kg	10.0	Source: PKH0452-01 ND	88.4	85-115			
Matrix Spike Dup Analyzed: 08/30/01 (P1H3004-MSD1)										
Chromium VI	9.98	1.0	mg/kg	10.0	Source: PKH0452-01 ND	99.8	85-115	12.1	20	
Batch: P1I0517 Extracted: 09/05/01										
Blank Analyzed: 09/08/01 (P1I0517-BLK1)										
Arsenic	ND	5.0	mg/kg							
Chromium	1.51	1.0	mg/kg							B1
Copper	ND	2.0	mg/kg							
Nickel	ND	5.0	mg/kg							
Zinc	ND	5.0	mg/kg							B4
LCS Analyzed: 09/08/01 (P1I0517-BS1)										
Arsenic	96.6	5.0	mg/kg	100		96.6	80-120			
Chromium	94.1	1.0	mg/kg	100		94.1	80-120			
Copper	94.6	2.0	mg/kg	100		94.6	80-120			
Nickel	92.5	5.0	mg/kg	100		92.5	80-120			
Zinc	94.8	5.0	mg/kg	100		94.8	80-120			

Law Engineering
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METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0517 Extracted: 09/05/01										
LCS Dup Analyzed: 09/08/01 (P1I0517-BSD1)										
Arsenic	95.6	5.0	mg/kg	100		95.6	80-120	1.04	20	
Chromium	92.8	1.0	mg/kg	100		92.8	80-120	1.39	20	
Copper	92.7	2.0	mg/kg	100		92.7	80-120	2.03	20	
Nickel	91.6	5.0	mg/kg	100		91.6	80-120	0.978	20	
Zinc	93.0	5.0	mg/kg	100		93.0	80-120	1.92	20	
Matrix Spike Analyzed: 09/08/01 (P1I0517-MS1)										
Arsenic	90.9	5.0	mg/kg	100	ND	89.8	75-125			
Chromium	108	1.0	mg/kg	100	19	89.0	75-125			
Copper	97.7	2.0	mg/kg	100	7.3	90.4	75-125			
Nickel	97.0	5.0	mg/kg	100	12	85.0	75-125			
Zinc	115	5.0	mg/kg	100	30	85.0	75-125			
Matrix Spike Dup Analyzed: 09/08/01 (P1I0517-MSD1)										
Arsenic	93.3	5.0	mg/kg	100	ND	92.2	75-125	2.61	20	
Chromium	111	1.0	mg/kg	100	19	92.0	75-125	2.74	20	
Copper	101	2.0	mg/kg	100	7.3	93.7	75-125	3.32	20	
Nickel	100	5.0	mg/kg	100	12	88.0	75-125	3.05	20	
Zinc	119	5.0	mg/kg	100	30	89.0	75-125	3.42	20	
Batch: P1J0103 Extracted: 10/01/01										
Blank Analyzed: 10/02/01 (P1J0103-BLK1)										
Zinc	ND	5.0	mg/kg							
LCS Analyzed: 10/02/01 (P1J0103-BS1)										
Zinc	86.2	5.0	mg/kg	100		86.2	80-120			



Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Coldby Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9589
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: [none]
Report Number: PKH0448

Sampled: 08/25/01
Received: 08/25/01

METHOD BLANK QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1J0103 Extracted: 10/01/01										
Matrix Spike Analyzed: 10/02/01 (P1J0103-MS1)										
Zinc	142	5.0	mg/kg	100	29	113	75-125			
Matrix Spike Dup Analyzed: 10/02/01 (P1J0103-MSD1)										
Zinc	117	5.0	mg/kg	100	29	88.0	75-125	19.3	20	

Melissa Evans
Project Manager

PKH0448
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
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METHOD BLANK QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2706 Extracted: 08/25/01										
Blank Analyzed: 08/25/01 (P1H2706-BLK1)										
Chromium VI	ND	0.025	mg/l							
LCS Analyzed: 08/25/01 (P1H2706-BS1)										
Chromium VI	0.0999	0.050	mg/l	0.100		99.9	85-115			
Matrix Spike Analyzed: 08/25/01 (P1H2706-MS1)					Source: PKH0448-08					
Chromium VI	0.0500	0.025	mg/l	0.0500	ND	100	85-115			
Matrix Spike Dup Analyzed: 08/25/01 (P1H2706-MSD1)					Source: PKH0448-08					
Chromium VI	0.0500	0.025	mg/l	0.0500	ND	100	85-115	0.00	20	
Batch: P1H2827 Extracted: 08/28/01										
Blank Analyzed: 08/29/01 (P1H2827-BLK1)										
Arsenic	ND	0.050	mg/l							
Chromium	ND	0.010	mg/l							
Copper	ND	0.020	mg/l							
Nickel	ND	0.050	mg/l							
Zinc	ND	0.050	mg/l							
LCS Analyzed: 08/29/01 (P1H2827-BS1)										
Arsenic	0.961	0.050	mg/l	1.00		96.1	85-115			
Chromium	0.970	0.010	mg/l	1.00		97.0	85-115			
Copper	0.993	0.020	mg/l	1.00		99.3	85-115			
Nickel	0.960	0.050	mg/l	1.00		96.0	85-115			
Zinc	0.969	0.050	mg/l	1.00		96.9	85-115			



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METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2827 Extracted: 08/28/01										
LCS Dup Analyzed: 08/30/01 (P1H2827-BSD1)										
Arsenic	1.05	0.050	mg/l	1.00		105	85-115	8.85	20	
Chromium	1.03	0.010	mg/l	1.00		103	85-115	6.00	20	
Copper	1.10	0.020	mg/l	1.00		110	85-115	10.2	20	
Nickel	1.02	0.050	mg/l	1.00		102	85-115	6.06	20	
Zinc	1.04	0.050	mg/l	1.00		104	85-115	7.07	20	
Matrix Spike Analyzed: 08/29/01 (P1H2827-MS1)										
					Source: PKH0446-01					
Arsenic	0.988	0.050	mg/l	1.00	ND	98.8	70-130			
Chromium	0.971	0.010	mg/l	1.00	ND	97.1	70-130			
Copper	1.00	0.020	mg/l	1.00	ND	100	70-130			
Nickel	0.960	0.050	mg/l	1.00	ND	96.0	70-130			
Zinc	0.974	0.050	mg/l	1.00	ND	96.0	70-130			
Matrix Spike Dup Analyzed: 08/29/01 (P1H2827-MSD1)										
					Source: PKH0446-01					
Arsenic	0.948	0.050	mg/l	1.00	ND	94.8	70-130	4.13	20	
Chromium	0.952	0.010	mg/l	1.00	ND	95.2	70-130	1.98	20	
Copper	0.986	0.020	mg/l	1.00	ND	98.6	70-130	1.41	20	
Nickel	0.942	0.050	mg/l	1.00	ND	94.2	70-130	1.89	20	
Zinc	0.952	0.050	mg/l	1.00	ND	93.8	70-130	2.28	20	

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: [none]
 Report Number: PKH0448

Sampled: 08/25/01
 Received: 08/25/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0513 Extracted: 09/05/01										
Blank Analyzed: 09/05/01 (P1I0513-BLK1)										
Total Cyanide	ND	0.50	mg/kg							
Matrix Spike Analyzed: 09/05/01 (P1I0513-MS1)					Source: PKH0448-03					
Total Cyanide	2.61	0.50	mg/kg	2.50	ND	104	70-130			
Matrix Spike Dup Analyzed: 09/05/01 (P1I0513-MSD1)					Source: PKH0448-03					
Total Cyanide	2.24	0.50	mg/kg	2.50	ND	89.6	70-130	15.3	20	
Reference Analyzed: 09/05/01 (P1I0513-SRM1)										
Total Cyanide	116	20	mg/kg	201		57.7	40-160			
Batch: P1I0611 Extracted: 09/06/01										
Blank Analyzed: 09/06/01 (P1I0611-BLK1)										
Total Cyanide	ND	0.50	mg/kg							
Matrix Spike Analyzed: 09/06/01 (P1I0611-MS1)					Source: PKH0448-05					
Total Cyanide	1.79	0.50	mg/kg	2.50	ND	71.6	70-130			
Matrix Spike Dup Analyzed: 09/06/01 (P1I0611-MSD1)					Source: PKH0448-05					
Total Cyanide	1.31	0.50	mg/kg	2.50	ND	52.4	70-130	31.0	20	M2,Q11
Reference Analyzed: 09/06/01 (P1I0611-SRM1)										
Total Cyanide	109	20	mg/kg	201		54.2	40-160			
Batch: P1I0619 Extracted: 09/06/01										
Blank Analyzed: 09/06/01 (P1I0619-BLK1)										
Total Cyanide	ND	0.020	mg/l							



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Client Project ID: [none]
Report Number: PKH0448

Sampled: 08/25/01
Received: 08/25/01

METHOD BLANK QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0619 Extracted: 09/06/01										
LCS Analyzed: 09/06/01 (P1I0619-BS1)										
Total Cyanide	0.112	0.020	mg/l	0.100		112	90-110			L3
Matrix Spike Analyzed: 09/06/01 (P1I0619-MS1)										
Total Cyanide	0.106	0.020	mg/l	0.100	ND	106	70-130			
Matrix Spike Dup Analyzed: 09/06/01 (P1I0619-MSD1)										
Total Cyanide	0.114	0.020	mg/l	0.100	ND	114	70-130	7.27	20	

Melissa Evans
Project Manager

PKH0448
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Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: [none]
Report Number: PKH0448

Sampled: 08/25/01
Received: 08/25/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

B1	Target analyte detected in method blank at or above the method reporting limit.
B4	Target analyte detected in blank at/above method acceptance criteria.
L3	The associated blank spike recovery was above method acceptance limits. See case narrative.
M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
N1	See case narrative.
N2	See corrective action report.
Q11	Sample is heterogeneous. Sample homogeneity could not be readily achieved using routine laboratory practices.
R4	MS/MSD RPD exceeded the method control limit. Recovery met acceptance criteria.
R6	LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference



Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd., Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

CHAIN OF CUSTODY FORM

Client Name/Address: LAW		Project/PO Number: 70211-0-0150-2-2-10		Page 1 of 1																	
Project Manager: Jim Clarke		Phone Number:		Analysis Required																	
Sampler: Jim Clarke		Fax Number:		Special Instructions																	
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	AS, CH, CO, NI	C, VI	Cyanide	VOCs 9260	PKH0448	2	3	4	5	6	7	8	9		
LB2-S-10	Soil	Sleeve	1	8/25	8:25		X	X	X												
LB2-S-20	Soil	Sleeve	1	8/25	0905		X	X	X												
LB2-S-30	Soil	Sleeve	1	8/25	0935		X	X	X												
LB2-S-30	Soil	Encore	1	8/25	0935					X											
LB2-S-40	Soil	Sleeve	1	8/25	1010		X	X	X												
LB2-S-50	Soil	Sleeve	1	8/25	1035		X	X	X												
LB2-S-50	Soil	Encore	1	8/25	1035					X											
Rinsate-3	Water	VIALS	3	8/25	1100					X											
Rinsate-3	Water	Plastic bottles	3	8/25	1100		X	X	X												
Relinquished By: Wm. J. Clarke		Date /Time: 8/25/01 12:15		Received by:		Date /Time:		Turnaround Time: (Check)		same day		24 hours		48 hours		72 hours		5 days		normal	
Relinquished By:		Date /Time:		Received by:		Date /Time:		Sample Integrity: (Check)		intact		on ice		Temp							
Relinquished By:		Date /Time: 8/25/01		Received in Lab by:		Date /Time: 8/25/01 1215															

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/26/01
Received: 08/27/01
Issued: 10/11/01

CASE NARRATIVE

LABORATORY NUMBER

PKH0452-01
PKH0452-01RE8
PKH0452-02

SAMPLE DESCRIPTION

LB2-S-60
LB2-S-60
Dumpster 4414

SAMPLE MATRIX

Soil
Soil
Soil

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.


OBSERVATIONS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

QA/QC CRITERIA: All analyses met method criteria.

EXPLANATION OF DATA
QUALIFIERS: The N1 flag on ICP Chromium indicates that the analyte was detected in the associated Method Blank. Analyte concentration in the sample is greater than 10X the concentration found in the Method Blank.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)


Melissa Evans
Project Manager

PKH0452
Page 1 of 19

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01
 Received: 08/27/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0452-02 (Dumpster 4414 - Soil)								
Acetone	EPA 8260B	P1H2801	1000	ND	1	8/28/01	9/7/01	
Benzene	EPA 8260B	P1H2801	50	ND	1	8/28/01	9/7/01	
Bromobenzene	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
Bromochloromethane	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
Bromodichloromethane	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Bromoform	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
Bromomethane	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
2-Butanone (MEK)	EPA 8260B	P1H2801	500	ND	1	8/28/01	9/7/01	
n-Butylbenzene	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
sec-Butylbenzene	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
tert-Butylbenzene	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
Carbon Disulfide	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
Carbon tetrachloride	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
Chlorobenzene	EPA 8260B	P1H2801	50	ND	1	8/28/01	9/7/01	
Chloroethane	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
Chloroform	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Chloromethane	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
2-Chlorotoluene	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
4-Chlorotoluene	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
Dibromochloromethane	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Dibromomethane	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
1,2-Dichlorobenzene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
1,3-Dichlorobenzene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
1,4-Dichlorobenzene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Dichlorodifluoromethane	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
1,1-Dichloroethane	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
1,2-Dichloroethane	EPA 8260B	P1H2801	50	ND	1	8/28/01	9/7/01	
1,1-Dichloroethene	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
cis-1,2-Dichloroethene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
trans-1,2-Dichloroethene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
1,2-Dichloropropane	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
1,3-Dichloropropane	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
2,2-Dichloropropane	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
1,1-Dichloropropene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
cis-1,3-Dichloropropene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
trans-1,3-Dichloropropene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Ethylbenzene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Hexachlorobutadiene	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
2-Hexanone	EPA 8260B	P1H2801	500	ND	1	8/28/01	9/7/01	
Iodomethane	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Isopropylbenzene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
p-Isopropyltoluene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	

Melissa Evans
 Project Manager

PKH0452
 Page 2 of 19

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01

Received: 08/27/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0452-02 (Dumpster 4414 - Soil)								
Methylene chloride	EPA 8260B	P1H2801	500	ND	1	8/28/01	9/7/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P1H2801	500	ND	1	8/28/01	9/7/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
Naphthalene	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
n-Propylbenzene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Styrene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Tetrachloroethene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Toluene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
1,2,3-Trichlorobenzene	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
1,2,4-Trichlorobenzene	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
1,1,1-Trichloroethane	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
1,1,2-Trichloroethane	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Trichloroethene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Trichlorofluoromethane	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
1,2,3-Trichloropropane	EPA 8260B	P1H2801	500	ND	1	8/28/01	9/7/01	
1,2,4-Trimethylbenzene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
1,3,5-Trimethylbenzene	EPA 8260B	P1H2801	100	ND	1	8/28/01	9/7/01	
Vinyl acetate	EPA 8260B	P1H2801	1200	ND	1	8/28/01	9/7/01	
Vinyl chloride	EPA 8260B	P1H2801	250	ND	1	8/28/01	9/7/01	
Xylenes, Total	EPA 8260B	P1H2801	150	ND	1	8/28/01	9/7/01	
Surrogate: Dibromofluoromethane (70-125%)				90.4 %				
Surrogate: Toluene-d8 (50-135%)				91.2 %				
Surrogate: 4-Bromofluorobenzene (70-130%)				86.4 %				

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Project Manager

PKH0452
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 Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01

Received: 08/27/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0452-01 (LB2-S-60 - Soil)								
Arsenic	EPA 6010B	P1I0517	5.0	ND	1	9/5/01	9/8/01	N1
Chromium	EPA 6010B	P1I0517	1.0	19	1	9/5/01	9/8/01	
Chromium VI	EPA 7196A	P1H3004	1.0	ND	1	8/29/01	8/30/01	
Copper	EPA 6010B	P1I0517	2.0	7.3	1	9/5/01	9/9/01	
Nickel	EPA 6010B	P1I0517	5.0	12	1	9/5/01	9/8/01	
Sample ID: PKH0452-01RE8 (LB2-S-60 - Soil)								
Zinc	EPA 6010B	P1J0103	5.0	23	1	10/1/01	10/2/01	
Sample ID: PKH0452-02 (Dumpster 4414 - Soil)								
Arsenic	EPA 6010B	P1I0517	5.0	ND	1	9/5/01	9/8/01	N1
Barium	EPA 6010B	P1I0517	1.0	63	1	9/5/01	9/8/01	
Cadmium	EPA 6010B	P1I0517	0.50	ND	1	9/5/01	9/8/01	
Chromium	EPA 6010B	P1I0517	1.0	19	1	9/5/01	9/8/01	
Lead	EPA 6010B	P1I0517	5.0	ND	1	9/5/01	9/8/01	
Mercury	EPA 7471A	P1I0523	0.020	0.76	1	9/5/01	9/5/01	
Selenium	EPA 6010B	P1I0517	5.0	ND	1	9/5/01	9/8/01	
Silver	EPA 6010B	P1I0517	0.50	ND	1	9/5/01	9/8/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426

Melissa Evans
 Project Manager

PKH0452
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01
Received: 08/27/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0452-01 (LB2-S-60 - Soil)								
Total Cyanide	EPA 9014	P110611	0.50 P/NP	ND P/NP	1	9/6/01	9/6/01	
Sample ID: PKH0452-02 (Dumpster 4414 - Soil)								
Paint Filter Liquids Test	EPA 9095A	P110521	NA mg/kg	Present mg/kg	1	9/5/01	9/5/01	
Sample ID: PKH0452-02 (Dumpster 4414 - Soil)								
Total Cyanide	EPA 9014	P110611	0.50	ND	1	9/6/01	9/6/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426

Melissa Evans
Project Manager

PKH0452
Page 5 of 19

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01
 Received: 08/27/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2801 Extracted: 08/28/01										
Blank Analyzed: 08/29/01 (P1H2801-BLK1)										
Acetone	ND	1000	ug/kg							
Benzene	ND	50	ug/kg							
Bromobenzene	ND	250	ug/kg							
Bromochloromethane	ND	250	ug/kg							
Bromodichloromethane	ND	100	ug/kg							
Bromoform	ND	250	ug/kg							
Bromomethane	ND	250	ug/kg							
2-Butanone (MEK)	ND	500	ug/kg							
n-Butylbenzene	ND	250	ug/kg							
sec-Butylbenzene	ND	250	ug/kg							
tert-Butylbenzene	ND	250	ug/kg							
Carbon Disulfide	ND	250	ug/kg							
Carbon tetrachloride	ND	250	ug/kg							
Chlorobenzene	ND	50	ug/kg							
Chloroethane	ND	250	ug/kg							
Chloroform	ND	100	ug/kg							
Chloromethane	ND	250	ug/kg							
2-Chlorotoluene	ND	250	ug/kg							
4-Chlorotoluene	ND	250	ug/kg							
Dibromochloromethane	ND	100	ug/kg							
1,2-Dibromo-3-chloropropane	ND	250	ug/kg							
1,2-Dibromoethane (EDB)	ND	100	ug/kg							
Dibromomethane	ND	100	ug/kg							
1,2-Dichlorobenzene	ND	100	ug/kg							
1,3-Dichlorobenzene	ND	100	ug/kg							
1,4-Dichlorobenzene	ND	100	ug/kg							
Dichlorodifluoromethane	ND	250	ug/kg							
1,1-Dichloroethane	ND	100	ug/kg							
1,2-Dichloroethane	ND	50	ug/kg							
1,1-Dichloroethene	ND	250	ug/kg							
cis-1,2-Dichloroethene	ND	100	ug/kg							
trans-1,2-Dichloroethene	ND	100	ug/kg							
1,2-Dichloropropane	ND	100	ug/kg							
1,3-Dichloropropane	ND	100	ug/kg							
2,2-Dichloropropane	ND	100	ug/kg							

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01
 Received: 08/27/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2801 Extracted: 08/28/01										
Blank Analyzed: 08/29/01 (P1H2801-BLK1)										
1,1-Dichloropropene	ND	100	ug/kg							
cis-1,3-Dichloropropene	ND	100	ug/kg							
trans-1,3-Dichloropropene	ND	100	ug/kg							
Ethylbenzene	ND	100	ug/kg							
Hexachlorobutadiene	ND	250	ug/kg							
2-Hexanone	ND	500	ug/kg							
Iodomethane	ND	100	ug/kg							
Isopropylbenzene	ND	100	ug/kg							
p-Isopropyltoluene	ND	100	ug/kg							
Methylene chloride	ND	500	ug/kg							
4-Methyl-2-pentanone (MIBK)	ND	500	ug/kg							
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg							
Naphthalene	ND	250	ug/kg							
n-Propylbenzene	ND	100	ug/kg							
Styrene	ND	100	ug/kg							
1,1,1,2-Tetrachloroethane	ND	250	ug/kg							
1,1,2,2-Tetrachloroethane	ND	100	ug/kg							
Tetrachloroethene	ND	100	ug/kg							
Toluene	ND	100	ug/kg							
1,2,3-Trichlorobenzene	ND	250	ug/kg							
1,2,4-Trichlorobenzene	ND	250	ug/kg							
1,1,1-Trichloroethane	ND	100	ug/kg							
1,1,2-Trichloroethane	ND	100	ug/kg							
Trichloroethene	ND	100	ug/kg							
Trichlorofluoromethane	ND	250	ug/kg							
1,2,3-Trichloropropane	ND	500	ug/kg							
1,2,4-Trimethylbenzene	ND	100	ug/kg							
1,3,5-Trimethylbenzene	ND	100	ug/kg							
Vinyl acetate	ND	1200	ug/kg							
Vinyl chloride	ND	250	ug/kg							
Xylenes, Total	ND	150	ug/kg							
Surrogate: Dibromofluoromethane	1240		ug/kg	1250		99.2	70-125			
Surrogate: Toluene-d8	1230		ug/kg	1250		98.4	50-135			
Surrogate: 4-Bromofluorobenzene	1250		ug/kg	1250		100	70-130			

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 Project Manager

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Law Engineering
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 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01
 Received: 08/27/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2801 Extracted: 08/28/01									
LCS Analyzed: 08/30/01 (P1H2801-BS1)									
Acetone	1050	1000	ug/kg	1000		105	5-200		
Benzene	836	50	ug/kg	1000		83.6	65-130		
Bromobenzene	933	250	ug/kg	1000		93.3	60-135		
Bromochloromethane	886	250	ug/kg	1000		88.6	60-135		
Bromodichloromethane	800	100	ug/kg	1000		80.0	30-135		
Bromoform	838	250	ug/kg	1000		83.8	60-140		
Bromomethane	ND	250	ug/kg	1000		22.8	10-200		
2-Butanone (MEK)	1050	500	ug/kg	1000		105	10-160		
n-Butylbenzene	894	250	ug/kg	1000		89.4	65-125		
sec-Butylbenzene	929	250	ug/kg	1000		92.9	70-135		
tert-Butylbenzene	964	250	ug/kg	1000		96.4	70-130		
Carbon Disulfide	734	250	ug/kg	1000		73.4	20-120		
Carbon tetrachloride	900	250	ug/kg	1000		90.0	70-140		
Chlorobenzene	940	50	ug/kg	1000		94.0	75-125		
Chloroethane	272	250	ug/kg	1000		27.2	10-200		
Chloroform	895	100	ug/kg	1000		89.5	35-135		
Chloromethane	725	250	ug/kg	1000		72.5	10-200		
2-Chlorotoluene	944	250	ug/kg	1000		94.4	70-135		
4-Chlorotoluene	931	250	ug/kg	1000		93.1	75-135		
Dibromochloromethane	870	100	ug/kg	1000		87.0	35-135		
1,2-Dibromo-3-chloropropane	812	250	ug/kg	1000		81.2	50-155		
1,2-Dibromoethane (EDB)	957	100	ug/kg	1000		95.7	70-130		
Dibromomethane	804	100	ug/kg	1000		80.4	65-130		
1,2-Dichlorobenzene	933	100	ug/kg	1000		93.3	70-125		
1,3-Dichlorobenzene	929	100	ug/kg	1000		92.9	70-125		
1,4-Dichlorobenzene	938	100	ug/kg	1000		93.8	70-135		
Dichlorodifluoromethane	551	250	ug/kg	1000		55.1	10-185		
1,1-Dichloroethane	925	100	ug/kg	1000		92.5	60-140		
1,2-Dichloroethane	808	50	ug/kg	1000		80.8	55-135		
1,1-Dichloroethene	836	250	ug/kg	1000		83.6	55-145		
cis-1,2-Dichloroethene	911	100	ug/kg	1000		91.1	60-125		
trans-1,2-Dichloroethene	926	100	ug/kg	1000		92.6	70-145		
1,2-Dichloropropane	755	100	ug/kg	1000		75.5	65-130		
1,3-Dichloropropane	925	100	ug/kg	1000		92.5	65-130		
2,2-Dichloropropane	955	100	ug/kg	1000		95.5	60-135		
1,1-Dichloropropene	890	100	ug/kg	1000		89.0	65-130		

Melissa Evans
 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01
Received: 08/27/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2801 Extracted: 08/28/01										
LCS Analyzed: 08/30/01 (P1H2801-BS1)										
cis-1,3-Dichloropropene	785	100	ug/kg	1000		78.5	60-125			
trans-1,3-Dichloropropene	840	100	ug/kg	1000		84.0	50-130			
Ethylbenzene	919	100	ug/kg	1000		91.9	70-125			
Hexachlorobutadiene	850	250	ug/kg	1000		85.0	60-125			
2-Hexanone	964	500	ug/kg	1000		96.4	25-185			
Iodomethane	697	100	ug/kg	1000		69.7	30-155			
Isopropylbenzene	935	100	ug/kg	1000		93.5	70-135			
p-Isopropyltoluene	907	100	ug/kg	1000		90.7	65-130			
Methylene chloride	962	500	ug/kg	1000		96.2	60-140			
4-Methyl-2-pentanone (MIBK)	882	500	ug/kg	1000		88.2	10-175			
Methyl-tert-butyl Ether (MTBE)	960	250	ug/kg	1000		96.0	55-135			
Naphthalene	839	250	ug/kg	1000		83.9	45-155			
n-Propylbenzene	922	100	ug/kg	1000		92.2	75-135			
Styrene	898	100	ug/kg	1000		89.8	70-130			
1,1,1,2-Tetrachloroethane	942	250	ug/kg	1000		94.2	70-130			
1,1,2,2-Tetrachloroethane	915	100	ug/kg	1000		91.5	60-140			
Tetrachloroethene	925	100	ug/kg	1000		92.5	65-130			
Toluene	927	100	ug/kg	1000		92.7	70-125			
1,2,3-Trichlorobenzene	826	250	ug/kg	1000		82.6	60-135			
1,2,4-Trichlorobenzene	941	250	ug/kg	1000		94.1	55-135			
1,1,1-Trichloroethane	870	100	ug/kg	1000		87.0	65-135			
1,1,2-Trichloroethane	910	100	ug/kg	1000		91.0	65-130			
Trichloroethene	886	100	ug/kg	1000		88.6	70-130			
Trichlorofluoromethane	567	250	ug/kg	1000		56.7	10-200			
1,2,3-Trichloropropane	951	500	ug/kg	1000		95.1	60-150			
1,2,4-Trimethylbenzene	894	100	ug/kg	1000		89.4	75-130			
1,3,5-Trimethylbenzene	891	100	ug/kg	1000		89.1	70-130			
Vinyl acetate	1270	1200	ug/kg	1000		127	25-130			
Vinyl chloride	773	250	ug/kg	1000		77.3	10-200			
Xylenes, Total	2740	150	ug/kg	3000		91.3	70-130			
Surrogate: Dibromofluoromethane	1140		ug/kg	1250		91.2	70-125			
Surrogate: Toluene-d8	1180		ug/kg	1250		94.4	50-135			
Surrogate: 4-Bromofluorobenzene	1200		ug/kg	1250		96.0	70-130			

Melissa Evans
Project Manager

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Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01
Received: 08/27/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2801 Extracted: 08/28/01									
LCS Dup Analyzed: 08/30/01 (P1H2801-BSD1)									
Acetone	1240	1000	ug/kg	1000	124	5-200	16.6	35	
Benzene	836	50	ug/kg	1000	83.6	65-130	0.00	35	
Bromobenzene	923	250	ug/kg	1000	92.3	60-135	1.08	35	
Bromochloromethane	943	250	ug/kg	1000	94.3	60-135	6.23	35	
Bromodichloromethane	787	100	ug/kg	1000	78.7	30-135	1.64	35	
Bromoform	866	250	ug/kg	1000	86.6	60-140	3.29	35	
Bromomethane	ND	250	ug/kg	1000	21.5	10-200	5.87	35	
2-Butanone (MEK)	1120	500	ug/kg	1000	112	10-160	6.45	35	
n-Butylbenzene	904	250	ug/kg	1000	90.4	65-125	1.11	35	
sec-Butylbenzene	924	250	ug/kg	1000	92.4	70-135	0.540	35	
tert-Butylbenzene	946	250	ug/kg	1000	94.6	70-130	1.88	35	
Carbon Disulfide	723	250	ug/kg	1000	72.3	20-120	1.51	35	
Carbon tetrachloride	913	250	ug/kg	1000	91.3	70-140	1.43	35	
Chlorobenzene	936	50	ug/kg	1000	93.6	75-125	0.426	35	
Chloroethane	ND	250	ug/kg	1000	21.3	10-200	24.3	35	
Chloroform	904	100	ug/kg	1000	90.4	35-135	1.00	35	
Chloromethane	731	250	ug/kg	1000	73.1	10-200	0.824	35	
2-Chlorotoluene	926	250	ug/kg	1000	92.6	70-135	1.93	35	
4-Chlorotoluene	915	250	ug/kg	1000	91.5	75-135	1.73	35	
Dibromochloromethane	869	100	ug/kg	1000	86.9	35-135	0.115	35	
1,2-Dibromo-3-chloropropane	835	250	ug/kg	1000	83.5	50-155	2.79	35	
1,2-Dibromoethane (EDB)	963	100	ug/kg	1000	96.3	70-130	0.625	35	
Dibromomethane	825	100	ug/kg	1000	82.5	65-130	2.58	35	
1,2-Dichlorobenzene	923	100	ug/kg	1000	92.3	70-125	1.08	35	
1,3-Dichlorobenzene	920	100	ug/kg	1000	92.0	70-125	0.973	35	
1,4-Dichlorobenzene	945	100	ug/kg	1000	94.5	70-135	0.743	35	
Dichlorodifluoromethane	520	250	ug/kg	1000	52.0	10-185	5.79	35	
1,1-Dichloroethane	897	100	ug/kg	1000	89.7	60-140	3.07	35	
1,2-Dichloroethane	852	50	ug/kg	1000	85.2	55-135	5.30	35	
1,1-Dichloroethene	813	250	ug/kg	1000	81.3	55-145	2.79	35	
cis-1,2-Dichloroethene	910	100	ug/kg	1000	91.0	60-125	0.110	35	
trans-1,2-Dichloroethene	909	100	ug/kg	1000	90.9	70-145	1.85	35	
1,2-Dichloropropane	820	100	ug/kg	1000	82.0	65-130	8.25	35	
1,3-Dichloropropane	944	100	ug/kg	1000	94.4	65-130	2.03	35	
2,2-Dichloropropane	928	100	ug/kg	1000	92.8	60-135	2.87	35	
1,1-Dichloropropene	903	100	ug/kg	1000	90.3	65-130	1.45	35	

Melissa Evans
Project Manager

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Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01

Received: 08/27/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2801 Extracted: 08/28/01										
LCS Dup Analyzed: 08/30/01 (P1H2801-BS01)										
cis-1,3-Dichloropropene	786	100	ug/kg	1000		78.6	60-125	0.127	35	
trans-1,3-Dichloropropene	828	100	ug/kg	1000		82.8	50-130	1.44	35	
Ethylbenzene	907	100	ug/kg	1000		90.7	70-125	1.31	35	
Hexachlorobutadiene	899	250	ug/kg	1000		89.9	60-125	5.60	35	
2-Hexanone	1020	500	ug/kg	1000		102	25-185	5.65	35	
Iodomethane	655	100	ug/kg	1000		65.5	30-155	6.21	35	
Isopropylbenzene	916	100	ug/kg	1000		91.6	70-135	2.05	35	
p-Isopropyltoluene	906	100	ug/kg	1000		90.6	65-130	0.110	35	
Methylene chloride	925	500	ug/kg	1000		92.5	60-140	3.92	35	
4-Methyl-2-pentanone (MIBK)	937	500	ug/kg	1000		93.7	10-175	6.05	35	
Methyl-tert-butyl Ether (MTBE)	962	250	ug/kg	1000		96.2	55-135	0.208	35	
Naphthalene	886	250	ug/kg	1000		88.6	45-155	5.45	35	
n-Propylbenzene	900	100	ug/kg	1000		90.0	75-135	2.41	35	
Styrene	889	100	ug/kg	1000		88.9	70-130	1.01	35	
1,1,1,2-Tetrachloroethane	938	250	ug/kg	1000		93.8	70-130	0.426	35	
1,1,2,2-Tetrachloroethane	934	100	ug/kg	1000		93.4	60-140	2.06	35	
Tetrachloroethene	933	100	ug/kg	1000		93.3	65-130	0.861	35	
Toluene	924	100	ug/kg	1000		92.4	70-125	0.324	35	
1,2,3-Trichlorobenzene	843	250	ug/kg	1000		84.3	60-135	2.04	35	
1,2,4-Trichlorobenzene	937	250	ug/kg	1000		93.7	55-135	0.426	35	
1,1,1-Trichloroethane	851	100	ug/kg	1000		85.1	65-135	2.21	35	
1,1,2-Trichloroethane	937	100	ug/kg	1000		93.7	65-130	2.92	35	
Trichloroethene	881	100	ug/kg	1000		88.1	70-130	0.566	35	
Trichlorofluoromethane	377	250	ug/kg	1000		37.7	10-200	40.3	35	R4
1,2,3-Trichloropropane	987	500	ug/kg	1000		98.7	60-150	3.72	35	
1,2,4-Trimethylbenzene	892	100	ug/kg	1000		89.2	75-130	0.224	35	
1,3,5-Trimethylbenzene	875	100	ug/kg	1000		87.5	70-130	1.81	35	
Vinyl acetate	1270	1200	ug/kg	1000		127	25-130	0.00	35	
Vinyl chloride	767	250	ug/kg	1000		76.7	10-200	0.779	35	
Xylenes, Total	2740	150	ug/kg	3000		91.3	70-130	0.00	35	
Surrogate: Dibromofluoromethane	1200		ug/kg	1250		96.0	70-125			
Surrogate: Toluene-d8	1230		ug/kg	1250		98.4	50-135			
Surrogate: 4-Bromofluorobenzene	1210		ug/kg	1250		96.8	70-130			



Law Engineering
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 Phoenix, AZ 85040
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Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01
 Received: 08/27/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2801 Extracted: 08/28/01									
Matrix Spike Analyzed: 08/29/01 (P1H2801-MS1)					Source: PKH0465-01				
Acetone	1070	1000	ug/kg	1000	ND	107	5-200		
Benzene	713	50	ug/kg	1000	ND	71.3	65-130		
Bromobenzene	800	250	ug/kg	1000	ND	80.0	60-135		
Bromochloromethane	714	250	ug/kg	1000	ND	71.4	60-135		
Bromodichloromethane	669	100	ug/kg	1000	ND	66.9	30-135		
Bromoform	702	250	ug/kg	1000	ND	70.2	60-140		
Bromomethane	279	250	ug/kg	1000	ND	27.9	10-200		
2-Butanone (MEK)	898	500	ug/kg	1000	ND	89.8	10-160		
n-Butylbenzene	773	250	ug/kg	1000	ND	77.3	65-125		
sec-Butylbenzene	807	250	ug/kg	1000	ND	80.7	70-135		
tert-Butylbenzene	824	250	ug/kg	1000	ND	82.4	70-130		
Carbon Disulfide	588	250	ug/kg	1000	ND	58.8	20-120		
Carbon tetrachloride	742	250	ug/kg	1000	ND	74.2	70-140		
Chlorobenzene	820	50	ug/kg	1000	ND	82.0	75-125		
Chloroethane	ND	250	ug/kg	1000	ND	23.4	10-200		
Chloroform	758	100	ug/kg	1000	ND	75.8	35-135		
Chloromethane	552	250	ug/kg	1000	ND	55.2	10-200		
2-Chlorotoluene	818	250	ug/kg	1000	ND	81.8	70-135		
4-Chlorotoluene	805	250	ug/kg	1000	ND	80.5	75-135		
Dibromochloromethane	739	100	ug/kg	1000	ND	73.9	35-135		
1,2-Dibromo-3-chloropropane	681	250	ug/kg	1000	ND	68.1	50-155		
1,2-Dibromoethane (EDB)	849	100	ug/kg	1000	ND	84.9	70-130		
Dibromomethane	722	100	ug/kg	1000	ND	72.2	65-130		
1,2-Dichlorobenzene	806	100	ug/kg	1000	ND	80.6	70-125		
1,3-Dichlorobenzene	807	100	ug/kg	1000	ND	80.7	70-125		
1,4-Dichlorobenzene	813	100	ug/kg	1000	ND	81.3	70-135		
Dichlorodifluoromethane	328	250	ug/kg	1000	ND	32.8	10-185		
1,1-Dichloroethane	778	100	ug/kg	1000	ND	77.8	60-140		
1,2-Dichloroethane	695	50	ug/kg	1000	ND	69.5	55-135		
1,1-Dichloroethene	669	250	ug/kg	1000	ND	66.9	55-145		
cis-1,2-Dichloroethene	786	100	ug/kg	1000	ND	78.6	60-125		
trans-1,2-Dichloroethene	779	100	ug/kg	1000	ND	77.9	70-145		
1,2-Dichloropropane	708	100	ug/kg	1000	ND	70.8	65-130		
1,3-Dichloropropane	822	100	ug/kg	1000	ND	82.2	65-130		
2,2-Dichloropropane	753	100	ug/kg	1000	ND	75.3	60-135		
1,1-Dichloropropene	743	100	ug/kg	1000	ND	74.3	65-130		

Melissa Evans
 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01
Received: 08/27/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H2801 Extracted: 08/28/01										
Matrix Spike Analyzed: 08/29/01 (P1H2801-MS1)					Source: PKH0465-01					
cis-1,3-Dichloropropene	664	100	ug/kg	1000	ND	66.4	60-125			
trans-1,3-Dichloropropene	708	100	ug/kg	1000	ND	70.8	50-130			
Ethylbenzene	796	100	ug/kg	1000	ND	79.6	70-125			
Hexachlorobutadiene	812	250	ug/kg	1000	ND	81.2	60-125			
2-Hexanone	891	500	ug/kg	1000	ND	89.1	25-185			
Iodomethane	595	100	ug/kg	1000	ND	59.5	30-155			
Isopropylbenzene	799	100	ug/kg	1000	ND	79.9	70-135			
p-Isopropyltoluene	772	100	ug/kg	1000	ND	77.2	65-130			
Methylene chloride	737	500	ug/kg	1000	ND	73.7	60-140			
4-Methyl-2-pentanone (MIBK)	793	500	ug/kg	1000	ND	79.3	10-175			
Methyl-tert-butyl Ether (MTBE)	822	250	ug/kg	1000	ND	82.2	55-135			
Naphthalene	803	250	ug/kg	1000	ND	80.3	45-155			
n-Propylbenzene	786	100	ug/kg	1000	ND	78.6	75-135			
Styrene	772	100	ug/kg	1000	ND	77.2	70-130			
1,1,1,2-Tetrachloroethane	817	250	ug/kg	1000	ND	81.7	70-130			
1,1,2,2-Tetrachloroethane	797	100	ug/kg	1000	ND	79.7	60-140			
Tetrachloroethene	815	100	ug/kg	1000	ND	81.5	65-130			
Toluene	770	100	ug/kg	1000	ND	77.0	70-125			
1,2,3-Trichlorobenzene	760	250	ug/kg	1000	ND	76.0	60-135			
1,2,4-Trichlorobenzene	825	250	ug/kg	1000	ND	82.5	55-135			
1,1,1-Trichloroethane	688	100	ug/kg	1000	ND	68.8	65-135			
1,1,2-Trichloroethane	807	100	ug/kg	1000	ND	80.7	65-130			
Trichloroethene	744	100	ug/kg	1000	ND	74.4	70-130			
Trichlorofluoromethane	398	250	ug/kg	1000	ND	39.8	10-200			
1,2,3-Trichloropropane	841	500	ug/kg	1000	ND	84.1	60-150			
1,2,4-Trimethylbenzene	777	100	ug/kg	1000	ND	77.7	75-130			
1,3,5-Trimethylbenzene	774	100	ug/kg	1000	ND	77.4	70-130			
Vinyl acetate	ND	1200	ug/kg	1000	ND	105	25-130			
Vinyl chloride	587	250	ug/kg	1000	ND	58.7	10-200			
Xylenes, Total	2400	150	ug/kg	3000	ND	80.0	70-130			
Surrogate: Dibromofluoromethane	942		ug/kg	1250		75.4	70-125			
Surrogate: Toluene-d8	972		ug/kg	1250		77.8	50-135			
Surrogate: 4-Bromofluorobenzene	1020		ug/kg	1250		81.6	70-130			



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 Phoenix, AZ 85040
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Report Number: PKH0452

Sampled: 08/25/01-08/26/01

Received: 08/27/01

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Data Qualifiers
Batch: P1H3004 Extracted: 08/29/01										
Blank Analyzed: 08/30/01 (P1H3004-BLK1)										
Chromium VI	ND	1.0	mg/kg							
LCS Analyzed: 08/30/01 (P1H3004-BS1)										
Chromium VI	9.73	1.0	mg/kg	10.0		97.3	85-115			
LCS Dup Analyzed: 08/30/01 (P1H3004-BSD1)										
Chromium VI	9.28	1.0	mg/kg	10.0		92.8	85-115	4.73	20	
Matrix Spike Analyzed: 08/30/01 (P1H3004-MS1)										
Chromium VI	8.84	1.0	mg/kg	10.0	ND	88.4	85-115			
Matrix Spike Dup Analyzed: 08/30/01 (P1H3004-MSD1)										
Chromium VI	9.98	1.0	mg/kg	10.0	ND	99.8	85-115	12.1	20	
Batch: P110517 Extracted: 09/05/01										
Blank Analyzed: 09/08/01 (P110517-BLK1)										
Arsenic	ND	5.0	mg/kg							
Barium	ND	1.0	mg/kg							
Cadmium	ND	0.50	mg/kg							
Chromium	1.51	1.0	mg/kg							
Copper	ND	2.0	mg/kg							
Lead	ND	5.0	mg/kg							
Nickel	ND	5.0	mg/kg							
Selenium	ND	5.0	mg/kg							
Silver	ND	0.50	mg/kg							

B1

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01
 Received: 08/27/01

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0517 Extracted: 09/05/01										
LCS Analyzed: 09/08/01 (P1I0517-BS1)										
Arsenic	96.6	5.0	mg/kg	100		96.6	80-120			
Barium	95.7	1.0	mg/kg	100		95.7	80-120			
Cadmium	96.9	0.50	mg/kg	100		96.9	80-120			
Chromium	94.1	1.0	mg/kg	100		94.1	80-120			
Copper	94.6	2.0	mg/kg	100		94.6	80-120			
Lead	92.5	5.0	mg/kg	100		92.5	80-120			
Nickel	92.5	5.0	mg/kg	100		92.5	80-120			
Selenium	97.9	5.0	mg/kg	100		97.9	80-120			
Silver	101	0.50	mg/kg	100		101	80-120			
LCS Dup Analyzed: 09/08/01 (P1I0517-BSD1)										
Arsenic	95.6	5.0	mg/kg	100		95.6	80-120	1.04	20	
Barium	93.4	1.0	mg/kg	100		93.4	80-120	2.43	20	
Cadmium	94.1	0.50	mg/kg	100		94.1	80-120	2.93	20	
Chromium	92.8	1.0	mg/kg	100		92.8	80-120	1.39	20	
Copper	92.7	2.0	mg/kg	100		92.7	80-120	2.03	20	
Lead	92.3	5.0	mg/kg	100		92.3	80-120	0.216	20	
Nickel	91.6	5.0	mg/kg	100		91.6	80-120	0.978	20	
Selenium	96.1	5.0	mg/kg	100		96.1	80-120	1.86	20	
Silver	99.3	0.50	mg/kg	100		99.3	80-120	1.70	20	
Matrix Spike Analyzed: 09/08/01 (P1I0517-MS1)					Source: PKH0452-01					
Arsenic	90.9	5.0	mg/kg	100	ND	89.8	75-125			
Barium	145	1.0	mg/kg	100	48	97.0	75-125			
Cadmium	87.6	0.50	mg/kg	100	ND	87.6	75-125			
Chromium	108	1.0	mg/kg	100	19	89.0	75-125			
Copper	97.7	2.0	mg/kg	100	7.3	90.4	75-125			
Lead	92.2	5.0	mg/kg	100	ND	88.1	75-125			
Nickel	97.0	5.0	mg/kg	100	12	85.0	75-125			
Selenium	91.4	5.0	mg/kg	100	ND	89.8	75-125			
Silver	96.8	0.50	mg/kg	100	ND	96.8	75-125			



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01

Received: 08/27/01

METHOD BLANK QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0517 Extracted: 09/05/01										
Matrix Spike Dup Analyzed: 09/08/01 (P1I0517-MSD1)					Source: PKH0452-01					
Arsenic	93.3	5.0	mg/kg	100	ND	92.2	75-125	2.61	20	
Barium	148	1.0	mg/kg	100	48	100	75-125	2.05	20	
Cadmium	90.5	0.50	mg/kg	100	ND	90.5	75-125	3.26	20	
Chromium	111	1.0	mg/kg	100	19	92.0	75-125	2.74	20	
Copper	101	2.0	mg/kg	100	7.3	93.7	75-125	3.32	20	
Lead	95.4	5.0	mg/kg	100	ND	91.3	75-125	3.41	20	
Nickel	100	5.0	mg/kg	100	12	88.0	75-125	3.05	20	
Selenium	92.9	5.0	mg/kg	100	ND	91.3	75-125	1.63	20	
Silver	97.5	0.50	mg/kg	100	ND	97.5	75-125	0.721	20	

Batch: P1I0523 Extracted: 09/05/01

Blank Analyzed: 09/05/01 (P1I0523-BLK1)

Mercury	ND	0.020	mg/kg
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LCS Analyzed: 09/05/01 (P1I0523-BS1)

Mercury	0.413	0.020	mg/kg	0.417	99.0	85-115
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Matrix Spike Analyzed: 09/05/01 (P1I0523-MS1)

Mercury	0.594	0.020	mg/kg	0.417	ND	139	85-115	M1
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Matrix Spike Dup Analyzed: 09/05/01 (P1I0523-MSD1)

Mercury	0.527	0.020	mg/kg	0.417	ND	123	85-115	12.0	20	M1
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Batch: P1J0103 Extracted: 10/01/01

Blank Analyzed: 10/02/01 (P1J0103-BLK1)

Zinc	ND	5.0	mg/kg
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
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Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01
 Received: 08/27/01

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1J0103 Extracted: 10/01/01										
LCS Analyzed: 10/02/01 (P1J0103-BS1)										
Zinc	86.2	5.0	mg/kg	100		86.2	80-120			
Matrix Spike Analyzed: 10/02/01 (P1J0103-MS1)										
Zinc	142	5.0	mg/kg	100	29	113	75-125			
Matrix Spike Dup Analyzed: 10/02/01 (P1J0103-MSD1)										
Zinc	117	5.0	mg/kg	100	29	88.0	75-125	19.3	20	



Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
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Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01

Received: 08/27/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0611 Extracted: 09/06/01										
Blank Analyzed: 09/06/01 (P1I0611-BLK1)										
Total Cyanide	ND	0.50	mg/kg							
Matrix Spike Analyzed: 09/06/01 (P1I0611-MS1)										
Total Cyanide	1.79	0.50	mg/kg	2.50	ND	71.6	70-130			
Matrix Spike Dup Analyzed: 09/06/01 (P1I0611-MSD1)										
Total Cyanide	1.31	0.50	mg/kg	2.50	ND	52.4	70-130	31.0	20	M2,Q11
Reference Analyzed: 09/06/01 (P1I0611-SRM1)										
Total Cyanide	109	20	mg/kg	201		54.2	40-160			

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0-0150-2-2.10 South Mesa

Report Number: PKH0452

Sampled: 08/25/01-08/26/01
Received: 08/27/01

METHOD BLANK QC DATA

DATA QUALIFIERS AND DEFINITIONS

B1	Target analyte detected in method blank at or above the method reporting limit.
B4	Target analyte detected in blank at/above method acceptance criteria.
M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
N1	See case narrative.
Q11	Sample is heterogeneous. Sample homogeneity could not be readily achieved using routine laboratory practices.
R4	MS/MSD RPD exceeded the method control limit. Recovery met acceptance criteria.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference



Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.



CORRECTIVE ACTION REPORT

Department: GC/MS Method: 8260B
Date: 09/09/2001 Matrix: Water
Batch: P111002
Samples: PKH0451-02, PKH0563-01 – PKH0563-02, PKH0535-02, PKH0511-11
– PKH00511-13, PKH0540-02 & PKI0037-03

Identification and Definition of Problem:

The Matrix Spike (MS) recovered below the Method Detection Limit (MDL) for Vinyl Acetate. The MS recovered at a concentration of 11 ppb and the MDL is 12 ppb. The recovery of the compound is 44% and within the acceptance limits of 25-130%. Due to the MS recovering below the MDL, the Relative Percent Difference (RPD) between the MS and the Matrix Spike Duplicate (MSD) is not calculated in the report. The actual RPD between the MS and the MSD is 13%.

Determination of the Cause of the Problem:

The cause of the low recovery in the MS which caused the concentration to be below the MDL has not been determined.

Corrective Action:

The Laboratory Control Sample (LCS), Laboratory Control Sample Duplicate (LCSD) and MSD recovered within acceptance limits for Vinyl acetate. The RPD between the LCS and the LCSD was also within acceptance limits. Therefore, the data should not be significantly impacted. The MS has been flagged "N2" for Vinyl acetate to indicate that the compound was recovered at a concentration that is less than the MDL.

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 9/20 /2001
Quality Assurance Manager



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0540-01 (DUMPSTER 4212 - Soil)								
Acetone	EPA 8260B	PIH3104	1000	ND	1	8/31/01	9/10/01	
Benzene	EPA 8260B	PIH3104	50	ND	1	8/31/01	9/10/01	
Bromobenzene	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
Bromochloromethane	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
Bromodichloromethane	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
Bromoform	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	M2
Bromomethane	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
2-Butanone (MEK)	EPA 8260B	PIH3104	500	ND	1	8/31/01	9/10/01	
n-Butylbenzene	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
sec-Butylbenzene	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
tert-Butylbenzene	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
Carbon Disulfide	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
Carbon tetrachloride	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
Chlorobenzene	EPA 8260B	PIH3104	50	ND	1	8/31/01	9/10/01	
Chloroethane	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
Chloroform	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
Chloromethane	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
2-Chlorotoluene	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
4-Chlorotoluene	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
Dibromochloromethane	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	M2
1,2-Dibromoethane (EDB)	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	M2
Dibromomethane	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
1,2-Dichlorobenzene	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
1,3-Dichlorobenzene	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
1,4-Dichlorobenzene	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
Dichlorodifluoromethane	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
1,1-Dichloroethane	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
1,2-Dichloroethane	EPA 8260B	PIH3104	50	ND	1	8/31/01	9/10/01	
1,1-Dichloroethene	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
cis-1,2-Dichloroethene	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
trans-1,2-Dichloroethene	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
1,2-Dichloropropane	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
1,3-Dichloropropane	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
2,2-Dichloropropane	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
1,1-Dichloropropene	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
cis-1,3-Dichloropropene	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
trans-1,3-Dichloropropene	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
Ethylbenzene	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
Hexachlorobutadiene	EPA 8260B	PIH3104	250	ND	1	8/31/01	9/10/01	
2-Hexanone	EPA 8260B	PIH3104	500	ND	1	8/31/01	9/10/01	
Iodomethane	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
Isopropylbenzene	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	
p-Isopropyltoluene	EPA 8260B	PIH3104	100	ND	1	8/31/01	9/10/01	

Melissa Evans
 Project Manager

PKH0540
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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0540-01 (DUMPSTER 4212 - Soil)								
Methylene chloride	EPA 8260B	P1H3104	500	ND	1	8/31/01	9/10/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P1H3104	500	ND	1	8/31/01	9/10/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P1H3104	250	ND	1	8/31/01	9/10/01	
Naphthalene	EPA 8260B	P1H3104	250	ND	1	8/31/01	9/10/01	
n-Propylbenzene	EPA 8260B	P1H3104	100	ND	1	8/31/01	9/10/01	
Styrene	EPA 8260B	P1H3104	100	ND	1	8/31/01	9/10/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P1H3104	250	ND	1	8/31/01	9/10/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P1H3104	100	ND	1	8/31/01	9/10/01	M2
Tetrachloroethene	EPA 8260B	P1H3104	100	ND	1	8/31/01	9/10/01	
Toluene	EPA 8260B	P1H3104	100	ND	1	8/31/01	9/10/01	
1,2,3-Trichlorobenzene	EPA 8260B	P1H3104	250	ND	1	8/31/01	9/10/01	
1,2,4-Trichlorobenzene	EPA 8260B	P1H3104	250	ND	1	8/31/01	9/10/01	
1,1,1-Trichloroethane	EPA 8260B	P1H3104	100	ND	1	8/31/01	9/10/01	
1,1,2-Trichloroethane	EPA 8260B	P1H3104	100	ND	1	8/31/01	9/10/01	
Trichloroethene	EPA 8260B	P1H3104	100	ND	1	8/31/01	9/10/01	
Trichlorofluoromethane	EPA 8260B	P1H3104	250	ND	1	8/31/01	9/10/01	
1,2,3-Trichloropropane	EPA 8260B	P1H3104	500	ND	1	8/31/01	9/10/01	M2
1,2,4-Trimethylbenzene	EPA 8260B	P1H3104	100	ND	1	8/31/01	9/10/01	
1,3,5-Trimethylbenzene	EPA 8260B	P1H3104	100	ND	1	8/31/01	9/10/01	
Vinyl acetate	EPA 8260B	P1H3104	1200	ND	1	8/31/01	9/10/01	M2
Vinyl chloride	EPA 8260B	P1H3104	250	ND	1	8/31/01	9/10/01	
Xylenes, Total	EPA 8260B	P1H3104	150	ND	1	8/31/01	9/10/01	
Surrogate: Dibromofluoromethane (70-125%)				89.6 %				
Surrogate: Toluene-d8 (50-135%)				86.4 %				
Surrogate: 4-Bromofluorobenzene (70-130%)				83.2 %				



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 Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0540-02 (RINSATE 8/30/01 - Water)								
Acetone	EPA 8260B	PII1002	20	ND	1	9/9/01	9/9/01	
Benzene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Bromobenzene	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
Bromochloromethane	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
Bromodichloromethane	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Bromoform	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
Bromomethane	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
2-Butanone (MEK)	EPA 8260B	PII1002	10	ND	1	9/9/01	9/9/01	
n-Butylbenzene	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
sec-Butylbenzene	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
tert-Butylbenzene	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
Carbon Disulfide	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
Carbon tetrachloride	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
Chlorobenzene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Chloroethane	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
Chloroform	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Chloromethane	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
2-Chlorotoluene	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
4-Chlorotoluene	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
Dibromochloromethane	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
1,2-Dibromoethane (EDB)	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Dibromomethane	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,2-Dichlorobenzene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,3-Dichlorobenzene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,4-Dichlorobenzene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Dichlorodifluoromethane	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
1,1-Dichloroethane	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,2-Dichloroethane	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,1-Dichloroethene	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
cis-1,2-Dichloroethene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
trans-1,2-Dichloroethene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,2-Dichloropropane	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,3-Dichloropropane	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
2,2-Dichloropropane	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,1-Dichloropropene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
cis-1,3-Dichloropropene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
trans-1,3-Dichloropropene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Ethylbenzene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Hexachlorobutadiene	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
2-Hexanone	EPA 8260B	PII1002	10	ND	1	9/9/01	9/9/01	
Iodomethane	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Isopropylbenzene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
p-Isopropyltoluene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	

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Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0540-02 (RINSATE 8/30/01 - Water)								
Methylene chloride	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	PII1002	10	ND	1	9/9/01	9/9/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
Naphthalene	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
n-Propylbenzene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Styrene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Tetrachloroethene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Toluene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,2,3-Trichlorobenzene	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
1,2,4-Trichlorobenzene	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
1,1,1-Trichloroethane	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,1,2-Trichloroethane	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Trichloroethene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Trichlorofluoromethane	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
1,2,3-Trichloropropane	EPA 8260B	PII1002	10	ND	1	9/9/01	9/9/01	
1,2,4-Trimethylbenzene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
1,3,5-Trimethylbenzene	EPA 8260B	PII1002	2.0	ND	1	9/9/01	9/9/01	
Vinyl acetate	EPA 8260B	PII1002	25	ND	1	9/9/01	9/9/01	
Vinyl chloride	EPA 8260B	PII1002	5.0	ND	1	9/9/01	9/9/01	
Xylenes, Total	EPA 8260B	PII1002	10	ND	1	9/9/01	9/9/01	
Surrogate: Dibromofluoromethane (80-120%)				104 %				
Surrogate: Toluene-d8 (80-120%)				104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				99.2 %				

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Sampled: 08/29/01-08/30/01

Received: 08/30/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0540-01 (DUMPSTER 4212 - Soil)								
Arsenic	EPA 6010B	P1I0713	5.0	ND	1	9/7/01	9/10/01	
Barium	EPA 6010B	P1I0713	1.0	73	1	9/7/01	9/10/01	
Cadmium	EPA 6010B	P1I0713	0.50	ND	1	9/7/01	9/10/01	
Chromium	EPA 6010B	P1I0713	1.0	31	1	9/7/01	9/10/01	N1
Lead	EPA 6010B	P1I0713	5.0	ND	1	9/7/01	9/10/01	
Mercury	EPA 7471A	P1I0524	0.020	ND	1	9/5/01	9/5/01	
Selenium	EPA 6010B	P1I0713	5.0	ND	1	9/7/01	9/10/01	
Silver	EPA 6010B	P1I0713	0.50	ND	1	9/7/01	9/10/01	

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Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0540-02 (RINSATE 8/30/01 - Water)								
Arsenic	EPA 200.7	P1I0605	0.050	ND	1	9/6/01	9/8/01	
Chromium VI	SM3500CR-D	P1I0404	0.025	ND	1	8/31/01	8/31/01	
Copper	EPA 200.7	P1I0605	0.020	ND	1	9/6/01	9/8/01	
Nickel	EPA 200.7	P1I0605	0.050	ND	1	9/6/01	9/8/01	
Zinc	EPA 200.7	P1I0605	0.050	ND	1	9/6/01	9/8/01	

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Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

INORGANICS

Analyte	Method	Batch	Reporting Limit P/NP	Sample Result P/NP	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0540-01 (DUMPSTER 4212 - Soil)								
Paint Filter Liquids Test	EPA 9095A	PII0521	NA mg/kg	Not Present mg/kg	1	9/5/01	9/5/01	
Sample ID: PKH0540-01 (DUMPSTER 4212 - Soil)								
Total Cyanide	EPA 9014	PII1024	0.50 mg/l	ND mg/l	1	9/10/01	9/11/01	
Sample ID: PKH0540-02 (RINSATE 8/30/01 - Water)								
Total Cyanide	SM4500-CN,C-E	PII1008	0.020	ND	1	9/10/01	9/10/01	

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Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3104 Extracted: 08/31/01										
Blank Analyzed: 09/10/01 (P1H3104-BLK1)										
Acetone	ND	1000	ug/kg							
Benzene	ND	50	ug/kg							
Bromobenzene	ND	250	ug/kg							
Bromochloromethane	ND	250	ug/kg							
Bromodichloromethane	ND	100	ug/kg							
Bromoform	ND	250	ug/kg							
Bromomethane	ND	250	ug/kg							
2-Butanone (MEK)	ND	500	ug/kg							
n-Butylbenzene	ND	250	ug/kg							
sec-Butylbenzene	ND	250	ug/kg							
tert-Butylbenzene	ND	250	ug/kg							
Carbon Disulfide	ND	250	ug/kg							
Carbon tetrachloride	ND	250	ug/kg							
Chlorobenzene	ND	50	ug/kg							
Chloroethane	ND	250	ug/kg							
Chloroform	ND	100	ug/kg							
Chloromethane	ND	250	ug/kg							
2-Chlorotoluene	ND	250	ug/kg							
4-Chlorotoluene	ND	250	ug/kg							
Dibromochloromethane	ND	100	ug/kg							
1,2-Dibromo-3-chloropropane	ND	250	ug/kg							
1,2-Dibromoethane (EDB)	ND	100	ug/kg							
Dibromomethane	ND	100	ug/kg							
1,2-Dichlorobenzene	ND	100	ug/kg							
1,3-Dichlorobenzene	ND	100	ug/kg							
1,4-Dichlorobenzene	ND	100	ug/kg							
Dichlorodifluoromethane	ND	250	ug/kg							
1,1-Dichloroethane	ND	100	ug/kg							
1,2-Dichloroethane	ND	50	ug/kg							
1,1-Dichloroethene	ND	250	ug/kg							
cis-1,2-Dichloroethene	ND	100	ug/kg							
trans-1,2-Dichloroethene	ND	100	ug/kg							
1,2-Dichloropropane	ND	100	ug/kg							
1,3-Dichloropropane	ND	100	ug/kg							
2,2-Dichloropropane	ND	100	ug/kg							

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Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3104 Extracted: 08/31/01										
Blank Analyzed: 09/10/01 (P1H3104-BLK1)										
1,1-Dichloropropene	ND	100	ug/kg							
cis-1,3-Dichloropropene	ND	100	ug/kg							
trans-1,3-Dichloropropene	ND	100	ug/kg							
Ethylbenzene	ND	100	ug/kg							
Hexachlorobutadiene	ND	250	ug/kg							
2-Hexanone	ND	500	ug/kg							
Iodomethane	ND	100	ug/kg							
Isopropylbenzene	ND	100	ug/kg							
p-Isopropyltoluene	ND	100	ug/kg							
Methylene chloride	ND	500	ug/kg							
4-Methyl-2-pentanone (MIBK)	ND	500	ug/kg							
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg							
Naphthalene	ND	250	ug/kg							
n-Propylbenzene	ND	100	ug/kg							
Styrene	ND	100	ug/kg							
1,1,1,2-Tetrachloroethane	ND	250	ug/kg							
1,1,2,2-Tetrachloroethane	ND	100	ug/kg							
Tetrachloroethene	ND	100	ug/kg							
Toluene	ND	100	ug/kg							
1,2,3-Trichlorobenzene	ND	250	ug/kg							
1,2,4-Trichlorobenzene	ND	250	ug/kg							
1,1,1-Trichloroethane	ND	100	ug/kg							
1,1,2-Trichloroethane	ND	100	ug/kg							
Trichloroethene	ND	100	ug/kg							
Trichlorofluoromethane	ND	250	ug/kg							
1,2,3-Trichloropropane	ND	500	ug/kg							
1,2,4-Trimethylbenzene	ND	100	ug/kg							
1,3,5-Trimethylbenzene	ND	100	ug/kg							
Vinyl acetate	ND	1200	ug/kg							
Vinyl chloride	ND	250	ug/kg							
Xylenes, Total	ND	150	ug/kg							
Surrogate: Dibromofluoromethane	1350		ug/kg	1250		108	70-125			
Surrogate: Toluene-d8	1250		ug/kg	1250		100	50-135			
Surrogate: 4-Bromofluorobenzene	1110		ug/kg	1250		88.8	70-130			

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Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK GC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3104 Extracted: 08/31/01									
LCS Analyzed: 09/10/01 (P1H3104-BS1)									
Acetone	ND	1000	ug/kg	1000		52.5	5-200		
Benzene	968	50	ug/kg	1000		96.8	65-130		
Bromobenzene	981	250	ug/kg	1000		98.1	60-135		
Bromochloromethane	1010	250	ug/kg	1000		101	60-135		
Bromodichloromethane	988	100	ug/kg	1000		98.8	30-135		
Bromoform	736	250	ug/kg	1000		73.6	60-140		
Bromomethane	874	250	ug/kg	1000		87.4	10-200		
2-Butanone (MEK)	544	500	ug/kg	1000		54.4	10-160		
n-Butylbenzene	972	250	ug/kg	1000		97.2	65-125		
sec-Butylbenzene	968	250	ug/kg	1000		96.8	70-135		
tert-Butylbenzene	978	250	ug/kg	1000		97.8	70-130		
Carbon Disulfide	860	250	ug/kg	1000		86.0	20-120		
Carbon tetrachloride	1040	250	ug/kg	1000		104	70-140		
Chlorobenzene	1060	50	ug/kg	1000		106	75-125		
Chloroethane	893	250	ug/kg	1000		89.3	10-200		
Chloroform	1020	100	ug/kg	1000		102	35-135		
Chloromethane	809	250	ug/kg	1000		80.9	10-200		
2-Chlorotoluene	971	250	ug/kg	1000		97.1	70-135		
4-Chlorotoluene	962	250	ug/kg	1000		96.2	75-135		
Dibromochloromethane	940	100	ug/kg	1000		94.0	35-135		
1,2-Dibromo-3-chloropropane	556	250	ug/kg	1000		55.6	50-155		
1,2-Dibromoethane (EDB)	808	100	ug/kg	1000		80.8	70-130		
Dibromomethane	871	100	ug/kg	1000		87.1	65-130		
1,2-Dichlorobenzene	978	100	ug/kg	1000		97.8	70-125		
1,3-Dichlorobenzene	1000	100	ug/kg	1000		100	70-125		
1,4-Dichlorobenzene	1020	100	ug/kg	1000		102	70-135		
Dichlorodifluoromethane	855	250	ug/kg	1000		85.5	10-185		
1,1-Dichloroethane	1020	100	ug/kg	1000		102	60-140		
1,2-Dichloroethane	901	50	ug/kg	1000		90.1	55-135		
1,1-Dichloroethene	1010	250	ug/kg	1000		101	55-145		
cis-1,2-Dichloroethene	1020	100	ug/kg	1000		102	60-125		
trans-1,2-Dichloroethene	1030	100	ug/kg	1000		103	70-145		
1,2-Dichloropropane	971	100	ug/kg	1000		97.1	65-130		
1,3-Dichloropropane	871	100	ug/kg	1000		87.1	65-130		
2,2-Dichloropropane	1150	100	ug/kg	1000		115	60-135		
1,1-Dichloropropene	973	100	ug/kg	1000		97.3	65-130		

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Received: 08/30/01

METHOD BLANK OR DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: PIH3104 Extracted: 08/31/01										
LCS Analyzed: 09/10/01 (PIH3104-BS1)										
cis-1,3-Dichloropropene	930	100	ug/kg	1000		93.0	60-125			
trans-1,3-Dichloropropene	849	100	ug/kg	1000		84.9	50-130			
Ethylbenzene	1030	100	ug/kg	1000		103	70-125			
Hexachlorobutadiene	1020	250	ug/kg	1000		102	60-125			
2-Hexanone	563	500	ug/kg	1000		56.3	25-185			
Iodomethane	1090	100	ug/kg	1000		109	30-155			
Isopropylbenzene	1050	100	ug/kg	1000		105	70-135			
p-Isopropyltoluene	948	100	ug/kg	1000		94.8	65-130			
Methylene chloride	1000	500	ug/kg	1000		100	60-140			
4-Methyl-2-pentanone (MIBK)	595	500	ug/kg	1000		59.5	10-175			
Methyl-tert-butyl Ether (MTBE)	938	250	ug/kg	1000		93.8	55-135			
Naphthalene	697	250	ug/kg	1000		69.7	45-155			
n-Propylbenzene	991	100	ug/kg	1000		99.1	75-135			
Styrene	1040	100	ug/kg	1000		104	70-130			
1,1,1,2-Tetrachloroethane	1050	250	ug/kg	1000		105	70-130			
1,1,2,2-Tetrachloroethane	712	100	ug/kg	1000		71.2	60-140			
Tetrachloroethene	1050	100	ug/kg	1000		105	65-130			
Toluene	1000	100	ug/kg	1000		100	70-125			
1,2,3-Trichlorobenzene	930	250	ug/kg	1000		93.0	60-135			
1,2,4-Trichlorobenzene	1010	250	ug/kg	1000		101	55-135			
1,1,1-Trichloroethane	1060	100	ug/kg	1000		106	65-135			
1,1,2-Trichloroethane	880	100	ug/kg	1000		88.0	65-130			
Trichloroethene	983	100	ug/kg	1000		98.3	70-130			
Trichlorofluoromethane	1060	250	ug/kg	1000		106	10-200			
1,2,3-Trichloropropane	644	500	ug/kg	1000		64.4	60-150			
1,2,4-Trimethylbenzene	977	100	ug/kg	1000		97.7	75-130			
1,3,5-Trimethylbenzene	971	100	ug/kg	1000		97.1	70-130			
Vinyl acetate	ND	1200	ug/kg	1000		64.4	25-130			
Vinyl chloride	416	250	ug/kg	1000		41.6	10-200			
Xylenes, Total	3120	150	ug/kg	3000		104	70-130			
Surrogate: Dibromofluoromethane	1330		ug/kg	1250		106	70-125			
Surrogate: Toluene-d8	1300		ug/kg	1250		104	50-135			
Surrogate: 4-Bromofluorobenzene	1210		ug/kg	1250		96.8	70-130			

Law Engineering
4634 S. 36th Place
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Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3104 Extracted: 08/31/01										
LCS Dup Analyzed: 09/10/01 (P1H3104-BSD1)										
Acetone	ND	1000	ug/kg	1000		45.8	5-200	13.6	35	
Benzene	949	50	ug/kg	1000		94.9	65-130	1.98	35	
Bromobenzene	957	250	ug/kg	1000		95.7	60-135	2.48	35	
Bromochloromethane	1000	250	ug/kg	1000		100	60-135	0.995	35	
Bromodichloromethane	963	100	ug/kg	1000		96.3	30-135	2.56	35	
Bromoform	718	250	ug/kg	1000		71.8	60-140	2.48	35	
Bromomethane	865	250	ug/kg	1000		86.5	10-200	1.04	35	
2-Butanone (MEK)	ND	500	ug/kg	1000		48.5	10-160	11.5	35	
n-Butylbenzene	964	250	ug/kg	1000		96.4	65-125	0.826	35	
sec-Butylbenzene	960	250	ug/kg	1000		96.0	70-135	0.830	35	
tert-Butylbenzene	968	250	ug/kg	1000		96.8	70-130	1.03	35	
Carbon Disulfide	831	250	ug/kg	1000		83.1	20-120	3.43	35	
Carbon tetrachloride	1000	250	ug/kg	1000		100	70-140	3.92	35	
Chlorobenzene	1040	50	ug/kg	1000		104	75-125	1.90	35	
Chloroethane	826	250	ug/kg	1000		82.6	10-200	7.80	35	
Chloroform	1020	100	ug/kg	1000		102	35-135	0.00	35	
Chloromethane	767	250	ug/kg	1000		76.7	10-200	5.33	35	
2-Chlorotoluene	958	250	ug/kg	1000		95.8	70-135	1.35	35	
4-Chlorotoluene	972	250	ug/kg	1000		97.2	75-135	1.03	35	
Dibromochloromethane	891	100	ug/kg	1000		89.1	35-135	5.35	35	
1,2-Dibromo-3-chloropropane	534	250	ug/kg	1000		53.4	50-155	4.04	35	
1,2-Dibromoethane (EDB)	796	100	ug/kg	1000		79.6	70-130	1.50	35	
Dibromomethane	858	100	ug/kg	1000		85.8	65-130	1.50	35	
1,2-Dichlorobenzene	969	100	ug/kg	1000		96.9	70-125	0.924	35	
1,3-Dichlorobenzene	988	100	ug/kg	1000		98.8	70-125	1.21	35	
1,4-Dichlorobenzene	1010	100	ug/kg	1000		101	70-135	0.985	35	
Dichlorodifluoromethane	808	250	ug/kg	1000		80.8	10-185	5.65	35	
1,1-Dichloroethane	985	100	ug/kg	1000		98.5	60-140	3.49	35	
1,2-Dichloroethane	877	50	ug/kg	1000		87.7	55-135	2.70	35	
1,1-Dichloroethene	962	250	ug/kg	1000		96.2	55-145	4.87	35	
cis-1,2-Dichloroethene	1000	100	ug/kg	1000		100	60-125	1.98	35	
trans-1,2-Dichloroethene	1010	100	ug/kg	1000		101	70-145	1.96	35	
1,2-Dichloropropane	967	100	ug/kg	1000		96.7	65-130	0.413	35	
1,3-Dichloropropane	841	100	ug/kg	1000		84.1	65-130	3.50	35	
2,2-Dichloropropane	1150	100	ug/kg	1000		115	60-135	0.00	35	
1,1-Dichloropropene	959	100	ug/kg	1000		95.9	65-130	1.45	35	

Melissa Evans
Project Manager

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Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK/OC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3104 Extracted: 08/31/01										
LCS Dup Analyzed: 09/10/01 (P1H3104-BSD1)										
cis-1,3-Dichloropropene	922	100	ug/kg	1000		92.2	60-125	0.864	35	
trans-1,3-Dichloropropene	827	100	ug/kg	1000		82.7	50-130	2.63	35	
Ethylbenzene	1000	100	ug/kg	1000		100	70-125	2.96	35	
Hexachlorobutadiene	1030	250	ug/kg	1000		103	60-125	0.976	35	
2-Hexanone	524	500	ug/kg	1000		52.4	25-185	7.18	35	
Iodomethane	1060	100	ug/kg	1000		106	30-155	2.79	35	
Isopropylbenzene	1030	100	ug/kg	1000		103	70-135	1.92	35	
p-Isopropyltoluene	942	100	ug/kg	1000		94.2	65-130	0.635	35	
Methylene chloride	967	500	ug/kg	1000		96.7	60-140	3.36	35	
4-Methyl-2-pentanone (MIBK)	580	500	ug/kg	1000		58.0	10-175	2.55	35	
Methyl-tert-butyl Ether (MTBE)	917	250	ug/kg	1000		91.7	55-135	2.26	35	
Naphthalene	665	250	ug/kg	1000		66.5	45-155	4.70	35	
n-Propylbenzene	989	100	ug/kg	1000		98.9	75-135	0.202	35	
Styrene	1020	100	ug/kg	1000		102	70-130	1.94	35	
1,1,1,2-Tetrachloroethane	1040	250	ug/kg	1000		104	70-130	0.957	35	
1,1,2,2-Tetrachloroethane	707	100	ug/kg	1000		70.7	60-140	0.705	35	
Tetrachloroethene	1040	100	ug/kg	1000		104	65-130	0.957	35	
Toluene	994	100	ug/kg	1000		99.4	70-125	0.602	35	
1,2,3-Trichlorobenzene	894	250	ug/kg	1000		89.4	60-135	3.95	35	
1,2,4-Trichlorobenzene	979	250	ug/kg	1000		97.9	55-135	3.12	35	
1,1,1-Trichloroethane	1030	100	ug/kg	1000		103	65-135	2.87	35	
1,1,2-Trichloroethane	846	100	ug/kg	1000		84.6	65-130	3.94	35	
Trichloroethene	990	100	ug/kg	1000		99.0	70-130	0.710	35	
Trichlorofluoromethane	1050	250	ug/kg	1000		105	10-200	0.948	35	
1,2,3-Trichloropropane	627	500	ug/kg	1000		62.7	60-150	2.68	35	
1,2,4-Trimethylbenzene	986	100	ug/kg	1000		98.6	75-130	0.917	35	
1,3,5-Trimethylbenzene	959	100	ug/kg	1000		95.9	70-130	1.24	35	
Vinyl acetate	ND	1200	ug/kg	1000		62.6	25-130	2.83	35	
Vinyl chloride	396	250	ug/kg	1000		39.6	10-200	4.93	35	
Xylenes, Total	3080	150	ug/kg	3000		103	70-130	1.29	35	
Surrogate: Dibromofluoromethane	1280		ug/kg	1250		102	70-125			
Surrogate: Toluene-d8	1260		ug/kg	1250		101	50-135			
Surrogate: 4-Bromofluorobenzene	1210		ug/kg	1250		96.8	70-130			

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Project Manager

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 Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: PIH3104 Extracted: 08/31/01										
Matrix Spike Analyzed: 09/10/01 (PIH3104-MS1)					Source: PKH0540-01					
Acetone	ND	1000	ug/kg	1000	ND	53.5	5-200			
Benzene	755	50	ug/kg	1000	ND	75.5	65-130			
Bromobenzene	840	250	ug/kg	1000	ND	84.0	60-135			
Bromochloromethane	753	250	ug/kg	1000	ND	75.3	60-135			
Bromodichloromethane	770	100	ug/kg	1000	ND	77.0	30-135			
Bromoform	589	250	ug/kg	1000	ND	58.9	60-140			M2
Bromomethane	640	250	ug/kg	1000	ND	64.0	10-200			
2-Butanone (MEK)	ND	500	ug/kg	1000	ND	46.8	10-160			
n-Butylbenzene	812	250	ug/kg	1000	ND	81.2	65-125			
sec-Butylbenzene	831	250	ug/kg	1000	ND	83.1	70-135			
tert-Butylbenzene	822	250	ug/kg	1000	ND	82.2	70-130			
Carbon Disulfide	596	250	ug/kg	1000	ND	59.6	20-120			
Carbon tetrachloride	760	250	ug/kg	1000	ND	76.0	70-140			
Chlorobenzene	872	50	ug/kg	1000	ND	87.2	75-125			
Chloroethane	664	250	ug/kg	1000	ND	66.4	10-200			
Chloroform	809	100	ug/kg	1000	ND	80.9	35-135			
Chloromethane	545	250	ug/kg	1000	ND	54.5	10-200			
2-Chlorotoluene	822	250	ug/kg	1000	ND	82.2	70-135			
4-Chlorotoluene	828	250	ug/kg	1000	ND	82.8	75-135			
Dibromochloromethane	747	100	ug/kg	1000	ND	74.7	35-135			
1,2-Dibromo-3-chloropropane	426	250	ug/kg	1000	ND	42.6	50-155			M2
1,2-Dibromoethane (EDB)	650	100	ug/kg	1000	ND	65.0	70-130			M2
Dibromomethane	684	100	ug/kg	1000	ND	68.4	65-130			
1,2-Dichlorobenzene	827	100	ug/kg	1000	ND	82.7	70-125			
1,3-Dichlorobenzene	868	100	ug/kg	1000	ND	86.8	70-125			
1,4-Dichlorobenzene	875	100	ug/kg	1000	ND	87.5	70-135			
Dichlorodifluoromethane	412	250	ug/kg	1000	ND	41.2	10-185			
1,1-Dichloroethane	764	100	ug/kg	1000	ND	76.4	60-140			
1,2-Dichloroethane	699	50	ug/kg	1000	ND	69.9	55-135			
1,1-Dichloroethene	716	250	ug/kg	1000	ND	71.6	55-145			
cis-1,2-Dichloroethene	800	100	ug/kg	1000	ND	80.0	60-125			
trans-1,2-Dichloroethene	750	100	ug/kg	1000	ND	75.0	70-145			
1,2-Dichloropropane	784	100	ug/kg	1000	ND	78.4	65-130			
1,3-Dichloropropane	699	100	ug/kg	1000	ND	69.9	65-130			
2,2-Dichloropropane	911	100	ug/kg	1000	ND	91.1	60-135			
1,1-Dichloropropene	734	100	ug/kg	1000	ND	73.4	65-130			

Melissa Evans
 Project Manager

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Report Number: PKH0540

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3104 Extracted: 08/31/01										
Matrix Spike Analyzed: 09/10/01 (P1H3104-MS1)					Source: PKH0540-01					
cis-1,3-Dichloropropene	732	100	ug/kg	1000	ND	73.2	60-125			
trans-1,3-Dichloropropene	680	100	ug/kg	1000	ND	68.0	50-130			
Ethylbenzene	837	100	ug/kg	1000	ND	83.7	70-125			
Hexachlorobutadiene	912	250	ug/kg	1000	ND	91.2	60-125			
2-Hexanone	503	500	ug/kg	1000	ND	50.3	25-185			
Iodomethane	785	100	ug/kg	1000	ND	78.5	30-155			
Isopropylbenzene	865	100	ug/kg	1000	ND	86.5	70-135			
p-Isopropyltoluene	812	100	ug/kg	1000	ND	81.2	65-130			
Methylene chloride	742	500	ug/kg	1000	ND	74.2	60-140			
4-Methyl-2-pentanone (MIBK)	ND	500	ug/kg	1000	ND	47.5	10-175			
Methyl-tert-butyl Ether (MTBE)	727	250	ug/kg	1000	ND	72.7	55-135			
Naphthalene	534	250	ug/kg	1000	ND	53.4	45-155			
n-Propylbenzene	846	100	ug/kg	1000	ND	84.6	75-135			
Styrene	872	100	ug/kg	1000	ND	87.2	70-130			
1,1,1,2-Tetrachloroethane	878	250	ug/kg	1000	ND	87.8	70-130			
1,1,2,2-Tetrachloroethane	594	100	ug/kg	1000	ND	59.4	60-140			M2
Tetrachloroethene	873	100	ug/kg	1000	ND	87.3	65-130			
Toluene	824	100	ug/kg	1000	ND	82.4	70-125			
1,2,3-Trichlorobenzene	745	250	ug/kg	1000	ND	74.5	60-135			
1,2,4-Trichlorobenzene	835	250	ug/kg	1000	ND	83.5	55-135			
1,1,1-Trichloroethane	789	100	ug/kg	1000	ND	78.9	65-135			
1,1,2-Trichloroethane	699	100	ug/kg	1000	ND	69.9	65-130			
Trichloroethene	776	100	ug/kg	1000	ND	77.6	70-130			
Trichlorofluoromethane	764	250	ug/kg	1000	ND	76.4	10-200			
1,2,3-Trichloropropane	540	500	ug/kg	1000	ND	54.0	60-150			M2
1,2,4-Trimethylbenzene	847	100	ug/kg	1000	ND	84.7	75-130			
1,3,5-Trimethylbenzene	824	100	ug/kg	1000	ND	82.4	70-130			
Vinyl acetate	ND	1200	ug/kg	1000	ND		25-130			M2
Vinyl chloride	277	250	ug/kg	1000	ND	27.7	10-200			
Xylenes, Total	2600	150	ug/kg	3000	ND	86.7	70-130			
Surrogate: Dibromofluoromethane	682		ug/kg	625		109	70-125			
Surrogate: Toluene-d8	687		ug/kg	625		110	50-135			
Surrogate: 4-Bromofluorobenzene	751		ug/kg	625		120	70-130			

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METHOD BLANK/CR DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3104 Extracted: 08/31/01										
Matrix Spike Dup Analyzed: 09/10/01 (P1H3104-MSD1)					Source: PKH0540-01					
Acetone	ND	1000	ug/kg	1000	ND	46.7	5-200	13.6	35	
Benzene	802	50	ug/kg	1000	ND	80.2	65-130	6.04	35	
Bromobenzene	834	250	ug/kg	1000	ND	83.4	60-135	0.717	35	
Bromochloromethane	822	250	ug/kg	1000	ND	82.2	60-135	8.76	35	
Bromodichloromethane	776	100	ug/kg	1000	ND	77.6	30-135	0.776	35	
Bromoform	561	250	ug/kg	1000	ND	56.1	60-140	4.87	35	M2
Bromomethane	712	250	ug/kg	1000	ND	71.2	10-200	10.7	35	
2-Butanone (MEK)	ND	500	ug/kg	1000	ND	40.6	10-160	14.2	35	
n-Butylbenzene	828	250	ug/kg	1000	ND	82.8	65-125	1.95	35	
sec-Butylbenzene	850	250	ug/kg	1000	ND	85.0	70-135	2.26	35	
tert-Butylbenzene	846	250	ug/kg	1000	ND	84.6	70-130	2.88	35	
Carbon Disulfide	625	250	ug/kg	1000	ND	62.5	20-120	4.75	35	
Carbon tetrachloride	830	250	ug/kg	1000	ND	83.0	70-140	8.81	35	
Chlorobenzene	886	50	ug/kg	1000	ND	88.6	75-125	1.59	35	
Chloroethane	681	250	ug/kg	1000	ND	68.1	10-200	2.53	35	
Chloroform	844	100	ug/kg	1000	ND	84.4	35-135	4.23	35	
Chloromethane	547	250	ug/kg	1000	ND	54.7	10-200	0.366	35	
2-Chlorotoluene	848	250	ug/kg	1000	ND	84.8	70-135	3.11	35	
4-Chlorotoluene	840	250	ug/kg	1000	ND	84.0	75-135	1.44	35	
Dibromochloromethane	712	100	ug/kg	1000	ND	71.2	35-135	4.80	35	
1,2-Dibromo-3-chloropropane	401	250	ug/kg	1000	ND	40.1	50-155	6.05	35	M2
1,2-Dibromoethane (EDB)	609	100	ug/kg	1000	ND	60.9	70-130	6.51	35	M2
Dibromomethane	655	100	ug/kg	1000	ND	65.5	65-130	4.33	35	
1,2-Dichlorobenzene	814	100	ug/kg	1000	ND	81.4	70-125	1.58	35	
1,3-Dichlorobenzene	875	100	ug/kg	1000	ND	87.5	70-125	0.803	35	
1,4-Dichlorobenzene	885	100	ug/kg	1000	ND	88.5	70-135	1.14	35	
Dichlorodifluoromethane	343	250	ug/kg	1000	ND	34.3	10-185	18.3	35	
1,1-Dichloroethane	817	100	ug/kg	1000	ND	81.7	60-140	6.70	35	
1,2-Dichloroethane	684	50	ug/kg	1000	ND	68.4	55-135	2.17	35	
1,1-Dichloroethene	754	250	ug/kg	1000	ND	75.4	55-145	5.17	35	
cis-1,2-Dichloroethene	823	100	ug/kg	1000	ND	82.3	60-125	2.83	35	
trans-1,2-Dichloroethene	814	100	ug/kg	1000	ND	81.4	70-145	8.18	35	
1,2-Dichloropropane	780	100	ug/kg	1000	ND	78.0	65-130	0.512	35	
1,3-Dichloropropane	671	100	ug/kg	1000	ND	67.1	65-130	4.09	35	
2,2-Dichloropropane	983	100	ug/kg	1000	ND	98.3	60-135	7.60	35	
1,1-Dichloropropene	791	100	ug/kg	1000	ND	79.1	65-130	7.48	35	

Melissa Evans
Project Manager

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Law Engineering
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 Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3104 Extracted: 08/31/01										
Matrix Spike Dup Analyzed: 09/10/01 (P1H3104-MSD1)					Source: PKH0540-01					
cis-1,3-Dichloropropene	729	100	ug/kg	1000	ND	72.9	60-125	0.411	35	
trans-1,3-Dichloropropene	658	100	ug/kg	1000	ND	65.8	50-130	3.29	35	
Ethylbenzene	870	100	ug/kg	1000	ND	87.0	70-125	3.87	35	
Hexachlorobutadiene	939	250	ug/kg	1000	ND	93.9	60-125	2.92	35	
2-Hexanone	ND	500	ug/kg	1000	ND	42.4	25-185	17.0	35	
Iodomethane	833	100	ug/kg	1000	ND	83.3	30-155	5.93	35	
Isopropylbenzene	886	100	ug/kg	1000	ND	88.6	70-135	2.40	35	
p-Isopropyltoluene	820	100	ug/kg	1000	ND	82.0	65-130	0.980	35	
Methylene chloride	763	500	ug/kg	1000	ND	76.3	60-140	2.79	35	
4-Methyl-2-pentanone (MIBK)	ND	500	ug/kg	1000	ND	41.2	10-175	14.2	35	
Methyl-tert-butyl Ether (MTBE)	709	250	ug/kg	1000	ND	70.9	55-135	2.51	35	
Naphthalene	483	250	ug/kg	1000	ND	48.3	45-155	10.0	35	
n-Propylbenzene	873	100	ug/kg	1000	ND	87.3	75-135	3.14	35	
Styrene	863	100	ug/kg	1000	ND	86.3	70-130	1.04	35	
1,1,1,2-Tetrachloroethane	872	250	ug/kg	1000	ND	87.2	70-130	0.686	35	
1,1,2,2-Tetrachloroethane	540	100	ug/kg	1000	ND	54.0	60-140	9.52	35	M2
Tetrachloroethene	889	100	ug/kg	1000	ND	88.9	65-130	1.82	35	
Toluene	838	100	ug/kg	1000	ND	83.8	70-125	1.68	35	
1,2,3-Trichlorobenzene	704	250	ug/kg	1000	ND	70.4	60-135	5.66	35	
1,2,4-Trichlorobenzene	805	250	ug/kg	1000	ND	80.5	55-135	3.66	35	
1,1,1-Trichloroethane	846	100	ug/kg	1000	ND	84.6	65-135	6.97	35	
1,1,2-Trichloroethane	658	100	ug/kg	1000	ND	65.8	65-130	6.04	35	
Trichloroethene	825	100	ug/kg	1000	ND	82.5	70-130	6.12	35	
Trichlorofluoromethane	781	250	ug/kg	1000	ND	78.1	10-200	2.20	35	
1,2,3-Trichloropropane	ND	500	ug/kg	1000	ND	48.9	60-150	9.91	35	M2
1,2,4-Trimethylbenzene	871	100	ug/kg	1000	ND	87.1	75-130	2.79	35	
1,3,5-Trimethylbenzene	843	100	ug/kg	1000	ND	84.3	70-130	2.28	35	
Vinyl acetate	ND	1200	ug/kg	1000	ND		25-130		35	M2
Vinyl chloride	283	250	ug/kg	1000	ND	28.3	10-200	2.14	35	
Xylenes, Total	2660	150	ug/kg	3000	ND	88.7	70-130	2.28	35	
Surrogate: Dibromofluoromethane	736		ug/kg	625		118	70-125			
Surrogate: Toluene-d8	730		ug/kg	625		117	50-135			
Surrogate: 4-Bromofluorobenzene	812		ug/kg	625		130	70-130			

Law Engineering
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Received: 08/30/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
Blank Analyzed: 09/09/01 (P111002-BLK1)										
Acetone	ND	20	ug/l							
Benzene	ND	2.0	ug/l							
Bromobenzene	ND	5.0	ug/l							
Bromochloromethane	ND	5.0	ug/l							
Bromodichloromethane	ND	2.0	ug/l							
Bromoform	ND	5.0	ug/l							
Bromomethane	ND	5.0	ug/l							
2-Butanone (MEK)	ND	10	ug/l							
n-Butylbenzene	ND	5.0	ug/l							
sec-Butylbenzene	ND	5.0	ug/l							
tert-Butylbenzene	ND	5.0	ug/l							
Carbon Disulfide	ND	5.0	ug/l							
Carbon tetrachloride	ND	5.0	ug/l							
Chlorobenzene	ND	2.0	ug/l							
Chloroethane	ND	5.0	ug/l							
Chloroform	ND	2.0	ug/l							
Chloromethane	ND	5.0	ug/l							
2-Chlorotoluene	ND	5.0	ug/l							
4-Chlorotoluene	ND	5.0	ug/l							
Dibromochloromethane	ND	2.0	ug/l							
1,2-Dibromo-3-chloropropane	ND	5.0	ug/l							
1,2-Dibromoethane (EDB)	ND	2.0	ug/l							
Dibromomethane	ND	2.0	ug/l							
1,2-Dichlorobenzene	ND	2.0	ug/l							
1,3-Dichlorobenzene	ND	2.0	ug/l							
1,4-Dichlorobenzene	ND	2.0	ug/l							
Dichlorodifluoromethane	ND	5.0	ug/l							
1,1-Dichloroethane	ND	2.0	ug/l							
1,2-Dichloroethane	ND	2.0	ug/l							
1,1-Dichloroethene	ND	5.0	ug/l							
cis-1,2-Dichloroethene	ND	2.0	ug/l							
trans-1,2-Dichloroethene	ND	2.0	ug/l							
1,2-Dichloropropane	ND	2.0	ug/l							
1,3-Dichloropropane	ND	2.0	ug/l							
2,2-Dichloropropane	ND	2.0	ug/l							

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METHOD BLANK/OC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
Blank Analyzed: 09/09/01 (P111002-BLK1)										
1,1-Dichloropropene	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Hexachlorobutadiene	ND	5.0	ug/l							
2-Hexanone	ND	10	ug/l							
Iodomethane	ND	2.0	ug/l							
Isopropylbenzene	ND	2.0	ug/l							
p-Isopropyltoluene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
4-Methyl-2-pentanone (MIBK)	ND	10	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
Naphthalene	ND	5.0	ug/l							
n-Propylbenzene	ND	2.0	ug/l							
Styrene	ND	2.0	ug/l							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,2,3-Trichlorobenzene	ND	5.0	ug/l							
1,2,4-Trichlorobenzene	ND	5.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
1,2,3-Trichloropropane	ND	10	ug/l							
1,2,4-Trimethylbenzene	ND	2.0	ug/l							
1,3,5-Trimethylbenzene	ND	2.0	ug/l							
Vinyl acetate	ND	25	ug/l							
Vinyl chloride	ND	5.0	ug/l							
Xylenes, Total	ND	10	ug/l							
Surrogate: Dibromofluoromethane	27.9		ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	26.5		ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	26.4		ug/l	25.0		106	80-120			

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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
LCS Analyzed: 09/09/01 (P111002-BS1)										
Acetone	28.0	20	ug/l	25.0		112	30-200			
Benzene	25.0	2.0	ug/l	25.0		100	80-120			
Bromobenzene	25.1	5.0	ug/l	25.0		100	80-120			
Bromochloromethane	28.3	5.0	ug/l	25.0		113	80-120			
Bromodichloromethane	26.8	2.0	ug/l	25.0		107	80-130			
Bromoform	27.1	5.0	ug/l	25.0		108	60-140			
Bromomethane	28.5	5.0	ug/l	25.0		114	60-150			
2-Butanone (MEK)	28.9	10	ug/l	25.0		116	30-185			
n-Butylbenzene	24.6	5.0	ug/l	25.0		98.4	75-130			
sec-Butylbenzene	25.0	5.0	ug/l	25.0		100	80-125			
tert-Butylbenzene	24.7	5.0	ug/l	25.0		98.8	80-120			
Carbon Disulfide	23.0	5.0	ug/l	25.0		92.0	65-120			
Carbon tetrachloride	28.8	5.0	ug/l	25.0		115	75-150			
Chlorobenzene	26.6	2.0	ug/l	25.0		106	80-120			
Chloroethane	24.9	5.0	ug/l	25.0		99.6	80-125			
Chloroform	26.6	2.0	ug/l	25.0		106	80-120			
Chloromethane	21.7	5.0	ug/l	25.0		86.8	60-125			
2-Chlorotoluene	24.9	5.0	ug/l	25.0		99.6	80-120			
4-Chlorotoluene	24.7	5.0	ug/l	25.0		98.8	80-120			
Dibromochloromethane	28.1	2.0	ug/l	25.0		112	70-150			
1,2-Dibromo-3-chloropropane	24.3	5.0	ug/l	25.0		97.2	50-145			
1,2-Dibromoethane (EDB)	26.0	2.0	ug/l	25.0		104	75-120			
Dibromomethane	26.3	2.0	ug/l	25.0		105	80-120			
1,2-Dichlorobenzene	25.3	2.0	ug/l	25.0		101	80-120			
1,3-Dichlorobenzene	25.1	2.0	ug/l	25.0		100	80-120			
1,4-Dichlorobenzene	26.0	2.0	ug/l	25.0		104	80-120			
Dichlorodifluoromethane	23.0	5.0	ug/l	25.0		92.0	25-140			
1,1-Dichloroethane	26.6	2.0	ug/l	25.0		106	80-120			
1,2-Dichloroethane	26.4	2.0	ug/l	25.0		106	80-120			
1,1-Dichloroethene	26.2	5.0	ug/l	25.0		105	80-120			
cis-1,2-Dichloroethene	26.2	2.0	ug/l	25.0		105	80-120			
trans-1,2-Dichloroethene	27.2	2.0	ug/l	25.0		109	80-120			
1,2-Dichloropropane	25.2	2.0	ug/l	25.0		101	80-120			
1,3-Dichloropropane	25.6	2.0	ug/l	25.0		102	80-120			
2,2-Dichloropropane	30.2	2.0	ug/l	25.0		121	75-135			
1,1-Dichloropropene	25.8	2.0	ug/l	25.0		103	80-120			

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

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Received: 08/30/01

METHOD BLANK/OC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
LCS Analyzed: 09/09/01 (P111002-BS1)										
cis-1,3-Dichloropropene	26.2	2.0	ug/l	25.0		105	80-120			
trans-1,3-Dichloropropene	25.5	2.0	ug/l	25.0		102	80-120			
Ethylbenzene	26.0	2.0	ug/l	25.0		104	80-120			
Hexachlorobutadiene	22.3	5.0	ug/l	25.0		89.2	60-145			
2-Hexanone	27.8	10	ug/l	25.0		111	50-170			
Iodomethane	27.6	2.0	ug/l	25.0		110	40-155			
Isopropylbenzene	26.8	2.0	ug/l	25.0		107	80-120			
p-Isopropyltoluene	24.1	2.0	ug/l	25.0		96.4	80-120			
Methylene chloride	26.9	5.0	ug/l	25.0		108	80-120			
4-Methyl-2-pentanone (MIBK)	25.8	10	ug/l	25.0		103	70-140			
Methyl-tert-butyl Ether (MTBE)	28.4	5.0	ug/l	25.0		114	75-135			
Naphthalene	22.6	5.0	ug/l	25.0		90.4	70-130			
n-Propylbenzene	25.7	2.0	ug/l	25.0		103	80-120			
Styrene	26.4	2.0	ug/l	25.0		106	80-120			
1,1,1,2-Tetrachloroethane	27.9	5.0	ug/l	25.0		112	65-150			
1,1,2,2-Tetrachloroethane	25.3	2.0	ug/l	25.0		101	70-130			
Tetrachloroethene	27.1	2.0	ug/l	25.0		108	80-125			
Toluene	25.4	2.0	ug/l	25.0		102	80-120			
1,2,3-Trichlorobenzene	22.4	5.0	ug/l	25.0		89.6	75-125			
1,2,4-Trichlorobenzene	23.8	5.0	ug/l	25.0		95.2	80-120			
1,1,1-Trichloroethane	27.5	2.0	ug/l	25.0		110	80-120			
1,1,2-Trichloroethane	25.4	2.0	ug/l	25.0		102	80-120			
Trichloroethene	24.8	2.0	ug/l	25.0		99.2	80-120			
Trichlorofluoromethane	30.4	5.0	ug/l	25.0		122	75-150			
1,2,3-Trichloropropane	23.8	10	ug/l	25.0		95.2	65-135			
1,2,4-Trimethylbenzene	25.3	2.0	ug/l	25.0		101	80-120			
1,3,5-Trimethylbenzene	24.7	2.0	ug/l	25.0		98.8	80-120			
Vinyl acetate	29.8	25	ug/l	25.0		119	40-120			
Vinyl chloride	28.8	5.0	ug/l	25.0		115	80-120			
Xylenes, Total	77.9	10	ug/l	75.0		104	80-120			
Surrogate: Dibromofluoromethane	28.8		ug/l	25.0		115	80-120			
Surrogate: Toluene-d8	27.6		ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	26.1		ug/l	25.0		104	80-120			

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
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Received: 08/30/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
LCS Dup Analyzed: 09/09/01 (P111002-BSD1)										
Acetone	31.0	20	ug/l	25.0		124	30-200	10.2	20	
Benzene	25.1	2.0	ug/l	25.0		100	80-120	0.399	20	
Bromobenzene	25.7	5.0	ug/l	25.0		103	80-120	2.36	20	
Bromochloromethane	29.1	5.0	ug/l	25.0		116	80-120	2.79	20	
Bromodichloromethane	27.0	2.0	ug/l	25.0		108	80-130	0.743	20	
Bromoform	28.0	5.0	ug/l	25.0		112	60-140	3.27	20	
Bromomethane	28.0	5.0	ug/l	25.0		112	60-150	1.77	20	
2-Butanone (MEK)	29.4	10	ug/l	25.0		118	30-185	1.72	20	
n-Butylbenzene	24.8	5.0	ug/l	25.0		99.2	75-130	0.810	20	
sec-Butylbenzene	24.9	5.0	ug/l	25.0		99.6	80-125	0.401	20	
tert-Butylbenzene	24.6	5.0	ug/l	25.0		98.4	80-120	0.406	20	
Carbon Disulfide	22.2	5.0	ug/l	25.0		88.8	65-120	3.54	20	
Carbon tetrachloride	28.2	5.0	ug/l	25.0		113	75-150	2.11	20	
Chlorobenzene	26.6	2.0	ug/l	25.0		106	80-120	0.00	20	
Chloroethane	24.7	5.0	ug/l	25.0		98.8	80-125	0.806	20	
Chloroform	27.0	2.0	ug/l	25.0		108	80-120	1.49	20	
Chloromethane	21.4	5.0	ug/l	25.0		85.6	60-125	1.39	20	
2-Chlorotoluene	24.9	5.0	ug/l	25.0		99.6	80-120	0.00	20	
4-Chlorotoluene	25.1	5.0	ug/l	25.0		100	80-120	1.61	20	
Dibromochloromethane	28.7	2.0	ug/l	25.0		115	70-150	2.11	20	
1,2-Dibromo-3-chloropropane	24.5	5.0	ug/l	25.0		98.0	50-145	0.820	20	
1,2-Dibromoethane (EDB)	27.0	2.0	ug/l	25.0		108	75-120	3.77	20	
Dibromomethane	28.2	2.0	ug/l	25.0		113	80-120	6.97	20	
1,2-Dichlorobenzene	26.0	2.0	ug/l	25.0		104	80-120	2.73	20	
1,3-Dichlorobenzene	25.5	2.0	ug/l	25.0		102	80-120	1.58	20	
1,4-Dichlorobenzene	26.4	2.0	ug/l	25.0		106	80-120	1.53	20	
Dichlorodifluoromethane	21.8	5.0	ug/l	25.0		87.2	25-140	5.36	20	
1,1-Dichloroethane	26.6	2.0	ug/l	25.0		106	80-120	0.00	20	
1,2-Dichloroethane	27.6	2.0	ug/l	25.0		110	80-120	4.44	20	
1,1-Dichloroethene	25.5	5.0	ug/l	25.0		102	80-120	2.71	20	
cis-1,2-Dichloroethene	26.9	2.0	ug/l	25.0		108	80-120	2.64	20	
trans-1,2-Dichloroethene	26.4	2.0	ug/l	25.0		106	80-120	2.99	20	
1,2-Dichloropropane	25.8	2.0	ug/l	25.0		103	80-120	2.35	20	
1,3-Dichloropropane	26.5	2.0	ug/l	25.0		106	80-120	3.45	20	
2,2-Dichloropropane	28.0	2.0	ug/l	25.0		112	75-135	7.56	20	
1,1-Dichloropropene	25.5	2.0	ug/l	25.0		102	80-120	1.17	20	

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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
LCS Dup Analyzed: 09/09/01 (P111002-BSD1)										
cis-1,3-Dichloropropene	26.6	2.0	ug/l	25.0		106	80-120	1.52	20	
trans-1,3-Dichloropropene	25.6	2.0	ug/l	25.0		102	80-120	0.391	20	
Ethylbenzene	25.8	2.0	ug/l	25.0		103	80-120	0.772	20	
Hexachlorobutadiene	23.1	5.0	ug/l	25.0		92.4	60-145	3.52	20	
2-Hexanone	28.2	10	ug/l	25.0		113	50-170	1.43	20	
Iodomethane	27.6	2.0	ug/l	25.0		110	40-155	0.00	20	
Isopropylbenzene	26.2	2.0	ug/l	25.0		105	80-120	2.26	20	
p-Isopropyltoluene	24.3	2.0	ug/l	25.0		97.2	80-120	0.826	20	
Methylene chloride	27.8	5.0	ug/l	25.0		111	80-120	3.29	20	
4-Methyl-2-pentanone (MIBK)	27.0	10	ug/l	25.0		108	70-140	4.55	20	
Methyl-tert-butyl Ether (MTBE)	28.1	5.0	ug/l	25.0		112	75-135	1.06	20	
Naphthalene	23.7	5.0	ug/l	25.0		94.8	70-130	4.75	20	
n-Propylbenzene	25.4	2.0	ug/l	25.0		102	80-120	1.17	20	
Styrene	26.4	2.0	ug/l	25.0		106	80-120	0.00	20	
1,1,1,2-Tetrachloroethane	28.3	5.0	ug/l	25.0		113	65-150	1.42	20	
1,1,2,2-Tetrachloroethane	26.0	2.0	ug/l	25.0		104	70-130	2.73	20	
Tetrachloroethene	27.0	2.0	ug/l	25.0		108	80-125	0.370	20	
Toluene	25.3	2.0	ug/l	25.0		101	80-120	0.394	20	
1,2,3-Trichlorobenzene	24.0	5.0	ug/l	25.0		96.0	75-125	6.90	20	
1,2,4-Trichlorobenzene	25.2	5.0	ug/l	25.0		101	80-120	5.71	20	
1,1,1-Trichloroethane	26.9	2.0	ug/l	25.0		108	80-120	2.21	20	
1,1,2-Trichloroethane	26.7	2.0	ug/l	25.0		107	80-120	4.99	20	
Trichloroethene	25.4	2.0	ug/l	25.0		102	80-120	2.39	20	
Trichlorofluoromethane	27.1	5.0	ug/l	25.0		108	75-150	11.5	20	
1,2,3-Trichloropropane	24.6	10	ug/l	25.0		98.4	65-135	3.31	20	
1,2,4-Trimethylbenzene	25.6	2.0	ug/l	25.0		102	80-120	1.18	20	
1,3,5-Trimethylbenzene	24.8	2.0	ug/l	25.0		99.2	80-120	0.404	20	
Vinyl acetate	30.0	25	ug/l	25.0		120	40-120	0.669	20	
Vinyl chloride	26.2	5.0	ug/l	25.0		105	80-120	9.45	20	
Xylenes, Total	77.6	10	ug/l	75.0		103	80-120	0.386	20	
Surrogate: Dibromofluoromethane	29.2		ug/l	25.0		117	80-120			
Surrogate: Toluene-d8	27.6		ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	26.3		ug/l	25.0		105	80-120			

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK OR DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1002 Extracted: 09/09/01										
Matrix Spike Analyzed: 09/09/01 (P1I1002-MS1)					Source: PKH0535-02					
Acetone	ND	20	ug/l	25.0	ND	41.6	5-200			
Benzene	23.4	2.0	ug/l	25.0	ND	93.6	80-120			
Bromobenzene	24.0	5.0	ug/l	25.0	ND	96.0	80-120			
Bromochloromethane	24.4	5.0	ug/l	25.0	ND	97.6	60-135			
Bromodichloromethane	25.7	2.0	ug/l	25.0	ND	103	80-120			
Bromoform	20.2	5.0	ug/l	25.0	ND	80.8	40-140			
Bromomethane	11.9	5.0	ug/l	25.0	ND	47.6	25-165			
2-Butanone (MEK)	12.1	10	ug/l	25.0	ND	48.4	10-160			
n-Butylbenzene	21.8	5.0	ug/l	25.0	ND	87.2	75-135			
sec-Butylbenzene	22.4	5.0	ug/l	25.0	ND	89.6	80-135			
tert-Butylbenzene	23.0	5.0	ug/l	25.0	ND	92.0	80-125			
Carbon Disulfide	10.5	5.0	ug/l	25.0	ND	42.0	20-120			
Carbon tetrachloride	26.7	5.0	ug/l	25.0	ND	107	80-145			
Chlorobenzene	26.0	2.0	ug/l	25.0	ND	104	80-120			
Chloroethane	15.5	5.0	ug/l	25.0	ND	62.0	30-150			
Chloroform	25.4	2.0	ug/l	25.0	ND	102	80-125			
Chloromethane	6.06	5.0	ug/l	25.0	ND	24.2	15-140			
2-Chlorotoluene	23.9	5.0	ug/l	25.0	ND	95.6	80-124			
4-Chlorotoluene	23.7	5.0	ug/l	25.0	ND	94.8	80-125			
Dibromochloromethane	24.2	2.0	ug/l	25.0	ND	96.8	75-135			
1,2-Dibromo-3-chloropropane	13.7	5.0	ug/l	25.0	ND	54.8	25-185			
1,2-Dibromoethane (EDB)	21.8	2.0	ug/l	25.0	ND	87.2	45-145			
Dibromomethane	23.2	2.0	ug/l	25.0	ND	92.8	55-140			
1,2-Dichlorobenzene	23.3	2.0	ug/l	25.0	ND	93.2	80-120			
1,3-Dichlorobenzene	23.6	2.0	ug/l	25.0	ND	94.4	80-120			
1,4-Dichlorobenzene	24.4	2.0	ug/l	25.0	ND	97.6	80-120			
Dichlorodifluoromethane	10.0	5.0	ug/l	25.0	ND	40.0	25-145			
1,1-Dichloroethane	23.4	2.0	ug/l	25.0	ND	93.6	75-120			
1,2-Dichloroethane	23.3	2.0	ug/l	25.0	ND	93.2	60-135			
1,1-Dichloroethene	20.1	5.0	ug/l	25.0	ND	80.4	55-120			
cis-1,2-Dichloroethene	32.8	2.0	ug/l	25.0	9.3	94.0	75-120			
trans-1,2-Dichloroethene	21.2	2.0	ug/l	25.0	ND	84.8	65-120			
1,2-Dichloropropane	24.5	2.0	ug/l	25.0	ND	98.0	80-125			
1,3-Dichloropropane	21.8	2.0	ug/l	25.0	ND	87.2	55-140			
2,2-Dichloropropane	29.4	2.0	ug/l	25.0	ND	118	45-165			
1,1-Dichloropropene	23.5	2.0	ug/l	25.0	ND	94.0	80-120			

Melissa Evans
Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1002 Extracted: 09/09/01										
Matrix Spike Analyzed: 09/09/01 (P1I1002-MS1)										
					Source: PKH0535-02					
cis-1,3-Dichloropropene	24.2	2.0	ug/l	25.0	ND	96.8	80-120			
trans-1,3-Dichloropropene	21.4	2.0	ug/l	25.0	ND	85.6	70-120			
Ethylbenzene	25.9	2.0	ug/l	25.0	ND	104	80-120			
Hexachlorobutadiene	18.1	5.0	ug/l	25.0	ND	72.4	80-135			M2
2-Hexanone	14.8	10	ug/l	25.0	ND	59.2	25-185			
Iodomethane	17.3	2.0	ug/l	25.0	ND	69.2	30-155			
Isopropylbenzene	25.9	2.0	ug/l	25.0	ND	104	80-125			
p-Isopropyltoluene	21.6	2.0	ug/l	25.0	ND	86.4	80-125			
Methylene chloride	20.1	5.0	ug/l	25.0	ND	80.4	55-125			
4-Methyl-2-pentanone (MIBK)	18.5	10	ug/l	25.0	ND	74.0	10-175			
Methyl-tert-butyl Ether (MTBE)	23.2	5.0	ug/l	25.0	ND	92.8	55-135			
Naphthalene	12.9	5.0	ug/l	25.0	ND	51.6	15-160			
n-Propylbenzene	24.9	2.0	ug/l	25.0	ND	99.6	80-130			
Styrene	24.2	2.0	ug/l	25.0	ND	96.8	60-135			
1,1,1,2-Tetrachloroethane	26.5	5.0	ug/l	25.0	ND	106	80-135			
1,1,2,2-Tetrachloroethane	14.9	2.0	ug/l	25.0	ND	59.6	35-150			
Tetrachloroethene	28.0	2.0	ug/l	25.0	ND	112	80-120			
Toluene	24.4	2.0	ug/l	25.0	ND	97.6	80-120			
1,2,3-Trichlorobenzene	14.8	5.0	ug/l	25.0	ND	59.2	45-145			
1,2,4-Trichlorobenzene	18.8	5.0	ug/l	25.0	ND	75.2	65-130			
1,1,1-Trichloroethane	26.4	2.0	ug/l	25.0	ND	106	80-120			
1,1,2-Trichloroethane	22.2	2.0	ug/l	25.0	ND	88.8	55-145			
Trichloroethene	28.3	2.0	ug/l	25.0	ND	113	80-120			
Trichlorofluoromethane	24.3	5.0	ug/l	25.0	ND	97.2	70-145			
1,2,3-Trichloropropane	17.5	10	ug/l	25.0	ND	70.0	20-160			
1,2,4-Trimethylbenzene	23.3	2.0	ug/l	25.0	ND	93.2	70-135			
1,3,5-Trimethylbenzene	23.2	2.0	ug/l	25.0	ND	92.8	80-125			
Vinyl acetate	ND	25	ug/l	25.0	ND		25-130			N2
Vinyl chloride	13.0	5.0	ug/l	25.0	ND	52.0	25-135			
Xylenes, Total	77.0	10	ug/l	75.0	ND	103	80-120			
Surrogate: Dibromofluoromethane	24.4		ug/l	25.0		97.6	80-120			
Surrogate: Toluene-d8	26.8		ug/l	25.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	25.6		ug/l	25.0		102	80-120			

Melissa Evans
 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
Matrix Spike Dup Analyzed: 09/09/01 (P111002-MSD1)										
					Source: PKH0535-02					
Acetone	ND	20	ug/l	25.0	ND	62.4	5-200	40.0	20	R4
Benzene	23.1	2.0	ug/l	25.0	ND	92.4	80-120	1.29	20	
Bromobenzene	23.3	5.0	ug/l	25.0	ND	93.2	80-120	2.96	20	
Bromochloromethane	24.9	5.0	ug/l	25.0	ND	99.6	60-135	2.03	20	
Bromodichloromethane	25.4	2.0	ug/l	25.0	ND	102	80-120	1.17	20	
Bromoform	23.4	5.0	ug/l	25.0	ND	93.6	40-140	14.7	20	
Bromomethane	12.6	5.0	ug/l	25.0	ND	50.4	25-165	5.71	20	
2-Butanone (MEK)	14.0	10	ug/l	25.0	ND	56.0	10-160	14.6	20	
n-Butylbenzene	21.9	5.0	ug/l	25.0	ND	87.6	75-135	0.458	20	
sec-Butylbenzene	22.2	5.0	ug/l	25.0	ND	88.8	80-135	0.897	20	
tert-Butylbenzene	22.3	5.0	ug/l	25.0	ND	89.2	80-125	3.09	20	
Carbon Disulfide	10.6	5.0	ug/l	25.0	ND	42.4	20-120	0.948	20	
Carbon tetrachloride	27.1	5.0	ug/l	25.0	ND	108	80-145	1.49	20	
Chlorobenzene	25.6	2.0	ug/l	25.0	ND	102	80-120	1.55	20	
Chloroethane	15.9	5.0	ug/l	25.0	ND	63.6	30-150	2.55	20	
Chloroform	25.6	2.0	ug/l	25.0	ND	102	80-125	0.784	20	
Chloromethane	6.17	5.0	ug/l	25.0	ND	24.7	15-140	1.80	20	
2-Chlorotoluene	23.1	5.0	ug/l	25.0	ND	92.4	80-124	3.40	20	
4-Chlorotoluene	23.5	5.0	ug/l	25.0	ND	94.0	80-125	0.847	20	
Dibromochloromethane	25.7	2.0	ug/l	25.0	ND	103	75-135	6.01	20	
1,2-Dibromo-3-chloropropane	18.8	5.0	ug/l	25.0	ND	75.2	25-185	31.4	20	R4
1,2-Dibromoethane (EDB)	24.0	2.0	ug/l	25.0	ND	96.0	45-145	9.61	20	
Dibromomethane	24.3	2.0	ug/l	25.0	ND	97.2	55-140	4.63	20	
1,2-Dichlorobenzene	23.5	2.0	ug/l	25.0	ND	94.0	80-120	0.855	20	
1,3-Dichlorobenzene	23.4	2.0	ug/l	25.0	ND	93.6	80-120	0.851	20	
1,4-Dichlorobenzene	24.0	2.0	ug/l	25.0	ND	96.0	80-120	1.65	20	
Dichlorodifluoromethane	9.65	5.0	ug/l	25.0	ND	38.6	25-145	3.56	20	
1,1-Dichloroethane	23.7	2.0	ug/l	25.0	ND	94.8	75-120	1.27	20	
1,2-Dichloroethane	24.5	2.0	ug/l	25.0	ND	98.0	60-135	5.02	20	
1,1-Dichloroethene	20.0	5.0	ug/l	25.0	ND	80.0	55-120	0.499	20	
cis-1,2-Dichloroethene	32.6	2.0	ug/l	25.0	9.3	93.2	75-120	0.612	20	
trans-1,2-Dichloroethene	21.3	2.0	ug/l	25.0	ND	85.2	65-120	0.471	20	
1,2-Dichloropropane	24.3	2.0	ug/l	25.0	ND	97.2	80-125	0.820	20	
1,3-Dichloropropane	23.7	2.0	ug/l	25.0	ND	94.8	55-140	8.35	20	
2,2-Dichloropropane	27.3	2.0	ug/l	25.0	ND	109	45-165	7.41	20	
1,1-Dichloropropene	23.6	2.0	ug/l	25.0	ND	94.4	80-120	0.425	20	

Melissa Evans
Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
Matrix Spike Dup Analyzed: 09/09/01 (P111002-MSD1)					Source: PKH0535-02					
cis-1,3-Dichloropropene	24.3	2.0	ug/l	25.0	ND	97.2	80-120	0.412	20	
trans-1,3-Dichloropropene	22.6	2.0	ug/l	25.0	ND	90.4	70-120	5.45	20	
Ethylbenzene	26.0	2.0	ug/l	25.0	ND	104	80-120	0.385	20	
Hexachlorobutadiene	19.7	5.0	ug/l	25.0	ND	78.8	80-135	8.47	20	M2
2-Hexanone	20.4	10	ug/l	25.0	ND	81.6	25-185	31.8	20	R4
Iodomethane	17.3	2.0	ug/l	25.0	ND	69.2	30-155	0.00	20	
Isopropylbenzene	26.0	2.0	ug/l	25.0	ND	104	80-125	0.385	20	
p-Isopropyltoluene	21.2	2.0	ug/l	25.0	ND	84.8	80-125	1.87	20	
Methylene chloride	19.7	5.0	ug/l	25.0	ND	78.8	55-125	2.01	20	
4-Methyl-2-pentanone (MIBK)	24.2	10	ug/l	25.0	ND	96.8	10-175	26.7	20	R4
Methyl-tert-butyl Ether (MTBE)	23.9	5.0	ug/l	25.0	ND	95.6	55-135	2.97	20	
Naphthalene	17.4	5.0	ug/l	25.0	ND	69.6	15-160	29.7	20	R4
n-Propylbenzene	24.0	2.0	ug/l	25.0	ND	96.0	80-130	3.68	20	
Styrene	24.4	2.0	ug/l	25.0	ND	97.6	60-135	0.823	20	
1,1,1,2-Tetrachloroethane	26.5	5.0	ug/l	25.0	ND	106	80-135	0.00	20	
1,1,2,2-Tetrachloroethane	16.7	2.0	ug/l	25.0	ND	66.8	35-150	11.4	20	
Tetrachloroethene	27.7	2.0	ug/l	25.0	ND	111	80-120	1.08	20	
Toluene	24.2	2.0	ug/l	25.0	ND	96.8	80-120	0.823	20	
1,2,3-Trichlorobenzene	17.7	5.0	ug/l	25.0	ND	70.8	45-145	17.8	20	
1,2,4-Trichlorobenzene	20.8	5.0	ug/l	25.0	ND	83.2	65-130	10.1	20	
1,1,1-Trichloroethane	26.5	2.0	ug/l	25.0	ND	106	80-120	0.378	20	
1,1,2-Trichloroethane	23.6	2.0	ug/l	25.0	ND	94.4	55-145	6.11	20	
Trichloroethene	29.5	2.0	ug/l	25.0	ND	118	80-120	4.15	20	
Trichlorofluoromethane	23.7	5.0	ug/l	25.0	ND	94.8	70-145	2.50	20	
1,2,3-Trichloropropane	21.3	10	ug/l	25.0	ND	85.2	20-160	19.6	20	
1,2,4-Trimethylbenzene	23.4	2.0	ug/l	25.0	ND	93.6	70-135	0.428	20	
1,3,5-Trimethylbenzene	22.8	2.0	ug/l	25.0	ND	91.2	80-125	1.74	20	
Vinyl acetate	ND	25	ug/l	25.0	ND	50.4	25-130		20	
Vinyl chloride	13.4	5.0	ug/l	25.0	ND	53.6	25-135	3.03	20	
Xylenes, Total	77.8	10	ug/l	75.0	ND	104	80-120	1.03	20	
Surrogate: Dibromofluoromethane	23.9		ug/l	25.0		95.6	80-120			
Surrogate: Toluene-d8	26.6		ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	24.8		ug/l	25.0		99.2	80-120			

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0524 Extracted: 09/05/01										
Blank Analyzed: 09/05/01 (P1I0524-BLK1)										
Mercury	ND	0.020	mg/kg							
LCS Analyzed: 09/05/01 (P1I0524-BS1)										
Mercury	0.406	0.020	mg/kg	0.417		97.4	85-115			
Matrix Spike Analyzed: 09/05/01 (P1I0524-MS1)										
Mercury	0.358	0.020	mg/kg	0.417	ND	84.9	85-115			
Matrix Spike Dup Analyzed: 09/05/01 (P1I0524-MSD1)										
Mercury	0.355	0.020	mg/kg	0.417	ND	84.2	85-115	0.842	20	M2
Batch: P1I0713 Extracted: 09/07/01										
Blank Analyzed: 09/10/01 (P1I0713-BLK1)										
Arsenic	ND	5.0	mg/kg							
Barium	ND	1.0	mg/kg							
Cadmium	ND	0.50	mg/kg							
Chromium	2.99	1.0	mg/kg							B1
Lead	ND	5.0	mg/kg							
Selenium	ND	5.0	mg/kg							
Silver	ND	0.50	mg/kg							
LCS Analyzed: 09/10/01 (P1I0713-BS1)										
Arsenic	94.8	5.0	mg/kg	100		94.8	80-120			
Barium	96.1	1.0	mg/kg	100		96.1	80-120			
Cadmium	97.9	0.50	mg/kg	100		97.9	80-120			
Chromium	95.6	1.0	mg/kg	100		95.6	80-120			
Lead	94.3	5.0	mg/kg	100		94.3	80-120			
Selenium	94.8	5.0	mg/kg	100		94.8	80-120			
Silver	81.7	0.50	mg/kg	100		81.7	80-120			



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
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 Received: 08/30/01

METHOD BLANK QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110713 Extracted: 09/07/01										
Matrix Spike Analyzed: 09/10/01 (P110713-MS1)										
					Source: PKH0511-03					
Arsenic	88.9	5.0	mg/kg	100	ND	88.9	75-125			
Barium	301	1.0	mg/kg	100	230	71.0	75-125			M2
Cadmium	87.6	0.50	mg/kg	100	ND	87.6	75-125			
Chromium	101	1.0	mg/kg	100	25	76.0	75-125			
Lead	97.5	5.0	mg/kg	100	9.0	88.5	75-125			
Selenium	92.2	5.0	mg/kg	100	ND	90.0	75-125			
Silver	88.7	0.50	mg/kg	100	ND	88.7	75-125			
Matrix Spike Dup Analyzed: 09/10/01 (P110713-MSD1)										
					Source: PKH0511-03					
Arsenic	73.2	5.0	mg/kg	100	ND	73.2	75-125	19.4	20	M2
Barium	300	1.0	mg/kg	100	230	70.0	75-125	0.333	20	M2
Cadmium	73.5	0.50	mg/kg	100	ND	73.5	75-125	17.5	20	M2
Chromium	88.3	1.0	mg/kg	100	25	63.3	75-125	13.4	20	M2
Lead	81.7	5.0	mg/kg	100	9.0	72.7	75-125	17.6	20	M2
Selenium	76.4	5.0	mg/kg	100	ND	74.2	75-125	18.7	20	M2
Silver	86.5	0.50	mg/kg	100	ND	86.5	75-125	2.51	20	

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0152

Report Number: PKH0540

Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Data Qualifiers
Batch: P110404 Extracted: 08/31/01										
Blank Analyzed: 08/31/01 (P110404-BLK1)										
Chromium VI	ND	0.025	mg/l							
LCS Analyzed: 08/31/01 (P110404-BS1)										
Chromium VI	0.0993	0.050	mg/l	0.100		99.3	85-115			
Matrix Spike Analyzed: 08/31/01 (P110404-MS1)										
Chromium VI	0.0521	0.025	mg/l	0.0500	ND	104	85-115			
Matrix Spike Dup Analyzed: 08/31/01 (P110404-MSD1)										
Chromium VI	0.0509	0.025	mg/l	0.0500	ND	102	85-115	2.33	20	
Batch: P110605 Extracted: 09/06/01										
Blank Analyzed: 09/07/01 (P110605-BLK1)										
Arsenic	ND	0.050	mg/l							
Copper	ND	0.020	mg/l							
Nickel	ND	0.050	mg/l							
Zinc	ND	0.050	mg/l							
LCS Analyzed: 09/07/01 (P110605-BS1)										
Arsenic	1.04	0.050	mg/l	1.00		104	85-115			
Copper	1.05	0.020	mg/l	1.00		105	85-115			
Nickel	1.02	0.050	mg/l	1.00		102	85-115			
Zinc	1.05	0.050	mg/l	1.00		105	85-115			
LCS Dup Analyzed: 09/07/01 (P110605-BSD1)										
Arsenic	1.03	0.050	mg/l	1.00		103	85-115	0.966	20	
Copper	1.06	0.020	mg/l	1.00		106	85-115	0.948	20	
Nickel	1.01	0.050	mg/l	1.00		101	85-115	0.985	20	
Zinc	1.04	0.050	mg/l	1.00		104	85-115	0.957	20	



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Report Number: PKH0540

Sampled: 08/29/01-08/30/01
Received: 08/30/01

METHOD BLANK QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0605 Extracted: 09/06/01									
Matrix Spike Analyzed: 09/07/01 (P1I0605-MS1)					Source: PKH0544-01				
Arsenic	1.04	0.050	mg/l	1.00	ND	104	70-130		
Copper	0.986	0.020	mg/l	1.00	ND	97.6	70-130		
Nickel	0.977	0.050	mg/l	1.00	ND	97.6	70-130		
Zinc	1.01	0.050	mg/l	1.00	ND	100	70-130		
Matrix Spike Dup Analyzed: 09/07/01 (P1I0605-MSD1)					Source: PKH0544-01				
Arsenic	1.04	0.050	mg/l	1.00	ND	104	70-130	0.00	20
Copper	0.987	0.020	mg/l	1.00	ND	97.7	70-130	0.101	20
Nickel	0.965	0.050	mg/l	1.00	ND	96.4	70-130	1.24	20
Zinc	0.996	0.050	mg/l	1.00	ND	98.8	70-130	1.40	20

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Client Project ID: 70211-0-0152

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Sampled: 08/29/01-08/30/01

Received: 08/30/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	Limit	Data Qualifiers
Batch: P1I1008 Extracted: 09/10/01										
Blank Analyzed: 09/10/01 (P1I1008-BLK1)										
Total Cyanide	ND	0.020	mg/l							
LCS Analyzed: 09/10/01 (P1I1008-BS1)										
Total Cyanide	0.0905	0.020	mg/l	0.100		90.5	90-110			
Matrix Spike Analyzed: 09/10/01 (P1I1008-MS1)										
Total Cyanide	0.0876	0.020	mg/l	0.100	ND	87.6	70-130			
Matrix Spike Dup Analyzed: 09/10/01 (P1I1008-MSD1)										
Total Cyanide	0.0963	0.020	mg/l	0.100	ND	96.3	70-130	9.46	20	
Batch: P1I1024 Extracted: 09/10/01										
Blank Analyzed: 09/11/01 (P1I1024-BLK1)										
Total Cyanide	ND	0.50	mg/kg							
Matrix Spike Analyzed: 09/11/01 (P1I1024-MS1)										
Total Cyanide	2.46	0.50	mg/kg	2.50	ND	98.4	70-130			
Matrix Spike Dup Analyzed: 09/11/01 (P1I1024-MSD1)										
Total Cyanide	2.19	0.50	mg/kg	2.50	ND	87.6	70-130	11.6	20	
Reference Analyzed: 09/11/01 (P1I1024-SRM1)										
Total Cyanide	138	20	mg/kg	201		68.7	40-160			



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Report Number: PKH0540

Sampled: 08/29/01-08/30/01
Received: 08/30/01

METHOD BLANK/OC DATA

DATA QUALIFIERS AND DEFINITIONS

- B1** Target analyte detected in method blank at or above the method reporting limit.
- B4** Target analyte detected in blank at/above method acceptance criteria.
- M2** Matrix spike recovery was low, the method control sample recovery was acceptable.
- N1** See case narrative.
- N2** See corrective action report.
- R4** MS/MSD RPD exceeded the method control limit. Recovery met acceptance criteria.
- ND** Analyte NOT DETECTED at or above the reporting limit
- NR** Not reported.
- RPD** Relative Percent Difference

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID 70211-0-0150
Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01
Issued: 10/2/01-11/26/01
Revised: 11/26/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKH0511-01	LB3-S-10	Soil
PKH0511-02	LB3-S-20	Soil
PKH0511-03	LB3-S-30	Soil
PKH0511-03RE2	LB3-S-30	Soil
PKH0511-04	LB3-S-40	Soil
PKH0511-04RE2	LB3-S-40	Soil
PKH0511-05	LB3-S-50	Soil
PKH0511-05RE2	LB3-S-50	Soil
PKH0511-05RE7	LB3-S-50	Soil
PKH0511-06	LB3-S-60	Soil
PKH0511-09	LB3-S-30	Soil
PKH0511-11	LB3-S-50	Soil
PKH0511-13	RINSATE	Water

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation. Soil samples requiring volatile analysis were received in Encore Container(s). Samples were received at a temperature of 7 degrees C.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: Report was revised 11/26/01 to include Quality Control data for Method 8260 (Soils).

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

QA/QC CRITERIA: The N2 flag on ICP Metals indicates that the Matrix Spike recovery was outside the method control limits. See Corrective Action Report. The R1 flag on ICP Metals indicates that the RPD exceeded the method control limit. See Corrective Action Report.

EXPLANATION OF DATA QUALIFIERS: The N1 flag on ICP Metals indicates that the analyte was detected in the associated Method Blank. Analyte concentration in the sample is greater than 10X the concentration found in the Method Blank. The N2 flag on 8260 indicates that one or more QC parameters were outside of laboratory acceptance limits. Please see Corrective Action Report.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)



Debbie Fuller
Project Manager

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CORRECTIVE ACTION REPORT

Department: Metals Methods: 6010B
Date: 09/14/2001 Matrix: Soil
Batch: P111410
Samples Affected: PKI0059-01 – PKI0059-04, PKI0037-02, PKI0078-01,
PKI0082-01 – PKI0082-03, PKI0091-01 _ PKI0091-02,
PKI0138-074, PKH0511-03 – PKH0511-05, PKH0448-03,
PKH0448-06 & PKH0471-02

Identification and Definition of Problem:

Several analytes recovered low and outside of acceptance limits in the Matrix Spike Duplicate (MSD). Also, several of the analytes recovered high and outside of acceptance limits in the Matrix Spike (MS). Because the MSD recovered low and the MS recovered high the Relative Percent Difference between the MS and the MSD for these compounds was also high and outside of acceptance limits.

Determination of the Cause of the Problem:

A definitive cause for the out of acceptance limits recoveries could not be determined.

Corrective Action:

The Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were both within acceptance limits for all analytes. The RPDs between the LCS and the LCSD were also within acceptance limits. Therefore the data should not be significantly impacted. The MS and MSD have been flagged "N2" to indicate that the recoveries were outside of acceptance limits. The MSD has also been flagged "R1" to indicate that the RPD was outside of acceptance limits.

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 10/5/2001
Quality Assurance Manager



CORRECTIVE ACTION REPORT

Department: GC/MS Method: 8260B
Date: 09/09/2001 Matrix: Water
Batch: P111002
Samples: PKH0451-02, PKH0563-01 – PKH0563-02, PKH0535-02, PKH0511-11
– PKH00511-13, PKH0540-02 & PKI0037-03

Identification and Definition of Problem:

The Matrix Spike (MS) recovered below the Method Detection Limit (MDL) for Vinyl Acetate. The MS recovered at a concentration of 11ppb and the MDL is 12ppb. The recovery of the compound is 44% and within the acceptance limits of 25-130%. Due to the MS recovering below the MDL, the Relative Percent Difference (RPD) between the MS and the Matrix Spike Duplicate (MSD) is not calculated in the report. The actual RPD between the MS and the MSD is 13%.

Determination of the Cause of the Problem:

The cause of the low recovery in the MS which caused the concentration to be below the MDL has not been determined.

Corrective Action:

The Laboratory Control Sample (LCS), Laboratory Control Sample Duplicate (LCSD) and MSD recovered within acceptance limits for Vinyl acetate. The RPD between the LCS and the LCSD was also within acceptance limits. Therefore, the data should not be significantly impacted. The MS has been flagged "N2" for Vinyl acetate to indicate that the compound was recovered at a concentration that is less than the MDL.

Elizabeth C. Wueschner:
Quality Assurance Manager

Elizabeth C. Wueschner

Date: 10/5 /2001



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01

Received: 08/29/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0511-09 (LB3-S-30 - Soil)								
Acetone	EPA 8260B	P1H3001	850	ND	1	8/30/01	9/9/01	
Benzene	EPA 8260B	P1H3001	42	ND	1	8/30/01	9/9/01	
Bromobenzene	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
Bromochloromethane	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
Bromodichloromethane	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Bromoform	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
Bromomethane	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
2-Butanone (MEK)	EPA 8260B	P1H3001	420	ND	1	8/30/01	9/9/01	
n-Butylbenzene	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
sec-Butylbenzene	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
tert-Butylbenzene	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
Carbon Disulfide	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
Carbon tetrachloride	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
Chlorobenzene	EPA 8260B	P1H3001	42	ND	1	8/30/01	9/9/01	
Chloroethane	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
Chloroform	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Chloromethane	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
2-Chlorotoluene	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
4-Chlorotoluene	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
Dibromochloromethane	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Dibromomethane	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
1,2-Dichlorobenzene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
1,3-Dichlorobenzene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
1,4-Dichlorobenzene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Dichlorodifluoromethane	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
1,1-Dichloroethane	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
1,2-Dichloroethane	EPA 8260B	P1H3001	42	ND	1	8/30/01	9/9/01	
1,1-Dichloroethene	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
cis-1,2-Dichloroethene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
trans-1,2-Dichloroethene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
1,2-Dichloropropane	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
1,3-Dichloropropane	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
2,2-Dichloropropane	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
1,1-Dichloropropene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
cis-1,3-Dichloropropene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
trans-1,3-Dichloropropene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Ethylbenzene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Hexachlorobutadiene	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
2-Hexanone	EPA 8260B	P1H3001	420	ND	1	8/30/01	9/9/01	
Iodomethane	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Isopropylbenzene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	

Debbie Fuller
 Project Manager

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PKH0511
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4634 S. 36th Place
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Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0511-09 (LB3-S-30 - Soil)								
p-Isopropyltoluene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Methylene chloride	EPA 8260B	P1H3001	420	ND	1	8/30/01	9/9/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P1H3001	420	ND	1	8/30/01	9/9/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
Naphthalene	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
n-Propylbenzene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Styrene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Tetrachloroethene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Toluene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
1,2,3-Trichlorobenzene	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
1,2,4-Trichlorobenzene	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
1,1,1-Trichloroethane	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
1,1,2-Trichloroethane	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Trichloroethene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Trichlorofluoromethane	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
1,2,3-Trichloropropane	EPA 8260B	P1H3001	420	ND	1	8/30/01	9/9/01	
1,2,4-Trimethylbenzene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
1,3,5-Trimethylbenzene	EPA 8260B	P1H3001	85	ND	1	8/30/01	9/9/01	
Vinyl acetate	EPA 8260B	P1H3001	1000	ND	1	8/30/01	9/9/01	
Vinyl chloride	EPA 8260B	P1H3001	210	ND	1	8/30/01	9/9/01	
Xylenes, Total	EPA 8260B	P1H3001	130	ND	1	8/30/01	9/9/01	
Surrogate: Dibromofluoromethane (70-125%)				89.2 %				
Surrogate: Toluene-d8 (50-135%)				96.2 %				
Surrogate: 4-Bromofluorobenzene (70-130%)				93.4 %				

The reporting limit for this sample was adjusted by a factor of 0.846 to account for the applicable preparation factor.



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 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01

Received: 08/29/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0511-11 (LB3-S-50 - Soil)								
Acetone	EPA 8260B	P1H3001	890	ND	1	8/30/01	9/9/01	
Benzene	EPA 8260B	P1H3001	44	ND	1	8/30/01	9/9/01	
Bromobenzene	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
Bromochloromethane	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
Bromodichloromethane	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Bromoform	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
Bromomethane	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
2-Butanone (MEK)	EPA 8260B	P1H3001	440	ND	1	8/30/01	9/9/01	
n-Butylbenzene	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
sec-Butylbenzene	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
tert-Butylbenzene	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
Carbon Disulfide	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
Carbon tetrachloride	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
Chlorobenzene	EPA 8260B	P1H3001	44	ND	1	8/30/01	9/9/01	
Chloroethane	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
Chloroform	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Chloromethane	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
2-Chlorotoluene	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
4-Chlorotoluene	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
Dibromochloromethane	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Dibromomethane	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
1,2-Dichlorobenzene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
1,3-Dichlorobenzene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
1,4-Dichlorobenzene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Dichlorodifluoromethane	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
1,1-Dichloroethane	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
1,2-Dichloroethane	EPA 8260B	P1H3001	44	ND	1	8/30/01	9/9/01	
1,1-Dichloroethene	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
cis-1,2-Dichloroethene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
trans-1,2-Dichloroethene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
1,2-Dichloropropane	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
1,3-Dichloropropane	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
2,2-Dichloropropane	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
1,1-Dichloropropene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
cis-1,3-Dichloropropene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
trans-1,3-Dichloropropene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Ethylbenzene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Hexachlorobutadiene	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
2-Hexanone	EPA 8260B	P1H3001	440	ND	1	8/30/01	9/9/01	
Iodomethane	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Isopropylbenzene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	

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PKH0511
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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0511-11 (LB3-S-50 - Soil)								
p-Isopropyltoluene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Methylene chloride	EPA 8260B	P1H3001	440	ND	1	8/30/01	9/9/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P1H3001	440	ND	1	8/30/01	9/9/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
Naphthalene	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
n-Propylbenzene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Styrene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Tetrachloroethene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Toluene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
1,2,3-Trichlorobenzene	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
1,2,4-Trichlorobenzene	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
1,1,1-Trichloroethane	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
1,1,2-Trichloroethane	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Trichloroethene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Trichlorofluoromethane	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
1,2,3-Trichloropropane	EPA 8260B	P1H3001	440	ND	1	8/30/01	9/9/01	
1,2,4-Trimethylbenzene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
1,3,5-Trimethylbenzene	EPA 8260B	P1H3001	89	ND	1	8/30/01	9/9/01	
Vinyl acetate	EPA 8260B	P1H3001	1100	ND	1	8/30/01	9/9/01	
Vinyl chloride	EPA 8260B	P1H3001	220	ND	1	8/30/01	9/9/01	
Xylenes, Total	EPA 8260B	P1H3001	130	ND	1	8/30/01	9/9/01	
Surrogate: Dibromofluoromethane (70-125%)				92.8 %				
Surrogate: Toluene-d8 (50-135%)				95.5 %				
Surrogate: 4-Bromofluorobenzene (70-130%)				86.1 %				

The reporting limit for this sample was adjusted by a factor of 0.887 to account for the applicable preparation factor.



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
 Received: 08/29/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0511-13 (RINSATE - Water)								
Acetone	EPA 8260B	P111002	20	ND	1	9/9/01	9/9/01	
Benzene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Bromobenzene	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
Bromochloromethane	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
Bromodichloromethane	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Bromoform	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
Bromomethane	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
2-Butanone (MEK)	EPA 8260B	P111002	10	ND	1	9/9/01	9/9/01	
n-Butylbenzene	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
sec-Butylbenzene	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
tert-Butylbenzene	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
Carbon Disulfide	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
Carbon tetrachloride	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
Chlorobenzene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Chloroethane	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
Chloroform	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Chloromethane	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
2-Chlorotoluene	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
4-Chlorotoluene	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
Dibromochloromethane	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Dibromomethane	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,2-Dichlorobenzene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,3-Dichlorobenzene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,4-Dichlorobenzene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Dichlorodifluoromethane	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
1,1-Dichloroethane	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,2-Dichloroethane	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,1-Dichloroethene	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
cis-1,2-Dichloroethene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
trans-1,2-Dichloroethene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,2-Dichloropropane	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,3-Dichloropropane	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
2,2-Dichloropropane	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,1-Dichloropropene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
cis-1,3-Dichloropropene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
trans-1,3-Dichloropropene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Ethylbenzene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Hexachlorobutadiene	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
2-Hexanone	EPA 8260B	P111002	10	ND	1	9/9/01	9/9/01	
Iodomethane	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Isopropylbenzene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	

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PKH0511
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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0511-13 (RINSATE - Water)								
p-Isopropyltoluene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Methylene chloride	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P111002	10	ND	1	9/9/01	9/9/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
Naphthalene	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
n-Propylbenzene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Styrene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Tetrachloroethene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Toluene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,2,3-Trichlorobenzene	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
1,2,4-Trichlorobenzene	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
1,1,1-Trichloroethane	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,1,2-Trichloroethane	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Trichloroethene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Trichlorofluoromethane	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
1,2,3-Trichloropropane	EPA 8260B	P111002	10	ND	1	9/9/01	9/9/01	
1,2,4-Trimethylbenzene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
1,3,5-Trimethylbenzene	EPA 8260B	P111002	2.0	ND	1	9/9/01	9/9/01	
Vinyl acetate	EPA 8260B	P111002	25	ND	1	9/9/01	9/9/01	
Vinyl chloride	EPA 8260B	P111002	5.0	ND	1	9/9/01	9/9/01	
Xylenes, Total	EPA 8260B	P111002	10	ND	1	9/9/01	9/9/01	
Surrogate: Dibromofluoromethane (80-120%)				107 %				
Surrogate: Toluene-d8 (80-120%)				106 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				103 %				

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Project Manager

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PKH0511
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01

Received: 08/29/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0511-01 (LB3-S-10 - Soil)								
Arsenic	EPA 6010B	P110616	5.0	ND	1	9/6/01	9/9/01	
Chromium	EPA 6010B	P110616	1.0	26	1	9/6/01	9/9/01	
Chromium VI	EPA 7196A	P110722	1.0	ND	1	9/7/01	9/7/01	
Copper	EPA 6010B	P110616	2.0	24	1	9/6/01	9/9/01	
Nickel	EPA 6010B	P110616	5.0	24	1	9/6/01	9/9/01	
Zinc	EPA 6010B	P110616	5.0	74	1	9/6/01	9/9/01	N1
Sample ID: PKH0511-02 (LB3-S-20 - Soil)								
Arsenic	EPA 6010B	P110616	5.0	ND	1	9/6/01	9/10/01	
Chromium	EPA 6010B	P110616	1.0	20	1	9/6/01	9/10/01	
Chromium VI	EPA 7196A	P110722	1.0	ND	1	9/7/01	9/7/01	
Copper	EPA 6010B	P110616	2.0	16	1	9/6/01	9/10/01	
Nickel	EPA 6010B	P110616	5.0	15	1	9/6/01	9/10/01	
Zinc	EPA 6010B	P110616	5.0	51	1	9/6/01	9/10/01	N1
Sample ID: PKH0511-03 (LB3-S-30 - Soil)								
Arsenic	EPA 6010B	P110713	5.0	ND	1	9/7/01	9/10/01	M2
Chromium VI	EPA 7196A	P110722	1.0	ND	1	9/7/01	9/7/01	
Copper	EPA 6010B	P110713	2.0	13	1	9/7/01	9/10/01	
Nickel	EPA 6010B	P110713	5.0	32	1	9/7/01	9/10/01	M2
Zinc	EPA 6010B	P110713	5.0	38	1	9/7/01	9/10/01	
Sample ID: PKH0511-03RE2 (LB3-S-30 - Soil)								
Chromium	EPA 6010B	P111410	1.0	61	1	9/11/01	9/14/01	

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0511-04 (LB3-S-40 - Soil)								
Arsenic	EPA 6010B	P1I0713	5.0	ND	1	9/7/01	9/10/01	
Chromium VI	EPA 7196A	P1I0722	1.0	ND	1	9/7/01	9/7/01	
Copper	EPA 6010B	P1I0713	2.0	16	1	9/7/01	9/10/01	
Nickel	EPA 6010B	P1I0713	5.0	33	1	9/7/01	9/10/01	
Zinc	EPA 6010B	P1I0713	5.0	39	1	9/7/01	9/10/01	
Sample ID: PKH0511-04RE2 (LB3-S-40 - Soil)								
Chromium	EPA 6010B	P1I1410	1.0	21	1	9/11/01	9/14/01	
Sample ID: PKH0511-05 (LB3-S-50 - Soil)								
Chromium VI	EPA 7196A	P1I0722	1.0	ND	1	9/7/01	9/7/01	
Sample ID: PKH0511-05RE2 (LB3-S-50 - Soil)								
Arsenic	EPA 6010B	P1I1410	5.0	ND	1	9/11/01	9/14/01	
Chromium	EPA 6010B	P1I1410	1.0	150	1	9/11/01	9/14/01	
Copper	EPA 6010B	P1I1410	2.0	9.8	1	9/11/01	9/14/01	
Nickel	EPA 6010B	P1I1410	5.0	53	1	9/11/01	9/14/01	
Sample ID: PKH0511-05RE7 (LB3-S-50 - Soil)								
Zinc	EPA 6010B	PIJ0103	5.0	30	1	10/1/01	10/2/01	
Sample ID: PKH0511-06 (LB3-S-60 - Soil)								
Arsenic	EPA 6010B	P1I0713	5.0	ND	1	9/7/01	9/10/01	
Chromium	EPA 6010B	P1I0713	1.0	45	1	9/7/01	9/10/01	N1
Chromium VI	EPA 7196A	P1I0722	1.0	ND	1	9/7/01	9/7/01	
Copper	EPA 6010B	P1I0713	2.0	39	1	9/7/01	9/10/01	
Nickel	EPA 6010B	P1I0713	5.0	51	1	9/7/01	9/10/01	
Zinc	EPA 6010B	P1I0713	5.0	33	1	9/7/01	9/10/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Debbie Fuller
Project Manager

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PKH0511
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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0511-13 (RINSATE - Water)								
Arsenic	EPA 200.7	P1H3011	0.050	ND	1	8/30/01	9/7/01	
Chromium	EPA 200.7	P1H3011	0.010	ND	1	8/30/01	9/7/01	
Chromium VI	SM3500CR-D	P1H3101	0.025	ND	1	8/30/01	8/30/01	
Copper	EPA 200.7	P1H3011	0.020	ND	1	8/30/01	9/7/01	
Nickel	EPA 200.7	P1H3011	0.050	ND	1	8/30/01	9/7/01	
Zinc	EPA 200.7	P1H3011	0.050	ND	1	8/30/01	9/7/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426

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PKH0511
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Law Engineering
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 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
 Received: 08/29/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKH0511-01 (LB3-S-10 - Soil)								
Total Cyanide	EPA 9014	P1I0611	0.50	ND	1	9/6/01	9/6/01	
Sample ID: PKH0511-02 (LB3-S-20 - Soil)								
Total Cyanide	EPA 9014	P1I0720	0.50	ND	1	9/7/01	9/10/01	
Sample ID: PKH0511-03 (LB3-S-30 - Soil)								
Total Cyanide	EPA 9014	P1I0720	0.50	ND	1	9/7/01	9/10/01	
Sample ID: PKH0511-04 (LB3-S-40 - Soil)								
Total Cyanide	EPA 9014	P1I0720	0.50	ND	1	9/7/01	9/10/01	
Sample ID: PKH0511-05 (LB3-S-50 - Soil)								
Total Cyanide	EPA 9014	P1I0720	0.50	ND	1	9/7/01	9/10/01	
Sample ID: PKH0511-06 (LB3-S-60 - Soil)								
Total Cyanide	EPA 9014	P1I0720	0.50 mg/l	ND mg/l	1	9/7/01	9/10/01	
Sample ID: PKH0511-13 (RINSATE - Water)								
Total Cyanide	SM4500-CN,C-E	P1I0709	0.020	ND	1	9/7/01	9/7/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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PKH0511
 Page 11 of 36



Law Engineering
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 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01

Received: 08/29/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3001 Extracted: 08/30/01										
Blank Analyzed: 09/05/01 (P1H3001-BLK1)										
Acetone	ND	1000	ug/kg							
Benzene	ND	50	ug/kg							
Bromobenzene	ND	250	ug/kg							
Bromochloromethane	ND	250	ug/kg							
Bromodichloromethane	ND	100	ug/kg							
Bromoform	ND	250	ug/kg							
Bromomethane	ND	250	ug/kg							
2-Butanone (MEK)	ND	500	ug/kg							
n-Butylbenzene	ND	250	ug/kg							
sec-Butylbenzene	ND	250	ug/kg							
tert-Butylbenzene	ND	250	ug/kg							
Carbon Disulfide	ND	250	ug/kg							
Carbon tetrachloride	ND	250	ug/kg							
Chlorobenzene	ND	50	ug/kg							
Chloroethane	ND	250	ug/kg							
Chloroform	ND	100	ug/kg							
Chloromethane	ND	250	ug/kg							
2-Chlorotoluene	ND	250	ug/kg							
4-Chlorotoluene	ND	250	ug/kg							
Dibromochloromethane	ND	100	ug/kg							
1,2-Dibromo-3-chloropropane	ND	250	ug/kg							
1,2-Dibromoethane (EDB)	ND	100	ug/kg							
Dibromomethane	ND	100	ug/kg							
1,2-Dichlorobenzene	ND	100	ug/kg							
1,3-Dichlorobenzene	ND	100	ug/kg							
1,4-Dichlorobenzene	ND	100	ug/kg							
Dichlorodifluoromethane	ND	250	ug/kg							
1,1-Dichloroethane	ND	100	ug/kg							
1,2-Dichloroethane	ND	50	ug/kg							
1,1-Dichloroethene	ND	250	ug/kg							
cis-1,2-Dichloroethene	ND	100	ug/kg							
trans-1,2-Dichloroethene	ND	100	ug/kg							
1,2-Dichloropropane	ND	100	ug/kg							
1,3-Dichloropropane	ND	100	ug/kg							

Debbie Fuller
 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3001 Extracted: 08/30/01										
Blank Analyzed: 09/05/01 (P1H3001-BLK1)										
2,2-Dichloropropane	ND	100	ug/kg							
1,1-Dichloropropene	ND	100	ug/kg							
cis-1,3-Dichloropropene	ND	100	ug/kg							
trans-1,3-Dichloropropene	ND	100	ug/kg							
Ethylbenzene	ND	100	ug/kg							
Hexachlorobutadiene	ND	250	ug/kg							
2-Hexanone	ND	500	ug/kg							
Iodomethane	ND	100	ug/kg							
Isopropylbenzene	ND	100	ug/kg							
p-Isopropyltoluene	ND	100	ug/kg							
Methylene chloride	ND	500	ug/kg							
4-Methyl-2-pentanone (MIBK)	ND	500	ug/kg							
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg							
Naphthalene	ND	250	ug/kg							
n-Propylbenzene	ND	100	ug/kg							
Styrene	ND	100	ug/kg							
1,1,1,2-Tetrachloroethane	ND	250	ug/kg							
1,1,2,2-Tetrachloroethane	ND	100	ug/kg							
Tetrachloroethene	ND	100	ug/kg							
Toluene	ND	100	ug/kg							
1,2,3-Trichlorobenzene	ND	250	ug/kg							
1,2,4-Trichlorobenzene	ND	250	ug/kg							
1,1,1-Trichloroethane	ND	100	ug/kg							
1,1,2-Trichloroethane	ND	100	ug/kg							
Trichloroethene	ND	100	ug/kg							
Trichlorofluoromethane	ND	250	ug/kg							
1,2,3-Trichloropropane	ND	500	ug/kg							
1,2,4-Trimethylbenzene	ND	100	ug/kg							
1,3,5-Trimethylbenzene	ND	100	ug/kg							
Vinyl acetate	ND	1200	ug/kg							
Vinyl chloride	ND	250	ug/kg							
Xylenes, Total	ND	150	ug/kg							
Surrogate: Dibromofluoromethane	1100		ug/kg	1250		88.0	70-125			
Surrogate: Toluene-d8	1210		ug/kg	1250		96.8	50-135			

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Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01

Received: 08/29/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3001 Extracted: 08/30/01										
Blank Analyzed: 09/05/01 (P1H3001-BLK1)										
Surrogate: 4-Bromofluorobenzene	1220		ug/kg	1250		97.6	70-130			
LCS Analyzed: 09/05/01 (P1H3001-BS1)										
Acetone	ND	1000	ug/kg	1000		91.9	5-200			
Benzene	880	50	ug/kg	1000		88.0	65-130			
Bromobenzene	878	250	ug/kg	1000		87.8	60-135			
Bromochloromethane	880	250	ug/kg	1000		88.0	60-135			
Bromodichloromethane	854	100	ug/kg	1000		85.4	30-135			
Bromoform	818	250	ug/kg	1000		81.8	60-140			
Bromomethane	ND	250	ug/kg	1000		20.0	10-200			
2-Butanone (MEK)	849	500	ug/kg	1000		84.9	10-160			
n-Butylbenzene	897	250	ug/kg	1000		89.7	65-125			
sec-Butylbenzene	936	250	ug/kg	1000		93.6	70-135			
tert-Butylbenzene	906	250	ug/kg	1000		90.6	70-130			
Carbon Disulfide	742	250	ug/kg	1000		74.2	20-120			
Carbon tetrachloride	862	250	ug/kg	1000		86.2	70-140			
Chlorobenzene	896	50	ug/kg	1000		89.6	75-125			
Chloroethane	ND	250	ug/kg	1000		22.5	10-200			
Chloroform	847	100	ug/kg	1000		84.7	35-135			
Chloromethane	729	250	ug/kg	1000		72.9	10-200			
2-Chlorotoluene	870	250	ug/kg	1000		87.0	70-135			
4-Chlorotoluene	887	250	ug/kg	1000		88.7	75-135			
Dibromochloromethane	837	100	ug/kg	1000		83.7	35-135			
1,2-Dibromo-3-chloropropane	734	250	ug/kg	1000		73.4	50-155			
1,2-Dibromoethane (EDB)	827	100	ug/kg	1000		82.7	70-130			
Dibromomethane	831	100	ug/kg	1000		83.1	65-130			
1,2-Dichlorobenzene	862	100	ug/kg	1000		86.2	70-125			
1,3-Dichlorobenzene	888	100	ug/kg	1000		88.8	70-125			
1,4-Dichlorobenzene	892	100	ug/kg	1000		89.2	70-135			
Dichlorodifluoromethane	610	250	ug/kg	1000		61.0	10-185			
1,1-Dichloroethane	866	100	ug/kg	1000		86.6	60-140			
1,2-Dichloroethane	839	50	ug/kg	1000		83.9	55-135			
1,1-Dichloroethene	866	250	ug/kg	1000		86.6	55-145			
cis-1,2-Dichloroethene	894	100	ug/kg	1000		89.4	60-125			
trans-1,2-Dichloroethene	878	100	ug/kg	1000		87.8	70-145			
1,2-Dichloropropane	879	100	ug/kg	1000		87.9	65-130			

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3001 Extracted: 08/30/01										
LCS Analyzed: 09/05/01 (P1H3001-BS1)										
1,3-Dichloropropane	862	100	ug/kg	1000		86.2	65-130			
2,2-Dichloropropane	818	100	ug/kg	1000		81.8	60-135			
1,1-Dichloropropene	849	100	ug/kg	1000		84.9	65-130			
cis-1,3-Dichloropropene	886	100	ug/kg	1000		88.6	60-125			
trans-1,3-Dichloropropene	818	100	ug/kg	1000		81.8	50-130			
Ethylbenzene	899	100	ug/kg	1000		89.9	70-125			
Hexachlorobutadiene	950	250	ug/kg	1000		95.0	60-125			
2-Hexanone	777	500	ug/kg	1000		77.7	25-185			
Iodomethane	747	100	ug/kg	1000		74.7	30-155			
Isopropylbenzene	899	100	ug/kg	1000		89.9	70-135			
p-Isopropyltoluene	883	100	ug/kg	1000		88.3	65-130			
Methylene chloride	943	500	ug/kg	1000		94.3	60-140			
4-Methyl-2-pentanone (MIBK)	777	500	ug/kg	1000		77.7	10-175			
Methyl-tert-butyl Ether (MTBE)	805	250	ug/kg	1000		80.5	55-135			
Naphthalene	788	250	ug/kg	1000		78.8	45-155			
n-Propylbenzene	894	100	ug/kg	1000		89.4	75-135			
Styrene	899	100	ug/kg	1000		89.9	70-130			
1,1,1,2-Tetrachloroethane	861	250	ug/kg	1000		86.1	70-130			
1,1,2,2-Tetrachloroethane	799	100	ug/kg	1000		79.9	60-140			
Tetrachloroethene	900	100	ug/kg	1000		90.0	65-130			
Toluene	899	100	ug/kg	1000		89.9	70-125			
1,2,3-Trichlorobenzene	794	250	ug/kg	1000		79.4	60-135			
1,2,4-Trichlorobenzene	828	250	ug/kg	1000		82.8	55-135			
1,1,1-Trichloroethane	855	100	ug/kg	1000		85.5	65-135			
1,1,2-Trichloroethane	857	100	ug/kg	1000		85.7	65-130			
Trichloroethene	896	100	ug/kg	1000		89.6	70-130			
Trichlorofluoromethane	690	250	ug/kg	1000		69.0	10-200			
1,2,3-Trichloropropane	786	500	ug/kg	1000		78.6	60-150			
1,2,4-Trimethylbenzene	907	100	ug/kg	1000		90.7	75-130			
1,3,5-Trimethylbenzene	886	100	ug/kg	1000		88.6	70-130			
Vinyl acetate	ND	1200	ug/kg	1000		66.4	25-130			
Vinyl chloride	806	250	ug/kg	1000		80.6	10-200			
Xylenes, Total	2680	150	ug/kg	3000		89.3	70-130			
Surrogate: Dibromofluoromethane	1080		ug/kg	1250		86.4	70-125			
Surrogate: Toluene-d8	1140		ug/kg	1250		91.2	50-135			
Surrogate: 4-Bromofluorobenzene	1160		ug/kg	1250		92.8	70-130			

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01

Received: 08/29/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3001 Extracted: 08/30/01										
LCS Dup Analyzed: 09/05/01 (P1H3001-BSD1)										
Acetone	ND	1000	ug/kg	1000		89.9	5-200	2.20	35	
Benzene	861	50	ug/kg	1000		86.1	65-130	2.18	35	
Bromobenzene	880	250	ug/kg	1000		88.0	60-135	0.228	35	
Bromochloromethane	852	250	ug/kg	1000		85.2	60-135	3.23	35	
Bromodichloromethane	864	100	ug/kg	1000		86.4	30-135	1.16	35	
Bromoform	773	250	ug/kg	1000		77.3	60-140	5.66	35	
Bromomethane	ND	250	ug/kg	1000		11.5	10-200	54.0	35	R6
2-Butanone (MEK)	835	500	ug/kg	1000		83.5	10-160	1.66	35	
n-Butylbenzene	892	250	ug/kg	1000		89.2	65-125	0.559	35	
sec-Butylbenzene	931	250	ug/kg	1000		93.1	70-135	0.536	35	
tert-Butylbenzene	886	250	ug/kg	1000		88.6	70-130	2.23	35	
Carbon Disulfide	648	250	ug/kg	1000		64.8	20-120	13.5	35	
Carbon tetrachloride	794	250	ug/kg	1000		79.4	70-140	8.21	35	
Chlorobenzene	856	50	ug/kg	1000		85.6	75-125	4.57	35	
Chloroethane	ND	250	ug/kg	1000		21.9	10-200	2.70	35	
Chloroform	796	100	ug/kg	1000		79.6	35-135	6.21	35	
Chloromethane	675	250	ug/kg	1000		67.5	10-200	7.69	35	
2-Chlorotoluene	867	250	ug/kg	1000		86.7	70-135	0.345	35	
4-Chlorotoluene	888	250	ug/kg	1000		88.8	75-135	0.113	35	
Dibromochloromethane	779	100	ug/kg	1000		77.9	35-135	7.18	35	
1,2-Dibromo-3-chloropropane	688	250	ug/kg	1000		68.8	50-155	6.47	35	
1,2-Dibromoethane (EDB)	753	100	ug/kg	1000		75.3	70-130	9.37	35	
Dibromomethane	841	100	ug/kg	1000		84.1	65-130	1.20	35	
1,2-Dichlorobenzene	861	100	ug/kg	1000		86.1	70-125	0.116	35	
1,3-Dichlorobenzene	882	100	ug/kg	1000		88.2	70-125	0.678	35	
1,4-Dichlorobenzene	887	100	ug/kg	1000		88.7	70-135	0.562	35	
Dichlorodifluoromethane	569	250	ug/kg	1000		56.9	10-185	6.96	35	
1,1-Dichloroethane	850	100	ug/kg	1000		85.0	60-140	1.86	35	
1,2-Dichloroethane	803	50	ug/kg	1000		80.3	55-135	4.38	35	
1,1-Dichloroethene	844	250	ug/kg	1000		84.4	55-145	2.57	35	
cis-1,2-Dichloroethene	838	100	ug/kg	1000		83.8	60-125	6.47	35	
trans-1,2-Dichloroethene	809	100	ug/kg	1000		80.9	70-145	8.18	35	
1,2-Dichloropropane	899	100	ug/kg	1000		89.9	65-130	2.25	35	
1,3-Dichloropropane	788	100	ug/kg	1000		78.8	65-130	8.97	35	
2,2-Dichloropropane	787	100	ug/kg	1000		78.7	60-135	3.86	35	

Debbie Fuller
 Project Manager

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PKH0511
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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3001 Extracted: 08/30/01										
LCS Dup Analyzed: 09/05/01 (P1H3001-BSD1)										
1,1-Dichloropropene	789	100	ug/kg	1000		78.9	65-130	7.33	35	
cis-1,3-Dichloropropene	885	100	ug/kg	1000		88.5	60-125	0.113	35	
trans-1,3-Dichloropropene	746	100	ug/kg	1000		74.6	50-130	9.21	35	
Ethylbenzene	883	100	ug/kg	1000		88.3	70-125	1.80	35	
Hexachlorobutadiene	684	250	ug/kg	1000		68.4	60-125	32.6	35	
2-Hexanone	709	500	ug/kg	1000		70.9	25-185	9.15	35	
Iodomethane	751	100	ug/kg	1000		75.1	30-155	0.534	35	
Isopropylbenzene	851	100	ug/kg	1000		85.1	70-135	5.49	35	
p-Isopropyltoluene	862	100	ug/kg	1000		86.2	65-130	2.41	35	
Methylene chloride	917	500	ug/kg	1000		91.7	60-140	2.80	35	
4-Methyl-2-pentanone (MIBK)	777	500	ug/kg	1000		77.7	10-175	0.00	35	
Methyl-tert-butyl Ether (MTBE)	752	250	ug/kg	1000		75.2	55-135	6.81	35	
Naphthalene	696	250	ug/kg	1000		69.6	45-155	12.4	35	
n-Propylbenzene	885	100	ug/kg	1000		88.5	75-135	1.01	35	
Styrene	841	100	ug/kg	1000		84.1	70-130	6.67	35	
1,1,1,2-Tetrachloroethane	812	250	ug/kg	1000		81.2	70-130	5.86	35	
1,1,2,2-Tetrachloroethane	780	100	ug/kg	1000		78.0	60-140	2.41	35	
Tetrachloroethene	824	100	ug/kg	1000		82.4	65-130	8.82	35	
Toluene	830	100	ug/kg	1000		83.0	70-125	7.98	35	
1,2,3-Trichlorobenzene	680	250	ug/kg	1000		68.0	60-135	15.5	35	
1,2,4-Trichlorobenzene	772	250	ug/kg	1000		77.2	55-135	7.00	35	
1,1,1-Trichloroethane	821	100	ug/kg	1000		82.1	65-135	4.06	35	
1,1,2-Trichloroethane	780	100	ug/kg	1000		78.0	65-130	9.41	35	
Trichloroethene	879	100	ug/kg	1000		87.9	70-130	1.92	35	
Trichlorofluoromethane	709	250	ug/kg	1000		70.9	10-200	2.72	35	
1,2,3-Trichloropropane	753	500	ug/kg	1000		75.3	60-150	4.29	35	
1,2,4-Trimethylbenzene	905	100	ug/kg	1000		90.5	75-130	0.221	35	
1,3,5-Trimethylbenzene	890	100	ug/kg	1000		89.0	70-130	0.450	35	
Vinyl acetate	ND	1200	ug/kg	1000		67.6	25-130	1.79	35	
Vinyl chloride	758	250	ug/kg	1000		75.8	10-200	6.14	35	
Xylenes, Total	2510	150	ug/kg	3000		83.7	70-130	6.55	35	
Surrogate: Dibromofluoromethane	1080		ug/kg	1250		86.4	70-125			
Surrogate: Toluene-d8	1090		ug/kg	1250		87.2	50-135			
Surrogate: 4-Bromofluorobenzene	1170		ug/kg	1250		93.6	70-130			

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Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01									
Blank Analyzed: 09/09/01 (P111002-BLK1)									
Acetone	ND	20	ug/l						
Benzene	ND	2.0	ug/l						
Bromobenzene	ND	5.0	ug/l						
Bromochloromethane	ND	5.0	ug/l						
Bromodichloromethane	ND	2.0	ug/l						
Bromoform	ND	5.0	ug/l						
Bromomethane	ND	5.0	ug/l						
2-Butanone (MEK)	ND	10	ug/l						
n-Butylbenzene	ND	5.0	ug/l						
sec-Butylbenzene	ND	5.0	ug/l						
tert-Butylbenzene	ND	5.0	ug/l						
Carbon Disulfide	ND	5.0	ug/l						
Carbon tetrachloride	ND	5.0	ug/l						
Chlorobenzene	ND	2.0	ug/l						
Chloroethane	ND	5.0	ug/l						
Chloroform	ND	2.0	ug/l						
Chloromethane	ND	5.0	ug/l						
2-Chlorotoluene	ND	5.0	ug/l						
4-Chlorotoluene	ND	5.0	ug/l						
Dibromochloromethane	ND	2.0	ug/l						
1,2-Dibromo-3-chloropropane	ND	5.0	ug/l						
1,2-Dibromoethane (EDB)	ND	2.0	ug/l						
Dibromomethane	ND	2.0	ug/l						
1,2-Dichlorobenzene	ND	2.0	ug/l						
1,3-Dichlorobenzene	ND	2.0	ug/l						
1,4-Dichlorobenzene	ND	2.0	ug/l						
Dichlorodifluoromethane	ND	5.0	ug/l						
1,1-Dichloroethane	ND	2.0	ug/l						
1,2-Dichloroethane	ND	2.0	ug/l						
1,1-Dichloroethene	ND	5.0	ug/l						
cis-1,2-Dichloroethene	ND	2.0	ug/l						
trans-1,2-Dichloroethene	ND	2.0	ug/l						
1,2-Dichloropropane	ND	2.0	ug/l						
1,3-Dichloropropane	ND	2.0	ug/l						

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PKH0511
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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

METHOD BLANK-QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
Blank Analyzed: 09/09/01 (P111002-BLK1)										
2,2-Dichloropropane	ND	2.0	ug/l							
1,1-Dichloropropene	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Hexachlorobutadiene	ND	5.0	ug/l							
2-Hexanone	ND	10	ug/l							
Iodomethane	ND	2.0	ug/l							
Isopropylbenzene	ND	2.0	ug/l							
p-Isopropyltoluene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
4-Methyl-2-pentanone (MIBK)	ND	10	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
Naphthalene	ND	5.0	ug/l							
n-Propylbenzene	ND	2.0	ug/l							
Styrene	ND	2.0	ug/l							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,2,3-Trichlorobenzene	ND	5.0	ug/l							
1,2,4-Trichlorobenzene	ND	5.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
1,2,3-Trichloropropane	ND	10	ug/l							
1,2,4-Trimethylbenzene	ND	2.0	ug/l							
1,3,5-Trimethylbenzene	ND	2.0	ug/l							
Vinyl acetate	ND	25	ug/l							
Vinyl chloride	ND	5.0	ug/l							
Xylenes, Total	ND	10	ug/l							
Surrogate: Dibromofluoromethane	27.9		ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	26.5		ug/l	25.0		106	80-120			

Debbie Fuller
Project Manager

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PKH0511
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
 Received: 08/29/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01									
Blank Analyzed: 09/09/01 (P111002-BLK1)									
Surrogate: 4-Bromofluorobenzene	26.4		ug/l	25.0		106 80-120			
LCS Analyzed: 09/09/01 (P111002-BS1)									
Acetone	28.0	20	ug/l	25.0		112 30-200			
Benzene	25.0	2.0	ug/l	25.0		100 80-120			
Bromobenzene	25.1	5.0	ug/l	25.0		100 80-120			
Bromochloromethane	28.3	5.0	ug/l	25.0		113 80-120			
Bromodichloromethane	26.8	2.0	ug/l	25.0		107 80-130			
Bromoform	27.1	5.0	ug/l	25.0		108 60-140			
Bromomethane	28.5	5.0	ug/l	25.0		114 60-150			
2-Butanone (MEK)	28.9	10	ug/l	25.0		116 30-185			
n-Butylbenzene	24.6	5.0	ug/l	25.0		98.4 75-130			
sec-Butylbenzene	25.0	5.0	ug/l	25.0		100 80-125			
tert-Butylbenzene	24.7	5.0	ug/l	25.0		98.8 80-120			
Carbon Disulfide	23.0	5.0	ug/l	25.0		92.0 65-120			
Carbon tetrachloride	28.8	5.0	ug/l	25.0		115 75-150			
Chlorobenzene	26.6	2.0	ug/l	25.0		106 80-120			
Chloroethane	24.9	5.0	ug/l	25.0		99.6 80-125			
Chloroform	26.6	2.0	ug/l	25.0		106 80-120			
Chloromethane	21.7	5.0	ug/l	25.0		86.8 60-125			
2-Chlorotoluene	24.9	5.0	ug/l	25.0		99.6 80-120			
4-Chlorotoluene	24.7	5.0	ug/l	25.0		98.8 80-120			
Dibromochloromethane	28.1	2.0	ug/l	25.0		112 70-150			
1,2-Dibromo-3-chloropropane	24.3	5.0	ug/l	25.0		97.2 50-145			
1,2-Dibromoethane (EDB)	26.0	2.0	ug/l	25.0		104 75-120			
Dibromomethane	26.3	2.0	ug/l	25.0		105 80-120			
1,2-Dichlorobenzene	25.3	2.0	ug/l	25.0		101 80-120			
1,3-Dichlorobenzene	25.1	2.0	ug/l	25.0		100 80-120			
1,4-Dichlorobenzene	26.0	2.0	ug/l	25.0		104 80-120			
Dichlorodifluoromethane	23.0	5.0	ug/l	25.0		92.0 25-140			
1,1-Dichloroethane	26.6	2.0	ug/l	25.0		106 80-120			
1,2-Dichloroethane	26.4	2.0	ug/l	25.0		106 80-120			
1,1-Dichloroethene	26.2	5.0	ug/l	25.0		105 80-120			
cis-1,2-Dichloroethene	26.2	2.0	ug/l	25.0		105 80-120			
trans-1,2-Dichloroethene	27.2	2.0	ug/l	25.0		109 80-120			
1,2-Dichloropropane	25.2	2.0	ug/l	25.0		101 80-120			
1,3-Dichloropropane	25.6	2.0	ug/l	25.0		102 80-120			

Debbie Fuller
 Project Manager

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PKH0511
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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1002 Extracted: 09/09/01									
LCS Analyzed: 09/09/01 (P1I1002-BS1)									
2,2-Dichloropropane	30.2	2.0	ug/l	25.0		121	75-135		
1,1-Dichloropropene	25.8	2.0	ug/l	25.0		103	80-120		
cis-1,3-Dichloropropene	26.2	2.0	ug/l	25.0		105	80-120		
trans-1,3-Dichloropropene	25.5	2.0	ug/l	25.0		102	80-120		
Ethylbenzene	26.0	2.0	ug/l	25.0		104	80-120		
Hexachlorobutadiene	22.3	5.0	ug/l	25.0		89.2	60-145		
2-Hexanone	27.8	10	ug/l	25.0		111	50-170		
Iodomethane	27.6	2.0	ug/l	25.0		110	40-155		
Isopropylbenzene	26.8	2.0	ug/l	25.0		107	80-120		
p-Isopropyltoluene	24.1	2.0	ug/l	25.0		96.4	80-120		
Methylene chloride	26.9	5.0	ug/l	25.0		108	80-120		
4-Methyl-2-pentanone (MIBK)	25.8	10	ug/l	25.0		103	70-140		
Methyl-tert-butyl Ether (MTBE)	28.4	5.0	ug/l	25.0		114	75-135		
Naphthalene	22.6	5.0	ug/l	25.0		90.4	70-130		
n-Propylbenzene	25.7	2.0	ug/l	25.0		103	80-120		
Styrene	26.4	2.0	ug/l	25.0		106	80-120		
1,1,1,2-Tetrachloroethane	27.9	5.0	ug/l	25.0		112	65-150		
1,1,2,2-Tetrachloroethane	25.3	2.0	ug/l	25.0		101	70-130		
Tetrachloroethene	27.1	2.0	ug/l	25.0		108	80-125		
Toluene	25.4	2.0	ug/l	25.0		102	80-120		
1,2,3-Trichlorobenzene	22.4	5.0	ug/l	25.0		89.6	75-125		
1,2,4-Trichlorobenzene	23.8	5.0	ug/l	25.0		95.2	80-120		
1,1,1-Trichloroethane	27.5	2.0	ug/l	25.0		110	80-120		
1,1,2-Trichloroethane	25.4	2.0	ug/l	25.0		102	80-120		
Trichloroethene	24.8	2.0	ug/l	25.0		99.2	80-120		
Trichlorofluoromethane	30.4	5.0	ug/l	25.0		122	75-150		
1,2,3-Trichloropropane	23.8	10	ug/l	25.0		95.2	65-135		
1,2,4-Trimethylbenzene	25.3	2.0	ug/l	25.0		101	80-120		
1,3,5-Trimethylbenzene	24.7	2.0	ug/l	25.0		98.8	80-120		
Vinyl acetate	29.8	25	ug/l	25.0		119	40-120		
Vinyl chloride	28.8	5.0	ug/l	25.0		115	80-120		
Xylenes, Total	77.9	10	ug/l	75.0		104	80-120		
Surrogate: Dibromofluoromethane	28.8		ug/l	25.0		115	80-120		
Surrogate: Toluene-d8	27.6		ug/l	25.0		110	80-120		
Surrogate: 4-Bromofluorobenzene	26.1		ug/l	25.0		104	80-120		

Debbie Fuller
Project Manager

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PKH0511
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
 Received: 08/29/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
LCS Dup Analyzed: 09/09/01 (P111002-BSD1)										
Acetone	31.0	20	ug/l	25.0		124	30-200	10.2	20	
Benzene	25.1	2.0	ug/l	25.0		100	80-120	0.399	20	
Bromobenzene	25.7	5.0	ug/l	25.0		103	80-120	2.36	20	
Bromochloromethane	29.1	5.0	ug/l	25.0		116	80-120	2.79	20	
Bromodichloromethane	27.0	2.0	ug/l	25.0		108	80-130	0.743	20	
Bromoform	28.0	5.0	ug/l	25.0		112	60-140	3.27	20	
Bromomethane	28.0	5.0	ug/l	25.0		112	60-150	1.77	20	
2-Butanone (MEK)	29.4	10	ug/l	25.0		118	30-185	1.72	20	
n-Butylbenzene	24.8	5.0	ug/l	25.0		99.2	75-130	0.810	20	
sec-Butylbenzene	24.9	5.0	ug/l	25.0		99.6	80-125	0.401	20	
tert-Butylbenzene	24.6	5.0	ug/l	25.0		98.4	80-120	0.406	20	
Carbon Disulfide	22.2	5.0	ug/l	25.0		88.8	65-120	3.54	20	
Carbon tetrachloride	28.2	5.0	ug/l	25.0		113	75-150	2.11	20	
Chlorobenzene	26.6	2.0	ug/l	25.0		106	80-120	0.00	20	
Chloroethane	24.7	5.0	ug/l	25.0		98.8	80-125	0.806	20	
Chloroform	27.0	2.0	ug/l	25.0		108	80-120	1.49	20	
Chloromethane	21.4	5.0	ug/l	25.0		85.6	60-125	1.39	20	
2-Chlorotoluene	24.9	5.0	ug/l	25.0		99.6	80-120	0.00	20	
4-Chlorotoluene	25.1	5.0	ug/l	25.0		100	80-120	1.61	20	
Dibromochloromethane	28.7	2.0	ug/l	25.0		115	70-150	2.11	20	
1,2-Dibromo-3-chloropropane	24.5	5.0	ug/l	25.0		98.0	50-145	0.820	20	
1,2-Dibromoethane (EDB)	27.0	2.0	ug/l	25.0		108	75-120	3.77	20	
Dibromomethane	28.2	2.0	ug/l	25.0		113	80-120	6.97	20	
1,2-Dichlorobenzene	26.0	2.0	ug/l	25.0		104	80-120	2.73	20	
1,3-Dichlorobenzene	25.5	2.0	ug/l	25.0		102	80-120	1.58	20	
1,4-Dichlorobenzene	26.4	2.0	ug/l	25.0		106	80-120	1.53	20	
Dichlorodifluoromethane	21.8	5.0	ug/l	25.0		87.2	25-140	5.36	20	
1,1-Dichloroethane	26.6	2.0	ug/l	25.0		106	80-120	0.00	20	
1,2-Dichloroethane	27.6	2.0	ug/l	25.0		110	80-120	4.44	20	
1,1-Dichloroethene	25.5	5.0	ug/l	25.0		102	80-120	2.71	20	
cis-1,2-Dichloroethene	26.9	2.0	ug/l	25.0		108	80-120	2.64	20	
trans-1,2-Dichloroethene	26.4	2.0	ug/l	25.0		106	80-120	2.99	20	
1,2-Dichloropropane	25.8	2.0	ug/l	25.0		103	80-120	2.35	20	
1,3-Dichloropropane	26.5	2.0	ug/l	25.0		106	80-120	3.45	20	
2,2-Dichloropropane	28.0	2.0	ug/l	25.0		112	75-135	7.56	20	

Debbie Fuller
 Project Manager

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PKH0511
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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
LCS Dup Analyzed: 09/09/01 (P111002-BSD1)										
1,1-Dichloropropene	25.5	2.0	ug/l	25.0		102	80-120	1.17	20	
cis-1,3-Dichloropropene	26.6	2.0	ug/l	25.0		106	80-120	1.52	20	
trans-1,3-Dichloropropene	25.6	2.0	ug/l	25.0		102	80-120	0.391	20	
Ethylbenzene	25.8	2.0	ug/l	25.0		103	80-120	0.772	20	
Hexachlorobutadiene	23.1	5.0	ug/l	25.0		92.4	60-145	3.52	20	
2-Hexanone	28.2	10	ug/l	25.0		113	50-170	1.43	20	
Iodomethane	27.6	2.0	ug/l	25.0		110	40-155	0.00	20	
Isopropylbenzene	26.2	2.0	ug/l	25.0		105	80-120	2.26	20	
p-Isopropyltoluene	24.3	2.0	ug/l	25.0		97.2	80-120	0.826	20	
Methylene chloride	27.8	5.0	ug/l	25.0		111	80-120	3.29	20	
4-Methyl-2-pentanone (MIBK)	27.0	10	ug/l	25.0		108	70-140	4.55	20	
Methyl-tert-butyl Ether (MTBE)	28.1	5.0	ug/l	25.0		112	75-135	1.06	20	
Naphthalene	23.7	5.0	ug/l	25.0		94.8	70-130	4.75	20	
n-Propylbenzene	25.4	2.0	ug/l	25.0		102	80-120	1.17	20	
Styrene	26.4	2.0	ug/l	25.0		106	80-120	0.00	20	
1,1,1,2-Tetrachloroethane	28.3	5.0	ug/l	25.0		113	65-150	1.42	20	
1,1,2,2-Tetrachloroethane	26.0	2.0	ug/l	25.0		104	70-130	2.73	20	
Tetrachloroethene	27.0	2.0	ug/l	25.0		108	80-125	0.370	20	
Toluene	25.3	2.0	ug/l	25.0		101	80-120	0.394	20	
1,2,3-Trichlorobenzene	24.0	5.0	ug/l	25.0		96.0	75-125	6.90	20	
1,2,4-Trichlorobenzene	25.2	5.0	ug/l	25.0		101	80-120	5.71	20	
1,1,1-Trichloroethane	26.9	2.0	ug/l	25.0		108	80-120	2.21	20	
1,1,2-Trichloroethane	26.7	2.0	ug/l	25.0		107	80-120	4.99	20	
Trichloroethene	25.4	2.0	ug/l	25.0		102	80-120	2.39	20	
Trichlorofluoromethane	27.1	5.0	ug/l	25.0		108	75-150	11.5	20	
1,2,3-Trichloropropane	24.6	10	ug/l	25.0		98.4	65-135	3.31	20	
1,2,4-Trimethylbenzene	25.6	2.0	ug/l	25.0		102	80-120	1.18	20	
1,3,5-Trimethylbenzene	24.8	2.0	ug/l	25.0		99.2	80-120	0.404	20	
Vinyl acetate	30.0	25	ug/l	25.0		120	40-120	0.669	20	
Vinyl chloride	26.2	5.0	ug/l	25.0		105	80-120	9.45	20	
Xylenes, Total	77.6	10	ug/l	75.0		103	80-120	0.386	20	
Surrogate: Dibromofluoromethane	29.2		ug/l	25.0		117	80-120			
Surrogate: Toluene-d8	27.6		ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	26.3		ug/l	25.0		105	80-120			

Debbie Fuller
Project Manager

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PKH0511
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
 Received: 08/29/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
Matrix Spike Analyzed: 09/09/01 (P111002-MS1)					Source: PKH0535-02					
Acetone	ND	20	ug/l	25.0	ND	41.6	5-200			
Benzene	23.4	2.0	ug/l	25.0	ND	93.6	80-120			
Bromobenzene	24.0	5.0	ug/l	25.0	ND	96.0	80-120			
Bromochloromethane	24.4	5.0	ug/l	25.0	ND	97.6	60-135			
Bromodichloromethane	25.7	2.0	ug/l	25.0	ND	103	80-120			
Bromoform	20.2	5.0	ug/l	25.0	ND	80.8	40-140			
Bromomethane	11.9	5.0	ug/l	25.0	ND	47.6	25-165			
2-Butanone (MEK)	12.1	10	ug/l	25.0	ND	48.4	10-160			
n-Butylbenzene	21.8	5.0	ug/l	25.0	ND	87.2	75-135			
sec-Butylbenzene	22.4	5.0	ug/l	25.0	ND	89.6	80-135			
tert-Butylbenzene	23.0	5.0	ug/l	25.0	ND	92.0	80-125			
Carbon Disulfide	10.5	5.0	ug/l	25.0	ND	42.0	20-120			
Carbon tetrachloride	26.7	5.0	ug/l	25.0	ND	107	80-145			
Chlorobenzene	26.0	2.0	ug/l	25.0	ND	104	80-120			
Chloroethane	15.5	5.0	ug/l	25.0	ND	62.0	30-150			
Chloroform	25.4	2.0	ug/l	25.0	ND	102	80-125			
Chloromethane	6.06	5.0	ug/l	25.0	ND	24.2	15-140			
2-Chlorotoluene	23.9	5.0	ug/l	25.0	ND	95.6	80-124			
4-Chlorotoluene	23.7	5.0	ug/l	25.0	ND	94.8	80-125			
Dibromochloromethane	24.2	2.0	ug/l	25.0	ND	96.8	75-135			
1,2-Dibromo-3-chloropropane	13.7	5.0	ug/l	25.0	ND	54.8	25-185			
1,2-Dibromoethane (EDB)	21.8	2.0	ug/l	25.0	ND	87.2	45-145			
Dibromomethane	23.2	2.0	ug/l	25.0	ND	92.8	55-140			
1,2-Dichlorobenzene	23.3	2.0	ug/l	25.0	ND	93.2	80-120			
1,3-Dichlorobenzene	23.6	2.0	ug/l	25.0	ND	94.4	80-120			
1,4-Dichlorobenzene	24.4	2.0	ug/l	25.0	ND	97.6	80-120			
Dichlorodifluoromethane	10.0	5.0	ug/l	25.0	ND	40.0	25-145			
1,1-Dichloroethane	23.4	2.0	ug/l	25.0	ND	93.6	75-120			
1,2-Dichloroethane	23.3	2.0	ug/l	25.0	ND	93.2	60-135			
1,1-Dichloroethene	20.1	5.0	ug/l	25.0	ND	80.4	55-120			
cis-1,2-Dichloroethene	32.8	2.0	ug/l	25.0	9.3	94.0	75-120			
trans-1,2-Dichloroethene	21.2	2.0	ug/l	25.0	ND	84.8	65-120			
1,2-Dichloropropane	24.5	2.0	ug/l	25.0	ND	98.0	80-125			
1,3-Dichloropropane	21.8	2.0	ug/l	25.0	ND	87.2	55-140			
2,2-Dichloropropane	29.4	2.0	ug/l	25.0	ND	118	45-165			

Debbie Fuller
 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
Matrix Spike Analyzed: 09/09/01 (P111002-MS1)					Source: PKH0535-02					
1,1-Dichloropropene	23.5	2.0	ug/l	25.0	ND	94.0	80-120			
cis-1,3-Dichloropropene	24.2	2.0	ug/l	25.0	ND	96.8	80-120			
trans-1,3-Dichloropropene	21.4	2.0	ug/l	25.0	ND	85.6	70-120			
Ethylbenzene	25.9	2.0	ug/l	25.0	ND	104	80-120			
Hexachlorobutadiene	18.1	5.0	ug/l	25.0	ND	72.4	80-135			M2
2-Hexanone	14.8	10	ug/l	25.0	ND	59.2	25-185			
Iodomethane	17.3	2.0	ug/l	25.0	ND	69.2	30-155			
Isopropylbenzene	25.9	2.0	ug/l	25.0	ND	104	80-125			
p-Isopropyltoluene	21.6	2.0	ug/l	25.0	ND	86.4	80-125			
Methylene chloride	20.1	5.0	ug/l	25.0	ND	80.4	55-125			
4-Methyl-2-pentanone (MIBK)	18.5	10	ug/l	25.0	ND	74.0	10-175			
Methyl-tert-butyl Ether (MTBE)	23.2	5.0	ug/l	25.0	ND	92.8	55-135			
Naphthalene	12.9	5.0	ug/l	25.0	ND	51.6	15-160			
n-Propylbenzene	24.9	2.0	ug/l	25.0	ND	99.6	80-130			
Styrene	24.2	2.0	ug/l	25.0	ND	96.8	60-135			
1,1,1,2-Tetrachloroethane	26.5	5.0	ug/l	25.0	ND	106	80-135			
1,1,2,2-Tetrachloroethane	14.9	2.0	ug/l	25.0	ND	59.6	35-150			
Tetrachloroethene	28.0	2.0	ug/l	25.0	ND	112	80-120			
Toluene	24.4	2.0	ug/l	25.0	ND	97.6	80-120			
1,2,3-Trichlorobenzene	14.8	5.0	ug/l	25.0	ND	59.2	45-145			
1,2,4-Trichlorobenzene	18.8	5.0	ug/l	25.0	ND	75.2	65-130			
1,1,1-Trichloroethane	26.4	2.0	ug/l	25.0	ND	106	80-120			
1,1,2-Trichloroethane	22.2	2.0	ug/l	25.0	ND	88.8	55-145			
Trichloroethene	28.3	2.0	ug/l	25.0	ND	113	80-120			
Trichlorofluoromethane	24.3	5.0	ug/l	25.0	ND	97.2	70-145			
1,2,3-Trichloropropane	17.5	10	ug/l	25.0	ND	70.0	20-160			
1,2,4-Trimethylbenzene	23.3	2.0	ug/l	25.0	ND	93.2	70-135			
1,3,5-Trimethylbenzene	23.2	2.0	ug/l	25.0	ND	92.8	80-125			
Vinyl acetate	ND	25	ug/l	25.0	ND		25-130			N2
Vinyl chloride	13.0	5.0	ug/l	25.0	ND	52.0	25-135			
Xylenes, Total	77.0	10	ug/l	75.0	ND	103	80-120			
Surrogate: Dibromofluoromethane	24.4		ug/l	25.0		97.6	80-120			
Surrogate: Toluene-d8	26.8		ug/l	25.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	25.6		ug/l	25.0		102	80-120			

Debbie Fuller
Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01

Received: 08/29/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1002 Extracted: 09/09/01										
Matrix Spike Dup Analyzed: 09/09/01 (P1I1002-MSD1)					Source: PKH0535-02					
Acetone	ND	20	ug/l	25.0	ND	62.4	5-200	40.0	20	R4
Benzene	23.1	2.0	ug/l	25.0	ND	92.4	80-120	1.29	20	
Bromobenzene	23.3	5.0	ug/l	25.0	ND	93.2	80-120	2.96	20	
Bromochloromethane	24.9	5.0	ug/l	25.0	ND	99.6	60-135	2.03	20	
Bromodichloromethane	25.4	2.0	ug/l	25.0	ND	102	80-120	1.17	20	
Bromoform	23.4	5.0	ug/l	25.0	ND	93.6	40-140	14.7	20	
Bromomethane	12.6	5.0	ug/l	25.0	ND	50.4	25-165	5.71	20	
2-Butanone (MEK)	14.0	10	ug/l	25.0	ND	56.0	10-160	14.6	20	
n-Butylbenzene	21.9	5.0	ug/l	25.0	ND	87.6	75-135	0.458	20	
sec-Butylbenzene	22.2	5.0	ug/l	25.0	ND	88.8	80-135	0.897	20	
tert-Butylbenzene	22.3	5.0	ug/l	25.0	ND	89.2	80-125	3.09	20	
Carbon Disulfide	10.6	5.0	ug/l	25.0	ND	42.4	20-120	0.948	20	
Carbon tetrachloride	27.1	5.0	ug/l	25.0	ND	108	80-145	1.49	20	
Chlorobenzene	25.6	2.0	ug/l	25.0	ND	102	80-120	1.55	20	
Chloroethane	15.9	5.0	ug/l	25.0	ND	63.6	30-150	2.55	20	
Chloroform	25.6	2.0	ug/l	25.0	ND	102	80-125	0.784	20	
Chloromethane	6.17	5.0	ug/l	25.0	ND	24.7	15-140	1.80	20	
2-Chlorotoluene	23.1	5.0	ug/l	25.0	ND	92.4	80-124	3.40	20	
4-Chlorotoluene	23.5	5.0	ug/l	25.0	ND	94.0	80-125	0.847	20	
Dibromochloromethane	25.7	2.0	ug/l	25.0	ND	103	75-135	6.01	20	
1,2-Dibromo-3-chloropropane	18.8	5.0	ug/l	25.0	ND	75.2	25-185	31.4	20	R4
1,2-Dibromoethane (EDB)	24.0	2.0	ug/l	25.0	ND	96.0	45-145	9.61	20	
Dibromomethane	24.3	2.0	ug/l	25.0	ND	97.2	55-140	4.63	20	
1,2-Dichlorobenzene	23.5	2.0	ug/l	25.0	ND	94.0	80-120	0.855	20	
1,3-Dichlorobenzene	23.4	2.0	ug/l	25.0	ND	93.6	80-120	0.851	20	
1,4-Dichlorobenzene	24.0	2.0	ug/l	25.0	ND	96.0	80-120	1.65	20	
Dichlorodifluoromethane	9.65	5.0	ug/l	25.0	ND	38.6	25-145	3.56	20	
1,1-Dichloroethane	23.7	2.0	ug/l	25.0	ND	94.8	75-120	1.27	20	
1,2-Dichloroethane	24.5	2.0	ug/l	25.0	ND	98.0	60-135	5.02	20	
1,1-Dichloroethene	20.0	5.0	ug/l	25.0	ND	80.0	55-120	0.499	20	
cis-1,2-Dichloroethene	32.6	2.0	ug/l	25.0	9.3	93.2	75-120	0.612	20	
trans-1,2-Dichloroethene	21.3	2.0	ug/l	25.0	ND	85.2	65-120	0.471	20	
1,2-Dichloropropane	24.3	2.0	ug/l	25.0	ND	97.2	80-125	0.820	20	
1,3-Dichloropropane	23.7	2.0	ug/l	25.0	ND	94.8	55-140	8.35	20	
2,2-Dichloropropane	27.3	2.0	ug/l	25.0	ND	109	45-165	7.41	20	

Debbie Fuller
 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111002 Extracted: 09/09/01										
Matrix Spike Dup Analyzed: 09/09/01 (P111002-MSD1)					Source: PKH0535-02					
1,1-Dichloropropene	23.6	2.0	ug/l	25.0	ND	94.4	80-120	0.425	20	
cis-1,3-Dichloropropene	24.3	2.0	ug/l	25.0	ND	97.2	80-120	0.412	20	
trans-1,3-Dichloropropene	22.6	2.0	ug/l	25.0	ND	90.4	70-120	5.45	20	
Ethylbenzene	26.0	2.0	ug/l	25.0	ND	104	80-120	0.385	20	
Hexachlorobutadiene	19.7	5.0	ug/l	25.0	ND	78.8	80-135	8.47	20	M2
2-Hexanone	20.4	10	ug/l	25.0	ND	81.6	25-185	31.8	20	R4
Iodomethane	17.3	2.0	ug/l	25.0	ND	69.2	30-155	0.00	20	
Isopropylbenzene	26.0	2.0	ug/l	25.0	ND	104	80-125	0.385	20	
p-Isopropyltoluene	21.2	2.0	ug/l	25.0	ND	84.8	80-125	1.87	20	
Methylene chloride	19.7	5.0	ug/l	25.0	ND	78.8	55-125	2.01	20	
4-Methyl-2-pentanone (MIBK)	24.2	10	ug/l	25.0	ND	96.8	10-175	26.7	20	R4
Methyl-tert-butyl Ether (MTBE)	23.9	5.0	ug/l	25.0	ND	95.6	55-135	2.97	20	
Naphthalene	17.4	5.0	ug/l	25.0	ND	69.6	15-160	29.7	20	R4
n-Propylbenzene	24.0	2.0	ug/l	25.0	ND	96.0	80-130	3.68	20	
Styrene	24.4	2.0	ug/l	25.0	ND	97.6	60-135	0.823	20	
1,1,1,2-Tetrachloroethane	26.5	5.0	ug/l	25.0	ND	106	80-135	0.00	20	
1,1,2,2-Tetrachloroethane	16.7	2.0	ug/l	25.0	ND	66.8	35-150	11.4	20	
Tetrachloroethene	27.7	2.0	ug/l	25.0	ND	111	80-120	1.08	20	
Toluene	24.2	2.0	ug/l	25.0	ND	96.8	80-120	0.823	20	
1,2,3-Trichlorobenzene	17.7	5.0	ug/l	25.0	ND	70.8	45-145	17.8	20	
1,2,4-Trichlorobenzene	20.8	5.0	ug/l	25.0	ND	83.2	65-130	10.1	20	
1,1,1-Trichloroethane	26.5	2.0	ug/l	25.0	ND	106	80-120	0.378	20	
1,1,2-Trichloroethane	23.6	2.0	ug/l	25.0	ND	94.4	55-145	6.11	20	
Trichloroethene	29.5	2.0	ug/l	25.0	ND	118	80-120	4.15	20	
Trichlorofluoromethane	23.7	5.0	ug/l	25.0	ND	94.8	70-145	2.50	20	
1,2,3-Trichloropropane	21.3	10	ug/l	25.0	ND	85.2	20-160	19.6	20	
1,2,4-Trimethylbenzene	23.4	2.0	ug/l	25.0	ND	93.6	70-135	0.428	20	
1,3,5-Trimethylbenzene	22.8	2.0	ug/l	25.0	ND	91.2	80-125	1.74	20	
Vinyl acetate	ND	25	ug/l	25.0	ND	50.4	25-130		20	
Vinyl chloride	13.4	5.0	ug/l	25.0	ND	53.6	25-135	3.03	20	
Xylenes, Total	77.8	10	ug/l	75.0	ND	104	80-120	1.03	20	
Surrogate: Dibromofluoromethane	23.9		ug/l	25.0		95.6	80-120			
Surrogate: Toluene-d8	26.6		ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	24.8		ug/l	25.0		99.2	80-120			

Debbie Fuller
Project Manager

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PKH0511
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
 Received: 08/29/01

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0616 Extracted: 09/06/01										
Blank Analyzed: 09/06/01 (P1I0616-BLK1)										
Arsenic	ND	5.0	mg/kg							
Chromium	ND	1.0	mg/kg							
Copper	ND	2.0	mg/kg							
Nickel	ND	5.0	mg/kg							
Zinc	ND	5.0	mg/kg							
LCS Analyzed: 09/06/01 (P1I0616-BS1)										
Arsenic	92.0	5.0	mg/kg	100		92.0	80-120			B4
Chromium	92.4	1.0	mg/kg	100		92.4	80-120			
Copper	96.8	2.0	mg/kg	100		96.8	80-120			
Nickel	90.6	5.0	mg/kg	100		90.6	80-120			
Zinc	93.7	5.0	mg/kg	100		93.7	80-120			
LCS Dup Analyzed: 09/06/01 (P1I0616-BSD1)										
Arsenic	90.7	5.0	mg/kg	100		90.7	80-120	1.42	20	
Chromium	90.4	1.0	mg/kg	100		90.4	80-120	2.19	20	
Copper	95.4	2.0	mg/kg	100		95.4	80-120	1.46	20	
Nickel	88.6	5.0	mg/kg	100		88.6	80-120	2.23	20	
Zinc	93.8	5.0	mg/kg	100		93.8	80-120	0.107	20	
Matrix Spike Analyzed: 09/06/01 (P1I0616-MS1)										
					Source: PKH0486-02					
Arsenic	95.2	5.0	mg/kg	100	ND	90.8	75-125			M3
Chromium	118	1.0	mg/kg	100	14	104	75-125			
Copper	208	2.0	mg/kg	100	80	128	75-125			
Nickel	108	5.0	mg/kg	100	14	94.0	75-125			
Zinc	157	5.0	mg/kg	100	58	99.0	75-125			
Matrix Spike Dup Analyzed: 09/06/01 (P1I0616-MSD1)										
					Source: PKH0486-02					
Arsenic	100	5.0	mg/kg	100	ND	95.6	75-125	4.92	20	M3
Chromium	110	1.0	mg/kg	100	14	96.0	75-125	7.02	20	
Copper	224	2.0	mg/kg	100	80	144	75-125	7.41	20	
Nickel	106	5.0	mg/kg	100	14	92.0	75-125	1.87	20	
Zinc	176	5.0	mg/kg	100	58	118	75-125	11.4	20	

Debbie Fuller
 Project Manager

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PKH0511
 Page 28 of 36

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01

Received: 08/29/01

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110713 Extracted: 09/07/01										
Blank Analyzed: 09/10/01 (P110713-BLK1)										
Arsenic	ND	5.0	mg/kg							
Chromium	2.99	1.0	mg/kg							B1
Copper	ND	2.0	mg/kg							
Nickel	ND	5.0	mg/kg							
Zinc	ND	5.0	mg/kg							
LCS Analyzed: 09/10/01 (P110713-BS1)										
Arsenic	94.8	5.0	mg/kg	100		94.8	80-120			
Chromium	95.6	1.0	mg/kg	100		95.6	80-120			
Copper	97.6	2.0	mg/kg	100		97.6	80-120			
Nickel	93.8	5.0	mg/kg	100		93.8	80-120			
Zinc	96.3	5.0	mg/kg	100		96.3	80-120			
Matrix Spike Analyzed: 09/10/01 (P110713-MS1)										
Arsenic	88.9	5.0	mg/kg	100	ND	88.9	75-125			
Chromium	101	1.0	mg/kg	100	25	76.0	75-125			
Copper	108	2.0	mg/kg	100	13	95.0	75-125			
Nickel	97.5	5.0	mg/kg	100	32	65.5	75-125			M2
Zinc	130	5.0	mg/kg	100	38	92.0	75-125			
Matrix Spike Dup Analyzed: 09/10/01 (P110713-MSD1)										
Arsenic	73.2	5.0	mg/kg	100	ND	73.2	75-125	19.4	20	M2
Chromium	88.3	1.0	mg/kg	100	25	63.3	75-125	13.4	20	M2
Copper	91.6	2.0	mg/kg	100	13	78.6	75-125	16.4	20	
Nickel	82.6	5.0	mg/kg	100	32	50.6	75-125	16.5	20	M2
Zinc	114	5.0	mg/kg	100	38	76.0	75-125	13.1	20	



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01

Received: 08/29/01

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I0722 Extracted: 09/07/01										
Blank Analyzed: 09/07/01 (P1I0722-BLK1)										
Chromium VI	ND	1.0	mg/kg							
LCS Analyzed: 09/07/01 (P1I0722-BS1)										
Chromium VI	9.48	1.0	mg/kg	10.0		94.8	85-115			
Matrix Spike Analyzed: 09/07/01 (P1I0722-MS1)										
Chromium VI	9.23	1.0	mg/kg	10.0	ND	89.3	85-115			
Matrix Spike Dup Analyzed: 09/07/01 (P1I0722-MSD1)										
Chromium VI	9.23	1.0	mg/kg	10.0	ND	89.3	85-115	0.00	20	
Batch: P1I1410 Extracted: 09/14/01										
Blank Analyzed: 09/14/01 (P1I1410-BLK1)										
Arsenic	ND	5.0	mg/kg							
Chromium	ND	1.0	mg/kg							
Copper	ND	2.0	mg/kg							
Nickel	ND	5.0	mg/kg							
LCS Analyzed: 09/14/01 (P1I1410-BS1)										
Arsenic	91.2	5.0	mg/kg	100		91.2	80-120			
Chromium	95.3	1.0	mg/kg	100		95.3	80-120			
Copper	100	2.0	mg/kg	100		100	80-120			
Nickel	93.7	5.0	mg/kg	100		93.7	80-120			
LCS Dup Analyzed: 09/14/01 (P1I1410-BSD1)										
Arsenic	91.3	5.0	mg/kg	100		91.3	80-120	0.110	20	
Chromium	96.4	1.0	mg/kg	100		96.4	80-120	1.15	20	
Copper	99.7	2.0	mg/kg	100		99.7	80-120	0.300	20	
Nickel	94.3	5.0	mg/kg	100		94.3	80-120	0.638	20	

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
 Received: 08/29/01

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1410 Extracted: 09/14/01										
Matrix Spike Analyzed: 09/14/01 (P1I1410-MS1)					Source: PKI0089-04RE1					
Arsenic	159	5.0	mg/kg	100	ND	159	75-125			N2
Chromium	190	1.0	mg/kg	100	18	172	75-125			N2
Copper	221	2.0	mg/kg	100	16	205	75-125			N2
Nickel	171	5.0	mg/kg	100	9.7	161	75-125			N2
Matrix Spike Dup Analyzed: 09/14/01 (P1I1410-MSD1)					Source: PKI0089-04RE1					
Arsenic	22.2	5.0	mg/kg	100	ND	22.2	75-125	151	20	N2,R1
Chromium	22.8	1.0	mg/kg	100	18	4.80	75-125	157	20	N2,R1
Copper	24.6	2.0	mg/kg	100	16	8.60	75-125	160	20	N2,R1
Nickel	21.1	5.0	mg/kg	100	9.7	11.4	75-125	156	20	N2,R1
Batch: P1J0103 Extracted: 10/01/01										
Blank Analyzed: 10/02/01 (P1J0103-BLK1)										
Zinc	ND	5.0	mg/kg							
LCS Analyzed: 10/02/01 (P1J0103-BS1)										
Zinc	86.2	5.0	mg/kg	100		86.2	80-120			
Matrix Spike Analyzed: 10/02/01 (P1J0103-MS1)					Source: PKI0288-19					
Zinc	142	5.0	mg/kg	100	29	113	75-125			
Matrix Spike Dup Analyzed: 10/02/01 (P1J0103-MSD1)					Source: PKI0288-19					
Zinc	117	5.0	mg/kg	100	29	88.0	75-125	19.3	20	



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01

Received: 08/29/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3011 Extracted: 08/30/01										
Blank Analyzed: 09/06/01 (P1H3011-BLK1)										
Arsenic	ND	0.050	mg/l							
Chromium	ND	0.010	mg/l							B1
Copper	ND	0.020	mg/l							
Nickel	ND	0.050	mg/l							
Zinc	ND	0.050	mg/l							B4
LCS Analyzed: 09/06/01 (P1H3011-BS1)										
Arsenic	1.03	0.050	mg/l	1.00		103	85-115			
Chromium	0.988	0.010	mg/l	1.00		98.8	85-115			
Copper	1.05	0.020	mg/l	1.00		105	85-115			
Nickel	0.980	0.050	mg/l	1.00		98.0	85-115			
Zinc	1.02	0.050	mg/l	1.00		102	85-115			
Matrix Spike Analyzed: 09/06/01 (P1H3011-MS1)										
Arsenic	1.05	0.050	mg/l	1.00	ND	105	70-130			
Chromium	0.999	0.010	mg/l	1.00	ND	98.9	70-130			
Copper	1.04	0.020	mg/l	1.00	ND	104	70-130			
Nickel	0.967	0.050	mg/l	1.00	ND	96.4	70-130			
Zinc	1.22	0.050	mg/l	1.00	0.22	100	70-130			
Matrix Spike Dup Analyzed: 09/06/01 (P1H3011-MSD1)										
Arsenic	1.02	0.050	mg/l	1.00	ND	102	70-130	2.90	20	
Chromium	0.976	0.010	mg/l	1.00	ND	96.6	70-130	2.33	20	
Copper	1.01	0.020	mg/l	1.00	ND	101	70-130	2.93	20	
Nickel	0.944	0.050	mg/l	1.00	ND	94.1	70-130	2.41	20	
Zinc	1.19	0.050	mg/l	1.00	0.22	97.0	70-130	2.49	20	

Debbie Fuller
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01

Received: 08/29/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H3101 Extracted: 08/30/01										
Blank Analyzed: 08/30/01 (P1H3101-BLK1)										
Chromium VI	ND	0.025	mg/l							
LCS Analyzed: 08/30/01 (P1H3101-BS1)										
Chromium VI	0.104	0.050	mg/l	0.100		104	85-115			
Matrix Spike Analyzed: 08/30/01 (P1H3101-MS1)					Source: PKH0511-13					
Chromium VI	0.0558	0.025	mg/l	0.0500	ND	112	85-115			
Matrix Spike Dup Analyzed: 08/30/01 (P1H3101-MSD1)					Source: PKH0511-13					
Chromium VI	0.0521	0.025	mg/l	0.0500	ND	104	85-115	6.86	20	



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Report Number: PKH0511

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Received: 08/29/01

METHOD BLANK QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110611 Extracted: 09/06/01										
Blank Analyzed: 09/06/01 (P110611-BLK1)										
Total Cyanide	ND	0.50	mg/kg							
Matrix Spike Analyzed: 09/06/01 (P110611-MS1)					Source: PKH0448-05					
Total Cyanide	1.79	0.50	mg/kg	2.50	ND	71.6	70-130			
Matrix Spike Dup Analyzed: 09/06/01 (P110611-MSD1)					Source: PKH0448-05					
Total Cyanide	1.31	0.50	mg/kg	2.50	ND	52.4	70-130	31.0	20	M2,Q11
Reference Analyzed: 09/06/01 (P110611-SRM1)										
Total Cyanide	109	20	mg/kg	201		54.2	40-160			
Batch: P110709 Extracted: 09/07/01										
Blank Analyzed: 09/07/01 (P110709-BLK1)										
Total Cyanide	ND	0.020	mg/l							
LCS Analyzed: 09/07/01 (P110709-BS1)										
Total Cyanide	0.101	0.020	mg/l	0.100		101	90-110			
Matrix Spike Analyzed: 09/07/01 (P110709-MS1)					Source: PKH0515-02					
Total Cyanide	0.155	0.020	mg/l	0.100	0.038	117	70-130			
Matrix Spike Dup Analyzed: 09/07/01 (P110709-MSD1)					Source: PKH0515-02					
Total Cyanide	0.170	0.020	mg/l	0.100	0.038	132	70-130	9.23	20	M1
Batch: P110720 Extracted: 09/07/01										
Blank Analyzed: 09/10/01 (P110720-BLK1)										
Total Cyanide	ND	0.50	mg/kg							

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 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
 Received: 08/29/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P110720 Extracted: 09/07/01										
Matrix Spike Analyzed: 09/10/01 (P110720-MS1)					Source: PKH0511-02					
Total Cyanide	2.95	0.50	mg/kg	2.50	ND	118	70-130			
Matrix Spike Dup Analyzed: 09/10/01 (P110720-MSD1)					Source: PKH0511-02					
Total Cyanide	2.45	0.50	mg/kg	2.50	ND	98.0	70-130	18.5	20	
Reference Analyzed: 09/10/01 (P110720-SRM1)										
Total Cyanide	164	20	mg/kg	201		81.6	40-160			



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4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKH0511

Sampled: 08/28/01-08/29/01
Received: 08/29/01

METHOD BLANK QC DATA

DATA QUALIFIERS AND DEFINITIONS

- B1** Target analyte detected in method blank at or above the method reporting limit.
- B4** Target analyte detected in blank at/above method acceptance criteria.
- M1** Matrix spike recovery was high, the method control sample recovery was acceptable.
- M2** Matrix spike recovery was low, the method control sample recovery was acceptable.
- M3** The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
- N1** See case narrative.
- N2** See corrective action report.
- Q11** Sample is heterogeneous. Sample homogeneity could not be readily achieved using routine laboratory practices.
- R1** RPD exceeded the method control limit. See case narrative.
- R4** MS/MSD RPD exceeded the method control limit. Recovery met acceptance criteria.
- R6** LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
- ND** Analyte NOT DETECTED at or above the reporting limit
- NR** Not reported.
- RPD** Relative Percent Difference



2852 Alton Ave., Irvine, CA 92606
(949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324
(909) 370-4967 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406
(818) 778-1844 FAX (818) 778-1843
9494 Chesapeake Dr., Suite 805, San Diego, CA 92123
(619) 505-9596 FAX (619) 505-9689
9530 South 51st St., Suite B-120, Phoenix, AZ 85044
(480) 785-0043 FAX (480) 785-0851

CHAIN OF CUSTODY FORM

Quote #: _____ Page _____ of _____

Client Name/Address: LAW ENF		Project/PO Number: 70211-0-0150		Analysis Required										Special Instructions
Project Manager: JIM CUDRAC		Phone Number: 602-417-0250		Sample Matrix		Container Type		# of Cont.		Sampling Date/Time		Preservatives		
Sampler: PATRICK COOKS		Fax Number: 602-417-0250												
LB3-3-10	SPOL	SS	1	2115	1	2115	1	2115	1	2115	1	2115	1	01
LB3-3-20			1	2135	1	2135	1	2135	1	2135	1	2135	1	02
LB3-3-30			1	2230	1	2230	1	2230	1	2230	1	2230	1	03
LB3-3-40			1	2305	1	2305	1	2305	1	2305	1	2305	1	04
LB3-3-50			1	2335	1	2335	1	2335	1	2335	1	2335	1	05
LB3-3-60			1	2335	1	2335	1	2335	1	2335	1	2335	1	06
LB3-3-10	SPOL	SS	1	2005	1	2005	1	2005	1	2005	1	2005	1	07
LB3-3-20			1	2115	1	2115	1	2115	1	2115	1	2115	1	08
LB3-3-30			1	2155	1	2155	1	2155	1	2155	1	2155	1	09
LB3-3-40			1	2230	1	2230	1	2230	1	2230	1	2230	1	10
LB3-3-50			1	2305	1	2305	1	2305	1	2305	1	2305	1	11
LB3-3-60			1	2335	1	2335	1	2335	1	2335	1	2335	1	12
LB3-3-10	SPOL	SS	1	2005	1	2005	1	2005	1	2005	1	2005	1	13

Relinquished By:

Relinquished By:

Relinquished By:

Date / Time: 08/29/01 1925

Date / Time: 08/29/01 1925

Date / Time: 08/29/01 1925

Received by:

Received by:

Received by:

Date / Time: 08/29/01

Date / Time: 08/29/01

Date / Time: 08/29/01

Turnaround Time: (Check)
same day _____ 72 hours _____
24 hours _____ 5 days _____
48 hours _____ normal _____

Sample Integrity: (Check)
intact ☒ on ice ☒

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

COC-GB

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID 70211-0-0150
Report Number: PKI0159

Sampled: 09/11/01
Received: 09/11/01
Issued: 10/1/01-11/27/01
Revised: 11/27/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKI0159-03	LB4 S-30	Soil
PKI0159-04	LB4 S-40	Soil
PKI0159-06	RINSATE 9/11/01	Water
PKI0159-07	LB4 S-10	Soil
PKI0159-07RE2	LB4 S-10	Soil
PKI0159-08	LB4 S-20	Soil
PKI0159-08RE2	LB4 S-20	Soil
PKI0159-09	LB4 S-30	Soil
PKI0159-09RE2	LB4 S-30	Soil
PKI0159-10	LB4 S-40	Soil
PKI0159-10RE1	LB4 S-40	Soil
PKI0159-11	LB4 S-50	Soil
PKI0159-11RE1	LB4 S-50	Soil

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation. Soil samples requiring volatile analysis were received in Encore Container(s).

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

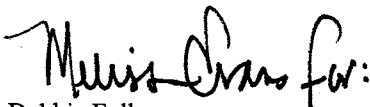
OBSERVATIONS: Report was revised 11/27/01 to include an LCS Duplicate for 8260 soils.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

QA/QC CRITERIA: The N2 flag on 8260 indicates that one or more QC parameters were outside of laboratory acceptance criteria. Please see Corrective Action Report. The R1 flag on Cyanide indicates that the RPD exceeded the method control limit. See Corrective Action Report.

EXPLANATION OF DATA QUALIFIERS: The D1 flag on ICP Arsenic indicates that the reporting limit was raised due to sample matrix effects.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)


Debbie Fuller
Project Manager

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PKI0159
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CORRECTIVE ACTION REPORT

Department: GC/MS Method: 8260B
Date: 09/17/2001 Matrix: Soil
Batch: P111201
Samples: PKI0123-01 – PKI0123-05, PKI0169-02, PKI0130-01 – PKI0130-03 &
PKI0159-03 – PKI0159-04

Identification and Definition of Problem:

1,2-Dibromo-3-chloropropane recovered low (43%) and outside of the 50-155% acceptance limits in the Laboratory Control Sample Duplicate (LCSD). There is no MTBE spike data available for the above batch.

Determination of the Cause of the Problem:

The cause of the low recovery in the LCSD could not be determined. The analyst who prepared the spiking standard inadvertently did not add MTBE to the spiking mix.

Corrective Action:

The Laboratory Control Sample (LCS), Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recovered within acceptance limits for 1,2-Dibromo-3-chloropropane. The RPDs between the LCS and the LCSD and the MS and MSD were also within acceptance limits. The LCSD has been flagged "N2" to indicate the low recovery. A new standard has been prepared that contains all target analytes and is now in use.

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 12/18/2001
Quality Assurance Manager



CORRECTIVE ACTION REPORT

Department: Wet Chemistry Methods: 9014
Date: 09/24/2001 Matrix: Soil
Batch: P1I2125
Samples Affected: PKI0159-07 – PKI0159-11

Identification and Definition of Problem:

The Relative Percent Difference (RPD) between the Matrix Spike (MS) and the Matrix Spike Duplicate (MSD) was high (35%) and outside of the 20% acceptance limits.

Determination of the Cause of the Problem:

A definitive cause for the high RPD has not been determined.

Corrective Action:

The MS, MSD as well as the Laboratory Control Sample recovered within acceptance limits, thus validating the batch. The MSD "R1" to indicate that the RPD was outside of acceptance limits.

Elizabeth C. Wueschner:
Quality Assurance Manager

Elizabeth C. Wueschner Date: 10/01 /2001



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

Sampled: 09/11/01

Received: 09/11/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0159-03 (LB4 S-30 - Soil)								
Acetone	EPA 8260B	P111201	1000	ND	1	9/12/01	9/23/01	
Benzene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Bromobenzene	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
Bromochloromethane	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
Bromodichloromethane	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Bromoform	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
Bromomethane	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
2-Butanone (MEK)	EPA 8260B	P111201	500	ND	1	9/12/01	9/23/01	
n-Butylbenzene	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
sec-Butylbenzene	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
tert-Butylbenzene	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
Carbon Disulfide	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
Carbon tetrachloride	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
Chlorobenzene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Chloroethane	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
Chloroform	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Chloromethane	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
2-Chlorotoluene	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
4-Chlorotoluene	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
Dibromochloromethane	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Dibromomethane	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,2-Dichlorobenzene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,3-Dichlorobenzene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,4-Dichlorobenzene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Dichlorodifluoromethane	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
1,1-Dichloroethane	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,2-Dichloroethane	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,1-Dichloroethene	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
cis-1,2-Dichloroethene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
trans-1,2-Dichloroethene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,2-Dichloropropane	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,3-Dichloropropane	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
2,2-Dichloropropane	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,1-Dichloropropene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
cis-1,3-Dichloropropene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
trans-1,3-Dichloropropene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Ethylbenzene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Hexachlorobutadiene	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
2-Hexanone	EPA 8260B	P111201	500	ND	1	9/12/01	9/23/01	
Iodomethane	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Isopropylbenzene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	

Debbie Fuller
 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

Sampled: 09/11/01
Received: 09/11/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0159-03 (LB4 S-30 - Soil)								
p-Isopropyltoluene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Methylene chloride	EPA 8260B	P111201	500	ND	1	9/12/01	9/23/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P111201	500	ND	1	9/12/01	9/23/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
Naphthalene	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
n-Propylbenzene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Styrene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Tetrachloroethene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Toluene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,2,3-Trichlorobenzene	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
1,2,4-Trichlorobenzene	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
1,1,1-Trichloroethane	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,1,2-Trichloroethane	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Trichloroethene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Trichlorofluoromethane	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
1,2,3-Trichloropropane	EPA 8260B	P111201	500	ND	1	9/12/01	9/23/01	
1,2,4-Trimethylbenzene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
1,3,5-Trimethylbenzene	EPA 8260B	P111201	100	ND	1	9/12/01	9/23/01	
Vinyl acetate	EPA 8260B	P111201	1200	ND	1	9/12/01	9/23/01	V1
Vinyl chloride	EPA 8260B	P111201	250	ND	1	9/12/01	9/23/01	
Xylenes, Total	EPA 8260B	P111201	300	ND	1	9/12/01	9/23/01	

Surrogate: Dibromofluoromethane (70-125%)

108 %

Surrogate: Toluene-d8 (50-135%)

99.1 %

Surrogate: 4-Bromofluorobenzene (70-130%)

94.0 %

The reporting limit for this sample was adjusted by a factor of 0.929 to account for the applicable preparation factor.



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

Sampled: 09/11/01

Received: 09/11/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0159-04 (LB4 S-40 - Soil)								
Acetone	EPA 8260B	P111201	1400	ND	1	9/12/01	9/23/01	
Benzene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Bromobenzene	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
Bromochloromethane	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
Bromodichloromethane	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Bromoform	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
Bromomethane	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
2-Butanone (MEK)	EPA 8260B	P111201	690	ND	1	9/12/01	9/23/01	
n-Butylbenzene	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
sec-Butylbenzene	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
tert-Butylbenzene	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
Carbon Disulfide	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
Carbon tetrachloride	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
Chlorobenzene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Chloroethane	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
Chloroform	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Chloromethane	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
2-Chlorotoluene	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
4-Chlorotoluene	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
Dibromochloromethane	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Dibromomethane	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,2-Dichlorobenzene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,3-Dichlorobenzene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,4-Dichlorobenzene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Dichlorodifluoromethane	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
1,1-Dichloroethane	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,2-Dichloroethane	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,1-Dichloroethene	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
cis-1,2-Dichloroethene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
trans-1,2-Dichloroethene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,2-Dichloropropane	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,3-Dichloropropane	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
2,2-Dichloropropane	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,1-Dichloropropene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
cis-1,3-Dichloropropene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
trans-1,3-Dichloropropene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Ethylbenzene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Hexachlorobutadiene	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
2-Hexanone	EPA 8260B	P111201	690	ND	1	9/12/01	9/23/01	
Iodomethane	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Isopropylbenzene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	

Debbie Fuller
 Project Manager

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PKI0159
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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

Sampled: 09/11/01
Received: 09/11/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0159-04 (LB4 S-40 - Soil)								
p-Isopropyltoluene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Methylene chloride	EPA 8260B	P111201	690	ND	1	9/12/01	9/23/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P111201	690	ND	1	9/12/01	9/23/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
Naphthalene	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
n-Propylbenzene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Styrene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Tetrachloroethene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Toluene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,2,3-Trichlorobenzene	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
1,2,4-Trichlorobenzene	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
1,1,1-Trichloroethane	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,1,2-Trichloroethane	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Trichloroethene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Trichlorofluoromethane	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
1,2,3-Trichloropropane	EPA 8260B	P111201	690	ND	1	9/12/01	9/23/01	
1,2,4-Trimethylbenzene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
1,3,5-Trimethylbenzene	EPA 8260B	P111201	140	ND	1	9/12/01	9/23/01	
Vinyl acetate	EPA 8260B	P111201	1700	ND	1	9/12/01	9/23/01	VI
Vinyl chloride	EPA 8260B	P111201	350	ND	1	9/12/01	9/23/01	
Xylenes, Total	EPA 8260B	P111201	420	ND	1	9/12/01	9/23/01	

Surrogate: Dibromofluoromethane (70-125%)

98.8 %

Surrogate: Toluene-d8 (50-135%)

87.9 %

Surrogate: 4-Bromofluorobenzene (70-130%)

80.9 %

The reporting limit for this sample was adjusted by a factor of 1.39 to account for the applicable preparation factor.



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

Sampled: 09/11/01

Received: 09/11/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0159-06 (RINSATE 9/11/01 - Water)								
Acetone	EPA 8260B	P111912	20	ND	1	9/24/01	9/24/01	
Benzene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Bromobenzene	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
Bromochloromethane	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
Bromodichloromethane	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Bromoform	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
Bromomethane	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
2-Butanone (MEK)	EPA 8260B	P111912	10	ND	1	9/24/01	9/24/01	
n-Butylbenzene	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
sec-Butylbenzene	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
tert-Butylbenzene	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
Carbon Disulfide	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
Carbon tetrachloride	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
Chlorobenzene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Chloroethane	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
Chloroform	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Chloromethane	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
2-Chlorotoluene	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
4-Chlorotoluene	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
Dibromochloromethane	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Dibromomethane	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,2-Dichlorobenzene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,3-Dichlorobenzene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,4-Dichlorobenzene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Dichlorodifluoromethane	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
1,1-Dichloroethane	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,2-Dichloroethane	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,1-Dichloroethene	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
cis-1,2-Dichloroethene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
trans-1,2-Dichloroethene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,2-Dichloropropane	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,3-Dichloropropane	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
2,2-Dichloropropane	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,1-Dichloropropene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
cis-1,3-Dichloropropene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
trans-1,3-Dichloropropene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Ethylbenzene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Hexachlorobutadiene	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
2-Hexanone	EPA 8260B	P111912	10	ND	1	9/24/01	9/24/01	
Iodomethane	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Isopropylbenzene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

Sampled: 09/11/01
Received: 09/11/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0159-06 (RINSATE 9/11/01 - Water)								
p-Isopropyltoluene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Methylene chloride	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P111912	10	ND	1	9/24/01	9/24/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
Naphthalene	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
n-Propylbenzene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Styrene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Tetrachloroethene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Toluene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,2,3-Trichlorobenzene	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
1,2,4-Trichlorobenzene	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
1,1,1-Trichloroethane	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,1,2-Trichloroethane	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Trichloroethene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Trichlorofluoromethane	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
1,2,3-Trichloropropane	EPA 8260B	P111912	10	ND	1	9/24/01	9/24/01	
1,2,4-Trimethylbenzene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
1,3,5-Trimethylbenzene	EPA 8260B	P111912	2.0	ND	1	9/24/01	9/24/01	
Vinyl acetate	EPA 8260B	P111912	25	ND	1	9/24/01	9/24/01	
Vinyl chloride	EPA 8260B	P111912	5.0	ND	1	9/24/01	9/24/01	
Xylenes, Total	EPA 8260B	P111912	10	ND	1	9/24/01	9/24/01	
Surrogate: Dibromofluoromethane (80-120%)				99.6 %				
Surrogate: Toluene-d8 (80-120%)				104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				94.0 %				

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Debbie Fuller
Project Manager

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PKI0159
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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

Sampled: 09/11/01

Received: 09/11/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0159-07 (LB4 S-10 - Soil)								
Arsenic	EPA 6010B	PII1219	5.0	ND	1	9/12/01	9/13/01	
Chromium	EPA 6010B	PII1219	1.0	25	1	9/12/01	9/13/01	
Chromium VI	EPA 7196A	PII2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	PII1219	2.0	19	1	9/12/01	9/13/01	
Nickel	EPA 6010B	PII1219	5.0	18	1	9/12/01	9/13/01	
Sample ID: PKI0159-07RE2 (LB4 S-10 - Soil)								
Zinc	EPA 6010B	PII2605	5.0	54	1	9/26/01	9/28/01	
Sample ID: PKI0159-08 (LB4 S-20 - Soil)								
Arsenic	EPA 6010B	PII1219	5.0	ND	1	9/12/01	9/13/01	
Chromium	EPA 6010B	PII1219	1.0	22	1	9/12/01	9/13/01	
Chromium VI	EPA 7196A	PII2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	PII1219	2.0	21	1	9/12/01	9/13/01	
Nickel	EPA 6010B	PII1219	5.0	23	1	9/12/01	9/13/01	
Sample ID: PKI0159-08RE2 (LB4 S-20 - Soil)								
Zinc	EPA 6010B	PII2605	5.0	66	1	9/26/01	9/28/01	
Sample ID: PKI0159-09 (LB4 S-30 - Soil)								
Arsenic	EPA 6010B	PII1219	5.0	ND	1	9/12/01	9/13/01	
Chromium	EPA 6010B	PII1219	1.0	18	1	9/12/01	9/13/01	
Chromium VI	EPA 7196A	PII2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	PII1219	2.0	17	1	9/12/01	9/13/01	
Nickel	EPA 6010B	PII1219	5.0	14	1	9/12/01	9/13/01	

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

Sampled: 09/11/01

Received: 09/11/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0159-09RE2 (LB4 S-30 - Soil)								
Zinc	EPA 6010B	P1I2605	5.0	46	1	9/26/01	9/28/01	
Sample ID: PKI0159-10 (LB4 S-40 - Soil)								
Arsenic	EPA 6010B	P1I1805	25	ND	5	9/18/01	9/20/01	D1
Chromium	EPA 6010B	P1I1805	1.0	18	1	9/18/01	9/20/01	
Chromium VI	EPA 7196A	P1I2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	P1I1805	2.0	16	1	9/18/01	9/20/01	
Nickel	EPA 6010B	P1I1805	5.0	14	1	9/18/01	9/20/01	
Sample ID: PKI0159-10RE1 (LB4 S-40 - Soil)								
Zinc	EPA 6010B	P1I2605	5.0	45	1	9/26/01	9/28/01	
Sample ID: PKI0159-11 (LB4 S-50 - Soil)								
Arsenic	EPA 6010B	P1I1805	5.0	ND	1	9/18/01	9/20/01	
Chromium	EPA 6010B	P1I1805	1.0	15	1	9/18/01	9/20/01	
Chromium VI	EPA 7196A	P1I2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	P1I1805	2.0	14	1	9/18/01	9/20/01	
Nickel	EPA 6010B	P1I1805	5.0	12	1	9/18/01	9/20/01	
Sample ID: PKI0159-11RE1 (LB4 S-50 - Soil)								
Zinc	EPA 6010B	P1I2605	5.0	470	1	9/26/01	9/28/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Debbie Fuller
Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

Sampled: 09/11/01

Received: 09/11/01

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0159-06 (RINSATE 9/11/01 - Water)								
Arsenic	EPA 200.7	P111815	0.050	ND	1	9/18/01	9/19/01	
Chromium	EPA 200.7	P111815	0.010	ND	1	9/18/01	9/19/01	
Chromium VI	SM3500CR-D	P111206	0.025	ND	1	9/12/01	9/12/01	
Copper	EPA 200.7	P111815	0.020	ND	1	9/18/01	9/19/01	
Nickel	EPA 200.7	P111815	0.050	ND	1	9/18/01	9/19/01	
Zinc	EPA 200.7	P111815	0.050	ND	1	9/18/01	9/19/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

Sampled: 09/11/01

Received: 09/11/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0159-06 (RINSATE 9/11/01 - Water)								
Total Cyanide	SM4500-CN,C-E	P1I2028	0.020 mg/kg	ND	1	9/20/01	9/21/01	
Sample ID: PKI0159-07 (LB4 S-10 - Soil)								
Total Cyanide	EPA 9014	P1I2125	0.62	ND	1.25	9/21/01	9/24/01	
Sample ID: PKI0159-08 (LB4 S-20 - Soil)								
Total Cyanide	EPA 9014	P1I2125	0.62	ND	1.25	9/21/01	9/24/01	
Sample ID: PKI0159-09 (LB4 S-30 - Soil)								
Total Cyanide	EPA 9014	P1I2125	0.62	ND	1.25	9/21/01	9/24/01	
Sample ID: PKI0159-10 (LB4 S-40 - Soil)								
Total Cyanide	EPA 9014	P1I2125	0.62	ND	1.25	9/21/01	9/24/01	
Sample ID: PKI0159-11 (LB4 S-50 - Soil)								
Total Cyanide	EPA 9014	P1I2125	0.62	ND	1.25	9/21/01	9/24/01	

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 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

Sampled: 09/11/01

Received: 09/11/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: P111201 Extracted: 09/12/01										
Blank Analyzed: 09/17/01 (P111201-BLK1)										
Acetone	ND	1000	ug/kg							
Benzene	ND	100	ug/kg							
Bromobenzene	ND	250	ug/kg							
Bromochloromethane	ND	250	ug/kg							
Bromodichloromethane	ND	100	ug/kg							
Bromoform	ND	250	ug/kg							
Bromomethane	ND	250	ug/kg							
2-Butanone (MEK)	ND	500	ug/kg							
n-Butylbenzene	ND	250	ug/kg							
sec-Butylbenzene	ND	250	ug/kg							
tert-Butylbenzene	ND	250	ug/kg							
Carbon Disulfide	ND	250	ug/kg							
Carbon tetrachloride	ND	250	ug/kg							
Chlorobenzene	ND	100	ug/kg							
Chloroethane	ND	250	ug/kg							
Chloroform	ND	100	ug/kg							
Chloromethane	ND	250	ug/kg							
2-Chlorotoluene	ND	250	ug/kg							
4-Chlorotoluene	ND	250	ug/kg							
Dibromochloromethane	ND	100	ug/kg							
1,2-Dibromo-3-chloropropane	ND	250	ug/kg							
1,2-Dibromoethane (EDB)	ND	100	ug/kg							
Dibromomethane	ND	100	ug/kg							
1,2-Dichlorobenzene	ND	100	ug/kg							
1,3-Dichlorobenzene	ND	100	ug/kg							
1,4-Dichlorobenzene	ND	100	ug/kg							
Dichlorodifluoromethane	ND	250	ug/kg							
1,1-Dichloroethane	ND	100	ug/kg							
1,2-Dichloroethane	ND	100	ug/kg							
1,1-Dichloroethene	ND	250	ug/kg							
cis-1,2-Dichloroethene	ND	100	ug/kg							
trans-1,2-Dichloroethene	ND	100	ug/kg							
1,2-Dichloropropane	ND	100	ug/kg							
1,3-Dichloropropane	ND	100	ug/kg							

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111201 Extracted: 09/12/01										
Blank Analyzed: 09/17/01 (P111201-BLK1)										
2,2-Dichloropropane	ND	100	ug/kg							
1,1-Dichloropropene	ND	100	ug/kg							
cis-1,3-Dichloropropene	ND	100	ug/kg							
trans-1,3-Dichloropropene	ND	100	ug/kg							
Ethylbenzene	ND	100	ug/kg							
Hexachlorobutadiene	ND	250	ug/kg							
2-Hexanone	ND	500	ug/kg							
Iodomethane	ND	100	ug/kg							
Isopropylbenzene	ND	100	ug/kg							
p-Isopropyltoluene	ND	100	ug/kg							
Methylene chloride	ND	500	ug/kg							
4-Methyl-2-pentanone (MIBK)	ND	500	ug/kg							
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg							
Naphthalene	ND	250	ug/kg							
n-Propylbenzene	ND	100	ug/kg							
Styrene	ND	100	ug/kg							
1,1,1,2-Tetrachloroethane	ND	250	ug/kg							
1,1,2,2-Tetrachloroethane	ND	100	ug/kg							
Tetrachloroethene	ND	100	ug/kg							
Toluene	ND	100	ug/kg							
1,2,3-Trichlorobenzene	ND	250	ug/kg							
1,2,4-Trichlorobenzene	ND	250	ug/kg							
1,1,1-Trichloroethane	ND	100	ug/kg							
1,1,2-Trichloroethane	ND	100	ug/kg							
Trichloroethene	ND	100	ug/kg							
Trichlorofluoromethane	ND	250	ug/kg							
1,2,3-Trichloropropane	ND	500	ug/kg							
1,2,4-Trimethylbenzene	ND	100	ug/kg							
1,3,5-Trimethylbenzene	ND	100	ug/kg							
Vinyl acetate	ND	1200	ug/kg							
Vinyl chloride	ND	250	ug/kg							
Xylenes, Total	ND	300	ug/kg							
Surrogate: Dibromofluoromethane	161		ug/kg	125		129	70-125			S4
Surrogate: Toluene-d8	168		ug/kg	125		134	50-135			



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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111201 Extracted: 09/12/01									
Blank Analyzed: 09/17/01 (P111201-BLK1)									
Surrogate: 4-Bromofluorobenzene	151		ug/kg	125		121	70-130		
LCS Analyzed: 09/17/01 (P111201-BS1)									
Acetone	ND	1000	ug/kg	1000		55.8	5-200		
Benzene	927	100	ug/kg	1000		92.7	65-130		
Bromobenzene	1090	250	ug/kg	1000		109	60-135		
Bromochloromethane	1030	250	ug/kg	1000		103	60-135		
Bromodichloromethane	915	100	ug/kg	1000		91.5	30-135		
Bromoform	737	250	ug/kg	1000		73.7	60-140		
Bromomethane	1330	250	ug/kg	2000		66.5	10-200		
2-Butanone (MEK)	521	500	ug/kg	1000		52.1	10-160		
n-Butylbenzene	900	250	ug/kg	1000		90.0	65-125		
sec-Butylbenzene	928	250	ug/kg	1000		92.8	70-135		
tert-Butylbenzene	982	250	ug/kg	1000		98.2	70-130		
Carbon Disulfide	757	250	ug/kg	1000		75.7	20-120		
Carbon tetrachloride	859	250	ug/kg	1000		85.9	70-140		
Chlorobenzene	1050	100	ug/kg	1000		105	70-125		
Chloroethane	1270	250	ug/kg	2000		63.5	10-200		
Chloroform	987	100	ug/kg	1000		98.7	35-135		
Chloromethane	1410	250	ug/kg	2000		70.5	10-200		
2-Chlorotoluene	972	250	ug/kg	1000		97.2	70-135		
4-Chlorotoluene	965	250	ug/kg	1000		96.5	75-135		
Dibromochloromethane	898	100	ug/kg	1000		89.8	35-135		
1,2-Dibromo-3-chloropropane	537	250	ug/kg	1000		53.7	50-155		
1,2-Dibromoethane (EDB)	900	100	ug/kg	1000		90.0	70-130		
Dibromomethane	925	100	ug/kg	1000		92.5	65-130		
1,2-Dichlorobenzene	987	100	ug/kg	1000		98.7	70-125		
1,3-Dichlorobenzene	1000	100	ug/kg	1000		100	70-125		
1,4-Dichlorobenzene	1040	100	ug/kg	1000		104	70-135		
Dichlorodifluoromethane	1380	250	ug/kg	2000		69.0	10-185		
1,1-Dichloroethane	952	100	ug/kg	1000		95.2	60-140		
1,2-Dichloroethane	935	100	ug/kg	1000		93.5	55-135		
1,1-Dichloroethene	992	250	ug/kg	1000		99.2	55-145		
cis-1,2-Dichloroethene	996	100	ug/kg	1000		99.6	60-125		
trans-1,2-Dichloroethene	973	100	ug/kg	1000		97.3	70-145		
1,2-Dichloropropane	921	100	ug/kg	1000		92.1	65-130		

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111201 Extracted: 09/12/01										
LCS Analyzed: 09/17/01 (P111201-BS1)										
1,3-Dichloropropane	920	100	ug/kg	1000		92.0	65-130			
2,2-Dichloropropane	863	100	ug/kg	1000		86.3	60-135			
1,1-Dichloropropene	925	100	ug/kg	1000		92.5	65-130			
cis-1,3-Dichloropropene	840	100	ug/kg	1000		84.0	60-125			
trans-1,3-Dichloropropene	784	100	ug/kg	1000		78.4	50-130			
Ethylbenzene	1010	100	ug/kg	1000		101	70-125			
Hexachlorobutadiene	942	250	ug/kg	1000		94.2	60-125			
2-Hexanone	600	500	ug/kg	1000		60.0	25-185			
Iodomethane	1120	100	ug/kg	1000		112	30-155			
Isopropylbenzene	1010	100	ug/kg	1000		101	70-135			
p-Isopropyltoluene	926	100	ug/kg	1000		92.6	65-130			
Methylene chloride	953	500	ug/kg	1000		95.3	60-140			
4-Methyl-2-pentanone (MIBK)	685	500	ug/kg	1000		68.5	10-175			
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg				55-135			
Naphthalene	731	250	ug/kg	1000		73.1	45-155			
n-Propylbenzene	965	100	ug/kg	1000		96.5	75-135			
Styrene	1020	100	ug/kg	1000		102	70-130			
1,1,1,2-Tetrachloroethane	951	250	ug/kg	1000		95.1	70-130			
1,1,2,2-Tetrachloroethane	757	100	ug/kg	1000		75.7	60-140			
Tetrachloroethene	1070	100	ug/kg	1000		107	65-130			
Toluene	985	100	ug/kg	1000		98.5	70-125			
1,2,3-Trichlorobenzene	853	250	ug/kg	1000		85.3	60-135			
1,2,4-Trichlorobenzene	950	250	ug/kg	1000		95.0	55-135			
1,1,1-Trichloroethane	943	100	ug/kg	1000		94.3	65-135			
1,1,2-Trichloroethane	919	100	ug/kg	1000		91.9	65-130			
Trichloroethene	992	100	ug/kg	1000		99.2	70-130			
Trichlorofluoromethane	2000	250	ug/kg	2000		100	10-200			
1,2,3-Trichloropropane	745	500	ug/kg	1000		74.5	60-150			
1,2,4-Trimethylbenzene	1000	100	ug/kg	1000		100	75-130			
1,3,5-Trimethylbenzene	955	100	ug/kg	1000		95.5	70-130			
Vinyl acetate	ND	1200	ug/kg	1000		52.8	25-130			
Vinyl chloride	853	250	ug/kg	2000		42.6	10-200			
Xylenes, Total	3040	300	ug/kg	3000		101	70-130			
Surrogate: Dibromofluoromethane	150		ug/kg	125		120	70-125			
Surrogate: Toluene-d8	161		ug/kg	125		129	50-135			
Surrogate: 4-Bromofluorobenzene	156		ug/kg	125		125	70-130			



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Sampled: 09/11/01

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METHOD BLANK-QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111201 Extracted: 09/12/01									
LCS Dup Analyzed: 09/17/01 (P111201-BSD1)									
Acetone	ND	1000	ug/kg	1000		62.8 5-200	11.8	35	
Benzene	961	100	ug/kg	1000		96.1 65-130	3.60	35	
Bromobenzene	1080	250	ug/kg	1000		108 60-135	0.922	35	
Bromochloromethane	1050	250	ug/kg	1000		105 60-135	1.92	35	
Bromodichloromethane	944	100	ug/kg	1000		94.4 30-135	3.12	35	
Bromoform	729	250	ug/kg	1000		72.9 60-140	1.09	35	
Bromomethane	1440	250	ug/kg	2000		72.0 10-200	7.94	35	
2-Butanone (MEK)	528	500	ug/kg	1000		52.8 10-160	1.33	35	
n-Butylbenzene	960	250	ug/kg	1000		96.0 65-125	6.45	35	
sec-Butylbenzene	995	250	ug/kg	1000		99.5 70-135	6.97	35	
tert-Butylbenzene	1030	250	ug/kg	1000		103 70-130	4.77	35	
Carbon Disulfide	788	250	ug/kg	1000		78.8 20-120	4.01	35	
Carbon tetrachloride	928	250	ug/kg	1000		92.8 70-140	7.72	35	
Chlorobenzene	1100	100	ug/kg	1000		110 70-125	4.65	35	
Chloroethane	1350	250	ug/kg	2000		67.5 10-200	6.11	35	
Chloroform	1040	100	ug/kg	1000		104 35-135	5.23	35	
Chloromethane	1520	250	ug/kg	2000		76.0 10-200	7.51	35	
2-Chlorotoluene	1020	250	ug/kg	1000		102 70-135	4.82	35	
4-Chlorotoluene	1020	250	ug/kg	1000		102 75-135	5.54	35	
Dibromochloromethane	929	100	ug/kg	1000		92.9 35-135	3.39	35	
1,2-Dibromo-3-chloropropane	429	250	ug/kg	1000		42.9 50-155	22.4	35	N2
1,2-Dibromoethane (EDB)	897	100	ug/kg	1000		89.7 70-130	0.334	35	
Dibromomethane	938	100	ug/kg	1000		93.8 65-130	1.40	35	
1,2-Dichlorobenzene	1040	100	ug/kg	1000		104 70-125	5.23	35	
1,3-Dichlorobenzene	1060	100	ug/kg	1000		106 70-125	5.83	35	
1,4-Dichlorobenzene	1070	100	ug/kg	1000		107 70-135	2.84	35	
Dichlorodifluoromethane	1500	250	ug/kg	2000		75.0 10-185	8.33	35	
1,1-Dichloroethane	992	100	ug/kg	1000		99.2 60-140	4.12	35	
1,2-Dichloroethane	966	100	ug/kg	1000		96.6 55-135	3.26	35	
1,1-Dichloroethene	1040	250	ug/kg	1000		104 55-145	4.72	35	
cis-1,2-Dichloroethene	1020	100	ug/kg	1000		102 60-125	2.38	35	
trans-1,2-Dichloroethene	1040	100	ug/kg	1000		104 70-145	6.66	35	
1,2-Dichloropropane	963	100	ug/kg	1000		96.3 65-130	4.46	35	
1,3-Dichloropropane	940	100	ug/kg	1000		94.0 65-130	2.15	35	
2,2-Dichloropropane	948	100	ug/kg	1000		94.8 60-135	9.39	35	

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 Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

Sampled: 09/11/01

Received: 09/11/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111201 Extracted: 09/12/01									
LCS Dup Analyzed: 09/17/01 (P111201-BSD1)									
1,1-Dichloropropene	964	100	ug/kg	1000		96.4 65-130	4.13	35	
cis-1,3-Dichloropropene	883	100	ug/kg	1000		88.3 60-125	4.99	35	
trans-1,3-Dichloropropene	810	100	ug/kg	1000		81.0 50-130	3.26	35	
Ethylbenzene	1080	100	ug/kg	1000		108 70-125	6.70	35	
Hexachlorobutadiene	1040	250	ug/kg	1000		104 60-125	9.89	35	
2-Hexanone	601	500	ug/kg	1000		60.1 25-185	0.167	35	
Iodomethane	1170	100	ug/kg	1000		117 30-155	4.37	35	
Isopropylbenzene	1080	100	ug/kg	1000		108 70-135	6.70	35	
p-Isopropyltoluene	988	100	ug/kg	1000		98.8 65-130	6.48	35	
Methylene chloride	987	500	ug/kg	1000		98.7 60-140	3.51	35	
4-Methyl-2-pentanone (MIBK)	639	500	ug/kg	1000		63.9 10-175	6.95	35	
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg			55-135		35	
Naphthalene	686	250	ug/kg	1000		68.6 45-155	6.35	35	
n-Propylbenzene	1020	100	ug/kg	1000		102 75-135	5.54	35	
Styrene	1080	100	ug/kg	1000		108 70-130	5.71	35	
1,1,1,2-Tetrachloroethane	992	250	ug/kg	1000		99.2 70-130	4.22	35	
1,1,2,2-Tetrachloroethane	726	100	ug/kg	1000		72.6 60-140	4.18	35	
Tetrachloroethene	1120	100	ug/kg	1000		112 65-130	4.57	35	
Toluene	1060	100	ug/kg	1000		106 70-125	7.33	35	
1,2,3-Trichlorobenzene	820	250	ug/kg	1000		82.0 60-135	3.95	35	
1,2,4-Trichlorobenzene	990	250	ug/kg	1000		99.0 55-135	4.12	35	
1,1,1-Trichloroethane	1010	100	ug/kg	1000		101 65-135	6.86	35	
1,1,2-Trichloroethane	942	100	ug/kg	1000		94.2 65-130	2.47	35	
Trichloroethene	1060	100	ug/kg	1000		106 70-130	6.63	35	
Trichlorofluoromethane	2260	250	ug/kg	2000		113 10-200	12.2	35	
1,2,3-Trichloropropane	714	500	ug/kg	1000		71.4 60-150	4.25	35	
1,2,4-Trimethylbenzene	1050	100	ug/kg	1000		105 75-130	4.88	35	
1,3,5-Trimethylbenzene	1010	100	ug/kg	1000		101 70-130	5.60	35	
Vinyl acetate	ND	1200	ug/kg	1000		37.4 25-130	34.1	35	
Vinyl chloride	859	250	ug/kg	2000		43.0 10-200	0.701	35	
Xylenes, Total	3250	300	ug/kg	3000		108 70-130	6.68	35	
Surrogate: Dibromofluoromethane	140		ug/kg	125		112 70-125			
Surrogate: Toluene-d8	162		ug/kg	125		130 50-135			
Surrogate: 4-Bromofluorobenzene	153		ug/kg	125		122 70-130			



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 Attention: Jim Clarke

Client Project ID: 70211-0-0150

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111201 Extracted: 09/12/01										
Matrix Spike Analyzed: 09/17/01 (P111201-MS1)					Source: PKI0130-01					
Acetone	ND	1000	ug/kg	1000	ND	54.6	5-200			
Benzene	932	100	ug/kg	1000	ND	93.2	65-130			
Bromobenzene	1090	250	ug/kg	1000	ND	109	60-135			
Bromochloromethane	1060	250	ug/kg	1000	ND	106	60-135			
Bromodichloromethane	956	100	ug/kg	1000	ND	95.6	30-135			
Bromoform	789	250	ug/kg	1000	ND	78.9	60-140			
Bromomethane	1250	250	ug/kg	2000	ND	62.5	10-200			
2-Butanone (MEK)	505	500	ug/kg	1000	ND	50.5	10-160			
n-Butylbenzene	964	250	ug/kg	1000	ND	96.4	65-125			
sec-Butylbenzene	991	250	ug/kg	1000	ND	99.1	70-135			
tert-Butylbenzene	999	250	ug/kg	1000	ND	99.9	70-130			
Carbon Disulfide	743	250	ug/kg	1000	ND	74.3	20-120			
Carbon tetrachloride	901	250	ug/kg	1000	ND	90.1	70-140			
Chlorobenzene	1100	100	ug/kg	1000	ND	110	75-125			
Chloroethane	1270	250	ug/kg	2000	ND	63.5	10-200			
Chloroform	1020	100	ug/kg	1000	ND	102	35-135			
Chloromethane	1420	250	ug/kg	2000	ND	71.0	10-200			
2-Chlorotoluene	1000	250	ug/kg	1000	ND	100	70-135			
4-Chlorotoluene	1000	250	ug/kg	1000	ND	100	75-135			
Dibromochloromethane	942	100	ug/kg	1000	ND	94.2	35-135			
1,2-Dibromo-3-chloropropane	584	250	ug/kg	1000	ND	58.4	50-155			
1,2-Dibromoethane (EDB)	938	100	ug/kg	1000	ND	93.8	70-130			
Dibromomethane	940	100	ug/kg	1000	ND	94.0	65-130			
1,2-Dichlorobenzene	1040	100	ug/kg	1000	ND	104	70-125			
1,3-Dichlorobenzene	1040	100	ug/kg	1000	ND	104	70-125			
1,4-Dichlorobenzene	1090	100	ug/kg	1000	ND	109	70-135			
Dichlorodifluoromethane	1300	250	ug/kg	2000	ND	65.0	10-185			
1,1-Dichloroethane	976	100	ug/kg	1000	ND	97.6	60-140			
1,2-Dichloroethane	952	100	ug/kg	1000	ND	95.2	55-135			
1,1-Dichloroethene	1010	250	ug/kg	1000	ND	101	55-145			
cis-1,2-Dichloroethene	1010	100	ug/kg	1000	ND	101	60-125			
trans-1,2-Dichloroethene	1020	100	ug/kg	1000	ND	102	70-145			
1,2-Dichloropropane	932	100	ug/kg	1000	ND	93.2	65-130			
1,3-Dichloropropane	942	100	ug/kg	1000	ND	94.2	65-130			
2,2-Dichloropropane	827	100	ug/kg	1000	ND	82.7	60-135			

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: PII1201 Extracted: 09/12/01										
Matrix Spike Analyzed: 09/17/01 (PII1201-MS1)					Source: PKI0130-01					
1,1-Dichloropropene	943	100	ug/kg	1000	ND	94.3	65-130			
cis-1,3-Dichloropropene	876	100	ug/kg	1000	ND	87.6	60-125			
trans-1,3-Dichloropropene	835	100	ug/kg	1000	ND	83.5	50-130			
Ethylbenzene	1060	100	ug/kg	1000	ND	106	70-125			
Hexachlorobutadiene	1140	250	ug/kg	1000	ND	114	60-125			
2-Hexanone	639	500	ug/kg	1000	ND	63.9	25-185			
Iodomethane	1120	100	ug/kg	1000	ND	112	30-155			
Isopropylbenzene	1070	100	ug/kg	1000	ND	107	70-135			
p-Isopropyltoluene	998	100	ug/kg	1000	ND	99.8	65-130			
Methylene chloride	971	500	ug/kg	1000	ND	97.1	60-140			
4-Methyl-2-pentanone (MIBK)	709	500	ug/kg	1000	ND	70.9	10-175			
Naphthalene	781	250	ug/kg	1000	ND	78.1	45-155			
n-Propylbenzene	1030	100	ug/kg	1000	ND	103	75-135			
Styrene	1080	100	ug/kg	1000	ND	108	70-130			
1,1,1,2-Tetrachloroethane	1010	250	ug/kg	1000	ND	101	70-130			
1,1,2,2-Tetrachloroethane	815	100	ug/kg	1000	ND	81.5	60-140			
Tetrachloroethene	1140	100	ug/kg	1000	ND	114	65-130			
Toluene	1060	100	ug/kg	1000	ND	106	70-125			
1,2,3-Trichlorobenzene	906	250	ug/kg	1000	ND	90.6	60-135			
1,2,4-Trichlorobenzene	1020	250	ug/kg	1000	ND	102	55-135			
1,1,1-Trichloroethane	963	100	ug/kg	1000	ND	96.3	65-135			
1,1,2-Trichloroethane	987	100	ug/kg	1000	ND	98.7	65-130			
Trichloroethene	1060	100	ug/kg	1000	ND	106	70-130			
Trichlorofluoromethane	1970	250	ug/kg	2000	ND	98.5	10-200			
1,2,3-Trichloropropane	791	500	ug/kg	1000	ND	79.1	60-150			
1,2,4-Trimethylbenzene	1050	100	ug/kg	1000	ND	105	75-130			
1,3,5-Trimethylbenzene	1000	100	ug/kg	1000	ND	100	70-130			
Vinyl acetate	ND	1200	ug/kg	1000	ND	28.4	25-130			
Vinyl chloride	830	250	ug/kg	2000	ND	41.5	10-200			
Xylenes, Total	3220	300	ug/kg	3000	ND	107	70-130			
Surrogate: Dibromofluoromethane	143		ug/kg	125		114	70-125			
Surrogate: Toluene-d8	159		ug/kg	125		127	50-135			
Surrogate: 4-Bromofluorobenzene	148		ug/kg	125		118	70-130			



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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111201 Extracted: 09/12/01										
Matrix Spike Dup Analyzed: 09/17/01 (P111201-MSD1)					Source: PKI0130-01					
Acetone	ND	1000	ug/kg	1000	ND	52.7	5-200	3.54	35	
Benzene	927	100	ug/kg	1000	ND	92.7	65-130	0.538	35	
Bromobenzene	1070	250	ug/kg	1000	ND	107	60-135	1.85	35	
Bromochloromethane	1020	250	ug/kg	1000	ND	102	60-135	3.85	35	
Bromodichloromethane	900	100	ug/kg	1000	ND	90.0	30-135	6.03	35	
Bromoform	717	250	ug/kg	1000	ND	71.7	60-140	9.56	35	
Bromomethane	1260	250	ug/kg	2000	ND	63.0	10-200	0.797	35	
2-Butanone (MEK)	ND	500	ug/kg	1000	ND	46.7	10-160	7.82	35	
n-Butylbenzene	939	250	ug/kg	1000	ND	93.9	65-125	2.63	35	
sec-Butylbenzene	956	250	ug/kg	1000	ND	95.6	70-135	3.60	35	
tert-Butylbenzene	986	250	ug/kg	1000	ND	98.6	70-130	1.31	35	
Carbon Disulfide	736	250	ug/kg	1000	ND	73.6	20-120	0.947	35	
Carbon tetrachloride	893	250	ug/kg	1000	ND	89.3	70-140	0.892	35	
Chlorobenzene	1090	100	ug/kg	1000	ND	109	75-125	0.913	35	
Chloroethane	1260	250	ug/kg	2000	ND	63.0	10-200	0.791	35	
Chloroform	989	100	ug/kg	1000	ND	98.9	35-135	3.09	35	
Chloromethane	1450	250	ug/kg	2000	ND	72.5	10-200	2.09	35	
2-Chlorotoluene	984	250	ug/kg	1000	ND	98.4	70-135	1.61	35	
4-Chlorotoluene	992	250	ug/kg	1000	ND	99.2	75-135	0.803	35	
Dibromochloromethane	912	100	ug/kg	1000	ND	91.2	35-135	3.24	35	
1,2-Dibromo-3-chloropropane	509	250	ug/kg	1000	ND	50.9	50-155	13.7	35	
1,2-Dibromoethane (EDB)	889	100	ug/kg	1000	ND	88.9	70-130	5.36	35	
Dibromomethane	913	100	ug/kg	1000	ND	91.3	65-130	2.91	35	
1,2-Dichlorobenzene	998	100	ug/kg	1000	ND	99.8	70-125	4.12	35	
1,3-Dichlorobenzene	1010	100	ug/kg	1000	ND	101	70-125	2.93	35	
1,4-Dichlorobenzene	1070	100	ug/kg	1000	ND	107	70-135	1.85	35	
Dichlorodifluoromethane	1290	250	ug/kg	2000	ND	64.5	10-185	0.772	35	
1,1-Dichloroethane	970	100	ug/kg	1000	ND	97.0	60-140	0.617	35	
1,2-Dichloroethane	901	100	ug/kg	1000	ND	90.1	55-135	5.50	35	
1,1-Dichloroethene	977	250	ug/kg	1000	ND	97.7	55-145	3.32	35	
cis-1,2-Dichloroethene	984	100	ug/kg	1000	ND	98.4	60-125	2.61	35	
trans-1,2-Dichloroethene	1010	100	ug/kg	1000	ND	101	70-145	0.985	35	
1,2-Dichloropropane	893	100	ug/kg	1000	ND	89.3	65-130	4.27	35	
1,3-Dichloropropane	909	100	ug/kg	1000	ND	90.9	65-130	3.57	35	
2,2-Dichloropropane	811	100	ug/kg	1000	ND	81.1	60-135	1.95	35	

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111201 Extracted: 09/12/01										
Matrix Spike Dup Analyzed: 09/17/01 (P111201-MSD1)					Source: PKI0130-01					
1,1-Dichloropropene	916	100	ug/kg	1000	ND	91.6	65-130	2.90	35	
cis-1,3-Dichloropropene	851	100	ug/kg	1000	ND	85.1	60-125	2.90	35	
trans-1,3-Dichloropropene	811	100	ug/kg	1000	ND	81.1	50-130	2.92	35	
Ethylbenzene	1040	100	ug/kg	1000	ND	104	70-125	1.90	35	
Hexachlorobutadiene	1040	250	ug/kg	1000	ND	104	60-125	9.17	35	
2-Hexanone	554	500	ug/kg	1000	ND	55.4	25-185	14.2	35	
Iodomethane	1130	100	ug/kg	1000	ND	113	30-155	0.889	35	
Isopropylbenzene	1040	100	ug/kg	1000	ND	104	70-135	2.84	35	
p-Isopropyltoluene	953	100	ug/kg	1000	ND	95.3	65-130	4.61	35	
Methylene chloride	957	500	ug/kg	1000	ND	95.7	60-140	1.45	35	
4-Methyl-2-pentanone (MIBK)	630	500	ug/kg	1000	ND	63.0	10-175	11.8	35	
Naphthalene	729	250	ug/kg	1000	ND	72.9	45-155	6.89	35	
n-Propylbenzene	1000	100	ug/kg	1000	ND	100	75-135	2.96	35	
Styrene	1070	100	ug/kg	1000	ND	107	70-130	0.930	35	
1,1,1,2-Tetrachloroethane	984	250	ug/kg	1000	ND	98.4	70-130	2.61	35	
1,1,2,2-Tetrachloroethane	724	100	ug/kg	1000	ND	72.4	60-140	11.8	35	
Tetrachloroethene	1120	100	ug/kg	1000	ND	112	65-130	1.77	35	
Toluene	1030	100	ug/kg	1000	ND	103	70-125	2.87	35	
1,2,3-Trichlorobenzene	848	250	ug/kg	1000	ND	84.8	60-135	6.61	35	
1,2,4-Trichlorobenzene	958	250	ug/kg	1000	ND	95.8	55-135	6.27	35	
1,1,1-Trichloroethane	950	100	ug/kg	1000	ND	95.0	65-135	1.36	35	
1,1,2-Trichloroethane	912	100	ug/kg	1000	ND	91.2	65-130	7.90	35	
Trichloroethene	987	100	ug/kg	1000	ND	98.7	70-130	7.13	35	
Trichlorofluoromethane	1950	250	ug/kg	2000	ND	97.5	10-200	1.02	35	
1,2,3-Trichloropropane	719	500	ug/kg	1000	ND	71.9	60-150	9.54	35	
1,2,4-Trimethylbenzene	1020	100	ug/kg	1000	ND	102	75-130	2.90	35	
1,3,5-Trimethylbenzene	990	100	ug/kg	1000	ND	99.0	70-130	1.01	35	
Vinyl acetate	ND	1200	ug/kg	1000	ND	23.0	25-130	21.0	35	M2
Vinyl chloride	1040	250	ug/kg	2000	ND	52.0	10-200	22.5	35	
Xylenes, Total	3150	300	ug/kg	3000	ND	105	70-130	2.20	35	
Surrogate: Dibromofluoromethane	140		ug/kg	125		112	70-125			
Surrogate: Toluene-d8	161		ug/kg	125		129	50-135			
Surrogate: 4-Bromofluorobenzene	148		ug/kg	125		118	70-130			



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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111912 Extracted: 09/24/01										
Blank Analyzed: 09/24/01 (P111912-BLK1)										
Acetone	ND	20	ug/l							
Benzene	ND	2.0	ug/l							
Bromobenzene	ND	5.0	ug/l							
Bromochloromethane	ND	5.0	ug/l							
Bromodichloromethane	ND	2.0	ug/l							
Bromoform	ND	5.0	ug/l							
Bromomethane	ND	5.0	ug/l							
2-Butanone (MEK)	ND	10	ug/l							
n-Butylbenzene	ND	5.0	ug/l							
sec-Butylbenzene	ND	5.0	ug/l							
tert-Butylbenzene	ND	5.0	ug/l							
Carbon Disulfide	ND	5.0	ug/l							
Carbon tetrachloride	ND	5.0	ug/l							
Chlorobenzene	ND	2.0	ug/l							
Chloroethane	ND	5.0	ug/l							
Chloroform	ND	2.0	ug/l							
Chloromethane	ND	5.0	ug/l							
2-Chlorotoluene	ND	5.0	ug/l							
4-Chlorotoluene	ND	5.0	ug/l							
Dibromochloromethane	ND	2.0	ug/l							
1,2-Dibromo-3-chloropropane	ND	5.0	ug/l							
1,2-Dibromoethane (EDB)	ND	2.0	ug/l							
Dibromomethane	ND	2.0	ug/l							
1,2-Dichlorobenzene	ND	2.0	ug/l							
1,3-Dichlorobenzene	ND	2.0	ug/l							
1,4-Dichlorobenzene	ND	2.0	ug/l							
Dichlorodifluoromethane	ND	5.0	ug/l							
1,1-Dichloroethane	ND	2.0	ug/l							
1,2-Dichloroethane	ND	2.0	ug/l							
1,1-Dichloroethene	ND	5.0	ug/l							
cis-1,2-Dichloroethene	ND	2.0	ug/l							
trans-1,2-Dichloroethene	ND	2.0	ug/l							
1,2-Dichloropropane	ND	2.0	ug/l							
1,3-Dichloropropane	ND	2.0	ug/l							

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111912 Extracted: 09/24/01										
Blank Analyzed: 09/24/01 (P111912-BLK1)										
2,2-Dichloropropane	ND	2.0	ug/l							
1,1-Dichloropropene	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Hexachlorobutadiene	ND	5.0	ug/l							
2-Hexanone	ND	10	ug/l							
Iodomethane	ND	2.0	ug/l							
Isopropylbenzene	ND	2.0	ug/l							
p-Isopropyltoluene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
4-Methyl-2-pentanone (MIBK)	ND	10	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
Naphthalene	ND	5.0	ug/l							
n-Propylbenzene	ND	2.0	ug/l							
Styrene	ND	2.0	ug/l							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,2,3-Trichlorobenzene	ND	5.0	ug/l							
1,2,4-Trichlorobenzene	ND	5.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
1,2,3-Trichloropropane	ND	10	ug/l							
1,2,4-Trimethylbenzene	ND	2.0	ug/l							
1,3,5-Trimethylbenzene	ND	2.0	ug/l							
Vinyl acetate	ND	25	ug/l							
Vinyl chloride	ND	5.0	ug/l							
Xylenes, Total	ND	10	ug/l							
Surrogate: Dibromofluoromethane	28.2		ug/l	25.0		113	80-120			
Surrogate: Toluene-d8	26.2		ug/l	25.0		105	80-120			



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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111912 Extracted: 09/24/01										
Blank Analyzed: 09/24/01 (P111912-BLK1)										
Surrogate: 4-Bromofluorobenzene	23.0		ug/l	25.0		92.0	80-120			
LCS Analyzed: 09/24/01 (P111912-BS1)										
Acetone	27.5	20	ug/l	25.0		110	30-200			
Benzene	22.5	2.0	ug/l	25.0		90.0	80-120			
Bromobenzene	24.6	5.0	ug/l	25.0		98.4	80-120			
Bromochloromethane	28.6	5.0	ug/l	25.0		114	80-120			
Bromodichloromethane	27.7	2.0	ug/l	25.0		111	80-130			
Bromoform	30.8	5.0	ug/l	25.0		123	60-140			
Bromomethane	27.8	5.0	ug/l	25.0		111	60-150			
2-Butanone (MEK)	21.1	10	ug/l	25.0		84.4	30-185			
n-Butylbenzene	21.6	5.0	ug/l	25.0		86.4	75-130			
sec-Butylbenzene	21.8	5.0	ug/l	25.0		87.2	80-125			
tert-Butylbenzene	22.3	5.0	ug/l	25.0		89.2	80-120			
Carbon Disulfide	21.8	5.0	ug/l	25.0		87.2	65-120			
Carbon tetrachloride	30.4	5.0	ug/l	25.0		122	75-150			
Chlorobenzene	27.2	2.0	ug/l	25.0		109	80-120			
Chloroethane	23.6	5.0	ug/l	25.0		94.4	80-125			
Chloroform	25.9	2.0	ug/l	25.0		104	80-120			
Chloromethane	19.8	5.0	ug/l	25.0		79.2	60-125			
2-Chlorotoluene	22.5	5.0	ug/l	25.0		90.0	80-120			
4-Chlorotoluene	22.6	5.0	ug/l	25.0		90.4	80-120			
Dibromochloromethane	31.1	2.0	ug/l	25.0		124	70-150			
1,2-Dibromo-3-chloropropane	24.7	5.0	ug/l	25.0		98.8	50-145			
1,2-Dibromoethane (EDB)	26.0	2.0	ug/l	25.0		104	75-120			
Dibromomethane	26.5	2.0	ug/l	25.0		106	80-120			
1,2-Dichlorobenzene	24.4	2.0	ug/l	25.0		97.6	80-120			
1,3-Dichlorobenzene	24.0	2.0	ug/l	25.0		96.0	80-120			
1,4-Dichlorobenzene	25.1	2.0	ug/l	25.0		100	80-120			
Dichlorodifluoromethane	22.8	5.0	ug/l	25.0		91.2	25-140			
1,1-Dichloroethane	23.9	2.0	ug/l	25.0		95.6	80-120			
1,2-Dichloroethane	25.0	2.0	ug/l	25.0		100	80-120			
1,1-Dichloroethene	25.6	5.0	ug/l	25.0		102	80-120			
cis-1,2-Dichloroethene	25.3	2.0	ug/l	25.0		101	80-120			
trans-1,2-Dichloroethene	24.9	2.0	ug/l	25.0		99.6	80-120			
1,2-Dichloropropane	23.3	2.0	ug/l	25.0		93.2	80-120			
1,3-Dichloropropane	24.3	2.0	ug/l	25.0		97.2	80-120			

Debbie Fuller
 Project Manager

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Attention: Jim Clarke

Client Project ID: 70211-0-0150

Report Number: PKI0159

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111912 Extracted: 09/24/01									
LCS Analyzed: 09/24/01 (P111912-BS1)									
2,2-Dichloropropane	31.3	2.0	ug/l	25.0		125 75-135			
1,1-Dichloropropene	23.3	2.0	ug/l	25.0		93.2 80-120			
cis-1,3-Dichloropropene	24.7	2.0	ug/l	25.0		98.8 80-120			
trans-1,3-Dichloropropene	24.4	2.0	ug/l	25.0		97.6 80-120			
Ethylbenzene	25.4	2.0	ug/l	25.0		102 80-120			
Hexachlorobutadiene	25.1	5.0	ug/l	25.0		100 60-145			
2-Hexanone	22.7	10	ug/l	25.0		90.8 50-170			
Iodomethane	30.2	2.0	ug/l	25.0		121 40-155			
Isopropylbenzene	25.8	2.0	ug/l	25.0		103 80-120			
p-Isopropyltoluene	21.7	2.0	ug/l	25.0		86.8 80-120			
Methylene chloride	23.8	5.0	ug/l	25.0		95.2 80-120			
4-Methyl-2-pentanone (MIBK)	23.0	10	ug/l	25.0		92.0 70-140			
Methyl-tert-butyl Ether (MTBE)	23.9	5.0	ug/l	25.0		95.6 75-135			
Naphthalene	23.8	5.0	ug/l	25.0		95.2 70-130			
n-Propylbenzene	22.6	2.0	ug/l	25.0		90.4 80-120			
Styrene	26.0	2.0	ug/l	25.0		104 80-120			
1,1,1,2-Tetrachloroethane	30.6	5.0	ug/l	25.0		122 65-150			
1,1,2,2-Tetrachloroethane	23.4	2.0	ug/l	25.0		93.6 70-130			
Tetrachloroethene	28.4	2.0	ug/l	25.0		114 80-125			
Toluene	24.7	2.0	ug/l	25.0		98.8 80-120			
1,2,3-Trichlorobenzene	23.4	5.0	ug/l	25.0		93.6 75-125			
1,2,4-Trichlorobenzene	23.2	5.0	ug/l	25.0		92.8 80-120			
1,1,1-Trichloroethane	28.0	2.0	ug/l	25.0		112 80-120			
1,1,2-Trichloroethane	26.2	2.0	ug/l	25.0		105 80-120			
Trichloroethene	25.6	2.0	ug/l	25.0		102 80-120			
Trichlorofluoromethane	31.6	5.0	ug/l	25.0		126 75-150			
1,2,3-Trichloropropane	21.6	10	ug/l	25.0		86.4 65-135			
1,2,4-Trimethylbenzene	23.5	2.0	ug/l	25.0		94.0 80-120			
1,3,5-Trimethylbenzene	22.4	2.0	ug/l	25.0		89.6 80-120			
Vinyl acetate	ND	25	ug/l	25.0		90.4 40-120			
Vinyl chloride	24.3	5.0	ug/l	25.0		97.2 80-120			
Xylenes, Total	76.5	10	ug/l	75.0		102 80-120			
Surrogate: Dibromofluoromethane	28.4		ug/l	25.0		114 80-120			
Surrogate: Toluene-d8	26.8		ug/l	25.0		107 80-120			
Surrogate: 4-Bromofluorobenzene	23.6		ug/l	25.0		94.4 80-120			



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 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111912 Extracted: 09/24/01										
LCS Dup Analyzed: 09/24/01 (P111912-BSD1)										
Acetone	34.1	20	ug/l	25.0		136	30-200	21.4	20	R6
Benzene	22.4	2.0	ug/l	25.0		89.6	80-120	0.445	20	
Bromobenzene	25.2	5.0	ug/l	25.0		101	80-120	2.41	20	
Bromochloromethane	27.5	5.0	ug/l	25.0		110	80-120	3.92	20	
Bromodichloromethane	27.1	2.0	ug/l	25.0		108	80-130	2.19	20	
Bromoform	30.7	5.0	ug/l	25.0		123	60-140	0.325	20	
Bromomethane	27.4	5.0	ug/l	25.0		110	60-150	1.45	20	
2-Butanone (MEK)	26.7	10	ug/l	25.0		107	30-185	23.4	20	R6
n-Butylbenzene	21.3	5.0	ug/l	25.0		85.2	75-130	1.40	20	
sec-Butylbenzene	21.9	5.0	ug/l	25.0		87.6	80-125	0.458	20	
tert-Butylbenzene	22.6	5.0	ug/l	25.0		90.4	80-120	1.34	20	
Carbon Disulfide	21.0	5.0	ug/l	25.0		84.0	65-120	3.74	20	
Carbon tetrachloride	30.0	5.0	ug/l	25.0		120	75-150	1.32	20	
Chlorobenzene	26.6	2.0	ug/l	25.0		106	80-120	2.23	20	
Chloroethane	23.0	5.0	ug/l	25.0		92.0	80-125	2.58	20	
Chloroform	25.6	2.0	ug/l	25.0		102	80-120	1.17	20	
Chloromethane	19.1	5.0	ug/l	25.0		76.4	60-125	3.60	20	
2-Chlorotoluene	22.6	5.0	ug/l	25.0		90.4	80-120	0.443	20	
4-Chlorotoluene	22.9	5.0	ug/l	25.0		91.6	80-120	1.32	20	
Dibromochloromethane	31.8	2.0	ug/l	25.0		127	70-150	2.23	20	
1,2-Dibromo-3-chloropropane	26.3	5.0	ug/l	25.0		105	50-145	6.27	20	
1,2-Dibromoethane (EDB)	26.6	2.0	ug/l	25.0		106	75-120	2.28	20	
Dibromomethane	26.9	2.0	ug/l	25.0		108	80-120	1.50	20	
1,2-Dichlorobenzene	24.6	2.0	ug/l	25.0		98.4	80-120	0.816	20	
1,3-Dichlorobenzene	24.4	2.0	ug/l	25.0		97.6	80-120	1.65	20	
1,4-Dichlorobenzene	25.0	2.0	ug/l	25.0		100	80-120	0.399	20	
Dichlorodifluoromethane	22.9	5.0	ug/l	25.0		91.6	25-140	0.438	20	
1,1-Dichloroethane	23.6	2.0	ug/l	25.0		94.4	80-120	1.26	20	
1,2-Dichloroethane	25.2	2.0	ug/l	25.0		101	80-120	0.797	20	
1,1-Dichloroethene	25.5	5.0	ug/l	25.0		102	80-120	0.391	20	
cis-1,2-Dichloroethene	24.8	2.0	ug/l	25.0		99.2	80-120	2.00	20	
trans-1,2-Dichloroethene	24.7	2.0	ug/l	25.0		98.8	80-120	0.806	20	
1,2-Dichloropropane	22.9	2.0	ug/l	25.0		91.6	80-120	1.73	20	
1,3-Dichloropropane	24.6	2.0	ug/l	25.0		98.4	80-120	1.23	20	
2,2-Dichloropropane	30.5	2.0	ug/l	25.0		122	75-135	2.59	20	

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4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

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METHOD BLANK/OC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111912 Extracted: 09/24/01										
LCS Dup Analyzed: 09/24/01 (P111912-BSD1)										
1,1-Dichloropropene	23.0	2.0	ug/l	25.0		92.0	80-120	1.30	20	
cis-1,3-Dichloropropene	24.3	2.0	ug/l	25.0		97.2	80-120	1.63	20	
trans-1,3-Dichloropropene	24.8	2.0	ug/l	25.0		99.2	80-120	1.63	20	
Ethylbenzene	25.1	2.0	ug/l	25.0		100	80-120	1.19	20	
Hexachlorobutadiene	25.3	5.0	ug/l	25.0		101	60-145	0.794	20	
2-Hexanone	27.5	10	ug/l	25.0		110	50-170	19.1	20	
Iodomethane	29.6	2.0	ug/l	25.0		118	40-155	2.01	20	
Isopropylbenzene	25.4	2.0	ug/l	25.0		102	80-120	1.56	20	
p-Isopropyltoluene	21.7	2.0	ug/l	25.0		86.8	80-120	0.00	20	
Methylene chloride	23.4	5.0	ug/l	25.0		93.6	80-120	1.69	20	
4-Methyl-2-pentanone (MIBK)	23.9	10	ug/l	25.0		95.6	70-140	3.84	20	
Methyl-tert-butyl Ether (MTBE)	24.6	5.0	ug/l	25.0		98.4	75-135	2.89	20	
Naphthalene	24.9	5.0	ug/l	25.0		99.6	70-130	4.52	20	
n-Propylbenzene	22.7	2.0	ug/l	25.0		90.8	80-120	0.442	20	
Styrene	25.9	2.0	ug/l	25.0		104	80-120	0.385	20	
1,1,1,2-Tetrachloroethane	29.8	5.0	ug/l	25.0		119	65-150	2.65	20	
1,1,2,2-Tetrachloroethane	24.2	2.0	ug/l	25.0		96.8	70-130	3.36	20	
Tetrachloroethene	27.3	2.0	ug/l	25.0		109	80-125	3.95	20	
Toluene	24.8	2.0	ug/l	25.0		99.2	80-120	0.404	20	
1,2,3-Trichlorobenzene	23.8	5.0	ug/l	25.0		95.2	75-125	1.69	20	
1,2,4-Trichlorobenzene	23.4	5.0	ug/l	25.0		93.6	80-120	0.858	20	
1,1,1-Trichloroethane	27.3	2.0	ug/l	25.0		109	80-120	2.53	20	
1,1,2-Trichloroethane	26.3	2.0	ug/l	25.0		105	80-120	0.381	20	
Trichloroethene	24.6	2.0	ug/l	25.0		98.4	80-120	3.98	20	
Trichlorofluoromethane	30.6	5.0	ug/l	25.0		122	75-150	3.22	20	
1,2,3-Trichloropropane	22.7	10	ug/l	25.0		90.8	65-135	4.97	20	
1,2,4-Trimethylbenzene	23.6	2.0	ug/l	25.0		94.4	80-120	0.425	20	
1,3,5-Trimethylbenzene	22.6	2.0	ug/l	25.0		90.4	80-120	0.889	20	
Vinyl acetate	ND	25	ug/l	25.0		92.8	40-120	2.62	20	
Vinyl chloride	23.7	5.0	ug/l	25.0		94.8	80-120	2.50	20	
Xylenes, Total	76.1	10	ug/l	75.0		101	80-120	0.524	20	
Surrogate: Dibromofluoromethane	28.4		ug/l	25.0		114	80-120			
Surrogate: Toluene-d8	26.4		ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	24.1		ug/l	25.0		96.4	80-120			



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111912 Extracted: 09/24/01										
Matrix Spike Analyzed: 09/24/01 (P111912-MS1)					Source: PKI0173-01					
Acetone	ND	20	ug/l	25.0	ND		5-200			M2
Benzene	26.5	2.0	ug/l	25.0	ND	106	80-120			
Bromobenzene	26.5	5.0	ug/l	25.0	ND	106	80-120			
Bromochloromethane	26.1	5.0	ug/l	25.0	ND	104	60-135			
Bromodichloromethane	28.6	2.0	ug/l	25.0	ND	114	80-120			
Bromoform	18.3	5.0	ug/l	25.0	ND	73.2	40-140			
Bromomethane	33.6	5.0	ug/l	25.0	ND	134	25-165			
2-Butanone (MEK)	ND	10	ug/l	25.0	ND		10-160			M2
n-Butylbenzene	28.2	5.0	ug/l	25.0	ND	113	75-135			
sec-Butylbenzene	27.3	5.0	ug/l	25.0	ND	109	80-135			
tert-Butylbenzene	27.7	5.0	ug/l	25.0	ND	111	80-125			
Carbon Disulfide	24.1	5.0	ug/l	25.0	ND	96.4	20-120			
Carbon tetrachloride	36.7	5.0	ug/l	25.0	ND	147	80-145			M1
Chlorobenzene	30.6	2.0	ug/l	25.0	ND	122	80-120			M1
Chloroethane	27.6	5.0	ug/l	25.0	ND	110	30-150			
Chloroform	29.9	2.0	ug/l	25.0	ND	120	80-125			
Chloromethane	23.5	5.0	ug/l	25.0	ND	94.0	15-140			
2-Chlorotoluene	26.7	5.0	ug/l	25.0	ND	107	80-125			
4-Chlorotoluene	26.8	5.0	ug/l	25.0	ND	107	80-125			
Dibromochloromethane	26.2	2.0	ug/l	25.0	ND	105	75-135			
1,2-Dibromo-3-chloropropane	11.0	5.0	ug/l	25.0	ND	44.0	25-185			
1,2-Dibromoethane (EDB)	19.0	2.0	ug/l	25.0	ND	76.0	45-145			
Dibromomethane	20.8	2.0	ug/l	25.0	ND	83.2	55-140			
1,2-Dichlorobenzene	25.3	2.0	ug/l	25.0	ND	101	80-120			
1,3-Dichlorobenzene	26.6	2.0	ug/l	25.0	ND	106	80-120			
1,4-Dichlorobenzene	27.1	2.0	ug/l	25.0	ND	108	80-120			
Dichlorodifluoromethane	34.0	5.0	ug/l	25.0	ND	136	25-145			
1,1-Dichloroethane	27.8	2.0	ug/l	25.0	ND	111	75-120			
1,2-Dichloroethane	22.3	2.0	ug/l	25.0	ND	89.2	60-135			
1,1-Dichloroethene	30.6	5.0	ug/l	25.0	ND	122	55-120			M1
cis-1,2-Dichloroethene	28.2	2.0	ug/l	25.0	ND	113	75-120			
trans-1,2-Dichloroethene	30.0	2.0	ug/l	25.0	ND	120	65-120			
1,2-Dichloropropane	25.3	2.0	ug/l	25.0	ND	101	80-125			
1,3-Dichloropropane	20.4	2.0	ug/l	25.0	ND	81.6	55-140			
2,2-Dichloropropane	43.2	2.0	ug/l	25.0	ND	173	45-165			M1

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111912 Extracted: 09/24/01										
Matrix Spike Analyzed: 09/24/01 (P111912-MS1)					Source: PKI0173-01					
1,1-Dichloropropene	28.8	2.0	ug/l	25.0	ND	115	80-120			
cis-1,3-Dichloropropene	24.9	2.0	ug/l	25.0	ND	99.6	80-120			
trans-1,3-Dichloropropene	22.0	2.0	ug/l	25.0	ND	88.0	70-120			
Ethylbenzene	30.6	2.0	ug/l	25.0	ND	122	80-120			M1
Hexachlorobutadiene	33.0	5.0	ug/l	25.0	ND	132	80-135			
2-Hexanone	10.0	10	ug/l	25.0	ND	40.0	25-185			
Iodomethane	34.7	2.0	ug/l	25.0	ND	139	30-155			
Isopropylbenzene	30.9	2.0	ug/l	25.0	ND	124	80-125			
p-Isopropyltoluene	27.5	2.0	ug/l	25.0	ND	110	80-125			
Methylene chloride	24.5	5.0	ug/l	25.0	ND	98.0	55-125			
4-Methyl-2-pentanone (MIBK)	12.3	10	ug/l	25.0	ND	49.2	10-175			
Methyl-tert-butyl Ether (MTBE)	25.0	5.0	ug/l	25.0	ND	100	55-135			
Naphthalene	13.2	5.0	ug/l	25.0	ND	52.8	15-160			
n-Propylbenzene	27.8	2.0	ug/l	25.0	ND	111	80-130			
Styrene	29.2	2.0	ug/l	25.0	ND	117	60-135			
1,1,1,2-Tetrachloroethane	33.1	5.0	ug/l	25.0	ND	132	80-135			
1,1,2,2-Tetrachloroethane	15.3	2.0	ug/l	25.0	ND	61.2	35-150			
Tetrachloroethene	34.3	2.0	ug/l	25.0	ND	137	80-120			M1
Toluene	29.5	2.0	ug/l	25.0	ND	118	80-120			
1,2,3-Trichlorobenzene	18.1	5.0	ug/l	25.0	ND	72.4	45-145			
1,2,4-Trichlorobenzene	21.7	5.0	ug/l	25.0	ND	86.8	65-130			
1,1,1-Trichloroethane	34.0	2.0	ug/l	25.0	ND	136	80-120			M1
1,1,2-Trichloroethane	21.2	2.0	ug/l	25.0	ND	84.8	55-145			
Trichloroethene	29.8	2.0	ug/l	25.0	ND	119	80-120			
Trichlorofluoromethane	38.0	5.0	ug/l	25.0	ND	152	70-145			M1
1,2,3-Trichloropropane	13.0	10	ug/l	25.0	ND	52.0	20-160			
1,2,4-Trimethylbenzene	28.8	2.0	ug/l	25.0	ND	115	70-135			
1,3,5-Trimethylbenzene	27.4	2.0	ug/l	25.0	ND	110	80-125			
Vinyl acetate	ND	25	ug/l	25.0	ND	64.0	25-130			
Vinyl chloride	33.7	5.0	ug/l	25.0	ND	135	25-135			
Xylenes, Total	90.7	10	ug/l	75.0	ND	121	80-120			M1
Surrogate: Dibromofluoromethane	24.5		ug/l	25.0		98.0	80-120			
Surrogate: Toluene-d8	26.3		ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	23.0		ug/l	25.0		92.0	80-120			



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111912 Extracted: 09/24/01										
Matrix Spike Dup Analyzed: 09/24/01 (P111912-MSD1)					Source: PKI0173-01					
Acetone	ND	20	ug/l	25.0	ND		5-200		20	M2
Benzene	25.6	2.0	ug/l	25.0	ND	102	80-120	3.45	20	
Bromobenzene	25.8	5.0	ug/l	25.0	ND	103	80-120	2.68	20	
Bromochloromethane	22.3	5.0	ug/l	25.0	ND	89.2	60-135	15.7	20	
Bromodichloromethane	25.6	2.0	ug/l	25.0	ND	102	80-120	11.1	20	
Bromoform	14.1	5.0	ug/l	25.0	ND	56.4	40-140	25.9	20	R4
Bromomethane	32.7	5.0	ug/l	25.0	ND	131	25-165	2.71	20	
2-Butanone (MEK)	ND	10	ug/l	25.0	ND		10-160		20	M2
n-Butylbenzene	28.2	5.0	ug/l	25.0	ND	113	75-135	0.00	20	
sec-Butylbenzene	28.8	5.0	ug/l	25.0	ND	115	80-135	5.35	20	
tert-Butylbenzene	29.3	5.0	ug/l	25.0	ND	117	80-125	5.61	20	
Carbon Disulfide	23.1	5.0	ug/l	25.0	ND	92.4	20-120	4.24	20	
Carbon tetrachloride	36.3	5.0	ug/l	25.0	ND	145	80-145	1.10	20	
Chlorobenzene	30.4	2.0	ug/l	25.0	ND	122	80-120	0.656	20	M1
Chloroethane	28.3	5.0	ug/l	25.0	ND	113	30-150	2.50	20	
Chloroform	28.7	2.0	ug/l	25.0	ND	115	80-125	4.10	20	
Chloromethane	22.4	5.0	ug/l	25.0	ND	89.6	15-140	4.79	20	
2-Chlorotoluene	28.0	5.0	ug/l	25.0	ND	112	80-125	4.75	20	
4-Chlorotoluene	27.7	5.0	ug/l	25.0	ND	111	80-125	3.30	20	
Dibromochloromethane	21.9	2.0	ug/l	25.0	ND	87.6	75-135	17.9	20	
1,2-Dibromo-3-chloropropane	8.01	5.0	ug/l	25.0	ND	32.0	25-185	31.5	20	R4
1,2-Dibromoethane (EDB)	16.1	2.0	ug/l	25.0	ND	64.4	45-145	16.5	20	
Dibromomethane	17.5	2.0	ug/l	25.0	ND	70.0	55-140	17.2	20	
1,2-Dichlorobenzene	23.2	2.0	ug/l	25.0	ND	92.8	80-120	8.66	20	
1,3-Dichlorobenzene	26.6	2.0	ug/l	25.0	ND	106	80-120	0.00	20	
1,4-Dichlorobenzene	26.7	2.0	ug/l	25.0	ND	107	80-120	1.49	20	
Dichlorodifluoromethane	33.6	5.0	ug/l	25.0	ND	134	25-145	1.18	20	
1,1-Dichloroethane	27.6	2.0	ug/l	25.0	ND	110	75-120	0.722	20	
1,2-Dichloroethane	19.0	2.0	ug/l	25.0	ND	76.0	60-135	16.0	20	
1,1-Dichloroethene	30.2	5.0	ug/l	25.0	ND	121	55-120	1.32	20	M1
cis-1,2-Dichloroethene	27.0	2.0	ug/l	25.0	ND	108	75-120	4.35	20	
trans-1,2-Dichloroethene	29.2	2.0	ug/l	25.0	ND	117	65-120	2.70	20	
1,2-Dichloropropane	23.2	2.0	ug/l	25.0	ND	92.8	80-125	8.66	20	
1,3-Dichloropropane	17.5	2.0	ug/l	25.0	ND	70.0	55-140	15.3	20	
2,2-Dichloropropane	41.8	2.0	ug/l	25.0	ND	167	45-165	3.29	20	M1

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111912 Extracted: 09/24/01										
Matrix Spike Dup Analyzed: 09/24/01 (P111912-MSD1)					Source: PKI0173-01					
1,1-Dichloropropene	28.4	2.0	ug/l	25.0	ND	114	80-120	1.40	20	
cis-1,3-Dichloropropene	22.1	2.0	ug/l	25.0	ND	88.4	80-120	11.9	20	
trans-1,3-Dichloropropene	19.3	2.0	ug/l	25.0	ND	77.2	70-120	13.1	20	
Ethylbenzene	31.4	2.0	ug/l	25.0	ND	126	80-120	2.58	20	M1
Hexachlorobutadiene	31.5	5.0	ug/l	25.0	ND	126	80-135	4.65	20	
2-Hexanone	ND	10	ug/l	25.0	ND	31.5	25-185	23.7	20	R4
Iodomethane	33.6	2.0	ug/l	25.0	ND	134	30-155	3.22	20	
Isopropylbenzene	31.5	2.0	ug/l	25.0	ND	126	80-125	1.92	20	M1
p-Isopropyltoluene	28.3	2.0	ug/l	25.0	ND	113	80-125	2.87	20	
Methylene chloride	22.5	5.0	ug/l	25.0	ND	90.0	55-125	8.51	20	
4-Methyl-2-pentanone (MIBK)	ND	10	ug/l	25.0	ND	37.7	10-175	26.4	20	R4
Methyl-tert-butyl Ether (MTBE)	21.5	5.0	ug/l	25.0	ND	86.0	55-135	15.1	20	
Naphthalene	9.26	5.0	ug/l	25.0	ND	37.0	15-160	35.1	20	R4
n-Propylbenzene	29.5	2.0	ug/l	25.0	ND	118	80-130	5.93	20	
Styrene	27.8	2.0	ug/l	25.0	ND	111	60-135	4.91	20	
1,1,1,2-Tetrachloroethane	31.6	5.0	ug/l	25.0	ND	126	80-135	4.64	20	
1,1,2,2-Tetrachloroethane	13.3	2.0	ug/l	25.0	ND	53.2	35-150	14.0	20	
Tetrachloroethene	35.2	2.0	ug/l	25.0	ND	141	80-120	2.59	20	M1
Toluene	30.0	2.0	ug/l	25.0	ND	120	80-120	1.68	20	
1,2,3-Trichlorobenzene	12.8	5.0	ug/l	25.0	ND	51.2	45-145	34.3	20	R4
1,2,4-Trichlorobenzene	17.5	5.0	ug/l	25.0	ND	70.0	65-130	21.4	20	R4
1,1,1-Trichloroethane	33.5	2.0	ug/l	25.0	ND	134	80-120	1.48	20	M1
1,1,2-Trichloroethane	18.4	2.0	ug/l	25.0	ND	73.6	55-145	14.1	20	
Trichloroethene	29.3	2.0	ug/l	25.0	ND	117	80-120	1.69	20	
Trichlorofluoromethane	38.7	5.0	ug/l	25.0	ND	155	70-145	1.83	20	M1
1,2,3-Trichloropropane	11.2	10	ug/l	25.0	ND	44.8	20-160	14.9	20	
1,2,4-Trimethylbenzene	29.5	2.0	ug/l	25.0	ND	118	70-135	2.40	20	
1,3,5-Trimethylbenzene	28.8	2.0	ug/l	25.0	ND	115	80-125	4.98	20	
Vinyl acetate	ND	25	ug/l	25.0	ND	50.4	25-130	23.8	20	R4
Vinyl chloride	33.1	5.0	ug/l	25.0	ND	132	25-135	1.80	20	
Xylenes, Total	93.3	10	ug/l	75.0	ND	124	80-120	2.83	20	M1
Surrogate: Dibromofluoromethane	23.5		ug/l	25.0		94.0	80-120			
Surrogate: Toluene-d8	27.4		ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	24.0		ug/l	25.0		96.0	80-120			



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METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111219 Extracted: 09/12/01										
Blank Analyzed: 09/13/01 (P111219-BLK1)										
Arsenic	ND	5.0	mg/kg							
Chromium	ND	1.0	mg/kg							
Copper	ND	2.0	mg/kg							
Nickel	ND	5.0	mg/kg							
LCS Analyzed: 09/13/01 (P111219-BS1)										
Arsenic	107	5.0	mg/kg	100		107	80-120			
Chromium	108	1.0	mg/kg	100		108	80-120			
Copper	109	2.0	mg/kg	100		109	80-120			
Nickel	106	5.0	mg/kg	100		106	80-120			
LCS Dup Analyzed: 09/13/01 (P111219-BSD1)										
Arsenic	101	5.0	mg/kg	100		101	80-120	5.77	20	
Chromium	101	1.0	mg/kg	100		101	80-120	6.70	20	
Copper	102	2.0	mg/kg	100		102	80-120	6.64	20	
Nickel	101	5.0	mg/kg	100		101	80-120	4.83	20	
Matrix Spike Analyzed: 09/13/01 (P111219-MS1)										
					Source: PKI0089-05					
Arsenic	94.2	5.0	mg/kg	100	ND	94.2	75-125			
Chromium	118	1.0	mg/kg	100	14	104	75-125			
Copper	135	2.0	mg/kg	100	27	108	75-125			
Nickel	102	5.0	mg/kg	100	6.6	95.4	75-125			
Matrix Spike Dup Analyzed: 09/13/01 (P111219-MSD1)										
					Source: PKI0089-05					
Arsenic	94.0	5.0	mg/kg	100	ND	94.0	75-125	0.213	20	
Chromium	109	1.0	mg/kg	100	14	95.0	75-125	7.93	20	
Copper	133	2.0	mg/kg	100	27	106	75-125	1.49	20	
Nickel	96.4	5.0	mg/kg	100	6.6	89.8	75-125	5.65	20	

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METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111805 Extracted: 09/18/01										
Blank Analyzed: 09/20/01 (P111805-BLK1)										
Arsenic	ND	5.0	mg/kg							
Chromium	ND	1.0	mg/kg							
Copper	ND	2.0	mg/kg							
Nickel	ND	5.0	mg/kg							
LCS Analyzed: 09/20/01 (P111805-BS1)										
Arsenic	89.9	5.0	mg/kg	100		89.9	80-120			
Chromium	88.0	1.0	mg/kg	100		88.0	80-120			
Copper	90.2	2.0	mg/kg	100		90.2	80-120			
Nickel	86.6	5.0	mg/kg	100		86.6	80-120			
LCS Dup Analyzed: 09/20/01 (P111805-BSD1)										
Arsenic	91.6	5.0	mg/kg	100		91.6	80-120	1.87	20	
Chromium	89.4	1.0	mg/kg	100		89.4	80-120	1.58	20	
Copper	90.2	2.0	mg/kg	100		90.2	80-120	0.00	20	
Nickel	87.8	5.0	mg/kg	100		87.8	80-120	1.38	20	
Matrix Spike Analyzed: 09/20/01 (P111805-MS1)										
					Source: PKI0226-10					
Arsenic	77.3	5.0	mg/kg	100	ND	77.3	75-125			
Chromium	95.8	1.0	mg/kg	100	12	83.8	75-125			
Copper	102	2.0	mg/kg	100	7.6	94.4	75-125			
Nickel	86.1	5.0	mg/kg	100	ND	81.4	75-125			
Matrix Spike Dup Analyzed: 09/20/01 (P111805-MSD1)										
					Source: PKI0226-10					
Arsenic	80.5	5.0	mg/kg	100	ND	80.5	75-125	4.06	20	
Chromium	99.4	1.0	mg/kg	100	12	87.4	75-125	3.69	20	
Copper	99.5	2.0	mg/kg	100	7.6	91.9	75-125	2.48	20	
Nickel	89.3	5.0	mg/kg	100	ND	84.6	75-125	3.65	20	

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METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P112415 Extracted: 09/24/01									
Blank Analyzed: 09/24/01 (P112415-BLK1)									
Chromium VI	ND	1.0	mg/kg						
LCS Analyzed: 09/24/01 (P112415-BS1)									
Chromium VI	9.73	1.0	mg/kg	10.0		97.3	85-115		
LCS Dup Analyzed: 09/24/01 (P112415-BSD1)									
Chromium VI	8.93	1.0	mg/kg	10.0		89.3	85-115	8.57	20
Matrix Spike Analyzed: 09/24/01 (P112415-MS1)									
Chromium VI	9.08	1.0	mg/kg	10.0	ND	89.3	85-115		
Matrix Spike Dup Analyzed: 09/24/01 (P112415-MSD1)									
Chromium VI	9.08	1.0	mg/kg	10.0	ND	89.3	85-115	0.00	20
Batch: P112605 Extracted: 09/26/01									
Blank Analyzed: 09/28/01 (P112605-BLK1)									
Zinc	ND	5.0	mg/kg						
LCS Analyzed: 09/28/01 (P112605-BS1)									
Zinc	104	5.0	mg/kg	100		104	80-120		
Matrix Spike Analyzed: 09/28/01 (P112605-MS1)									
Zinc	121	5.0	mg/kg	100	43	78.0	75-125		
Matrix Spike Dup Analyzed: 09/28/01 (P112605-MSD1)									
Zinc	130	5.0	mg/kg	100	43	87.0	75-125	7.17	20

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METHOD BLANK QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1206 Extracted: 09/12/01										
Blank Analyzed: 09/12/01 (P1I1206-BLK1)										
Chromium VI	ND	0.025	mg/l							
LCS Analyzed: 09/12/01 (P1I1206-BS1)										
Chromium VI	0.0993	0.050	mg/l	0.100		99.3	85-115			
Matrix Spike Analyzed: 09/12/01 (P1I1206-MS1)					Source: PKI0159-06					
Chromium VI	0.0521	0.025	mg/l	0.0500	ND	104	85-115			
Matrix Spike Dup Analyzed: 09/12/01 (P1I1206-MSD1)					Source: PKI0159-06					
Chromium VI	0.0521	0.025	mg/l	0.0500	ND	104	85-115	0.00	20	
Batch: P1I1815 Extracted: 09/18/01										
Blank Analyzed: 09/19/01 (P1I1815-BLK1)										
Arsenic	ND	0.050	mg/l							
Chromium	ND	0.010	mg/l							
Copper	ND	0.020	mg/l							
Nickel	ND	0.050	mg/l							
Zinc	ND	0.050	mg/l							
LCS Analyzed: 09/19/01 (P1I1815-BS1)										
Arsenic	0.981	0.050	mg/l	1.00		98.1	85-115			
Chromium	0.970	0.010	mg/l	1.00		97.0	85-115			
Copper	0.968	0.020	mg/l	1.00		96.8	85-115			
Nickel	0.954	0.050	mg/l	1.00		95.4	85-115			
Zinc	0.996	0.050	mg/l	1.00		99.6	85-115			



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METHOD BLANK QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111815 Extracted: 09/18/01									
LCS Dup Analyzed: 09/19/01 (P111815-BSD1)									
Arsenic	0.991	0.050	mg/l	1.00		99.1	85-115	1.01	20
Chromium	0.976	0.010	mg/l	1.00		97.6	85-115	0.617	20
Copper	0.976	0.020	mg/l	1.00		97.6	85-115	0.823	20
Nickel	0.961	0.050	mg/l	1.00		96.1	85-115	0.731	20
Zinc	1.01	0.050	mg/l	1.00		101	85-115	1.40	20
Matrix Spike Analyzed: 09/19/01 (P111815-MS1)									
					Source: PKI0142-03				
Arsenic	1.06	0.050	mg/l	1.00	ND	106	70-130		
Chromium	1.07	0.010	mg/l	1.00	0.053	102	70-130		
Copper	1.04	0.020	mg/l	1.00	ND	104	70-130		
Nickel	1.00	0.050	mg/l	1.00	ND	100	70-130		
Zinc	1.11	0.050	mg/l	1.00	ND	108	70-130		
Matrix Spike Dup Analyzed: 09/19/01 (P111815-MSD1)									
					Source: PKI0142-03				
Arsenic	1.06	0.050	mg/l	1.00	ND	106	70-130	0.00	20
Chromium	1.07	0.010	mg/l	1.00	0.053	102	70-130	0.00	20
Copper	1.04	0.020	mg/l	1.00	ND	104	70-130	0.00	20
Nickel	1.00	0.050	mg/l	1.00	ND	100	70-130	0.00	20
Zinc	1.10	0.050	mg/l	1.00	ND	107	70-130	0.905	20

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METHOD BLANK QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P112028 Extracted: 09/20/01										
Blank Analyzed: 09/21/01 (P112028-BLK1)										
Total Cyanide	ND	0.020	mg/l							
LCS Analyzed: 09/21/01 (P112028-BS1)										
Total Cyanide	0.105	0.020	mg/l	0.100		105	90-110			
LCS Dup Analyzed: 09/21/01 (P112028-BSD1)										
Total Cyanide	0.109	0.020	mg/l	0.100		109	90-110	3.74	20	
Matrix Spike Analyzed: 09/21/01 (P112028-MS1)										
Total Cyanide	0.0639	0.020	mg/l	0.100	ND	63.9	70-130			M2
Matrix Spike Dup Analyzed: 09/21/01 (P112028-MSD1)										
Total Cyanide	0.0570	0.020	mg/l	0.100	ND	57.0	70-130	11.4	20	M2
Batch: P112125 Extracted: 09/21/01										
Blank Analyzed: 09/24/01 (P112125-BLK1)										
Total Cyanide	ND	0.50	mg/kg							
Matrix Spike Analyzed: 09/24/01 (P112125-MS1)										
Total Cyanide	2.64	0.62	mg/kg	2.50	ND	106	70-130			
Matrix Spike Dup Analyzed: 09/24/01 (P112125-MSD1)										
Total Cyanide	1.85	0.62	mg/kg	2.50	ND	74.0	70-130	35.2	20	R1
Reference Analyzed: 09/24/01 (P112125-SRM1)										
Total Cyanide	167	20	mg/kg	201		83.1	40-160			



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METHOD BLANK QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I2125 Extracted: 09/21/01										
Reference Analyzed: 09/24/01 (P1I2125-SRM2)										
Total Cyanide	128	20	mg/kg	201		63.7	40-160			

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METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

B1	Target analyte detected in method blank at or above the method reporting limit.
D1	Sample required dilution due to matrix interference. See case narrative.
M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
N2	See corrective action report.
R1	RPD exceeded the method control limit. See case narrative.
R4	MS/MSD RPD exceeded the method control limit. Recovery met acceptance criteria.
R6	LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
S4	Surrogate recovery was above laboratory and method acceptance limits. No target analytes were detected in the sample.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference



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Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01

Received: 09/13/01

Issued: 10/12/01

Revised: 11/13/01

CASE NARRATIVE

LABORATORY NUMBER

SAMPLE DESCRIPTION

SAMPLE MATRIX

PKI0198-03	LB6-S-30	Soil
PKI0198-05	LB6-S-50	Soil
PKI0198-07	LB6-S-10	Soil
PKI0198-08	LB6-S-20	Soil
PKI0198-09	LB6-S-30	Soil
PKI0198-09RE6	LB6-S-30	Soil
PKI0198-10	LB6-S-40	Soil
PKI0198-10RE4	LB6-S-40	Soil
PKI0198-11	LB6-S-50	Soil
PKI0198-12	LB6-S-60	Soil
PKI0198-12RE3	LB6-S-60	Soil

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.


OBSERVATIONS: Report was revised 11/13/01 to include that the samples were received at a temperature of 8 degrees C. The N1 flag on ICP Zinc indicates that the analyte was detected in the associated Method Blank. Analyte concentration in the sample is greater than 10X the concentration found in the Method Blank.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

QA/QC CRITERIA: The N2 flag on Cyanide indicates that the Matrix Spike recovery was outside the method control limits. See Corrective Action Report.
The R1 flag on Cyanide indicates that the RPD exceeded the method control limit. See Corrective Action Report.

EXPLANATION OF DATA QUALIFIERS: The D1 flag on ICP Arsenic indicates that the reporting limit was raised due to sample matrix effects.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)


Melissa Evans
Project Manager

PKI0198
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Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Coldby Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9589
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

CORRECTIVE ACTION REPORT

Department: Wet Chemistry Methods: 9014
Date: 09/27/2001 Matrix: Soil
Batch: P112701
Samples Affected: PKI0198-09 – PKI0198-12 & PKI0355-01

Identification and Definition of Problem:

The Relative Percent Difference (RPD) between the Matrix Spike (MS) and the Matrix Spike Duplicate (MSD) was high (24%) and outside of the 20% acceptance limits.

Determination of the Cause of the Problem:

A definitive cause for the high RPD could not be determined.

Corrective Action:

Both the MS and the MSD recovered within acceptance limits. Also, the Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) recovered within acceptance limits. The RPD between the LCS and the LCSD was also within acceptance limits, therefore the data should not be significantly impacted. The MSD has been flagged "R1" to indicate that the RPD was outside of acceptance limits.

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 10/12/2001
Quality Assurance Manager



Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Coldby Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9589
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

CORRECTIVE ACTION REPORT

Department: Wet Chemistry Methods: 9014
Date: 09/25/2001 Matrix: Soil
Batch: P112412
Samples Affected: PKI0198-07, PKI0198-08, PKI0168-01 – PKI0168-05 &
PKI0180-08 – PKI0180-14

Identification and Definition of Problem:

The Matrix Spike Duplicate (MSD) recovered high (131%) and outside of the 70-130% acceptance limits. Because of the high recovery in the MSD the Relative Percent Difference (RPD) between the Matrix Spike (MS) and the MSD was high (41.8%) and outside of the 20% acceptance limits.

Determination of the Cause of the Problem:

A definitive cause for the high recovery has not been determined.

Corrective Action:

The MS as well as the Laboratory Control Sample recovered within acceptance limits, thus validating the batch. The MSD has been flagged "N2" to indicate the low recovery and "R1" to indicate that the RPD was outside of acceptance limits.

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 10/15 /2001
Quality Assurance Manager

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01

Received: 09/13/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0198-03 (LB6-S-30 - Soil)								
Acetone	EPA 8260B	P111401	1000	ND	1	9/14/01	9/27/01	
Benzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Bromobenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Bromochloromethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Bromodichloromethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Bromoform	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Bromomethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
2-Butanone (MEK)	EPA 8260B	P111401	500	ND	1	9/14/01	9/27/01	
n-Butylbenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
sec-Butylbenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
tert-Butylbenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Carbon Disulfide	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Carbon tetrachloride	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Chlorobenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Chloroethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Chloroform	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Chloromethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
2-Chlorotoluene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
4-Chlorotoluene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Dibromochloromethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Dibromomethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,2-Dichlorobenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,3-Dichlorobenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,4-Dichlorobenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Dichlorodifluoromethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
1,1-Dichloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,2-Dichloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,1-Dichloroethene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
cis-1,2-Dichloroethene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
trans-1,2-Dichloroethene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,2-Dichloropropane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,3-Dichloropropane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
2,2-Dichloropropane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,1-Dichloropropene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
cis-1,3-Dichloropropene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	

V1

Melissa Evans
 Project Manager

PKI0198
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01

Received: 09/13/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0198-03 (LB6-S-30 - Soil)								
trans-1,3-Dichloropropene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Ethylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Hexachlorobutadiene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
2-Hexanone	EPA 8260B	P111401	500	ND	1	9/14/01	9/27/01	
Iodomethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Isopropylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
p-Isopropyltoluene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Methylene chloride	EPA 8260B	P111401	500	ND	1	9/14/01	9/27/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P111401	500	ND	1	9/14/01	9/27/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Naphthalene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
n-Propylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Styrene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Tetrachloroethene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Toluene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,2,3-Trichlorobenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
1,2,4-Trichlorobenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
1,1,1-Trichloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,1,2-Trichloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Trichloroethene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Trichlorofluoromethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
1,2,3-Trichloropropane	EPA 8260B	P111401	500	ND	1	9/14/01	9/27/01	
1,2,4-Trimethylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,3,5-Trimethylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Vinyl acetate	EPA 8260B	P111401	1200	ND	1	9/14/01	9/27/01	
Vinyl chloride	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Xylenes, Total	EPA 8260B	P111401	300	ND	1	9/14/01	9/27/01	

Surrogate: Dibromofluoromethane (70-125%)

101 %

Surrogate: Toluene-d8 (50-135%)

110 %

Surrogate: 4-Bromofluorobenzene (70-130%)

93.3 %

The reporting limit for this sample was adjusted by a factor of 0.952 to account for the applicable preparation factor.

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01
Received: 09/13/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0198-05 (LB6-S-50 - Soil)								
Acetone	EPA 8260B	P111401	1000	ND	1	9/14/01	9/27/01	
Benzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Bromobenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Bromochloromethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Bromodichloromethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Bromoform	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Bromomethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
2-Butanone (MEK)	EPA 8260B	P111401	500	ND	1	9/14/01	9/27/01	
n-Butylbenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
sec-Butylbenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
tert-Butylbenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Carbon Disulfide	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Carbon tetrachloride	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Chlorobenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Chloroethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Chloroform	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Chloromethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
2-Chlorotoluene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
4-Chlorotoluene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Dibromochloromethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Dibromomethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,2-Dichlorobenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,3-Dichlorobenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,4-Dichlorobenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Dichlorodifluoromethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
1,1-Dichloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,2-Dichloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,1-Dichloroethene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
cis-1,2-Dichloroethene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
trans-1,2-Dichloroethene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,2-Dichloropropane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,3-Dichloropropane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
2,2-Dichloropropane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,1-Dichloropropene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
cis-1,3-Dichloropropene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	

VI

Melissa Evans
Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01

Received: 09/13/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0198-05 (LB6-S-50 - Soil)								
trans-1,3-Dichloropropene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Ethylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Hexachlorobutadiene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
2-Hexanone	EPA 8260B	P111401	500	ND	1	9/14/01	9/27/01	
Iodomethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Isopropylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
p-Isopropyltoluene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Methylene chloride	EPA 8260B	P111401	500	ND	1	9/14/01	9/27/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P111401	500	ND	1	9/14/01	9/27/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Naphthalene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
n-Propylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Styrene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Tetrachloroethene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Toluene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,2,3-Trichlorobenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
1,2,4-Trichlorobenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
1,1,1-Trichloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,1,2-Trichloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Trichloroethene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Trichlorofluoromethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
1,2,3-Trichloropropane	EPA 8260B	P111401	500	ND	1	9/14/01	9/27/01	
1,2,4-Trimethylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
1,3,5-Trimethylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/27/01	
Vinyl acetate	EPA 8260B	P111401	1200	ND	1	9/14/01	9/27/01	
Vinyl chloride	EPA 8260B	P111401	250	ND	1	9/14/01	9/27/01	
Xylenes, Total	EPA 8260B	P111401	300	ND	1	9/14/01	9/27/01	
Surrogate: Dibromofluoromethane (70-125%)				97.5 %				
Surrogate: Toluene-d8 (50-135%)				112 %				
Surrogate: 4-Bromofluorobenzene (70-130%)				96.7 %				

The reporting limit for this sample was adjusted by a factor of 0.978 to account for the applicable preparation factor.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Melissa Evans
Project Manager

PKI0198
Page 5 of 25

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01
Received: 09/13/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0198-07 (LB6-S-10 - Soil)								
Arsenic	EPA 6010B	P1I2006	10	ND	2	9/20/01	9/25/01	D1
Chromium	EPA 6010B	P1I2006	1.0	22	1	9/20/01	9/21/01	
Chromium VI	EPA 7196A	P1I2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	P1I2006	2.0	21	1	9/20/01	9/21/01	
Nickel	EPA 6010B	P1I2006	5.0	21	1	9/20/01	9/21/01	
Zinc	EPA 6010B	P1I2006	5.0	66	1	9/20/01	9/21/01	N1
Sample ID: PKI0198-08 (LB6-S-20 - Soil)								
Arsenic	EPA 6010B	P1I2006	10	ND	2	9/20/01	9/25/01	D1
Chromium	EPA 6010B	P1I2006	1.0	22	1	9/20/01	9/21/01	
Chromium VI	EPA 7196A	P1I2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	P1I2006	2.0	21	1	9/20/01	9/21/01	
Nickel	EPA 6010B	P1I2006	5.0	18	1	9/20/01	9/21/01	
Zinc	EPA 6010B	P1I2006	5.0	56	1	9/20/01	9/21/01	N1
Sample ID: PKI0198-09 (LB6-S-30 - Soil)								
Arsenic	EPA 6010B	P1I2006	5.0	ND	1	9/20/01	9/24/01	
Chromium	EPA 6010B	P1I2006	1.0	16	1	9/20/01	9/21/01	
Chromium VI	EPA 7196A	P1I2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	P1I2006	2.0	14	1	9/20/01	9/21/01	
Nickel	EPA 6010B	P1I2006	5.0	12	1	9/20/01	9/21/01	
Sample ID: PKI0198-09RE6 (LB6-S-30 - Soil)								
Zinc	EPA 6010B	P1J1010	5.0	63	1	10/10/01	10/11/01	N1

Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01

Received: 09/13/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0198-10 (LB6-S-40 - Soil)								
Arsenic	EPA 6010B	P1I2006	5.0	ND	1	9/20/01	9/24/01	
Chromium	EPA 6010B	P1I2006	1.0	23	1	9/20/01	9/21/01	
Chromium VI	EPA 7196A	P1I2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	P1I2006	2.0	16	1	9/20/01	9/21/01	
Nickel	EPA 6010B	P1I2006	5.0	16	1	9/20/01	9/21/01	
Sample ID: PKI0198-10RE4 (LB6-S-40 - Soil)								
Zinc	EPA 6010B	P1J0507	5.0	56	1	10/5/01	10/7/01	N1
Sample ID: PKI0198-11 (LB6-S-50 - Soil)								
Arsenic	EPA 6010B	P1I1911	5.0	ND	1	9/19/01	9/20/01	
Chromium	EPA 6010B	P1I1911	1.0	25	1	9/19/01	9/20/01	
Chromium VI	EPA 7196A	P1I2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	P1I1911	2.0	13	1	9/19/01	9/20/01	
Nickel	EPA 6010B	P1I1911	5.0	13	1	9/19/01	9/20/01	
Zinc	EPA 6010B	P1I1911	5.0	46	1	9/19/01	9/20/01	N1
Sample ID: PKI0198-12 (LB6-S-60 - Soil)								
Arsenic	EPA 6010B	P1I1911	5.0	ND	1	9/19/01	9/20/01	
Chromium	EPA 6010B	P1I1911	1.0	14	1	9/19/01	9/20/01	
Chromium VI	EPA 7196A	P1I2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	P1I1911	2.0	7.5	1	9/19/01	9/20/01	
Nickel	EPA 6010B	P1I1911	5.0	9.5	1	9/19/01	9/20/01	
Sample ID: PKI0198-12RE3 (LB6-S-60 - Soil)								
Zinc	EPA 6010B	P1J0103	5.0	26	1	10/1/01	10/2/01	

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Law Engineering
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 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01
 Received: 09/13/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0198-07 (LB6-S-10 - Soil)								
Total Cyanide	EPA 9014	P112412	0.50	ND	1	9/24/01	9/25/01	
Sample ID: PKI0198-08 (LB6-S-20 - Soil)								
Total Cyanide	EPA 9014	P112412	0.50	ND	1	9/24/01	9/25/01	
Sample ID: PKI0198-09 (LB6-S-30 - Soil)								
Total Cyanide	EPA 9014	P112701	0.50	ND	1	9/27/01	9/27/01	
Sample ID: PKI0198-10 (LB6-S-40 - Soil)								
Total Cyanide	EPA 9014	P112701	0.50	ND	1	9/27/01	9/27/01	
Sample ID: PKI0198-11 (LB6-S-50 - Soil)								
Total Cyanide	EPA 9014	P112701	0.50	ND	1	9/27/01	9/27/01	
Sample ID: PKI0198-12 (LB6-S-60 - Soil)								
Total Cyanide	EPA 9014	P112701	0.50	ND	1	9/27/01	9/27/01	

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Report Number: PKI0198

Sampled: 09/13/01

Received: 09/13/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1401 Extracted: 09/14/01										
Blank Analyzed: 09/19/01 (P1I1401-BLK1)										
Acetone	ND	1000	ug/kg							
Benzene	ND	100	ug/kg							
Bromobenzene	ND	250	ug/kg							
Bromochloromethane	ND	250	ug/kg							
Bromodichloromethane	ND	100	ug/kg							
Bromoform	ND	250	ug/kg							
Bromomethane	ND	250	ug/kg							
2-Butanone (MEK)	ND	500	ug/kg							
n-Butylbenzene	ND	250	ug/kg							
sec-Butylbenzene	ND	250	ug/kg							
tert-Butylbenzene	ND	250	ug/kg							
Carbon Disulfide	ND	250	ug/kg							
Carbon tetrachloride	ND	250	ug/kg							
Chlorobenzene	ND	100	ug/kg							
Chloroethane	ND	250	ug/kg							
Chloroform	ND	100	ug/kg							
Chloromethane	ND	250	ug/kg							
2-Chlorotoluene	ND	250	ug/kg							
4-Chlorotoluene	ND	250	ug/kg							
Dibromochloromethane	ND	100	ug/kg							
1,2-Dibromo-3-chloropropane	ND	250	ug/kg							
1,2-Dibromoethane (EDB)	ND	100	ug/kg							
Dibromomethane	ND	100	ug/kg							
1,2-Dichlorobenzene	ND	100	ug/kg							
1,3-Dichlorobenzene	ND	100	ug/kg							
1,4-Dichlorobenzene	ND	100	ug/kg							
Dichlorodifluoromethane	ND	250	ug/kg							
1,1-Dichloroethane	ND	100	ug/kg							
1,2-Dichloroethane	ND	100	ug/kg							
1,1-Dichloroethene	ND	250	ug/kg							
cis-1,2-Dichloroethene	ND	100	ug/kg							
trans-1,2-Dichloroethene	ND	100	ug/kg							
1,2-Dichloropropane	ND	100	ug/kg							
1,3-Dichloropropane	ND	100	ug/kg							
2,2-Dichloropropane	ND	100	ug/kg							

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Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01
 Received: 09/13/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1401 Extracted: 09/14/01										
Blank Analyzed: 09/19/01 (P1I1401-BLK1)										
1,1-Dichloropropene	ND	100	ug/kg							
cis-1,3-Dichloropropene	ND	100	ug/kg							
trans-1,3-Dichloropropene	ND	100	ug/kg							
Ethylbenzene	ND	100	ug/kg							
Hexachlorobutadiene	ND	250	ug/kg							
2-Hexanone	ND	500	ug/kg							
Iodomethane	ND	100	ug/kg							
Isopropylbenzene	ND	100	ug/kg							
p-Isopropyltoluene	ND	100	ug/kg							
Methylene chloride	ND	500	ug/kg							
4-Methyl-2-pentanone (MIBK)	ND	500	ug/kg							
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg							
Naphthalene	ND	250	ug/kg							
n-Propylbenzene	ND	100	ug/kg							
Styrene	ND	100	ug/kg							
1,1,1,2-Tetrachloroethane	ND	250	ug/kg							
1,1,2,2-Tetrachloroethane	ND	100	ug/kg							
Tetrachloroethene	ND	100	ug/kg							
Toluene	ND	100	ug/kg							
1,2,3-Trichlorobenzene	ND	250	ug/kg							
1,2,4-Trichlorobenzene	ND	250	ug/kg							
1,1,1-Trichloroethane	ND	100	ug/kg							
1,1,2-Trichloroethane	ND	100	ug/kg							
Trichloroethene	ND	100	ug/kg							
Trichlorofluoromethane	ND	250	ug/kg							
1,2,3-Trichloropropane	ND	500	ug/kg							
1,2,4-Trimethylbenzene	ND	100	ug/kg							
1,3,5-Trimethylbenzene	ND	100	ug/kg							
Vinyl acetate	ND	1200	ug/kg							
Vinyl chloride	ND	250	ug/kg							
Xylenes, Total	ND	300	ug/kg							
Surrogate: Dibromofluoromethane	146		ug/kg	125		117	70-125			
Surrogate: Toluene-d8	168		ug/kg	125		134	50-135			
Surrogate: 4-Bromofluorobenzene	164		ug/kg	125		131	70-130			S4

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Report Number: PKI0198

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Received: 09/13/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1401 Extracted: 09/14/01										
LCS Analyzed: 09/19/01 (P1I1401-BS1)										
Acetone	ND	1000	ug/kg	1000		96.7	5-200			
Benzene	931	100	ug/kg	1000		93.1	65-130			
Bromobenzene	1120	250	ug/kg	1000		112	60-135			
Bromochloromethane	1120	250	ug/kg	1000		112	60-135			
Bromodichloromethane	936	100	ug/kg	1000		93.6	30-135			
Bromoform	880	250	ug/kg	1000		88.0	60-140			
Bromomethane	1250	250	ug/kg	2000		62.5	10-200			
2-Butanone (MEK)	1030	500	ug/kg	1000		103	10-160			
n-Butylbenzene	935	250	ug/kg	1000		93.5	65-125			
sec-Butylbenzene	985	250	ug/kg	1000		98.5	70-135			
tert-Butylbenzene	1010	250	ug/kg	1000		101	70-130			
Carbon Disulfide	738	250	ug/kg	1000		73.8	20-120			
Carbon tetrachloride	899	250	ug/kg	1000		89.9	70-140			
Chlorobenzene	1090	100	ug/kg	1000		109	70-125			
Chloroethane	1190	250	ug/kg	2000		59.5	10-200			
Chloroform	994	100	ug/kg	1000		99.4	35-135			
Chloromethane	1480	250	ug/kg	2000		74.0	10-200			
2-Chlorotoluene	997	250	ug/kg	1000		99.7	70-135			
4-Chlorotoluene	998	250	ug/kg	1000		99.8	75-135			
Dibromochloromethane	974	100	ug/kg	1000		97.4	35-135			
1,2-Dibromo-3-chloropropane	1040	250	ug/kg	1000		104	50-155			
1,2-Dibromoethane (EDB)	1110	100	ug/kg	1000		111	70-130			
Dibromomethane	1090	100	ug/kg	1000		109	65-130			
1,2-Dichlorobenzene	1050	100	ug/kg	1000		105	70-125			
1,3-Dichlorobenzene	1050	100	ug/kg	1000		105	70-125			
1,4-Dichlorobenzene	1090	100	ug/kg	1000		109	70-135			
Dichlorodifluoromethane	1330	250	ug/kg	2000		66.5	10-185			
1,1-Dichloroethane	966	100	ug/kg	1000		96.6	60-140			
1,2-Dichloroethane	1020	100	ug/kg	1000		102	55-135			
1,1-Dichloroethene	987	250	ug/kg	1000		98.7	55-145			
cis-1,2-Dichloroethene	1010	100	ug/kg	1000		101	60-125			
trans-1,2-Dichloroethene	1010	100	ug/kg	1000		101	70-145			
1,2-Dichloropropane	956	100	ug/kg	1000		95.6	65-130			
1,3-Dichloropropane	1060	100	ug/kg	1000		106	65-130			
2,2-Dichloropropane	677	100	ug/kg	1000		67.7	60-135			
1,1-Dichloropropene	929	100	ug/kg	1000		92.9	65-130			

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Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01
 Received: 09/13/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1401 Extracted: 09/14/01									
LCS Analyzed: 09/19/01 (P1I1401-BS1)									
cis-1,3-Dichloropropene	885	100	ug/kg	1000		88.5	60-125		
trans-1,3-Dichloropropene	882	100	ug/kg	1000		88.2	50-130		
Ethylbenzene	1060	100	ug/kg	1000		106	70-125		
Hexachlorobutadiene	1030	250	ug/kg	1000		103	60-125		
2-Hexanone	1110	500	ug/kg	1000		111	25-185		
Iodomethane	1150	100	ug/kg	1000		115	30-155		
Isopropylbenzene	1070	100	ug/kg	1000		107	70-135		
p-Isopropyltoluene	967	100	ug/kg	1000		96.7	65-130		
Methylene chloride	979	500	ug/kg	1000		97.9	60-140		
4-Methyl-2-pentanone (MIBK)	1170	500	ug/kg	1000		117	10-175		
Naphthalene	1210	250	ug/kg	1000		121	45-155		
n-Propylbenzene	1010	100	ug/kg	1000		101	75-135		
Styrene	1070	100	ug/kg	1000		107	70-130		
1,1,1,2-Tetrachloroethane	1020	250	ug/kg	1000		102	70-130		
1,1,2,2-Tetrachloroethane	1060	100	ug/kg	1000		106	60-140		
Tetrachloroethene	1120	100	ug/kg	1000		112	65-130		
Toluene	1040	100	ug/kg	1000		104	70-125		
1,2,3-Trichlorobenzene	1080	250	ug/kg	1000		108	60-135		
1,2,4-Trichlorobenzene	1070	250	ug/kg	1000		107	55-135		
1,1,1-Trichloroethane	953	100	ug/kg	1000		95.3	65-135		
1,1,2-Trichloroethane	1070	100	ug/kg	1000		107	65-130		
Trichloroethene	1030	100	ug/kg	1000		103	70-130		
Trichlorofluoromethane	1140	250	ug/kg	2000		57.0	10-200		
1,2,3-Trichloropropane	1110	500	ug/kg	1000		111	60-150		
1,2,4-Trimethylbenzene	1040	100	ug/kg	1000		104	75-130		
1,3,5-Trimethylbenzene	1010	100	ug/kg	1000		101	70-130		
Vinyl acetate	ND	1200	ug/kg	1000		66.4	25-130		
Vinyl chloride	938	250	ug/kg	2000		46.9	10-200		
Xylenes, Total	3210	300	ug/kg	3000		107	70-130		
Surrogate: Dibromofluoromethane	149		ug/kg	125		119	70-125		
Surrogate: Toluene-d8	166		ug/kg	125		133	50-135		
Surrogate: 4-Bromofluorobenzene	158		ug/kg	125		126	70-130		



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Report Number: PKI0198

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Received: 09/13/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1401 Extracted: 09/14/01										
LCS Dup Analyzed: 09/19/01 (P1I1401-BSD1)										
Acetone	ND	1000	ug/kg	1000		68.5	5-200	34.1	35	
Benzene	904	100	ug/kg	1000		90.4	65-130	2.94	35	
Bromobenzene	1040	250	ug/kg	1000		104	60-135	7.41	35	
Bromochloromethane	1050	250	ug/kg	1000		105	60-135	6.45	35	
Bromodichloromethane	919	100	ug/kg	1000		91.9	30-135	1.83	35	
Bromoform	946	250	ug/kg	1000		94.6	60-140	7.23	35	
Bromomethane	903	250	ug/kg	2000		45.2	10-200	32.2	35	
2-Butanone (MEK)	835	500	ug/kg	1000		83.5	10-160	20.9	35	
n-Butylbenzene	829	250	ug/kg	1000		82.9	65-125	12.0	35	
sec-Butylbenzene	891	250	ug/kg	1000		89.1	70-135	10.0	35	
tert-Butylbenzene	933	250	ug/kg	1000		93.3	70-130	7.93	35	
Carbon Disulfide	647	250	ug/kg	1000		64.7	20-120	13.1	35	
Carbon tetrachloride	908	250	ug/kg	1000		90.8	70-140	0.996	35	
Chlorobenzene	1060	100	ug/kg	1000		106	70-125	2.79	35	
Chloroethane	944	250	ug/kg	2000		47.2	10-200	23.1	35	
Chloroform	970	100	ug/kg	1000		97.0	35-135	2.44	35	
Chloromethane	1030	250	ug/kg	2000		51.5	10-200	35.9	35	R6
2-Chlorotoluene	936	250	ug/kg	1000		93.6	70-135	6.31	35	
4-Chlorotoluene	941	250	ug/kg	1000		94.1	75-135	5.88	35	
Dibromochloromethane	1030	100	ug/kg	1000		103	35-135	5.59	35	
1,2-Dibromo-3-chloropropane	881	250	ug/kg	1000		88.1	50-155	16.6	35	
1,2-Dibromoethane (EDB)	1080	100	ug/kg	1000		108	70-130	2.74	35	
Dibromomethane	1010	100	ug/kg	1000		101	65-130	7.62	35	
1,2-Dichlorobenzene	976	100	ug/kg	1000		97.6	70-125	7.31	35	
1,3-Dichlorobenzene	973	100	ug/kg	1000		97.3	70-125	7.61	35	
1,4-Dichlorobenzene	1020	100	ug/kg	1000		102	70-135	6.64	35	
Dichlorodifluoromethane	736	250	ug/kg	2000		36.8	10-185	57.5	35	R6
1,1-Dichloroethane	926	100	ug/kg	1000		92.6	60-140	4.23	35	
1,2-Dichloroethane	983	100	ug/kg	1000		98.3	55-135	3.69	35	
1,1-Dichloroethene	912	250	ug/kg	1000		91.2	55-145	7.90	35	
cis-1,2-Dichloroethene	974	100	ug/kg	1000		97.4	60-125	3.63	35	
trans-1,2-Dichloroethene	966	100	ug/kg	1000		96.6	70-145	4.45	35	
1,2-Dichloropropane	911	100	ug/kg	1000		91.1	65-130	4.82	35	
1,3-Dichloropropane	1020	100	ug/kg	1000		102	65-130	3.85	35	
2,2-Dichloropropane	765	100	ug/kg	1000		76.5	60-135	12.2	35	
1,1-Dichloropropene	886	100	ug/kg	1000		88.6	65-130	4.74	35	

Melissa Evans
 Project Manager

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Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01
Received: 09/13/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1401 Extracted: 09/14/01										
LCS Dup Analyzed: 09/19/01 (P1I1401-BSD1)										
cis-1,3-Dichloropropene	889	100	ug/kg	1000		88.9	60-125	0.451	35	
trans-1,3-Dichloropropene	896	100	ug/kg	1000		89.6	50-130	1.57	35	
Ethylbenzene	1010	100	ug/kg	1000		101	70-125	4.83	35	
Hexachlorobutadiene	849	250	ug/kg	1000		84.9	60-125	19.3	35	
2-Hexanone	981	500	ug/kg	1000		98.1	25-185	12.3	35	
Iodomethane	1040	100	ug/kg	1000		104	30-155	10.0	35	
Isopropylbenzene	1010	100	ug/kg	1000		101	70-135	5.77	35	
p-Isopropyltoluene	884	100	ug/kg	1000		88.4	65-130	8.97	35	
Methylene chloride	942	500	ug/kg	1000		94.2	60-140	3.85	35	
4-Methyl-2-pentanone (MIBK)	1020	500	ug/kg	1000		102	10-175	13.7	35	
Naphthalene	922	250	ug/kg	1000		92.2	45-155	27.0	35	
n-Propylbenzene	937	100	ug/kg	1000		93.7	75-135	7.50	35	
Styrene	1050	100	ug/kg	1000		105	70-130	1.89	35	
1,1,1,2-Tetrachloroethane	1040	250	ug/kg	1000		104	70-130	1.94	35	
1,1,2,2-Tetrachloroethane	1010	100	ug/kg	1000		101	60-140	4.83	35	
Tetrachloroethene	1080	100	ug/kg	1000		108	65-130	3.64	35	
Toluene	1010	100	ug/kg	1000		101	70-125	2.93	35	
1,2,3-Trichlorobenzene	872	250	ug/kg	1000		87.2	60-135	21.3	35	
1,2,4-Trichlorobenzene	899	250	ug/kg	1000		89.9	55-135	17.4	35	
1,1,1-Trichloroethane	934	100	ug/kg	1000		93.4	65-135	2.01	35	
1,1,2-Trichloroethane	1040	100	ug/kg	1000		104	65-130	2.84	35	
Trichloroethene	971	100	ug/kg	1000		97.1	70-130	5.90	35	
Trichlorofluoromethane	1080	250	ug/kg	2000		54.0	10-200	5.41	35	
1,2,3-Trichloropropane	982	500	ug/kg	1000		98.2	60-150	12.2	35	
1,2,4-Trimethylbenzene	972	100	ug/kg	1000		97.2	75-130	6.76	35	
1,3,5-Trimethylbenzene	928	100	ug/kg	1000		92.8	70-130	8.46	35	
Vinyl acetate	ND	1200	ug/kg	1000		76.3	25-130	13.9	35	
Vinyl chloride	869	250	ug/kg	2000		43.4	10-200	7.64	35	
Xylenes, Total	3090	300	ug/kg	3000		103	70-130	3.81	35	
Surrogate: Dibromofluoromethane	138		ug/kg	125		110	70-125			
Surrogate: Toluene-d8	152		ug/kg	125		122	50-135			
Surrogate: 4-Bromofluorobenzene	152		ug/kg	125		122	70-130			

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4634 S. 36th Place
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Client Project ID: 70211-0-0150-2-2.10

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Received: 09/13/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1401 Extracted: 09/14/01										
Matrix Spike Analyzed: 09/20/01 (P1I1401-MS1)					Source: PKI0199-01					
Acetone	ND	1000	ug/kg	1000	ND	75.8	5-200			
Benzene	956	100	ug/kg	1000	ND	95.6	65-130			
Bromobenzene	980	250	ug/kg	1000	ND	98.0	60-135			
Bromochloromethane	1090	250	ug/kg	1000	ND	109	60-135			
Bromodichloromethane	1010	100	ug/kg	1000	ND	101	30-135			
Bromoform	877	250	ug/kg	1000	ND	87.7	60-140			
Bromomethane	1640	250	ug/kg	2000	ND	82.0	10-200			
2-Butanone (MEK)	806	500	ug/kg	1000	ND	80.6	10-160			
n-Butylbenzene	1010	250	ug/kg	1000	ND	101	65-125			
sec-Butylbenzene	960	250	ug/kg	1000	ND	96.0	70-135			
tert-Butylbenzene	932	250	ug/kg	1000	ND	93.2	70-130			
Carbon Disulfide	553	250	ug/kg	1000	ND	55.3	20-120			
Carbon tetrachloride	1120	250	ug/kg	1000	ND	112	70-140			
Chlorobenzene	1050	100	ug/kg	1000	ND	105	75-125			
Chloroethane	1440	250	ug/kg	2000	ND	72.0	10-200			
Chloroform	1040	100	ug/kg	1000	ND	104	35-135			
Chloromethane	1270	250	ug/kg	2000	ND	63.5	10-200			
2-Chlorotoluene	891	250	ug/kg	1000	ND	89.1	70-135			
4-Chlorotoluene	897	250	ug/kg	1000	ND	89.7	75-135			
Dibromochloromethane	969	100	ug/kg	1000	ND	96.9	35-135			
1,2-Dibromo-3-chloropropane	576	250	ug/kg	1000	ND	57.6	50-155			
1,2-Dibromoethane (EDB)	866	100	ug/kg	1000	ND	86.6	70-130			
Dibromomethane	1000	100	ug/kg	1000	ND	100	65-130			
1,2-Dichlorobenzene	960	100	ug/kg	1000	ND	96.0	70-125			
1,3-Dichlorobenzene	969	100	ug/kg	1000	ND	96.9	70-125			
1,4-Dichlorobenzene	1010	100	ug/kg	1000	ND	101	70-135			
Dichlorodifluoromethane	972	250	ug/kg	2000	ND	48.6	10-185			
1,1-Dichloroethane	991	100	ug/kg	1000	ND	99.1	60-140			
1,2-Dichloroethane	950	100	ug/kg	1000	ND	95.0	55-135			
1,1-Dichloroethene	651	250	ug/kg	1000	ND	65.1	55-145			
cis-1,2-Dichloroethene	1020	100	ug/kg	1000	ND	102	60-125			
trans-1,2-Dichloroethene	1040	100	ug/kg	1000	ND	104	70-145			
1,2-Dichloropropane	941	100	ug/kg	1000	ND	94.1	65-130			
1,3-Dichloropropane	841	100	ug/kg	1000	ND	84.1	65-130			
2,2-Dichloropropane	1140	100	ug/kg	1000	ND	114	60-135			
1,1-Dichloropropene	928	100	ug/kg	1000	ND	92.8	65-130			

Melissa Evans
Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01

Received: 09/13/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: PII1401 Extracted: 09/14/01									
Matrix Spike Analyzed: 09/20/01 (PII1401-MS1)					Source: PKI0199-01				
cis-1,3-Dichloropropene	943	100	ug/kg	1000	ND	94.3	60-125		
trans-1,3-Dichloropropene	795	100	ug/kg	1000	ND	79.5	50-130		
Ethylbenzene	1020	100	ug/kg	1000	ND	102	70-125		
Hexachlorobutadiene	1380	250	ug/kg	1000	ND	138	60-125		M1
2-Hexanone	785	500	ug/kg	1000	ND	78.5	25-185		
Iodomethane	710	100	ug/kg	1000	ND	71.0	30-155		
Isopropylbenzene	1080	100	ug/kg	1000	ND	108	70-135		
p-Isopropyltoluene	975	100	ug/kg	1000	ND	97.5	65-130		
Methylene chloride	659	500	ug/kg	1000	ND	65.9	60-140		
4-Methyl-2-pentanone (MIBK)	734	500	ug/kg	1000	ND	73.4	10-175		
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg		ND		55-135		
Naphthalene	710	250	ug/kg	1000	ND	71.0	45-155		
n-Propylbenzene	902	100	ug/kg	1000	ND	90.2	75-135		
Styrene	1030	100	ug/kg	1000	ND	103	70-130		
1,1,1,2-Tetrachloroethane	1120	250	ug/kg	1000	ND	112	70-130		
1,1,2,2-Tetrachloroethane	597	100	ug/kg	1000	ND	59.7	60-140		
Tetrachloroethene	1030	100	ug/kg	1000	ND	103	65-130		
Toluene	952	100	ug/kg	1000	ND	95.2	70-125		
1,2,3-Trichlorobenzene	809	250	ug/kg	1000	ND	80.9	60-135		
1,2,4-Trichlorobenzene	898	250	ug/kg	1000	ND	89.8	55-135		
1,1,1-Trichloroethane	1110	100	ug/kg	1000	ND	111	65-135		
1,1,2-Trichloroethane	885	100	ug/kg	1000	ND	88.5	65-130		
Trichloroethene	1170	100	ug/kg	1000	ND	117	70-130		
Trichlorofluoromethane	1860	250	ug/kg	2000	ND	93.0	10-200		
1,2,3-Trichloropropane	692	500	ug/kg	1000	ND	69.2	60-150		
1,2,4-Trimethylbenzene	955	100	ug/kg	1000	ND	95.5	75-130		
1,3,5-Trimethylbenzene	908	100	ug/kg	1000	ND	90.8	70-130		
Vinyl acetate	ND	1200	ug/kg	1000	ND	24.7	25-130		
Vinyl chloride	2000	250	ug/kg	2000	ND	100	10-200		
Xylenes, Total	3110	300	ug/kg	3000	ND	104	70-130		
Surrogate: Dibromofluoromethane	137		ug/kg	125		110	70-125		
Surrogate: Toluene-d8	137		ug/kg	125		110	50-135		
Surrogate: 4-Bromofluorobenzene	135		ug/kg	125		108	70-130		

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01

Received: 09/13/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111401 Extracted: 09/14/01										
Matrix Spike Dup Analyzed: 09/20/01 (P111401-MSD1)					Source: PKI0199-01					
Acetone	ND	1000	ug/kg	1000	ND	66.5	5-200	13.1	35	
Benzene	952	100	ug/kg	1000	ND	95.2	65-130	0.419	35	
Bromobenzene	1030	250	ug/kg	1000	ND	103	60-135	4.98	35	
Bromochloromethane	1070	250	ug/kg	1000	ND	107	60-135	1.85	35	
Bromodichloromethane	1040	100	ug/kg	1000	ND	104	30-135	2.93	35	
Bromoform	878	250	ug/kg	1000	ND	87.8	60-140	0.114	35	
Bromomethane	1250	250	ug/kg	2000	ND	62.5	10-200	27.0	35	
2-Butanone (MEK)	753	500	ug/kg	1000	ND	75.3	10-160	6.80	35	
n-Butylbenzene	982	250	ug/kg	1000	ND	98.2	65-125	2.81	35	
sec-Butylbenzene	969	250	ug/kg	1000	ND	96.9	70-135	0.933	35	
tert-Butylbenzene	955	250	ug/kg	1000	ND	95.5	70-130	2.44	35	
Carbon Disulfide	843	250	ug/kg	1000	ND	84.3	20-120	41.5	35	R4
Carbon tetrachloride	1110	250	ug/kg	1000	ND	111	70-140	0.897	35	
Chlorobenzene	1070	100	ug/kg	1000	ND	107	75-125	1.89	35	
Chloroethane	1140	250	ug/kg	2000	ND	57.0	10-200	23.3	35	
Chloroform	1060	100	ug/kg	1000	ND	106	35-135	1.90	35	
Chloromethane	1120	250	ug/kg	2000	ND	56.0	10-200	12.6	35	
2-Chlorotoluene	917	250	ug/kg	1000	ND	91.7	70-135	2.88	35	
4-Chlorotoluene	923	250	ug/kg	1000	ND	92.3	75-135	2.86	35	
Dibromochloromethane	974	100	ug/kg	1000	ND	97.4	35-135	0.515	35	
1,2-Dibromo-3-chloropropane	605	250	ug/kg	1000	ND	60.5	50-155	4.91	35	
1,2-Dibromoethane (EDB)	903	100	ug/kg	1000	ND	90.3	70-130	4.18	35	
Dibromomethane	984	100	ug/kg	1000	ND	98.4	65-130	1.61	35	
1,2-Dichlorobenzene	943	100	ug/kg	1000	ND	94.3	70-125	1.79	35	
1,3-Dichlorobenzene	959	100	ug/kg	1000	ND	95.9	70-125	1.04	35	
1,4-Dichlorobenzene	983	100	ug/kg	1000	ND	98.3	70-135	2.71	35	
Dichlorodifluoromethane	968	250	ug/kg	2000	ND	48.4	10-185	0.412	35	
1,1-Dichloroethane	1040	100	ug/kg	1000	ND	104	60-140	4.83	35	
1,2-Dichloroethane	966	100	ug/kg	1000	ND	96.6	55-135	1.67	35	
1,1-Dichloroethene	757	250	ug/kg	1000	ND	75.7	55-145	15.1	35	
cis-1,2-Dichloroethene	1030	100	ug/kg	1000	ND	103	60-125	0.976	35	
trans-1,2-Dichloroethene	1100	100	ug/kg	1000	ND	110	70-145	5.61	35	
1,2-Dichloropropane	942	100	ug/kg	1000	ND	94.2	65-130	0.106	35	
1,3-Dichloropropane	861	100	ug/kg	1000	ND	86.1	65-130	2.35	35	
2,2-Dichloropropane	1090	100	ug/kg	1000	ND	109	60-135	4.48	35	
1,1-Dichloropropene	934	100	ug/kg	1000	ND	93.4	65-130	0.644	35	

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01
 Received: 09/13/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111401 Extracted: 09/14/01										
Matrix Spike Dup Analyzed: 09/20/01 (P111401-MSD1)					Source: PKI0199-01					
cis-1,3-Dichloropropene	945	100	ug/kg	1000	ND	94.5	60-125	0.212	35	
trans-1,3-Dichloropropene	859	100	ug/kg	1000	ND	85.9	50-130	7.74	35	
Ethylbenzene	1050	100	ug/kg	1000	ND	105	70-125	2.90	35	
Hexachlorobutadiene	1420	250	ug/kg	1000	ND	142	60-125	2.86	35	M1
2-Hexanone	664	500	ug/kg	1000	ND	66.4	25-185	16.7	35	
Iodomethane	886	100	ug/kg	1000	ND	88.6	30-155	22.1	35	
Isopropylbenzene	1050	100	ug/kg	1000	ND	105	70-135	2.82	35	
p-Isopropyltoluene	969	100	ug/kg	1000	ND	96.9	65-130	0.617	35	
Methylene chloride	1030	500	ug/kg	1000	ND	103	60-140	43.9	35	R4
4-Methyl-2-pentanone (MIBK)	694	500	ug/kg	1000	ND	69.4	10-175	5.60	35	
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg		ND		55-135	12.8	35	
Naphthalene	736	250	ug/kg	1000	ND	73.6	45-155	3.60	35	
n-Propylbenzene	949	100	ug/kg	1000	ND	94.9	75-135	5.08	35	
Styrene	1020	100	ug/kg	1000	ND	102	70-130	0.976	35	
1,1,1,2-Tetrachloroethane	1130	250	ug/kg	1000	ND	113	70-130	0.889	35	
1,1,2,2-Tetrachloroethane	580	100	ug/kg	1000	ND	58.0	60-140	2.89	35	M2
Tetrachloroethene	1070	100	ug/kg	1000	ND	107	65-130	3.81	35	
Toluene	1020	100	ug/kg	1000	ND	102	70-125	6.90	35	
1,2,3-Trichlorobenzene	838	250	ug/kg	1000	ND	83.8	60-135	3.52	35	
1,2,4-Trichlorobenzene	923	250	ug/kg	1000	ND	92.3	55-135	2.75	35	
1,1,1-Trichloroethane	1110	100	ug/kg	1000	ND	111	65-135	0.00	35	
1,1,2-Trichloroethane	937	100	ug/kg	1000	ND	93.7	65-130	5.71	35	
Trichloroethene	1210	100	ug/kg	1000	ND	121	70-130	3.36	35	
Trichlorofluoromethane	1400	250	ug/kg	2000	ND	70.0	10-200	28.2	35	
1,2,3-Trichloropropane	743	500	ug/kg	1000	ND	74.3	60-150	7.11	35	
1,2,4-Trimethylbenzene	954	100	ug/kg	1000	ND	95.4	75-130	0.105	35	
1,3,5-Trimethylbenzene	923	100	ug/kg	1000	ND	92.3	70-130	1.64	35	
Vinyl acetate	ND	1200	ug/kg	1000	ND	20.0	25-130	21.0	35	M2
Vinyl chloride	1590	250	ug/kg	2000	ND	79.5	10-200	22.8	35	
Xylenes, Total	3200	300	ug/kg	3000	ND	107	70-130	2.85	35	
Surrogate: Dibromofluoromethane	136		ug/kg	125		109	70-125			
Surrogate: Toluene-d8	156		ug/kg	125		125	50-135			
Surrogate: 4-Bromofluorobenzene	152		ug/kg	125		122	70-130			

Melissa Evans
 Project Manager

PKI0198
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01

Received: 09/13/01

METHOD BLANK QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111911 Extracted: 09/19/01										
Blank Analyzed: 09/20/01 (P111911-BLK1)										
Arsenic	ND	5.0	mg/kg							
Chromium	ND	1.0	mg/kg							
Copper	ND	2.0	mg/kg							
Nickel	ND	5.0	mg/kg							
Zinc	ND	5.0	mg/kg							B4
LCS Analyzed: 09/20/01 (P111911-BS1)										
Arsenic	88.2	5.0	mg/kg	100		88.2	80-120			
Chromium	87.1	1.0	mg/kg	100		87.1	80-120			
Copper	88.0	2.0	mg/kg	100		88.0	80-120			
Nickel	85.7	5.0	mg/kg	100		85.7	80-120			
Zinc	92.6	5.0	mg/kg	100		92.6	80-120			
LCS Dup Analyzed: 09/20/01 (P111911-BSD1)										
Arsenic	92.8	5.0	mg/kg	100		92.8	80-120	5.08	20	
Chromium	91.5	1.0	mg/kg	100		91.5	80-120	4.93	20	
Copper	93.7	2.0	mg/kg	100		93.7	80-120	6.27	20	
Nickel	90.1	5.0	mg/kg	100		90.1	80-120	5.01	20	
Zinc	94.8	5.0	mg/kg	100		94.8	80-120	2.35	20	
Matrix Spike Analyzed: 09/20/01 (P111911-MS1)										
					Source: PKI0198-11					
Arsenic	80.9	5.0	mg/kg	100	ND	80.9	75-125			
Chromium	115	1.0	mg/kg	100	25	90.0	75-125			
Copper	107	2.0	mg/kg	100	13	94.0	75-125			
Nickel	101	5.0	mg/kg	100	13	88.0	75-125			
Zinc	133	5.0	mg/kg	100	46	87.0	75-125			
Matrix Spike Dup Analyzed: 09/20/01 (P111911-MSD1)										
					Source: PKI0198-11					
Arsenic	79.6	5.0	mg/kg	100	ND	79.6	75-125	1.62	20	
Chromium	108	1.0	mg/kg	100	25	83.0	75-125	6.28	20	
Copper	103	2.0	mg/kg	100	13	90.0	75-125	3.81	20	
Nickel	92.4	5.0	mg/kg	100	13	79.4	75-125	8.89	20	
Zinc	122	5.0	mg/kg	100	46	76.0	75-125	8.63	20	

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01

Received: 09/13/01

METHOD BLANK QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I2006 Extracted: 09/20/01										
Blank Analyzed: 09/21/01 (P1I2006-BLK1)										
Arsenic	ND	5.0	mg/kg							
Chromium	ND	1.0	mg/kg							
Copper	ND	2.0	mg/kg							
Nickel	ND	5.0	mg/kg							
Zinc	ND	5.0	mg/kg							B4
LCS Analyzed: 09/21/01 (P1I2006-BS1)										
Arsenic	87.5	5.0	mg/kg	100		87.5	80-120			
Chromium	88.5	1.0	mg/kg	100		88.5	80-120			
Copper	92.8	2.0	mg/kg	100		92.8	80-120			
Nickel	87.7	5.0	mg/kg	100		87.7	80-120			
Zinc	99.2	5.0	mg/kg	100		99.2	80-120			
LCS Dup Analyzed: 09/21/01 (P1I2006-BSD1)										
Arsenic	83.7	5.0	mg/kg	100		83.7	80-120	4.44	20	
Chromium	83.7	1.0	mg/kg	100		83.7	80-120	5.57	20	
Copper	84.6	2.0	mg/kg	100		84.6	80-120	9.24	20	
Nickel	83.7	5.0	mg/kg	100		83.7	80-120	4.67	20	
Zinc	89.8	5.0	mg/kg	100		89.8	80-120	9.95	20	
Matrix Spike Analyzed: 09/21/01 (P1I2006-MS1)										
					Source: PKI0202-05					
Arsenic	77.9	5.0	mg/kg	100	ND	77.9	75-125			
Chromium	93.8	1.0	mg/kg	100	14	79.8	75-125			
Copper	97.2	2.0	mg/kg	100	15	82.2	75-125			
Nickel	85.1	5.0	mg/kg	100	7.4	77.7	75-125			
Zinc	104	5.0	mg/kg	100	25	79.0	75-125			
Matrix Spike Dup Analyzed: 09/21/01 (P1I2006-MSD1)										
					Source: PKI0202-05					
Arsenic	58.8	5.0	mg/kg	100	ND	58.8	75-125	27.9	20	M2,Q11
Chromium	95.5	1.0	mg/kg	100	14	81.5	75-125	1.80	20	
Copper	97.5	2.0	mg/kg	100	15	82.5	75-125	0.308	20	
Nickel	84.8	5.0	mg/kg	100	7.4	77.4	75-125	0.353	20	
Zinc	110	5.0	mg/kg	100	25	85.0	75-125	5.61	20	



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01

Received: 09/13/01

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I2415 Extracted: 09/24/01										
Blank Analyzed: 09/24/01 (P1I2415-BLK1)										
Chromium VI	ND	1.0	mg/kg							
LCS Analyzed: 09/24/01 (P1I2415-BS1)										
Chromium VI	9.73	1.0	mg/kg	10.0		97.3	85-115			
LCS Dup Analyzed: 09/24/01 (P1I2415-BSD1)										
Chromium VI	8.93	1.0	mg/kg	10.0		89.3	85-115	8.57	20	
Matrix Spike Analyzed: 09/24/01 (P1I2415-MS1)										
Chromium VI	9.08	1.0	mg/kg	10.0	Source: PKI0159-07					
					ND	89.3	85-115			
Matrix Spike Dup Analyzed: 09/24/01 (P1I2415-MSD1)										
Chromium VI	9.08	1.0	mg/kg	10.0	Source: PKI0159-07					
					ND	89.3	85-115	0.00	20	
Batch: P1J0103 Extracted: 10/01/01										
Blank Analyzed: 10/02/01 (P1J0103-BLK1)										
Zinc	ND	5.0	mg/kg							
LCS Analyzed: 10/02/01 (P1J0103-BS1)										
Zinc	86.2	5.0	mg/kg	100		86.2	80-120			
Matrix Spike Analyzed: 10/02/01 (P1J0103-MS1)										
Zinc	142	5.0	mg/kg	100	Source: PKI0288-19					
					29	113	75-125			
Matrix Spike Dup Analyzed: 10/02/01 (P1J0103-MSD1)										
Zinc	117	5.0	mg/kg	100	Source: PKI0288-19					
					29	88.0	75-125	19.3	20	

Melissa Evans
 Project Manager

PKI0198
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01
 Received: 09/13/01

METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1J0507 Extracted: 10/05/01									
Blank Analyzed: 10/07/01 (P1J0507-BLK1)									
Zinc	5.44	5.0	mg/kg						B1
LCS Analyzed: 10/07/01 (P1J0507-BS1)									
Zinc	105	5.0	mg/kg	100		105 80-120			
Matrix Spike Analyzed: 10/07/01 (P1J0507-MS1)									
Zinc	191	5.0	mg/kg	100	75	116 75-125			
Matrix Spike Dup Analyzed: 10/07/01 (P1J0507-MSD1)									
Zinc	180	5.0	mg/kg	100	75	105 75-125	5.93	20	
Batch: P1J1010 Extracted: 10/10/01									
Blank Analyzed: 10/11/01 (P1J1010-BLK1)									
Zinc	6.02	5.0	mg/kg						B1
LCS Analyzed: 10/11/01 (P1J1010-BS1)									
Zinc	99.7	5.0	mg/kg	100		99.7 80-120			
Matrix Spike Analyzed: 10/11/01 (P1J1010-MS1)									
Zinc	152	5.0	mg/kg	100	64	88.0 75-125			
Matrix Spike Dup Analyzed: 10/11/01 (P1J1010-MSD1)									
Zinc	147	5.0	mg/kg	100	64	83.0 75-125	3.34	20	



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01

Received: 09/13/01

METHOD BLANK QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I2412 Extracted: 09/24/01										
Blank Analyzed: 09/25/01 (P1I2412-BLK1)										
Total Cyanide	ND	0.020	mg/kg							
Blank Analyzed: 09/25/01 (P1I2412-BLK2)										
Total Cyanide	ND	0.020	mg/kg							
Matrix Spike Analyzed: 09/25/01 (P1I2412-MS1)										
Total Cyanide	2.14	0.50	mg/kg	2.50	ND	85.6	70-130			
Matrix Spike Dup Analyzed: 09/25/01 (P1I2412-MSD1)										
Total Cyanide	3.27	0.50	mg/kg	2.50	ND	131	70-130	41.8	20	N2,R1
Reference Analyzed: 09/25/01 (P1I2412-SRM1)										
Total Cyanide	101	20	mg/kg	201		50.2	40-160			
Reference Analyzed: 09/25/01 (P1I2412-SRM2)										
Total Cyanide	157	20	mg/kg	201		78.1	40-160			
Batch: P1I2701 Extracted: 09/27/01										
Blank Analyzed: 09/27/01 (P1I2701-BLK1)										
Total Cyanide	ND	0.50	mg/kg							
Matrix Spike Analyzed: 09/27/01 (P1I2701-MS1)										
Total Cyanide	2.77	0.50	mg/kg	2.50	ND	111	70-130			
Matrix Spike Dup Analyzed: 09/27/01 (P1I2701-MSD1)										
Total Cyanide	2.18	0.50	mg/kg	2.50	ND	87.2	70-130	23.8	20	R1

Melissa Evans
 Project Manager

PKI0198
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01
 Received: 09/13/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I2701 Extracted: 09/27/01										
Reference Analyzed: 09/27/01 (P1I2701-SRM1)										
Total Cyanide	177	20	mg/kg	201		88.1	40-160			
Reference Analyzed: 09/27/01 (P1I2701-SRM2)										
Total Cyanide	138	20	mg/kg	201		68.7	40-160			



Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-0150-2-2.10

Report Number: PKI0198

Sampled: 09/13/01
Received: 09/13/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

B1	Target analyte detected in method blank at or above the method reporting limit.
B4	Target analyte detected in blank at/above method acceptance criteria.
D1	Sample required dilution due to matrix interference. See case narrative.
M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
N1	See case narrative.
N2	See corrective action report.
Q11	Sample is heterogeneous. Sample homogeneity could not be readily achieved using routine laboratory practices.
R1	RPD exceeded the method control limit. See case narrative.
R4	MS/MSD RPD exceeded the method control limit. Recovery met acceptance criteria.
R6	LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
S4	Surrogate recovery was above laboratory and method acceptance limits. No target analytes were detected in the sample.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference



1014 E. Cooley Dr., Suite A, Cotton, CA 92324
7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123
9830 South 51st St., Suite B-120, Phoenix, AZ 85044
2520 E. Sunset Rd., Suite 3, Las Vegas, NV 89120

CHAIN OF CUSTODY FORM

Client Name/Address:		Project/PO Number:		Analysis Required				Special Instructions	
Project Manager:		Phone Number:		Sampling Date		Sampling Time		Preservatives	
Sample:		Sample Description		Sample Matrix		Container Type		# of Cont.	
LA W		70211-0-01250		9/13/01		1005		1	
PAX AZ		437 0350		9/13/01		1040		1	
J.M. CURRAN		437 0350		9/13/01		1115		1	
PAX AZ		437 0350		9/13/01		1150		1	
J.M. CURRAN		437 0350		9/13/01		1245		1	
PAX AZ		437 0350		9/13/01		1340		1	
J.M. CURRAN		437 0350		9/13/01		1345		1	
PAX AZ		437 0350		9/13/01		1450		1	
J.M. CURRAN		437 0350		9/13/01		1545		1	
PAX AZ		437 0350		9/13/01		1640		1	
J.M. CURRAN		437 0350		9/13/01		1745		1	
PAX AZ		437 0350		9/13/01		1840		1	
J.M. CURRAN		437 0350		9/13/01		1945		1	
PAX AZ		437 0350		9/13/01		2040		1	
J.M. CURRAN		437 0350		9/13/01		2145		1	
PAX AZ		437 0350		9/13/01		2240		1	
J.M. CURRAN		437 0350		9/13/01		2345		1	
PAX AZ		437 0350		9/13/01		2440		1	
J.M. CURRAN		437 0350		9/13/01		2545		1	
PAX AZ		437 0350		9/13/01		2640		1	
J.M. CURRAN		437 0350		9/13/01		2745		1	
PAX AZ		437 0350		9/13/01		2840		1	
J.M. CURRAN		437 0350		9/13/01		2945		1	
PAX AZ		437 0350		9/13/01		3040		1	
J.M. CURRAN		437 0350		9/13/01		3145		1	
PAX AZ		437 0350		9/13/01		3240		1	
J.M. CURRAN		437 0350		9/13/01		3345		1	
PAX AZ		437 0350		9/13/01		3440		1	
J.M. CURRAN		437 0350		9/13/01		3545		1	
PAX AZ		437 0350		9/13/01		3640		1	
J.M. CURRAN		437 0350		9/13/01		3745		1	
PAX AZ		437 0350		9/13/01		3840		1	
J.M. CURRAN		437 0350		9/13/01		3945		1	
PAX AZ		437 0350		9/13/01		4040		1	
J.M. CURRAN		437 0350		9/13/01		4145		1	
PAX AZ		437 0350		9/13/01		4240		1	
J.M. CURRAN		437 0350		9/13/01		4345		1	
PAX AZ		437 0350		9/13/01		4440		1	
J.M. CURRAN		437 0350		9/13/01		4545		1	
PAX AZ		437 0350		9/13/01		4640		1	
J.M. CURRAN		437 0350		9/13/01		4745		1	
PAX AZ		437 0350		9/13/01		4840		1	
J.M. CURRAN		437 0350		9/13/01		4945		1	
PAX AZ		437 0350		9/13/01		5040		1	
J.M. CURRAN		437 0350		9/13/01		5145		1	
PAX AZ		437 0350		9/13/01		5240		1	
J.M. CURRAN		437 0350		9/13/01		5345		1	
PAX AZ		437 0350		9/13/01		5440		1	
J.M. CURRAN		437 0350		9/13/01		5545		1	
PAX AZ		437 0350		9/13/01		5640		1	
J.M. CURRAN		437 0350		9/13/01		5745		1	
PAX AZ		437 0350		9/13/01		5840		1	
J.M. CURRAN		437 0350		9/13/01		5945		1	
PAX AZ		437 0350		9/13/01		6040		1	
J.M. CURRAN		437 0350		9/13/01		6145		1	
PAX AZ		437 0350		9/13/01		6240		1	
J.M. CURRAN		437 0350		9/13/01		6345		1	
PAX AZ		437 0350		9/13/01		6440		1	
J.M. CURRAN		437 0350		9/13/01		6545		1	
PAX AZ		437 0350		9/13/01		6640		1	
J.M. CURRAN		437 0350		9/13/01		6745		1	
PAX AZ		437 0350		9/13/01		6840		1	
J.M. CURRAN		437 0350		9/13/01		6945		1	
PAX AZ		437 0350		9/13/01		7040		1	
J.M. CURRAN		437 0350		9/13/01		7145		1	
PAX AZ		437 0350		9/13/01		7240		1	
J.M. CURRAN		437 0350		9/13/01		7345		1	
PAX AZ		437 0350		9/13/01		7440		1	
J.M. CURRAN		437 0350		9/13/01		7545		1	
PAX AZ		437 0350		9/13/01		7640		1	
J.M. CURRAN		437 0350		9/13/01		7745		1	
PAX AZ		437 0350		9/13/01		7840		1	
J.M. CURRAN		437 0350		9/13/01		7945		1	
PAX AZ		437 0350		9/13/01		8040		1	
J.M. CURRAN		437 0350		9/13/01		8145		1	
PAX AZ		437 0350		9/13/01		8240		1	
J.M. CURRAN		437 0350		9/13/01		8345		1	
PAX AZ		437 0350		9/13/01		8440		1	
J.M. CURRAN		437 0350		9/13/01		8545		1	
PAX AZ		437 0350		9/13/01		8640		1	
J.M. CURRAN		437 0350		9/13/01		8745		1	
PAX AZ		437 0350		9/13/01		8840		1	
J.M. CURRAN		437 0350		9/13/01		8945		1	
PAX AZ		437 0350		9/13/01		9040		1	
J.M. CURRAN		437 0350		9/13/01		9145		1	
PAX AZ		437 0350		9/13/01		9240		1	
J.M. CURRAN		437 0350		9/13/01		9345		1	
PAX AZ		437 0350		9/13/01		9440		1	
J.M. CURRAN		437 0350		9/13/01		9545		1	
PAX AZ		437 0350		9/13/01		9640		1	
J.M. CURRAN		437 0350		9/13/01		9745		1	
PAX AZ		437 0350		9/13/01		9840		1	
J.M. CURRAN		437 0350		9/13/01		9945		1	
PAX AZ		437 0350		9/13/01		10040		1	

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01

Received: 09/12/01

Issued: 9/28/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKI0180-04	LB7-S-30	Soil
PKI0180-06	LB7-S-50	Soil
PKI0180-08	LB4-S-60	Soil
PKI0180-08RE1	LB4-S-60	Soil
PKI0180-09	LB7-S-10	Soil
PKI0180-09RE1	LB7-S-10	Soil
PKI0180-10	LB7-S-20	Soil
PKI0180-10RE1	LB7-S-20	Soil
PKI0180-11	LB7-S-30	Soil
PKI0180-11RE1	LB7-S-30	Soil
PKI0180-12	LB7-S-40	Soil
PKI0180-12RE1	LB7-S-40	Soil
PKI0180-13	LB7-S-50	Soil
PKI0180-13RE1	LB7-S-50	Soil
PKI0180-14	LB7-S-60	Soil
PKI0180-14RE1	LB7-S-60	Soil
PKI0180-15	RINSATE 7/12/01	Water
PKI0180-15RE1	RINSATE 7/12/01	Water

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

QA/QC CRITERIA: The R1 flag on Cyanide indicates that the RPD exceeded the method control limit. See Corrective Action Report.

EXPLANATION OF DATA QUALIFIERS: The N2 flag on Cyanide indicates that the Matrix Spike recovery was outside the method control limits. See Corrective Action Report.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)


 Melissa Evans
 Project Manager

PKI0180
 Page 1 of 39



CORRECTIVE ACTION REPORT

Department: Wet Chemistry Methods: 9014
Date: 09/25/2001 Matrix: Soil
Batch: P1I2412
Samples Affected: PKI0198-07, PKI0198-08, PKI0168-01 – PKI0168-05 &
PKI0180-08 – PKI0180-14

Identification and Definition of Problem:

The Matrix Spike Duplicate (MSD) recovered high (131%) and outside of the 70-130% acceptance limits. Because of the high recovery in the MSD the Relative Percent Difference (RPD) between the Matrix Spike (MS) and the MSD was high (41.8%) and outside of the 20% acceptance limits.

Determination of the Cause of the Problem:

A definitive cause for the high recovery has not been determined.

Corrective Action:

The MS as well as the Laboratory Control Sample recovered within acceptance limits, thus validating the batch. The MSD has been flagged "N2" to indicate the low recovery and "R1" to indicate that the RPD was outside of acceptance limits.

Elizabeth C. Wueschner: Elizabeth C Wueschner Date: 09/28/2001
Quality Assurance Manager

Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01

Received: 09/12/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0180-04 (LB7-S-30 - Soil)								
Acetone	EPA 8260B	P111401	1000	ND	1	9/14/01	9/26/01	
Benzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Bromobenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
Bromochloromethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
Bromodichloromethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Bromoform	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
Bromomethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
2-Butanone (MEK)	EPA 8260B	P111401	500	ND	1	9/14/01	9/26/01	
n-Butylbenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
sec-Butylbenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
tert-Butylbenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
Carbon Disulfide	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
Carbon tetrachloride	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
Chlorobenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Chloroethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
Chloroform	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Chloromethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
2-Chlorotoluene	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
4-Chlorotoluene	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
Dibromochloromethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Dibromomethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,2-Dichlorobenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,3-Dichlorobenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,4-Dichlorobenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Dichlorodifluoromethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
1,1-Dichloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,2-Dichloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,1-Dichloroethene	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
cis-1,2-Dichloroethene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
trans-1,2-Dichloroethene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,2-Dichloropropane	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,3-Dichloropropane	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
2,2-Dichloropropane	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,1-Dichloropropene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
cis-1,3-Dichloropropene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
trans-1,3-Dichloropropene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Ethylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Hexachlorobutadiene	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
2-Hexanone	EPA 8260B	P111401	500	ND	1	9/14/01	9/26/01	
Iodomethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Isopropylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
p-Isopropyltoluene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	

Melissa Evans
 Project Manager

PKI0180
 Page 2 of 39



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01
 Received: 09/12/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0180-04 (LB7-S-30 - Soil)								
Methylene chloride	EPA 8260B	P111401	500	ND	1	9/14/01	9/26/01	
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P111401	500	ND	1	9/14/01	9/26/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
Naphthalene	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
n-Propylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Styrene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Tetrachloroethene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Toluene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,2,3-Trichlorobenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
1,2,4-Trichlorobenzene	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
1,1,1-Trichloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,1,2-Trichloroethane	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Trichloroethene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Trichlorofluoromethane	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
1,2,3-Trichloropropane	EPA 8260B	P111401	500	ND	1	9/14/01	9/26/01	
1,2,4-Trimethylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
1,3,5-Trimethylbenzene	EPA 8260B	P111401	100	ND	1	9/14/01	9/26/01	
Vinyl acetate	EPA 8260B	P111401	1200	ND	1	9/14/01	9/26/01	
Vinyl chloride	EPA 8260B	P111401	250	ND	1	9/14/01	9/26/01	
Xylenes, Total	EPA 8260B	P111401	300	ND	1	9/14/01	9/26/01	

Surrogate: Dibromofluoromethane (70-125%)

109 %

Surrogate: Toluene-d8 (50-135%)

128 %

Surrogate: 4-Bromofluorobenzene (70-130%)

116 %

The reporting limit for this sample was adjusted by a factor of 0.936 to account for the applicable preparation factor.



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01

Received: 09/12/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0180-06 (LB7-S-50 - Soil)								
Acetone	EPA 8260B	P111401	910	ND	1	9/14/01	9/25/01	
Benzene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Bromobenzene	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
Bromochloromethane	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
Bromodichloromethane	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Bromoform	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
Bromomethane	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
2-Butanone (MEK)	EPA 8260B	P111401	450	ND	1	9/14/01	9/25/01	
n-Butylbenzene	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
sec-Butylbenzene	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
tert-Butylbenzene	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
Carbon Disulfide	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
Carbon tetrachloride	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
Chlorobenzene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Chloroethane	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
Chloroform	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Chloromethane	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
2-Chlorotoluene	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
4-Chlorotoluene	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
Dibromochloromethane	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Dibromomethane	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,2-Dichlorobenzene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,3-Dichlorobenzene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,4-Dichlorobenzene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Dichlorodifluoromethane	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
1,1-Dichloroethane	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,2-Dichloroethane	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,1-Dichloroethene	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
cis-1,2-Dichloroethene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
trans-1,2-Dichloroethene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,2-Dichloropropane	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,3-Dichloropropane	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
2,2-Dichloropropane	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,1-Dichloropropene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
cis-1,3-Dichloropropene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
trans-1,3-Dichloropropene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Ethylbenzene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Hexachlorobutadiene	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
2-Hexanone	EPA 8260B	P111401	450	ND	1	9/14/01	9/25/01	
Iodomethane	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Isopropylbenzene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
p-Isopropyltoluene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	

V1

Melissa Evans
 Project Manager

PKI0180
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01
 Received: 09/12/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/kg	Sample Result ug/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0180-06 (LB7-S-50 - Soil)								
Methylene chloride	EPA 8260B	P111401	450	ND	1	9/14/01	9/25/01	V1
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P111401	450	ND	1	9/14/01	9/25/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
Naphthalene	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
n-Propylbenzene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Styrene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Tetrachloroethene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Toluene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,2,3-Trichlorobenzene	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	V1
1,2,4-Trichlorobenzene	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
1,1,1-Trichloroethane	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,1,2-Trichloroethane	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Trichloroethene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Trichlorofluoromethane	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
1,2,3-Trichloropropane	EPA 8260B	P111401	450	ND	1	9/14/01	9/25/01	
1,2,4-Trimethylbenzene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
1,3,5-Trimethylbenzene	EPA 8260B	P111401	91	ND	1	9/14/01	9/25/01	
Vinyl acetate	EPA 8260B	P111401	1100	ND	1	9/14/01	9/25/01	
Vinyl chloride	EPA 8260B	P111401	230	ND	1	9/14/01	9/25/01	
Xylenes, Total	EPA 8260B	P111401	270	ND	1	9/14/01	9/25/01	

Surrogate: Dibromofluoromethane (70-125%)

89.4 %

Surrogate: Toluene-d8 (50-135%)

91.2 %

Surrogate: 4-Bromofluorobenzene (70-130%)

86.7 %

The reporting limit for this sample was adjusted by a factor of 0.907 to account for the applicable preparation factor.



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01
 Received: 09/12/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0180-15 (RINSATE 7/12/01 - Water)								
Acetone	EPA 8260B	P112706	20	ND	1	9/26/01	9/26/01	
Benzene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Bromobenzene	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
Bromochloromethane	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
Bromodichloromethane	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Bromoform	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
Bromomethane	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
2-Butanone (MEK)	EPA 8260B	P112706	10	ND	1	9/26/01	9/26/01	
n-Butylbenzene	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
sec-Butylbenzene	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
tert-Butylbenzene	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
Carbon Disulfide	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
Carbon tetrachloride	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
Chlorobenzene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Chloroethane	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
Chloroform	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Chloromethane	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
2-Chlorotoluene	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
4-Chlorotoluene	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
Dibromochloromethane	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,2-Dibromo-3-chloropropane	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
1,2-Dibromoethane (EDB)	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Dibromomethane	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,2-Dichlorobenzene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,3-Dichlorobenzene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,4-Dichlorobenzene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Dichlorodifluoromethane	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
1,1-Dichloroethane	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,2-Dichloroethane	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,1-Dichloroethene	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
cis-1,2-Dichloroethene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
trans-1,2-Dichloroethene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,2-Dichloropropane	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,3-Dichloropropane	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
2,2-Dichloropropane	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,1-Dichloropropene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
cis-1,3-Dichloropropene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
trans-1,3-Dichloropropene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Ethylbenzene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Hexachlorobutadiene	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
2-Hexanone	EPA 8260B	P112706	10	ND	1	9/26/01	9/26/01	
Iodomethane	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Isopropylbenzene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
p-Isopropyltoluene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	

Melissa Evans
 Project Manager

PKI0180
 Page 6 of 39



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01
 Received: 09/12/01

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0180-15 (RINSATE 7/12/01 - Water)								
Methylene chloride	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	M1
4-Methyl-2-pentanone (MIBK)	EPA 8260B	P112706	10	ND	1	9/26/01	9/26/01	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
Naphthalene	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
n-Propylbenzene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Styrene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,1,1,2-Tetrachloroethane	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
1,1,2,2-Tetrachloroethane	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Tetrachloroethene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Toluene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,2,3-Trichlorobenzene	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
1,2,4-Trichlorobenzene	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
1,1,1-Trichloroethane	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,1,2-Trichloroethane	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Trichloroethene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Trichlorofluoromethane	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
1,2,3-Trichloropropane	EPA 8260B	P112706	10	ND	1	9/26/01	9/26/01	
1,2,4-Trimethylbenzene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
1,3,5-Trimethylbenzene	EPA 8260B	P112706	2.0	ND	1	9/26/01	9/26/01	
Vinyl acetate	EPA 8260B	P112706	25	ND	1	9/26/01	9/26/01	
Vinyl chloride	EPA 8260B	P112706	5.0	ND	1	9/26/01	9/26/01	
Xylenes, Total	EPA 8260B	P112706	10	ND	1	9/26/01	9/26/01	
Surrogate: Dibromofluoromethane (80-120%)				103 %				
Surrogate: Toluene-d8 (80-120%)				109 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				100 %				

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Melissa Evans
 Project Manager

PKI0180
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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01
 Received: 09/12/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0180-08 (LB4-S-60 - Soil)								
Arsenic	EPA 6010B	P111805	5.0	ND	1	9/18/01	9/27/01	
Chromium	EPA 6010B	P111805	1.0	50	1	9/18/01	9/20/01	
Chromium VI	EPA 7196A	P112415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	P111805	2.0	14	1	9/18/01	9/20/01	
Nickel	EPA 6010B	P111805	5.0	19	1	9/18/01	9/20/01	
Sample ID: PKI0180-08RE1 (LB4-S-60 - Soil)								
Zinc	EPA 6010B	P112605	5.0	58	1	9/26/01	9/28/01	
Sample ID: PKI0180-09 (LB7-S-10 - Soil)								
Arsenic	EPA 6010B	P111805	5.0	ND	1	9/18/01	9/27/01	
Chromium	EPA 6010B	P111805	1.0	20	1	9/18/01	9/20/01	
Chromium VI	EPA 7196A	P112415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	P111805	2.0	20	1	9/18/01	9/20/01	
Nickel	EPA 6010B	P111805	5.0	19	1	9/18/01	9/20/01	
Sample ID: PKI0180-09RE1 (LB7-S-10 - Soil)								
Zinc	EPA 6010B	P112605	5.0	63	1	9/26/01	9/28/01	
Sample ID: PKI0180-10 (LB7-S-20 - Soil)								
Arsenic	EPA 6010B	P111805	5.0	ND	1	9/18/01	9/20/01	
Chromium	EPA 6010B	P111805	1.0	27	1	9/18/01	9/20/01	
Chromium VI	EPA 7196A	P112415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	P111805	2.0	17	1	9/18/01	9/20/01	
Nickel	EPA 6010B	P111805	5.0	18	1	9/18/01	9/20/01	



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01
 Received: 09/12/01

TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0180-10RE1 (LB7-S-20 - Soil)								
Zinc	EPA 6010B	PII2605	5.0	56	1	9/26/01	9/28/01	
Sample ID: PKI0180-11 (LB7-S-30 - Soil)								
Arsenic	EPA 6010B	PII1805	5.0	ND	1	9/18/01	9/27/01	
Chromium	EPA 6010B	PII1805	1.0	18	1	9/18/01	9/20/01	
Chromium VI	EPA 7196A	PII2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	PII1805	2.0	14	1	9/18/01	9/20/01	
Nickel	EPA 6010B	PII1805	5.0	12	1	9/18/01	9/20/01	
Sample ID: PKI0180-11RE1 (LB7-S-30 - Soil)								
Zinc	EPA 6010B	PII2605	5.0	41	1	9/26/01	9/28/01	
Sample ID: PKI0180-12 (LB7-S-40 - Soil)								
Arsenic	EPA 6010B	PII1805	5.0	ND	1	9/18/01	9/27/01	
Chromium	EPA 6010B	PII1805	1.0	16	1	9/18/01	9/20/01	
Chromium VI	EPA 7196A	PII2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	PII1805	2.0	18	1	9/18/01	9/20/01	
Nickel	EPA 6010B	PII1805	5.0	15	1	9/18/01	9/20/01	
Sample ID: PKI0180-12RE1 (LB7-S-40 - Soil)								
Zinc	EPA 6010B	PII2605	5.0	56	1	9/26/01	9/28/01	
Sample ID: PKI0180-13 (LB7-S-50 - Soil)								
Arsenic	EPA 6010B	PII1805	5.0	ND	1	9/18/01	9/27/01	
Chromium	EPA 6010B	PII1805	1.0	14	1	9/18/01	9/20/01	
Chromium VI	EPA 7196A	PII2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	PII1805	2.0	12	1	9/18/01	9/20/01	
Nickel	EPA 6010B	PII1805	5.0	11	1	9/18/01	9/20/01	

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TOTAL METALS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0180-13RE1 (LB7-S-50 - Soil)								
Zinc	EPA 6010B	P1I2605	5.0	41	1	9/26/01	9/28/01	
Sample ID: PKI0180-14 (LB7-S-60 - Soil)								
Arsenic	EPA 6010B	P1I1805	5.0	ND	1	9/18/01	9/20/01	
Chromium	EPA 6010B	P1I1805	1.0	15	1	9/18/01	9/20/01	
Chromium VI	EPA 7196A	P1I2415	1.0	ND	1	9/24/01	9/24/01	
Copper	EPA 6010B	P1I1805	2.0	10	1	9/18/01	9/20/01	
Nickel	EPA 6010B	P1I1805	5.0	14	1	9/18/01	9/20/01	
Sample ID: PKI0180-14RE1 (LB7-S-60 - Soil)								
Zinc	EPA 6010B	P1I2605	5.0	35	1	9/26/01	9/28/01	

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TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0180-15 (RINSATE 7/12/01 - Water)								
Arsenic	EPA 200.7	P1I2021	0.050	ND	1	9/20/01	9/23/01	
Chromium	EPA 200.7	P1I2021	0.010	ND	1	9/20/01	9/23/01	
Chromium VI	SM3500CR-D	P1I1408	0.025	ND	1	9/13/01	9/13/01	
Copper	EPA 200.7	P1I2021	0.020	ND	1	9/20/01	9/23/01	
Nickel	EPA 200.7	P1I2021	0.050	ND	1	9/20/01	9/23/01	
Zinc	EPA 200.7	P1I2021	0.050	ND	1	9/20/01	9/23/01	

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INORGANICS

Analyte	Method	Batch	Reporting Limit mg/kg	Sample Result mg/kg	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKI0180-08 (LB4-S-60 - Soil)								
Total Cyanide	EPA 9014	P1I2412	0.50	ND	1	9/24/01	9/25/01	
Sample ID: PKI0180-09 (LB7-S-10 - Soil)								
Total Cyanide	EPA 9014	P1I2412	0.50	ND	1	9/24/01	9/25/01	
Sample ID: PKI0180-10 (LB7-S-20 - Soil)								
Total Cyanide	EPA 9014	P1I2412	0.50	ND	1	9/24/01	9/25/01	
Sample ID: PKI0180-11 (LB7-S-30 - Soil)								
Total Cyanide	EPA 9014	P1I2412	0.50	ND	1	9/24/01	9/25/01	
Sample ID: PKI0180-12 (LB7-S-40 - Soil)								
Total Cyanide	EPA 9014	P1I2412	0.50	ND	1	9/24/01	9/25/01	
Sample ID: PKI0180-13 (LB7-S-50 - Soil)								
Total Cyanide	EPA 9014	P1I2412	0.50	ND	1	9/24/01	9/25/01	
Sample ID: PKI0180-14 (LB7-S-60 - Soil)								
Total Cyanide	EPA 9014	P1I2412	0.50 mg/l	ND mg/l	1	9/24/01	9/25/01	
Sample ID: PKI0180-15RE1 (RINSATE 7/12/01 - Water)								
Total Cyanide	SM4500-CN,C-E	P1I2622	0.020	ND	1	9/26/01	9/26/01	

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111401 Extracted: 09/14/01										
Blank Analyzed: 09/19/01 (P111401-BLK1)										
Acetone	ND	1000	ug/kg							
Benzene	ND	100	ug/kg							
Bromobenzene	ND	250	ug/kg							
Bromochloromethane	ND	250	ug/kg							
Bromodichloromethane	ND	100	ug/kg							
Bromoform	ND	250	ug/kg							
Bromomethane	ND	250	ug/kg							
2-Butanone (MEK)	ND	500	ug/kg							
n-Butylbenzene	ND	250	ug/kg							
sec-Butylbenzene	ND	250	ug/kg							
tert-Butylbenzene	ND	250	ug/kg							
Carbon Disulfide	ND	250	ug/kg							
Carbon tetrachloride	ND	250	ug/kg							
Chlorobenzene	ND	100	ug/kg							
Chloroethane	ND	250	ug/kg							
Chloroform	ND	100	ug/kg							
Chloromethane	ND	250	ug/kg							
2-Chlorotoluene	ND	250	ug/kg							
4-Chlorotoluene	ND	250	ug/kg							
Dibromochloromethane	ND	100	ug/kg							
1,2-Dibromo-3-chloropropane	ND	250	ug/kg							
1,2-Dibromoethane (EDB)	ND	100	ug/kg							
Dibromomethane	ND	100	ug/kg							
1,2-Dichlorobenzene	ND	100	ug/kg							
1,3-Dichlorobenzene	ND	100	ug/kg							
1,4-Dichlorobenzene	ND	100	ug/kg							
Dichlorodifluoromethane	ND	250	ug/kg							
1,1-Dichloroethane	ND	100	ug/kg							
1,2-Dichloroethane	ND	100	ug/kg							
1,1-Dichloroethene	ND	250	ug/kg							
cis-1,2-Dichloroethene	ND	100	ug/kg							
trans-1,2-Dichloroethene	ND	100	ug/kg							
1,2-Dichloropropane	ND	100	ug/kg							
1,3-Dichloropropane	ND	100	ug/kg							
2,2-Dichloropropane	ND	100	ug/kg							

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VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111401 Extracted: 09/14/01										
Blank Analyzed: 09/19/01 (P111401-BLK1)										
1,1-Dichloropropene	ND	100	ug/kg							
cis-1,3-Dichloropropene	ND	100	ug/kg							
trans-1,3-Dichloropropene	ND	100	ug/kg							
Ethylbenzene	ND	100	ug/kg							
Hexachlorobutadiene	ND	250	ug/kg							
2-Hexanone	ND	500	ug/kg							
Iodomethane	ND	100	ug/kg							
Isopropylbenzene	ND	100	ug/kg							
p-Isopropyltoluene	ND	100	ug/kg							
Methylene chloride	ND	500	ug/kg							
4-Methyl-2-pentanone (MIBK)	ND	500	ug/kg							
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg							
Naphthalene	ND	250	ug/kg							
n-Propylbenzene	ND	100	ug/kg							
Styrene	ND	100	ug/kg							
1,1,1,2-Tetrachloroethane	ND	250	ug/kg							
1,1,2,2-Tetrachloroethane	ND	100	ug/kg							
Tetrachloroethene	ND	100	ug/kg							
Toluene	ND	100	ug/kg							
1,2,3-Trichlorobenzene	ND	250	ug/kg							
1,2,4-Trichlorobenzene	ND	250	ug/kg							
1,1,1-Trichloroethane	ND	100	ug/kg							
1,1,2-Trichloroethane	ND	100	ug/kg							
Trichloroethene	ND	100	ug/kg							
Trichlorofluoromethane	ND	250	ug/kg							
1,2,3-Trichloropropane	ND	500	ug/kg							
1,2,4-Trimethylbenzene	ND	100	ug/kg							
1,3,5-Trimethylbenzene	ND	100	ug/kg							
Vinyl acetate	ND	1200	ug/kg							
Vinyl chloride	ND	250	ug/kg							
Xylenes, Total	ND	300	ug/kg							
Surrogate: Dibromofluoromethane	146		ug/kg	125		117	70-125			
Surrogate: Toluene-d8	168		ug/kg	125		134	50-135			
Surrogate: 4-Bromofluorobenzene	164		ug/kg	125		131	70-130			S4

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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111401 Extracted: 09/14/01									
LCS Analyzed: 09/19/01 (P111401-BS1)									
Acetone	ND	1000	ug/kg	1000		96.7	5-200		
Benzene	931	100	ug/kg	1000		93.1	65-130		
Bromobenzene	1120	250	ug/kg	1000		112	60-135		
Bromochloromethane	1120	250	ug/kg	1000		112	60-135		
Bromodichloromethane	936	100	ug/kg	1000		93.6	30-135		
Bromoform	880	250	ug/kg	1000		88.0	60-140		
Bromomethane	1250	250	ug/kg	2000		62.5	10-200		
2-Butanone (MEK)	1030	500	ug/kg	1000		103	10-160		
n-Butylbenzene	935	250	ug/kg	1000		93.5	65-125		
sec-Butylbenzene	985	250	ug/kg	1000		98.5	70-135		
tert-Butylbenzene	1010	250	ug/kg	1000		101	70-130		
Carbon Disulfide	738	250	ug/kg	1000		73.8	20-120		
Carbon tetrachloride	899	250	ug/kg	1000		89.9	70-140		
Chlorobenzene	1090	100	ug/kg	1000		109	70-125		
Chloroethane	1190	250	ug/kg	2000		59.5	10-200		
Chloroform	994	100	ug/kg	1000		99.4	35-135		
Chloromethane	1480	250	ug/kg	2000		74.0	10-200		
2-Chlorotoluene	997	250	ug/kg	1000		99.7	70-135		
4-Chlorotoluene	998	250	ug/kg	1000		99.8	75-135		
Dibromochloromethane	974	100	ug/kg	1000		97.4	35-135		
1,2-Dibromo-3-chloropropane	1040	250	ug/kg	1000		104	50-155		
1,2-Dibromoethane (EDB)	1110	100	ug/kg	1000		111	70-130		
Dibromomethane	1090	100	ug/kg	1000		109	65-130		
1,2-Dichlorobenzene	1050	100	ug/kg	1000		105	70-125		
1,3-Dichlorobenzene	1050	100	ug/kg	1000		105	70-125		
1,4-Dichlorobenzene	1090	100	ug/kg	1000		109	70-135		
Dichlorodifluoromethane	1330	250	ug/kg	2000		66.5	10-185		
1,1-Dichloroethane	966	100	ug/kg	1000		96.6	60-140		
1,2-Dichloroethane	1020	100	ug/kg	1000		102	55-135		
1,1-Dichloroethene	987	250	ug/kg	1000		98.7	55-145		
cis-1,2-Dichloroethene	1010	100	ug/kg	1000		101	60-125		
trans-1,2-Dichloroethene	1010	100	ug/kg	1000		101	70-145		
1,2-Dichloropropane	956	100	ug/kg	1000		95.6	65-130		
1,3-Dichloropropane	1060	100	ug/kg	1000		106	65-130		
2,2-Dichloropropane	677	100	ug/kg	1000		67.7	60-135		
1,1-Dichloropropene	929	100	ug/kg	1000		92.9	65-130		

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111401 Extracted: 09/14/01										
LCS Analyzed: 09/19/01 (P111401-BS1)										
cis-1,3-Dichloropropene	885	100	ug/kg	1000		88.5	60-125			
trans-1,3-Dichloropropene	882	100	ug/kg	1000		88.2	50-130			
Ethylbenzene	1060	100	ug/kg	1000		106	70-125			
Hexachlorobutadiene	1030	250	ug/kg	1000		103	60-125			
2-Hexanone	1110	500	ug/kg	1000		111	25-185			
Iodomethane	1150	100	ug/kg	1000		115	30-155			
Isopropylbenzene	1070	100	ug/kg	1000		107	70-135			
p-Isopropyltoluene	967	100	ug/kg	1000		96.7	65-130			
Methylene chloride	979	500	ug/kg	1000		97.9	60-140			
4-Methyl-2-pentanone (MIBK)	1170	500	ug/kg	1000		117	10-175			
Naphthalene	1210	250	ug/kg	1000		121	45-155			
n-Propylbenzene	1010	100	ug/kg	1000		101	75-135			
Styrene	1070	100	ug/kg	1000		107	70-130			
1,1,1,2-Tetrachloroethane	1020	250	ug/kg	1000		102	70-130			
1,1,2,2-Tetrachloroethane	1060	100	ug/kg	1000		106	60-140			
Tetrachloroethene	1120	100	ug/kg	1000		112	65-130			
Toluene	1040	100	ug/kg	1000		104	70-125			
1,2,3-Trichlorobenzene	1080	250	ug/kg	1000		108	60-135			
1,2,4-Trichlorobenzene	1070	250	ug/kg	1000		107	55-135			
1,1,1-Trichloroethane	953	100	ug/kg	1000		95.3	65-135			
1,1,2-Trichloroethane	1070	100	ug/kg	1000		107	65-130			
Trichloroethene	1030	100	ug/kg	1000		103	70-130			
Trichlorofluoromethane	1140	250	ug/kg	2000		57.0	10-200			
1,2,3-Trichloropropane	1110	500	ug/kg	1000		111	60-150			
1,2,4-Trimethylbenzene	1040	100	ug/kg	1000		104	75-130			
1,3,5-Trimethylbenzene	1010	100	ug/kg	1000		101	70-130			
Vinyl acetate	ND	1200	ug/kg	1000		66.4	25-130			
Vinyl chloride	938	250	ug/kg	2000		46.9	10-200			
Xylenes, Total	3210	300	ug/kg	3000		107	70-130			
Surrogate: Dibromofluoromethane	149		ug/kg	125		119	70-125			
Surrogate: Toluene-d8	166		ug/kg	125		133	50-135			
Surrogate: 4-Bromofluorobenzene	158		ug/kg	125		126	70-130			



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VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111401 Extracted: 09/14/01										
LCS Dup Analyzed: 09/19/01 (P111401-BSD1)										
Acetone	ND	1000	ug/kg	1000		68.5	5-200	34.1	35	
Benzene	904	100	ug/kg	1000		90.4	65-130	2.94	35	
Bromobenzene	1040	250	ug/kg	1000		104	60-135	7.41	35	
Bromochloromethane	1050	250	ug/kg	1000		105	60-135	6.45	35	
Bromodichloromethane	919	100	ug/kg	1000		91.9	30-135	1.83	35	
Bromoform	946	250	ug/kg	1000		94.6	60-140	7.23	35	
Bromomethane	903	250	ug/kg	2000		45.2	10-200	32.2	35	
2-Butanone (MEK)	835	500	ug/kg	1000		83.5	10-160	20.9	35	
n-Butylbenzene	829	250	ug/kg	1000		82.9	65-125	12.0	35	
sec-Butylbenzene	891	250	ug/kg	1000		89.1	70-135	10.0	35	
tert-Butylbenzene	933	250	ug/kg	1000		93.3	70-130	7.93	35	
Carbon Disulfide	647	250	ug/kg	1000		64.7	20-120	13.1	35	
Carbon tetrachloride	908	250	ug/kg	1000		90.8	70-140	0.996	35	
Chlorobenzene	1060	100	ug/kg	1000		106	70-125	2.79	35	
Chloroethane	944	250	ug/kg	2000		47.2	10-200	23.1	35	
Chloroform	970	100	ug/kg	1000		97.0	35-135	2.44	35	
Chloromethane	1030	250	ug/kg	2000		51.5	10-200	35.9	35	R6
2-Chlorotoluene	936	250	ug/kg	1000		93.6	70-135	6.31	35	
4-Chlorotoluene	941	250	ug/kg	1000		94.1	75-135	5.88	35	
Dibromochloromethane	1030	100	ug/kg	1000		103	35-135	5.59	35	
1,2-Dibromo-3-chloropropane	881	250	ug/kg	1000		88.1	50-155	16.6	35	
1,2-Dibromoethane (EDB)	1080	100	ug/kg	1000		108	70-130	2.74	35	
Dibromomethane	1010	100	ug/kg	1000		101	65-130	7.62	35	
1,2-Dichlorobenzene	976	100	ug/kg	1000		97.6	70-125	7.31	35	
1,3-Dichlorobenzene	973	100	ug/kg	1000		97.3	70-125	7.61	35	
1,4-Dichlorobenzene	1020	100	ug/kg	1000		102	70-135	6.64	35	
Dichlorodifluoromethane	736	250	ug/kg	2000		36.8	10-185	57.5	35	R6
1,1-Dichloroethane	926	100	ug/kg	1000		92.6	60-140	4.23	35	
1,2-Dichloroethane	983	100	ug/kg	1000		98.3	55-135	3.69	35	
1,1-Dichloroethene	912	250	ug/kg	1000		91.2	55-145	7.90	35	
cis-1,2-Dichloroethene	974	100	ug/kg	1000		97.4	60-125	3.63	35	
trans-1,2-Dichloroethene	966	100	ug/kg	1000		96.6	70-145	4.45	35	
1,2-Dichloropropane	911	100	ug/kg	1000		91.1	65-130	4.82	35	
1,3-Dichloropropane	1020	100	ug/kg	1000		102	65-130	3.85	35	
2,2-Dichloropropane	765	100	ug/kg	1000		76.5	60-135	12.2	35	
1,1-Dichloropropene	886	100	ug/kg	1000		88.6	65-130	4.74	35	

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VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111401 Extracted: 09/14/01										
LCS Dup Analyzed: 09/19/01 (P111401-BSD1)										
cis-1,3-Dichloropropene	889	100	ug/kg	1000		88.9	60-125	0.451	35	
trans-1,3-Dichloropropene	896	100	ug/kg	1000		89.6	50-130	1.57	35	
Ethylbenzene	1010	100	ug/kg	1000		101	70-125	4.83	35	
Hexachlorobutadiene	849	250	ug/kg	1000		84.9	60-125	19.3	35	
2-Hexanone	981	500	ug/kg	1000		98.1	25-185	12.3	35	
Iodomethane	1040	100	ug/kg	1000		104	30-155	10.0	35	
Isopropylbenzene	1010	100	ug/kg	1000		101	70-135	5.77	35	
p-Isopropyltoluene	884	100	ug/kg	1000		88.4	65-130	8.97	35	
Methylene chloride	942	500	ug/kg	1000		94.2	60-140	3.85	35	
4-Methyl-2-pentanone (MIBK)	1020	500	ug/kg	1000		102	10-175	13.7	35	
Naphthalene	922	250	ug/kg	1000		92.2	45-155	27.0	35	
n-Propylbenzene	937	100	ug/kg	1000		93.7	75-135	7.50	35	
Styrene	1050	100	ug/kg	1000		105	70-130	1.89	35	
1,1,1,2-Tetrachloroethane	1040	250	ug/kg	1000		104	70-130	1.94	35	
1,1,2,2-Tetrachloroethane	1010	100	ug/kg	1000		101	60-140	4.83	35	
Tetrachloroethene	1080	100	ug/kg	1000		108	65-130	3.64	35	
Toluene	1010	100	ug/kg	1000		101	70-125	2.93	35	
1,2,3-Trichlorobenzene	872	250	ug/kg	1000		87.2	60-135	21.3	35	
1,2,4-Trichlorobenzene	899	250	ug/kg	1000		89.9	55-135	17.4	35	
1,1,1-Trichloroethane	934	100	ug/kg	1000		93.4	65-135	2.01	35	
1,1,2-Trichloroethane	1040	100	ug/kg	1000		104	65-130	2.84	35	
Trichloroethene	971	100	ug/kg	1000		97.1	70-130	5.90	35	
Trichlorofluoromethane	1080	250	ug/kg	2000		54.0	10-200	5.41	35	
1,2,3-Trichloropropane	982	500	ug/kg	1000		98.2	60-150	12.2	35	
1,2,4-Trimethylbenzene	972	100	ug/kg	1000		97.2	75-130	6.76	35	
1,3,5-Trimethylbenzene	928	100	ug/kg	1000		92.8	70-130	8.46	35	
Vinyl acetate	ND	1200	ug/kg	1000		76.3	25-130	13.9	35	
Vinyl chloride	869	250	ug/kg	2000		43.4	10-200	7.64	35	
Xylenes, Total	3090	300	ug/kg	3000		103	70-130	3.81	35	
Surrogate: Dibromofluoromethane	138		ug/kg	125		110	70-125			
Surrogate: Toluene-d8	152		ug/kg	125		122	50-135			
Surrogate: 4-Bromofluorobenzene	152		ug/kg	125		122	70-130			



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 Attention: Jim Clarke

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1401 Extracted: 09/14/01										
Matrix Spike Analyzed: 09/20/01 (P1I1401-MS1)					Source: PKI0199-01					
Acetone	ND	1000	ug/kg	1000	ND	75.8	5-200			
Benzene	956	100	ug/kg	1000	ND	95.6	65-130			
Bromobenzene	980	250	ug/kg	1000	ND	98.0	60-135			
Bromochloromethane	1090	250	ug/kg	1000	ND	109	60-135			
Bromodichloromethane	1010	100	ug/kg	1000	ND	101	30-135			
Bromoform	877	250	ug/kg	1000	ND	87.7	60-140			
Bromomethane	1640	250	ug/kg	2000	ND	82.0	10-200			
2-Butanone (MEK)	806	500	ug/kg	1000	ND	80.6	10-160			
n-Butylbenzene	1010	250	ug/kg	1000	ND	101	65-125			
sec-Butylbenzene	960	250	ug/kg	1000	ND	96.0	70-135			
tert-Butylbenzene	932	250	ug/kg	1000	ND	93.2	70-130			
Carbon Disulfide	553	250	ug/kg	1000	ND	55.3	20-120			
Carbon tetrachloride	1120	250	ug/kg	1000	ND	112	70-140			
Chlorobenzene	1050	100	ug/kg	1000	ND	105	75-125			
Chloroethane	1440	250	ug/kg	2000	ND	72.0	10-200			
Chloroform	1040	100	ug/kg	1000	ND	104	35-135			
Chloromethane	1270	250	ug/kg	2000	ND	63.5	10-200			
2-Chlorotoluene	891	250	ug/kg	1000	ND	89.1	70-135			
4-Chlorotoluene	897	250	ug/kg	1000	ND	89.7	75-135			
Dibromochloromethane	969	100	ug/kg	1000	ND	96.9	35-135			
1,2-Dibromo-3-chloropropane	576	250	ug/kg	1000	ND	57.6	50-155			
1,2-Dibromoethane (EDB)	866	100	ug/kg	1000	ND	86.6	70-130			
Dibromomethane	1000	100	ug/kg	1000	ND	100	65-130			
1,2-Dichlorobenzene	960	100	ug/kg	1000	ND	96.0	70-125			
1,3-Dichlorobenzene	969	100	ug/kg	1000	ND	96.9	70-125			
1,4-Dichlorobenzene	1010	100	ug/kg	1000	ND	101	70-135			
Dichlorodifluoromethane	972	250	ug/kg	2000	ND	48.6	10-185			
1,1-Dichloroethane	991	100	ug/kg	1000	ND	99.1	60-140			
1,2-Dichloroethane	950	100	ug/kg	1000	ND	95.0	55-135			
1,1-Dichloroethene	651	250	ug/kg	1000	ND	65.1	55-145			
cis-1,2-Dichloroethene	1020	100	ug/kg	1000	ND	102	60-125			
trans-1,2-Dichloroethene	1040	100	ug/kg	1000	ND	104	70-145			
1,2-Dichloropropane	941	100	ug/kg	1000	ND	94.1	65-130			
1,3-Dichloropropane	841	100	ug/kg	1000	ND	84.1	65-130			
2,2-Dichloropropane	1140	100	ug/kg	1000	ND	114	60-135			
1,1-Dichloropropene	928	100	ug/kg	1000	ND	92.8	65-130			

Melissa Evans
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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111401 Extracted: 09/14/01										
Matrix Spike Analyzed: 09/20/01 (P111401-MS1)					Source: PKI0199-01					
cis-1,3-Dichloropropene	943	100	ug/kg	1000	ND	94.3	60-125			M1
trans-1,3-Dichloropropene	795	100	ug/kg	1000	ND	79.5	50-130			
Ethylbenzene	1020	100	ug/kg	1000	ND	102	70-125			
Hexachlorobutadiene	1380	250	ug/kg	1000	ND	138	60-125			
2-Hexanone	785	500	ug/kg	1000	ND	78.5	25-185			
Iodomethane	710	100	ug/kg	1000	ND	71.0	30-155			
Isopropylbenzene	1080	100	ug/kg	1000	ND	108	70-135			
p-Isopropyltoluene	975	100	ug/kg	1000	ND	97.5	65-130			
Methylene chloride	659	500	ug/kg	1000	ND	65.9	60-140			
4-Methyl-2-pentanone (MIBK)	734	500	ug/kg	1000	ND	73.4	10-175			
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg		ND		55-135			
Naphthalene	710	250	ug/kg	1000	ND	71.0	45-155			
n-Propylbenzene	902	100	ug/kg	1000	ND	90.2	75-135			
Styrene	1030	100	ug/kg	1000	ND	103	70-130			
1,1,1,2-Tetrachloroethane	1120	250	ug/kg	1000	ND	112	70-130			
1,1,2,2-Tetrachloroethane	597	100	ug/kg	1000	ND	59.7	60-140			
Tetrachloroethene	1030	100	ug/kg	1000	ND	103	65-130			
Toluene	952	100	ug/kg	1000	ND	95.2	70-125			
1,2,3-Trichlorobenzene	809	250	ug/kg	1000	ND	80.9	60-135			
1,2,4-Trichlorobenzene	898	250	ug/kg	1000	ND	89.8	55-135			
1,1,1-Trichloroethane	1110	100	ug/kg	1000	ND	111	65-135			
1,1,2-Trichloroethane	885	100	ug/kg	1000	ND	88.5	65-130			
Trichloroethene	1170	100	ug/kg	1000	ND	117	70-130			
Trichlorofluoromethane	1860	250	ug/kg	2000	ND	93.0	10-200			
1,2,3-Trichloropropane	692	500	ug/kg	1000	ND	69.2	60-150			
1,2,4-Trimethylbenzene	955	100	ug/kg	1000	ND	95.5	75-130			
1,3,5-Trimethylbenzene	908	100	ug/kg	1000	ND	90.8	70-130			
Vinyl acetate	ND	1200	ug/kg	1000	ND	24.7	25-130			
Vinyl chloride	2000	250	ug/kg	2000	ND	100	10-200			
Xylenes, Total	3110	300	ug/kg	3000	ND	104	70-130			
Surrogate: Dibromofluoromethane	137		ug/kg	125		110	70-125			
Surrogate: Toluene-d8	137		ug/kg	125		110	50-135			
Surrogate: 4-Bromofluorobenzene	135		ug/kg	125		108	70-130			

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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111401 Extracted: 09/14/01										
Matrix Spike Dup Analyzed: 09/20/01 (P111401-MSD1)					Source: PKI0199-01					
Acetone	ND	1000	ug/kg	1000	ND	66.5	5-200	13.1	35	
Benzene	952	100	ug/kg	1000	ND	95.2	65-130	0.419	35	
Bromobenzene	1030	250	ug/kg	1000	ND	103	60-135	4.98	35	
Bromochloromethane	1070	250	ug/kg	1000	ND	107	60-135	1.85	35	
Bromodichloromethane	1040	100	ug/kg	1000	ND	104	30-135	2.93	35	
Bromoform	878	250	ug/kg	1000	ND	87.8	60-140	0.114	35	
Bromomethane	1250	250	ug/kg	2000	ND	62.5	10-200	27.0	35	
2-Butanone (MEK)	753	500	ug/kg	1000	ND	75.3	10-160	6.80	35	
n-Butylbenzene	982	250	ug/kg	1000	ND	98.2	65-125	2.81	35	
sec-Butylbenzene	969	250	ug/kg	1000	ND	96.9	70-135	0.933	35	
tert-Butylbenzene	955	250	ug/kg	1000	ND	95.5	70-130	2.44	35	
Carbon Disulfide	843	250	ug/kg	1000	ND	84.3	20-120	41.5	35	R4
Carbon tetrachloride	1110	250	ug/kg	1000	ND	111	70-140	0.897	35	
Chlorobenzene	1070	100	ug/kg	1000	ND	107	75-125	1.89	35	
Chloroethane	1140	250	ug/kg	2000	ND	57.0	10-200	23.3	35	
Chloroform	1060	100	ug/kg	1000	ND	106	35-135	1.90	35	
Chloromethane	1120	250	ug/kg	2000	ND	56.0	10-200	12.6	35	
2-Chlorotoluene	917	250	ug/kg	1000	ND	91.7	70-135	2.88	35	
4-Chlorotoluene	923	250	ug/kg	1000	ND	92.3	75-135	2.86	35	
Dibromochloromethane	974	100	ug/kg	1000	ND	97.4	35-135	0.515	35	
1,2-Dibromo-3-chloropropane	605	250	ug/kg	1000	ND	60.5	50-155	4.91	35	
1,2-Dibromoethane (EDB)	903	100	ug/kg	1000	ND	90.3	70-130	4.18	35	
Dibromomethane	984	100	ug/kg	1000	ND	98.4	65-130	1.61	35	
1,2-Dichlorobenzene	943	100	ug/kg	1000	ND	94.3	70-125	1.79	35	
1,3-Dichlorobenzene	959	100	ug/kg	1000	ND	95.9	70-125	1.04	35	
1,4-Dichlorobenzene	983	100	ug/kg	1000	ND	98.3	70-135	2.71	35	
Dichlorodifluoromethane	968	250	ug/kg	2000	ND	48.4	10-185	0.412	35	
1,1-Dichloroethane	1040	100	ug/kg	1000	ND	104	60-140	4.83	35	
1,2-Dichloroethane	966	100	ug/kg	1000	ND	96.6	55-135	1.67	35	
1,1-Dichloroethene	757	250	ug/kg	1000	ND	75.7	55-145	15.1	35	
cis-1,2-Dichloroethene	1030	100	ug/kg	1000	ND	103	60-125	0.976	35	
trans-1,2-Dichloroethene	1100	100	ug/kg	1000	ND	110	70-145	5.61	35	
1,2-Dichloropropane	942	100	ug/kg	1000	ND	94.2	65-130	0.106	35	
1,3-Dichloropropane	861	100	ug/kg	1000	ND	86.1	65-130	2.35	35	
2,2-Dichloropropane	1090	100	ug/kg	1000	ND	109	60-135	4.48	35	
1,1-Dichloropropene	934	100	ug/kg	1000	ND	93.4	65-130	0.644	35	

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 Project Manager

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Client Project ID: 70211-0-01SD

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1401 Extracted: 09/14/01										
Matrix Spike Dup Analyzed: 09/20/01 (P1I1401-MSD1)					Source: PKI0199-01					
cis-1,3-Dichloropropene	945	100	ug/kg	1000	ND	94.5	60-125	0.212	35	
trans-1,3-Dichloropropene	859	100	ug/kg	1000	ND	85.9	50-130	7.74	35	
Ethylbenzene	1050	100	ug/kg	1000	ND	105	70-125	2.90	35	
Hexachlorobutadiene	1420	250	ug/kg	1000	ND	142	60-125	2.86	35	M1
2-Hexanone	664	500	ug/kg	1000	ND	66.4	25-185	16.7	35	
Iodomethane	886	100	ug/kg	1000	ND	88.6	30-155	22.1	35	
Isopropylbenzene	1050	100	ug/kg	1000	ND	105	70-135	2.82	35	
p-Isopropyltoluene	969	100	ug/kg	1000	ND	96.9	65-130	0.617	35	
Methylene chloride	1030	500	ug/kg	1000	ND	103	60-140	43.9	35	R4
4-Methyl-2-pentanone (MIBK)	694	500	ug/kg	1000	ND	69.4	10-175	5.60	35	
Methyl-tert-butyl Ether (MTBE)	ND	250	ug/kg		ND		55-135	12.8	35	
Naphthalene	736	250	ug/kg	1000	ND	73.6	45-155	3.60	35	
n-Propylbenzene	949	100	ug/kg	1000	ND	94.9	75-135	5.08	35	
Styrene	1020	100	ug/kg	1000	ND	102	70-130	0.976	35	
1,1,1,2-Tetrachloroethane	1130	250	ug/kg	1000	ND	113	70-130	0.889	35	
1,1,2,2-Tetrachloroethane	580	100	ug/kg	1000	ND	58.0	60-140	2.89	35	M2
Tetrachloroethene	1070	100	ug/kg	1000	ND	107	65-130	3.81	35	
Toluene	1020	100	ug/kg	1000	ND	102	70-125	6.90	35	
1,2,3-Trichlorobenzene	838	250	ug/kg	1000	ND	83.8	60-135	3.52	35	
1,2,4-Trichlorobenzene	923	250	ug/kg	1000	ND	92.3	55-135	2.75	35	
1,1,1-Trichloroethane	1110	100	ug/kg	1000	ND	111	65-135	0.00	35	
1,1,2-Trichloroethane	937	100	ug/kg	1000	ND	93.7	65-130	5.71	35	
Trichloroethene	1210	100	ug/kg	1000	ND	121	70-130	3.36	35	
Trichlorofluoromethane	1400	250	ug/kg	2000	ND	70.0	10-200	28.2	35	
1,2,3-Trichloropropane	743	500	ug/kg	1000	ND	74.3	60-150	7.11	35	
1,2,4-Trimethylbenzene	954	100	ug/kg	1000	ND	95.4	75-130	0.105	35	
1,3,5-Trimethylbenzene	923	100	ug/kg	1000	ND	92.3	70-130	1.64	35	
Vinyl acetate	ND	1200	ug/kg	1000	ND	20.0	25-130	21.0	35	M2
Vinyl chloride	1590	250	ug/kg	2000	ND	79.5	10-200	22.8	35	
Xylenes, Total	3200	300	ug/kg	3000	ND	107	70-130	2.85	35	
Surrogate: Dibromofluoromethane	136		ug/kg	125		109	70-125			
Surrogate: Toluene-d8	156		ug/kg	125		125	50-135			
Surrogate: 4-Bromofluorobenzene	152		ug/kg	125		122	70-130			



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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P112706 Extracted: 09/26/01									
Blank Analyzed: 09/26/01 (P112706-BLK1)									
Acetone	ND	20	ug/l						
Benzene	ND	2.0	ug/l						
Bromobenzene	ND	5.0	ug/l						
Bromochloromethane	ND	5.0	ug/l						
Bromodichloromethane	ND	2.0	ug/l						
Bromoform	ND	5.0	ug/l						
Bromomethane	ND	5.0	ug/l						
2-Butanone (MEK)	ND	10	ug/l						
n-Butylbenzene	ND	5.0	ug/l						
sec-Butylbenzene	ND	5.0	ug/l						
tert-Butylbenzene	ND	5.0	ug/l						
Carbon Disulfide	ND	5.0	ug/l						
Carbon tetrachloride	ND	5.0	ug/l						
Chlorobenzene	ND	2.0	ug/l						
Chloroethane	ND	5.0	ug/l						
Chloroform	ND	2.0	ug/l						
Chloromethane	ND	5.0	ug/l						
2-Chlorotoluene	ND	5.0	ug/l						
4-Chlorotoluene	ND	5.0	ug/l						
Dibromochloromethane	ND	2.0	ug/l						
1,2-Dibromo-3-chloropropane	ND	5.0	ug/l						
1,2-Dibromoethane (EDB)	ND	2.0	ug/l						
Dibromomethane	ND	2.0	ug/l						
1,2-Dichlorobenzene	ND	2.0	ug/l						
1,3-Dichlorobenzene	ND	2.0	ug/l						
1,4-Dichlorobenzene	ND	2.0	ug/l						
Dichlorodifluoromethane	ND	5.0	ug/l						
1,1-Dichloroethane	ND	2.0	ug/l						
1,2-Dichloroethane	ND	2.0	ug/l						
1,1-Dichloroethene	ND	5.0	ug/l						
cis-1,2-Dichloroethene	ND	2.0	ug/l						
trans-1,2-Dichloroethene	ND	2.0	ug/l						
1,2-Dichloropropane	ND	2.0	ug/l						
1,3-Dichloropropane	ND	2.0	ug/l						
2,2-Dichloropropane	ND	2.0	ug/l						

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P112706 Extracted: 09/26/01									
Blank Analyzed: 09/26/01 (P112706-BLK1)									
1,1-Dichloropropene	ND	2.0	ug/l						
cis-1,3-Dichloropropene	ND	2.0	ug/l						
trans-1,3-Dichloropropene	ND	2.0	ug/l						
Ethylbenzene	ND	2.0	ug/l						
Hexachlorobutadiene	ND	5.0	ug/l						
2-Hexanone	ND	10	ug/l						
Iodomethane	ND	2.0	ug/l						
Isopropylbenzene	ND	2.0	ug/l						
p-Isopropyltoluene	ND	2.0	ug/l						
Methylene chloride	ND	5.0	ug/l						
4-Methyl-2-pentanone (MIBK)	ND	10	ug/l						
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l						
Naphthalene	ND	5.0	ug/l						
n-Propylbenzene	ND	2.0	ug/l						
Styrene	ND	2.0	ug/l						
1,1,1,2-Tetrachloroethane	ND	5.0	ug/l						
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l						
Tetrachloroethene	ND	2.0	ug/l						
Toluene	ND	2.0	ug/l						
1,2,3-Trichlorobenzene	ND	5.0	ug/l						
1,2,4-Trichlorobenzene	ND	5.0	ug/l						
1,1,1-Trichloroethane	ND	2.0	ug/l						
1,1,2-Trichloroethane	ND	2.0	ug/l						
Trichloroethene	ND	2.0	ug/l						
Trichlorofluoromethane	ND	5.0	ug/l						
1,2,3-Trichloropropane	ND	10	ug/l						
1,2,4-Trimethylbenzene	ND	2.0	ug/l						
1,3,5-Trimethylbenzene	ND	2.0	ug/l						
Vinyl acetate	ND	25	ug/l						
Vinyl chloride	ND	5.0	ug/l						
Xylenes, Total	ND	10	ug/l						
Surrogate: Dibromofluoromethane	27.2		ug/l	25.0		109		80-120	
Surrogate: Toluene-d8	25.5		ug/l	25.0		102		80-120	
Surrogate: 4-Bromofluorobenzene	23.2		ug/l	25.0		92.8		80-120	

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METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P112706 Extracted: 09/26/01										
LCS Analyzed: 09/26/01 (P112706-BS1)										
Acetone	25.5	20	ug/l	25.0		102	30-200			
Benzene	23.3	2.0	ug/l	25.0		93.2	80-120			
Bromobenzene	27.7	5.0	ug/l	25.0		111	80-120			
Bromochloromethane	28.3	5.0	ug/l	25.0		113	80-120			
Bromodichloromethane	27.5	2.0	ug/l	25.0		110	80-130			
Bromoform	32.9	5.0	ug/l	25.0		132	60-140			
Bromomethane	27.3	5.0	ug/l	25.0		109	60-150			
2-Butanone (MEK)	23.9	10	ug/l	25.0		95.6	30-185			
n-Butylbenzene	22.3	5.0	ug/l	25.0		89.2	75-130			
sec-Butylbenzene	23.3	5.0	ug/l	25.0		93.2	80-125			
tert-Butylbenzene	24.1	5.0	ug/l	25.0		96.4	80-120			
Carbon Disulfide	21.4	5.0	ug/l	25.0		85.6	65-120			
Carbon tetrachloride	30.4	5.0	ug/l	25.0		122	75-150			
Chlorobenzene	27.7	2.0	ug/l	25.0		111	80-120			
Chloroethane	22.6	5.0	ug/l	25.0		90.4	80-125			
Chloroform	26.7	2.0	ug/l	25.0		107	80-120			
Chloromethane	19.5	5.0	ug/l	25.0		78.0	60-125			
2-Chlorotoluene	24.8	5.0	ug/l	25.0		99.2	80-120			
4-Chlorotoluene	24.8	5.0	ug/l	25.0		99.2	80-120			
Dibromochloromethane	32.8	2.0	ug/l	25.0		131	70-150			
1,2-Dibromo-3-chloropropane	33.8	5.0	ug/l	25.0		135	50-145			
1,2-Dibromoethane (EDB)	29.5	2.0	ug/l	25.0		118	75-120			
Dibromomethane	28.8	2.0	ug/l	25.0		115	80-120			
1,2-Dichlorobenzene	26.3	2.0	ug/l	25.0		105	80-120			
1,3-Dichlorobenzene	25.8	2.0	ug/l	25.0		103	80-120			
1,4-Dichlorobenzene	27.0	2.0	ug/l	25.0		108	80-120			
Dichlorodifluoromethane	27.2	5.0	ug/l	25.0		109	25-140			
1,1-Dichloroethane	24.6	2.0	ug/l	25.0		98.4	80-120			
1,2-Dichloroethane	26.9	2.0	ug/l	25.0		108	80-120			
1,1-Dichloroethene	27.1	5.0	ug/l	25.0		108	80-120			
cis-1,2-Dichloroethene	25.5	2.0	ug/l	25.0		102	80-120			
trans-1,2-Dichloroethene	26.1	2.0	ug/l	25.0		104	80-120			
1,2-Dichloropropane	23.3	2.0	ug/l	25.0		93.2	80-120			
1,3-Dichloropropane	26.4	2.0	ug/l	25.0		106	80-120			
2,2-Dichloropropane	27.3	2.0	ug/l	25.0		109	75-135			
1,1-Dichloropropene	24.0	2.0	ug/l	25.0		96.0	80-120			

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01
 Received: 09/12/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P112706 Extracted: 09/26/01										
LCS Analyzed: 09/26/01 (P112706-BS1)										
cis-1,3-Dichloropropene	25.8	2.0	ug/l	25.0		103	80-120			
trans-1,3-Dichloropropene	26.5	2.0	ug/l	25.0		106	80-120			
Ethylbenzene	26.6	2.0	ug/l	25.0		106	80-120			
Hexachlorobutadiene	24.9	5.0	ug/l	25.0		99.6	60-145			
2-Hexanone	26.0	10	ug/l	25.0		104	50-170			
Iodomethane	30.6	2.0	ug/l	25.0		122	40-155			
Isopropylbenzene	26.5	2.0	ug/l	25.0		106	80-120			
p-Isopropyltoluene	23.4	2.0	ug/l	25.0		93.6	80-120			
Methylene chloride	25.9	5.0	ug/l	25.0		104	80-120			
4-Methyl-2-pentanone (MIBK)	29.0	10	ug/l	25.0		116	70-140			
Methyl-tert-butyl Ether (MTBE)	25.9	5.0	ug/l	25.0		104	75-135			
Naphthalene	29.9	5.0	ug/l	25.0		120	70-130			
n-Propylbenzene	24.4	2.0	ug/l	25.0		97.6	80-120			
Styrene	27.1	2.0	ug/l	25.0		108	80-120			
1,1,1,2-Tetrachloroethane	30.5	5.0	ug/l	25.0		122	65-150			
1,1,2,2-Tetrachloroethane	28.4	2.0	ug/l	25.0		114	70-130			
Tetrachloroethene	29.2	2.0	ug/l	25.0		117	80-125			
Toluene	26.0	2.0	ug/l	25.0		104	80-120			
1,2,3-Trichlorobenzene	25.1	5.0	ug/l	25.0		100	75-125			
1,2,4-Trichlorobenzene	24.8	5.0	ug/l	25.0		99.2	80-120			
1,1,1-Trichloroethane	28.4	2.0	ug/l	25.0		114	80-120			
1,1,2-Trichloroethane	27.9	2.0	ug/l	25.0		112	80-120			
Trichloroethene	26.0	2.0	ug/l	25.0		104	80-120			
Trichlorofluoromethane	24.8	5.0	ug/l	25.0		99.2	75-150			
1,2,3-Trichloropropane	27.7	10	ug/l	25.0		111	65-135			
1,2,4-Trimethylbenzene	25.2	2.0	ug/l	25.0		101	80-120			
1,3,5-Trimethylbenzene	24.5	2.0	ug/l	25.0		98.0	80-120			
Vinyl acetate	27.4	25	ug/l	25.0		110	40-120			
Vinyl chloride	27.2	5.0	ug/l	25.0		109	80-120			
Xylenes, Total	79.7	10	ug/l	75.0		106	80-120			
Surrogate: Dibromofluoromethane	27.6		ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	26.9		ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	24.0		ug/l	25.0		96.0	80-120			



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01
 Received: 09/12/01

METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I2706 Extracted: 09/26/01										
LCS Dup Analyzed: 09/26/01 (P1I2706-BSD1)										
Acetone	35.9	20	ug/l	25.0		144	30-200	33.9	20	R6
Benzene	23.2	2.0	ug/l	25.0		92.8	80-120	0.430	20	
Bromobenzene	27.4	5.0	ug/l	25.0		110	80-120	1.09	20	
Bromochloromethane	28.9	5.0	ug/l	25.0		116	80-120	2.10	20	
Bromodichloromethane	28.5	2.0	ug/l	25.0		114	80-130	3.57	20	
Bromoform	35.0	5.0	ug/l	25.0		140	60-140	6.19	20	
Bromomethane	27.4	5.0	ug/l	25.0		110	60-150	0.366	20	
2-Butanone (MEK)	27.3	10	ug/l	25.0		109	30-185	13.3	20	
n-Butylbenzene	22.7	5.0	ug/l	25.0		90.8	75-130	1.78	20	
sec-Butylbenzene	23.4	5.0	ug/l	25.0		93.6	80-125	0.428	20	
tert-Butylbenzene	24.5	5.0	ug/l	25.0		98.0	80-120	1.65	20	
Carbon Disulfide	20.8	5.0	ug/l	25.0		83.2	65-120	2.84	20	
Carbon tetrachloride	30.9	5.0	ug/l	25.0		124	75-150	1.63	20	
Chlorobenzene	28.1	2.0	ug/l	25.0		112	80-120	1.43	20	
Chloroethane	22.4	5.0	ug/l	25.0		89.6	80-125	0.889	20	
Chloroform	26.7	2.0	ug/l	25.0		107	80-120	0.00	20	
Chloromethane	18.9	5.0	ug/l	25.0		75.6	60-125	3.13	20	
2-Chlorotoluene	24.8	5.0	ug/l	25.0		99.2	80-120	0.00	20	
4-Chlorotoluene	24.7	5.0	ug/l	25.0		98.8	80-120	0.404	20	
Dibromochloromethane	33.1	2.0	ug/l	25.0		132	70-150	0.910	20	
1,2-Dibromo-3-chloropropane	35.5	5.0	ug/l	25.0		142	50-145	4.91	20	
1,2-Dibromoethane (EDB)	29.8	2.0	ug/l	25.0		119	75-120	1.01	20	
Dibromomethane	28.8	2.0	ug/l	25.0		115	80-120	0.00	20	
1,2-Dichlorobenzene	26.5	2.0	ug/l	25.0		106	80-120	0.758	20	
1,3-Dichlorobenzene	26.1	2.0	ug/l	25.0		104	80-120	1.16	20	
1,4-Dichlorobenzene	27.0	2.0	ug/l	25.0		108	80-120	0.00	20	
Dichlorodifluoromethane	26.6	5.0	ug/l	25.0		106	25-140	2.23	20	
1,1-Dichloroethane	24.5	2.0	ug/l	25.0		98.0	80-120	0.407	20	
1,2-Dichloroethane	27.2	2.0	ug/l	25.0		109	80-120	1.11	20	
1,1-Dichloroethene	26.9	5.0	ug/l	25.0		108	80-120	0.741	20	
cis-1,2-Dichloroethene	25.2	2.0	ug/l	25.0		101	80-120	1.18	20	
trans-1,2-Dichloroethene	25.9	2.0	ug/l	25.0		104	80-120	0.769	20	
1,2-Dichloropropane	23.5	2.0	ug/l	25.0		94.0	80-120	0.855	20	
1,3-Dichloropropane	26.8	2.0	ug/l	25.0		107	80-120	1.50	20	
2,2-Dichloropropane	25.3	2.0	ug/l	25.0		101	75-135	7.60	20	
1,1-Dichloropropene	23.8	2.0	ug/l	25.0		95.2	80-120	0.837	20	

Melissa Evans
 Project Manager

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Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01
 Received: 09/12/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P112706 Extracted: 09/26/01										
LCS Dup Analyzed: 09/26/01 (P112706-BSD1)										
cis-1,3-Dichloropropene	25.4	2.0	ug/l	25.0		102	80-120	1.56	20	
trans-1,3-Dichloropropene	26.9	2.0	ug/l	25.0		108	80-120	1.50	20	
Ethylbenzene	26.8	2.0	ug/l	25.0		107	80-120	0.749	20	
Hexachlorobutadiene	25.3	5.0	ug/l	25.0		101	60-145	1.59	20	
2-Hexanone	31.7	10	ug/l	25.0		127	50-170	19.8	20	
Iodomethane	30.3	2.0	ug/l	25.0		121	40-155	0.985	20	
Isopropylbenzene	26.5	2.0	ug/l	25.0		106	80-120	0.00	20	
p-Isopropyltoluene	23.5	2.0	ug/l	25.0		94.0	80-120	0.426	20	
Methylene chloride	24.9	5.0	ug/l	25.0		99.6	80-120	3.94	20	
4-Methyl-2-pentanone (MIBK)	30.9	10	ug/l	25.0		124	70-140	6.34	20	
Methyl-tert-butyl Ether (MTBE)	26.4	5.0	ug/l	25.0		106	75-135	1.91	20	
Naphthalene	30.6	5.0	ug/l	25.0		122	70-130	2.31	20	
n-Propylbenzene	24.8	2.0	ug/l	25.0		99.2	80-120	1.63	20	
Styrene	27.2	2.0	ug/l	25.0		109	80-120	0.368	20	
1,1,1,2-Tetrachloroethane	31.7	5.0	ug/l	25.0		127	65-150	3.86	20	
1,1,2,2-Tetrachloroethane	29.5	2.0	ug/l	25.0		118	70-130	3.80	20	
Tetrachloroethene	29.3	2.0	ug/l	25.0		117	80-125	0.342	20	
Toluene	25.8	2.0	ug/l	25.0		103	80-120	0.772	20	
1,2,3-Trichlorobenzene	25.0	5.0	ug/l	25.0		100	75-125	0.399	20	
1,2,4-Trichlorobenzene	25.2	5.0	ug/l	25.0		101	80-120	1.60	20	
1,1,1-Trichloroethane	28.0	2.0	ug/l	25.0		112	80-120	1.42	20	
1,1,2-Trichloroethane	28.3	2.0	ug/l	25.0		113	80-120	1.42	20	
Trichloroethene	26.2	2.0	ug/l	25.0		105	80-120	0.766	20	
Trichlorofluoromethane	21.6	5.0	ug/l	25.0		86.4	75-150	13.8	20	
1,2,3-Trichloropropane	28.8	10	ug/l	25.0		115	65-135	3.89	20	
1,2,4-Trimethylbenzene	25.7	2.0	ug/l	25.0		103	80-120	1.96	20	
1,3,5-Trimethylbenzene	24.9	2.0	ug/l	25.0		99.6	80-120	1.62	20	
Vinyl acetate	27.8	25	ug/l	25.0		111	40-120	1.45	20	
Vinyl chloride	27.4	5.0	ug/l	25.0		110	80-120	0.733	20	
Xylenes, Total	80.0	10	ug/l	75.0		107	80-120	0.376	20	
Surrogate: Dibromofluoromethane	27.3		ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	26.7		ug/l	25.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	24.5		ug/l	25.0		98.0	80-120			



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01
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METHOD BLANK QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I2706 Extracted: 09/26/01										
Matrix Spike Analyzed: 09/26/01 (P1I2706-MS1)										
Source: PKI0180-15										
Acetone	ND	20	ug/l	25.0	ND	58.0	5-200			
Benzene	21.4	2.0	ug/l	25.0	ND	85.6	80-120			
Bromobenzene	26.9	5.0	ug/l	25.0	ND	108	80-120			
Bromochloromethane	25.6	5.0	ug/l	25.0	ND	102	60-135			
Bromodichloromethane	24.8	2.0	ug/l	25.0	ND	99.2	80-120			
Bromoform	28.5	5.0	ug/l	25.0	ND	114	40-140			
Bromomethane	23.4	5.0	ug/l	25.0	ND	93.6	25-165			
2-Butanone (MEK)	19.6	10	ug/l	25.0	ND	78.4	10-160			
n-Butylbenzene	21.6	5.0	ug/l	25.0	ND	86.4	75-135			
sec-Butylbenzene	22.9	5.0	ug/l	25.0	ND	91.6	80-135			
tert-Butylbenzene	24.2	5.0	ug/l	25.0	ND	96.8	80-125			
Carbon Disulfide	19.1	5.0	ug/l	25.0	ND	76.4	20-120			
Carbon tetrachloride	27.5	5.0	ug/l	25.0	ND	110	80-145			
Chlorobenzene	26.5	2.0	ug/l	25.0	ND	106	80-120			
Chloroethane	20.5	5.0	ug/l	25.0	ND	82.0	30-150			
Chloroform	24.0	2.0	ug/l	25.0	ND	96.0	80-125			
Chloromethane	17.7	5.0	ug/l	25.0	ND	70.8	15-140			
2-Chlorotoluene	24.4	5.0	ug/l	25.0	ND	97.6	80-125			
4-Chlorotoluene	24.4	5.0	ug/l	25.0	ND	97.6	80-125			
Dibromochloromethane	28.9	2.0	ug/l	25.0	ND	116	75-135			
1,2-Dibromo-3-chloropropane	28.4	5.0	ug/l	25.0	ND	114	25-185			
1,2-Dibromoethane (EDB)	26.3	2.0	ug/l	25.0	ND	105	45-145			
Dibromomethane	24.9	2.0	ug/l	25.0	ND	99.6	55-140			
1,2-Dichlorobenzene	25.6	2.0	ug/l	25.0	ND	102	80-120			
1,3-Dichlorobenzene	25.0	2.0	ug/l	25.0	ND	100	80-120			
1,4-Dichlorobenzene	26.0	2.0	ug/l	25.0	ND	104	80-120			
Dichlorodifluoromethane	23.7	5.0	ug/l	25.0	ND	94.8	25-145			
1,1-Dichloroethane	22.6	2.0	ug/l	25.0	ND	90.4	75-120			
1,2-Dichloroethane	23.4	2.0	ug/l	25.0	ND	93.6	60-135			
1,1-Dichloroethene	25.0	5.0	ug/l	25.0	ND	100	55-120			
cis-1,2-Dichloroethene	23.2	2.0	ug/l	25.0	ND	92.8	75-120			
trans-1,2-Dichloroethene	24.2	2.0	ug/l	25.0	ND	96.8	65-120			
1,2-Dichloropropane	22.0	2.0	ug/l	25.0	ND	88.0	80-125			
1,3-Dichloropropane	23.2	2.0	ug/l	25.0	ND	92.8	55-140			
2,2-Dichloropropane	24.8	2.0	ug/l	25.0	ND	99.2	45-165			
1,1-Dichloropropene	22.7	2.0	ug/l	25.0	ND	90.8	80-120			

Melissa Evans
 Project Manager

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Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040
Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01
Received: 09/12/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I2706 Extracted: 09/26/01										
Matrix Spike Analyzed: 09/26/01 (P1I2706-MS1)					Source: PKI0180-15					
cis-1,3-Dichloropropene	23.1	2.0	ug/l	25.0	ND	92.4	80-120			
trans-1,3-Dichloropropene	23.6	2.0	ug/l	25.0	ND	94.4	70-120			
Ethylbenzene	25.7	2.0	ug/l	25.0	ND	103	80-120			
Hexachlorobutadiene	23.8	5.0	ug/l	25.0	ND	95.2	80-135			
2-Hexanone	24.7	10	ug/l	25.0	ND	98.8	25-185			
Iodomethane	27.4	2.0	ug/l	25.0	ND	110	30-155			
Isopropylbenzene	25.6	2.0	ug/l	25.0	ND	102	80-125			
p-Isopropyltoluene	22.8	2.0	ug/l	25.0	ND	91.2	80-125			
Methylene chloride	30.2	5.0	ug/l	25.0	ND	121	55-125			
4-Methyl-2-pentanone (MIBK)	25.5	10	ug/l	25.0	ND	102	10-175			
Methyl-tert-butyl Ether (MTBE)	24.5	5.0	ug/l	25.0	ND	98.0	55-135			
Naphthalene	27.9	5.0	ug/l	25.0	ND	112	15-160			
n-Propylbenzene	24.1	2.0	ug/l	25.0	ND	96.4	80-130			
Styrene	25.6	2.0	ug/l	25.0	ND	102	60-135			
1,1,1,2-Tetrachloroethane	28.6	5.0	ug/l	25.0	ND	114	80-135			
1,1,2,2-Tetrachloroethane	26.5	2.0	ug/l	25.0	ND	106	35-150			
Tetrachloroethene	28.2	2.0	ug/l	25.0	ND	113	80-120			
Toluene	24.3	2.0	ug/l	25.0	ND	97.2	80-120			
1,2,3-Trichlorobenzene	23.9	5.0	ug/l	25.0	ND	95.6	45-145			
1,2,4-Trichlorobenzene	24.2	5.0	ug/l	25.0	ND	96.8	65-130			
1,1,1-Trichloroethane	26.3	2.0	ug/l	25.0	ND	105	80-120			
1,1,2-Trichloroethane	25.0	2.0	ug/l	25.0	ND	100	55-145			
Trichloroethene	23.9	2.0	ug/l	25.0	ND	95.6	80-120			
Trichlorofluoromethane	19.1	5.0	ug/l	25.0	ND	76.4	70-145			
1,2,3-Trichloropropane	25.5	10	ug/l	25.0	ND	102	20-160			
1,2,4-Trimethylbenzene	25.0	2.0	ug/l	25.0	ND	100	70-135			
1,3,5-Trimethylbenzene	24.0	2.0	ug/l	25.0	ND	96.0	80-125			
Vinyl acetate	ND	25	ug/l	25.0	ND	92.4	25-130			
Vinyl chloride	24.3	5.0	ug/l	25.0	ND	97.2	25-135			
Xylenes, Total	76.6	10	ug/l	75.0	ND	102	80-120			
Surrogate: Dibromofluoromethane	25.7		ug/l	25.0		103	80-120			
Surrogate: Toluene-d8	26.6		ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	24.8		ug/l	25.0		99.2	80-120			



Law Engineering
 4634 S. 36th Place
 Phoenix, AZ 85040
 Attention: Jim Clarke

Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01

Received: 09/12/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P112706 Extracted: 09/26/01										
Matrix Spike Dup Analyzed: 09/26/01 (P112706-MSD1)										
Source: PKI0180-15										
Acetone	ND	20	ug/l	25.0	ND	60.0	5-200	3.39	20	
Benzene	21.9	2.0	ug/l	25.0	ND	87.6	80-120	2.31	20	
Bromobenzene	27.0	5.0	ug/l	25.0	ND	108	80-120	0.371	20	
Bromochloromethane	26.1	5.0	ug/l	25.0	ND	104	60-135	1.93	20	
Bromodichloromethane	26.0	2.0	ug/l	25.0	ND	104	80-120	4.72	20	
Bromoform	30.0	5.0	ug/l	25.0	ND	120	40-140	5.13	20	
Bromomethane	24.8	5.0	ug/l	25.0	ND	99.2	25-165	5.81	20	
2-Butanone (MEK)	18.6	10	ug/l	25.0	ND	74.4	10-160	5.24	20	
n-Butylbenzene	21.2	5.0	ug/l	25.0	ND	84.8	75-135	1.87	20	
sec-Butylbenzene	22.5	5.0	ug/l	25.0	ND	90.0	80-135	1.76	20	
tert-Butylbenzene	23.4	5.0	ug/l	25.0	ND	93.6	80-125	3.36	20	
Carbon Disulfide	19.6	5.0	ug/l	25.0	ND	78.4	20-120	2.58	20	
Carbon tetrachloride	28.3	5.0	ug/l	25.0	ND	113	80-145	2.87	20	
Chlorobenzene	27.2	2.0	ug/l	25.0	ND	109	80-120	2.61	20	
Chloroethane	21.4	5.0	ug/l	25.0	ND	85.6	30-150	4.30	20	
Chloroform	24.7	2.0	ug/l	25.0	ND	98.8	80-125	2.87	20	
Chloromethane	18.1	5.0	ug/l	25.0	ND	72.4	15-140	2.23	20	
2-Chlorotoluene	24.0	5.0	ug/l	25.0	ND	96.0	80-125	1.65	20	
4-Chlorotoluene	24.3	5.0	ug/l	25.0	ND	97.2	80-125	0.411	20	
Dibromochloromethane	30.4	2.0	ug/l	25.0	ND	122	75-135	5.06	20	
1,2-Dibromo-3-chloropropane	29.0	5.0	ug/l	25.0	ND	116	25-185	2.09	20	
1,2-Dibromoethane (EDB)	27.3	2.0	ug/l	25.0	ND	109	45-145	3.73	20	
Dibromomethane	25.2	2.0	ug/l	25.0	ND	101	55-140	1.20	20	
1,2-Dichlorobenzene	25.5	2.0	ug/l	25.0	ND	102	80-120	0.391	20	
1,3-Dichlorobenzene	25.1	2.0	ug/l	25.0	ND	100	80-120	0.399	20	
1,4-Dichlorobenzene	26.1	2.0	ug/l	25.0	ND	104	80-120	0.384	20	
Dichlorodifluoromethane	24.7	5.0	ug/l	25.0	ND	98.8	25-145	4.13	20	
1,1-Dichloroethane	23.0	2.0	ug/l	25.0	ND	92.0	75-120	1.75	20	
1,2-Dichloroethane	23.9	2.0	ug/l	25.0	ND	95.6	60-135	2.11	20	
1,1-Dichloroethene	25.1	5.0	ug/l	25.0	ND	100	55-120	0.399	20	
cis-1,2-Dichloroethene	23.9	2.0	ug/l	25.0	ND	95.6	75-120	2.97	20	
trans-1,2-Dichloroethene	24.1	2.0	ug/l	25.0	ND	96.4	65-120	0.414	20	
1,2-Dichloropropane	22.2	2.0	ug/l	25.0	ND	88.8	80-125	0.905	20	
1,3-Dichloropropane	24.0	2.0	ug/l	25.0	ND	96.0	55-140	3.39	20	
2,2-Dichloropropane	24.4	2.0	ug/l	25.0	ND	97.6	45-165	1.63	20	
1,1-Dichloropropene	23.0	2.0	ug/l	25.0	ND	92.0	80-120	1.31	20	

Melissa Evans
 Project Manager

PKI0180
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 4634 S. 36th Place
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Client Project ID: 70211-0-01SD

Report Number: PKI0180

Sampled: 09/12/01
 Received: 09/12/01

METHOD BLANK/QC DATA

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P112706 Extracted: 09/26/01										
Matrix Spike Dup Analyzed: 09/26/01 (P112706-MSD1)					Source: PKI0180-15					
cis-1,3-Dichloropropene	23.6	2.0	ug/l	25.0	ND	94.4	80-120	2.14	20	
trans-1,3-Dichloropropene	24.8	2.0	ug/l	25.0	ND	99.2	70-120	4.96	20	
Ethylbenzene	26.4	2.0	ug/l	25.0	ND	106	80-120	2.69	20	
Hexachlorobutadiene	23.7	5.0	ug/l	25.0	ND	94.8	80-135	0.421	20	
2-Hexanone	25.3	10	ug/l	25.0	ND	101	25-185	2.40	20	
Iodomethane	28.1	2.0	ug/l	25.0	ND	112	30-155	2.52	20	
Isopropylbenzene	26.3	2.0	ug/l	25.0	ND	105	80-125	2.70	20	
p-Isopropyltoluene	22.4	2.0	ug/l	25.0	ND	89.6	80-125	1.77	20	
Methylene chloride	31.5	5.0	ug/l	25.0	ND	126	55-125	4.21	20	M1
4-Methyl-2-pentanone (MIBK)	25.8	10	ug/l	25.0	ND	103	10-175	1.17	20	
Methyl-tert-butyl Ether (MTBE)	25.2	5.0	ug/l	25.0	ND	101	55-135	2.82	20	
Naphthalene	28.0	5.0	ug/l	25.0	ND	112	15-160	0.358	20	
n-Propylbenzene	23.8	2.0	ug/l	25.0	ND	95.2	80-130	1.25	20	
Styrene	26.4	2.0	ug/l	25.0	ND	106	60-135	3.08	20	
1,1,1,2-Tetrachloroethane	29.8	5.0	ug/l	25.0	ND	119	80-135	4.11	20	
1,1,2,2-Tetrachloroethane	26.8	2.0	ug/l	25.0	ND	107	35-150	1.13	20	
Tetrachloroethene	28.5	2.0	ug/l	25.0	ND	114	80-120	1.06	20	
Toluene	25.0	2.0	ug/l	25.0	ND	100	80-120	2.84	20	
1,2,3-Trichlorobenzene	23.5	5.0	ug/l	25.0	ND	94.0	45-145	1.69	20	
1,2,4-Trichlorobenzene	24.0	5.0	ug/l	25.0	ND	96.0	65-130	0.830	20	
1,1,1-Trichloroethane	26.7	2.0	ug/l	25.0	ND	107	80-120	1.51	20	
1,1,2-Trichloroethane	26.3	2.0	ug/l	25.0	ND	105	55-145	5.07	20	
Trichloroethene	24.1	2.0	ug/l	25.0	ND	96.4	80-120	0.833	20	
Trichlorofluoromethane	20.7	5.0	ug/l	25.0	ND	82.8	70-145	8.04	20	
1,2,3-Trichloropropane	25.4	10	ug/l	25.0	ND	102	20-160	0.393	20	
1,2,4-Trimethylbenzene	24.5	2.0	ug/l	25.0	ND	98.0	70-135	2.02	20	
1,3,5-Trimethylbenzene	23.8	2.0	ug/l	25.0	ND	95.2	80-125	0.837	20	
Vinyl acetate	ND	25	ug/l	25.0	ND	92.4	25-130	0.00	20	
Vinyl chloride	25.3	5.0	ug/l	25.0	ND	101	25-135	4.03	20	
Xylenes, Total	78.9	10	ug/l	75.0	ND	105	80-120	2.96	20	
Surrogate: Dibromofluoromethane	26.1		ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	27.2		ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	24.7		ug/l	25.0		98.8	80-120			



Law Engineering
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Sampled: 09/12/01
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METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I1805 Extracted: 09/18/01										
Blank Analyzed: 09/20/01 (P1I1805-BLK1)										
Arsenic	ND	5.0	mg/kg							
Chromium	ND	1.0	mg/kg							
Copper	ND	2.0	mg/kg							
Nickel	ND	5.0	mg/kg							
LCS Analyzed: 09/20/01 (P1I1805-BS1)										
Arsenic	89.9	5.0	mg/kg	100		89.9	80-120			
Chromium	88.0	1.0	mg/kg	100		88.0	80-120			
Copper	90.2	2.0	mg/kg	100		90.2	80-120			
Nickel	86.6	5.0	mg/kg	100		86.6	80-120			
LCS Dup Analyzed: 09/20/01 (P1I1805-BSD1)										
Arsenic	91.6	5.0	mg/kg	100		91.6	80-120	1.87	20	
Chromium	89.4	1.0	mg/kg	100		89.4	80-120	1.58	20	
Copper	90.2	2.0	mg/kg	100		90.2	80-120	0.00	20	
Nickel	87.8	5.0	mg/kg	100		87.8	80-120	1.38	20	
Matrix Spike Analyzed: 09/20/01 (P1I1805-MS1)										
					Source: PKI0226-10					
Arsenic	77.3	5.0	mg/kg	100	ND	77.3	75-125			
Chromium	95.8	1.0	mg/kg	100	12	83.8	75-125			
Copper	102	2.0	mg/kg	100	7.6	94.4	75-125			
Nickel	86.1	5.0	mg/kg	100	ND	81.4	75-125			
Matrix Spike Dup Analyzed: 09/20/01 (P1I1805-MSD1)										
					Source: PKI0226-10					
Arsenic	80.5	5.0	mg/kg	100	ND	80.5	75-125	4.06	20	
Chromium	99.4	1.0	mg/kg	100	12	87.4	75-125	3.69	20	
Copper	99.5	2.0	mg/kg	100	7.6	91.9	75-125	2.48	20	
Nickel	89.3	5.0	mg/kg	100	ND	84.6	75-125	3.65	20	



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METHOD BLANK/QC DATA

TOTAL METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I2415 Extracted: 09/24/01									
Blank Analyzed: 09/24/01 (P1I2415-BLK1)									
Chromium VI	ND	1.0	mg/kg						
LCS Analyzed: 09/24/01 (P1I2415-BS1)									
Chromium VI	9.73	1.0	mg/kg	10.0		97.3	85-115		
LCS Dup Analyzed: 09/24/01 (P1I2415-BSD1)									
Chromium VI	8.93	1.0	mg/kg	10.0		89.3	85-115	8.57	20
Matrix Spike Analyzed: 09/24/01 (P1I2415-MS1)									
Chromium VI	9.08	1.0	mg/kg	10.0	ND	89.3	85-115		
Matrix Spike Dup Analyzed: 09/24/01 (P1I2415-MSD1)									
Chromium VI	9.08	1.0	mg/kg	10.0	ND	89.3	85-115	0.00	20
Batch: P1I2605 Extracted: 09/26/01									
Blank Analyzed: 09/28/01 (P1I2605-BLK1)									
Zinc	ND	5.0	mg/kg						
LCS Analyzed: 09/28/01 (P1I2605-BS1)									
Zinc	104	5.0	mg/kg	100		104	80-120		
Matrix Spike Analyzed: 09/28/01 (P1I2605-MS1)									
Zinc	121	5.0	mg/kg	100	43	78.0	75-125		
Matrix Spike Dup Analyzed: 09/28/01 (P1I2605-MSD1)									
Zinc	130	5.0	mg/kg	100	43	87.0	75-125	7.17	20



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METHOD BLANK QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P111408 Extracted: 09/13/01										
Blank Analyzed: 09/13/01 (P111408-BLK1)										
Chromium VI	ND	0.025	mg/l							
LCS Analyzed: 09/13/01 (P111408-BS1)										
Chromium VI	0.0993	0.050	mg/l	0.100		99.3	85-115			
LCS Dup Analyzed: 09/13/01 (P111408-BSD1)										
Chromium VI	0.0993	0.050	mg/l	0.100		99.3	85-115	0.00	20	
Matrix Spike Analyzed: 09/13/01 (P111408-MS1)										
Chromium VI	0.0496	0.025	mg/l	0.0500	ND	99.2	85-115			
Matrix Spike Dup Analyzed: 09/13/01 (P111408-MSD1)										
Chromium VI	0.0509	0.025	mg/l	0.0500	ND	102	85-115	2.59	20	
Batch: P112021 Extracted: 09/20/01										
Blank Analyzed: 09/23/01 (P112021-BLK1)										
Arsenic	ND	0.050	mg/l							
Chromium	ND	0.010	mg/l							
Copper	ND	0.020	mg/l							
Nickel	ND	0.050	mg/l							
Zinc	ND	0.050	mg/l							
LCS Analyzed: 09/23/01 (P112021-BS1)										
Arsenic	1.01	0.050	mg/l	1.00		101	85-115			
Chromium	0.982	0.010	mg/l	1.00		98.2	85-115			
Copper	0.971	0.020	mg/l	1.00		97.1	85-115			
Nickel	0.971	0.050	mg/l	1.00		97.1	85-115			
Zinc	0.992	0.050	mg/l	1.00		99.2	85-115			



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METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I2021 Extracted: 09/20/01										
LCS Dup Analyzed: 09/23/01 (P1I2021-BSD1)										
Arsenic	1.03	0.050	mg/l	1.00		103	85-115	1.96	20	
Chromium	0.994	0.010	mg/l	1.00		99.4	85-115	1.21	20	
Copper	0.991	0.020	mg/l	1.00		99.1	85-115	2.04	20	
Nickel	0.983	0.050	mg/l	1.00		98.3	85-115	1.23	20	
Zinc	0.997	0.050	mg/l	1.00		99.7	85-115	0.503	20	
Matrix Spike Analyzed: 09/23/01 (P1I2021-MS1)										
					Source: PKI0308-01					
Arsenic	1.08	0.050	mg/l	1.00	ND	108	70-130			
Chromium	1.02	0.010	mg/l	1.00	ND	102	70-130			
Copper	1.08	0.020	mg/l	1.00	ND	107	70-130			
Nickel	1.01	0.050	mg/l	1.00	ND	101	70-130			
Zinc	1.66	0.050	mg/l	1.00	0.62	104	70-130			
Matrix Spike Dup Analyzed: 09/23/01 (P1I2021-MSD1)										
					Source: PKI0308-01					
Arsenic	1.06	0.050	mg/l	1.00	ND	106	70-130	1.87	20	
Chromium	1.00	0.010	mg/l	1.00	ND	100	70-130	1.98	20	
Copper	1.06	0.020	mg/l	1.00	ND	105	70-130	1.87	20	
Nickel	0.988	0.050	mg/l	1.00	ND	98.8	70-130	2.20	20	
Zinc	1.63	0.050	mg/l	1.00	0.62	101	70-130	1.82	20	



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METHOD BLANK QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1I2412 Extracted: 09/24/01										
Blank Analyzed: 09/25/01 (P1I2412-BLK1)										
Total Cyanide	ND	0.020	mg/kg							
Blank Analyzed: 09/25/01 (P1I2412-BLK2)										
Total Cyanide	ND	0.020	mg/kg							
Matrix Spike Analyzed: 09/25/01 (P1I2412-MS1)										
Total Cyanide	2.14	0.50	mg/kg	2.50	ND	85.6	70-130			
Matrix Spike Dup Analyzed: 09/25/01 (P1I2412-MSD1)										
Total Cyanide	3.27	0.50	mg/kg	2.50	ND	131	70-130	41.8	20	N2,R1
Reference Analyzed: 09/25/01 (P1I2412-SRM1)										
Total Cyanide	101	20	mg/kg	201		50.2	40-160			
Reference Analyzed: 09/25/01 (P1I2412-SRM2)										
Total Cyanide	157	20	mg/kg	201		78.1	40-160			
Batch: P1I2622 Extracted: 09/26/01										
Blank Analyzed: 09/26/01 (P1I2622-BLK1)										
Total Cyanide	ND	0.020	mg/l							
LCS Analyzed: 09/26/01 (P1I2622-BS1)										
Total Cyanide	0.110	0.020	mg/l	0.100		110	90-110			
LCS Dup Analyzed: 09/26/01 (P1I2622-BSD1)										
Total Cyanide	0.110	0.020	mg/l	0.100		110	90-110	0.00	20	



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METHOD BLANK QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P112622 Extracted: 09/26/01										
Matrix Spike Analyzed: 09/26/01 (P112622-MS1)					Source: PKI0235-01RE1					
Total Cyanide	0.115	0.020	mg/l	0.100	ND	115	70-130			
Matrix Spike Dup Analyzed: 09/26/01 (P112622-MSD1)					Source: PKI0235-01RE1					
Total Cyanide	0.139	0.020	mg/l	0.100	ND	139	70-130	18.9	20	M1



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METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

B1	Target analyte detected in method blank at or above the method reporting limit.
M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
N2	See corrective action report.
R1	RPD exceeded the method control limit. See case narrative.
R4	MS/MSD RPD exceeded the method control limit. Recovery met acceptance criteria.
R6	LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
S4	Surrogate recovery was above laboratory and method acceptance limits. No target analytes were detected in the sample.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference

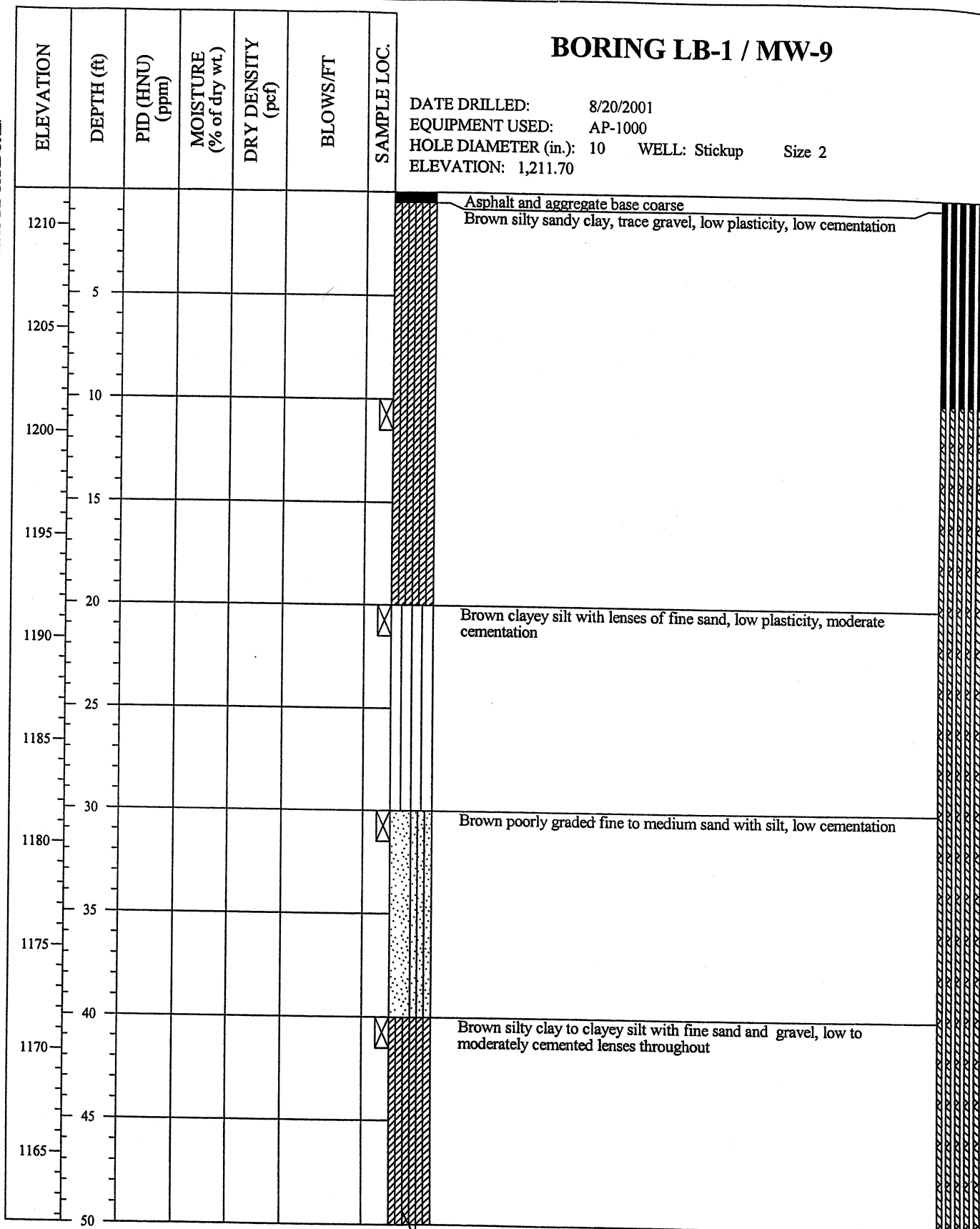


Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due us within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

APPENDIX I

BORING LOGS AND WELL CONSTRUCTION DIAGRAM

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.



(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *PC*
Prepared By: *PC*
Checked By: *JC*

South Mesa WQARF

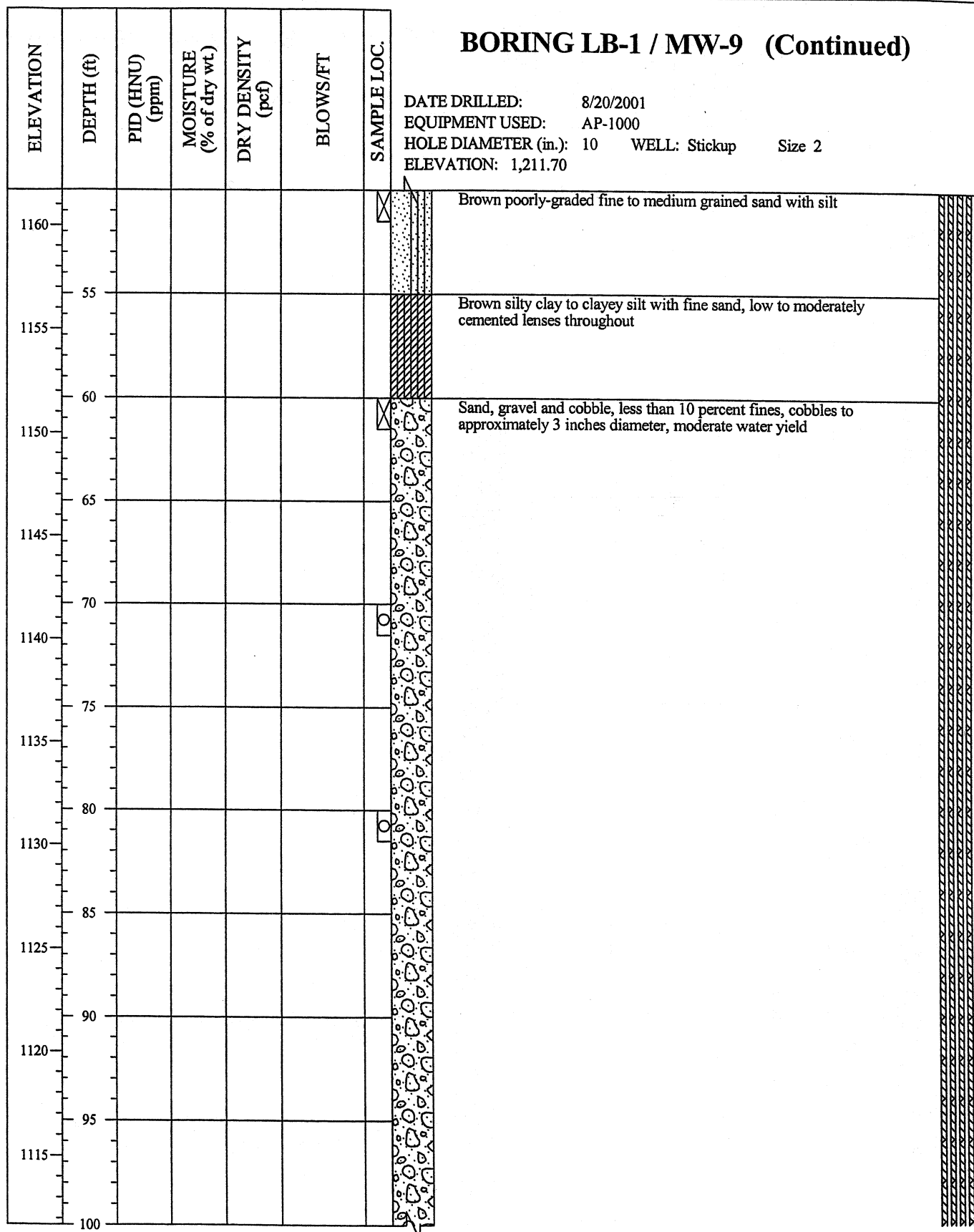
LAW
LAWGIBB Group Member

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.



BORING LB-1 / MW-9 (Continued)

DATE DRILLED: 8/20/2001
 EQUIPMENT USED: AP-1000
 HOLE DIAMETER (in.): 10 WELL: Stickup Size 2
 ELEVATION: 1,211.70

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: PL
 Prepared By: PL
 Checked By: JL

South Mesa WQARF




LAW
 LAWGIBB Group Member

LOG OF BORING

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

BORING LB-1 / MW-9 (Continued)

DATE DRILLED: 8/20/2001
 EQUIPMENT USED: AP-1000
 HOLE DIAMETER (in.): 10 WELL: Stickup Size 2
 ELEVATION: 1,211.70

ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1110						
105						
1105						
110						
1100						
115						
1095						
120						
1090						
125						
1085						
130						
1080						
135						
1075						
140						
1070						
145						
1065						
150						

Sand, gravel and cobble, less than 20 percent fines, cobbles to approximately 3 inches diameter, low water yield

Sand, gravel and cobble, less than 5 percent fines, cobbles to approximately 3 inches diameter, moderate water yield

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *pc*
 Prepared By: *pc*
 Checked By: *TL*

South Mesa WQARF

LAW
 LAWGIBB Group Member 

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1060						
155						
1055						
160						
1050						
165						
1045						
170						
1040						
175						
1035						
180						
1030						
185						
1025						
190						
1020						
195						
1015						
200						

BORING LB-1 / MW-9 (Continued)

DATE DRILLED: 8/20/2001
 EQUIPMENT USED: AP-1000
 HOLE DIAMETER (in.): 10 WELL: Stickup Size 2
 ELEVATION: 1,211.70

Silty clayey gravel with sand and cobble, very dense, very low water yield

Poorly-graded sand with gravel and cobble, moderate water yield

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *PC*
 Prepared By: *PC*
 Checked By: *SC*

South Mesa WQARF

LAW
 LAWGIBB Group Member

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

BORING LB-1 / MW-9 (Continued)

DATE DRILLED: 8/20/2001
 EQUIPMENT USED: AP-1000
 HOLE DIAMETER (in.): 10 WELL: Stickup Size 2
 ELEVATION: 1,211.70

ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1010						
205						
1005						
210						
1000						
215						
995						
220						
990						
225						
985						
230						
980						
235						
975						
240						
970						
245						
965						
250						

Silty clayey gravel with sand and cobble, very dense, very low water yield

Sand, gravel and cobble, less than 5 percent fines, cobbles to approximately 12 inches diameter, lenses of flowing sand, very large water yield

Field Tech: *fc*
 Prepared By: *fc*
 Checked By: *JL*

South Mesa WQARF

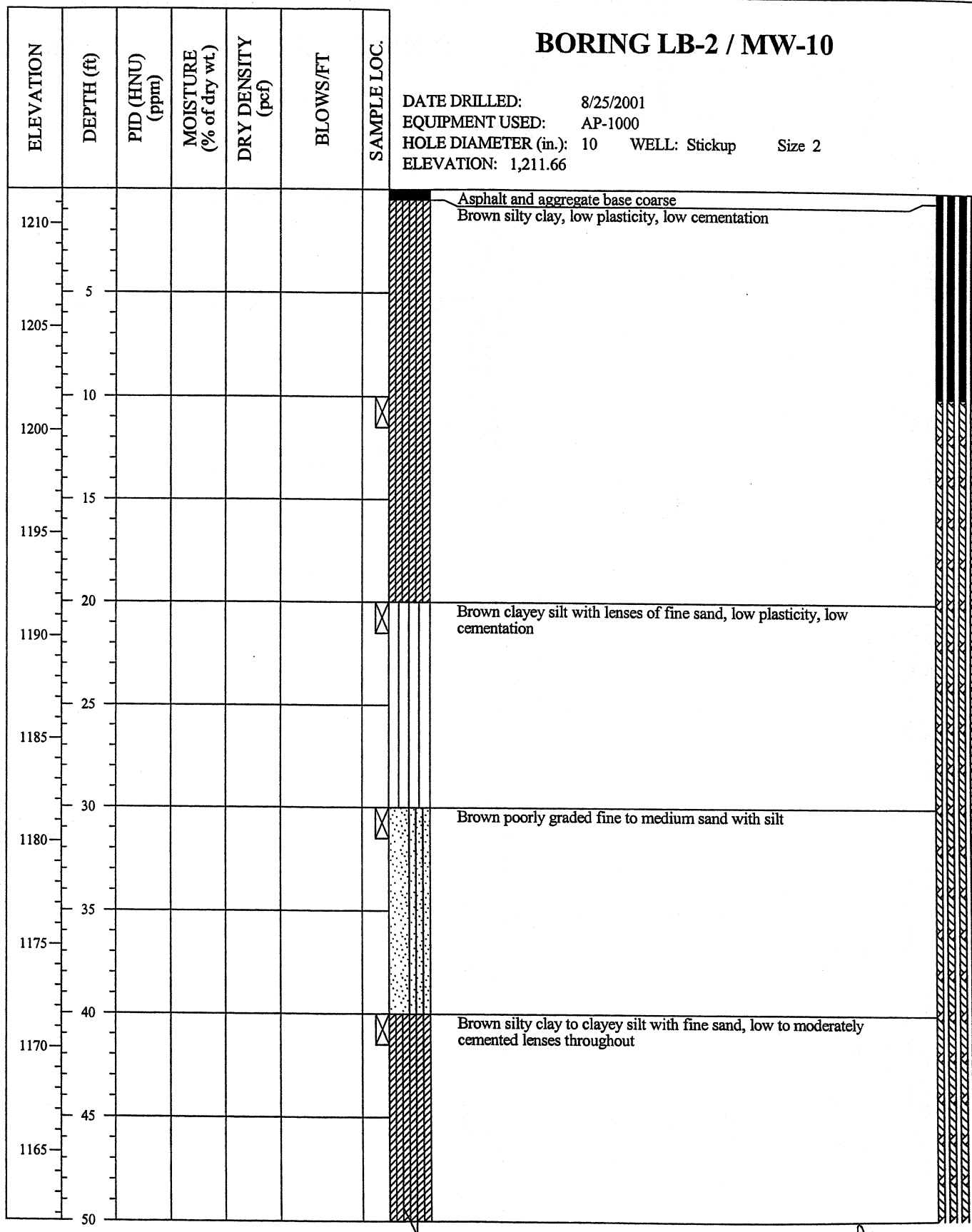
LAW
 LAWGIBB Group Member

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.



(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *PL*
 Prepared By: *PL*
 Checked By: *JC*

South Mesa WQARF

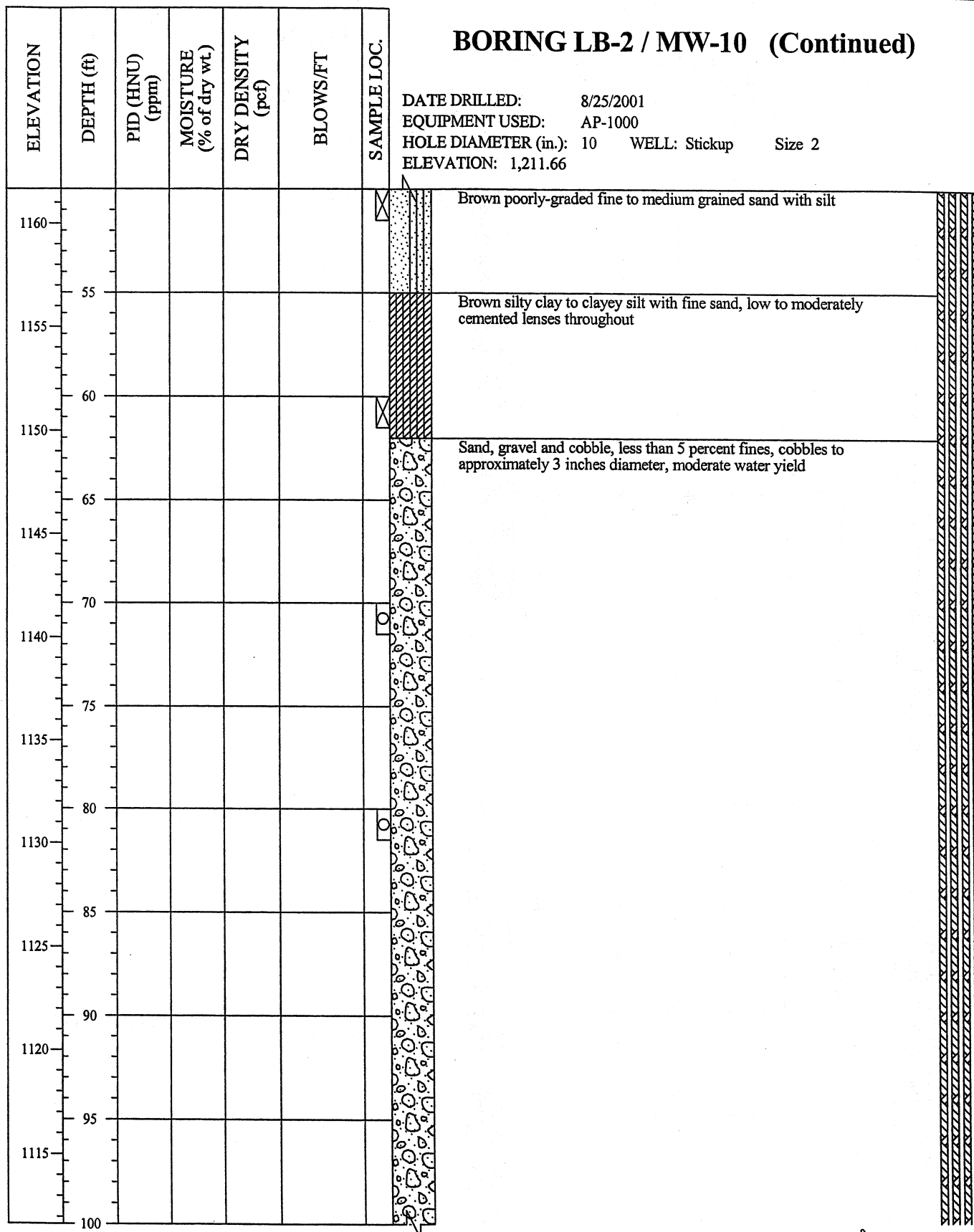
LAW
 LAWGIBB Group Member

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.



(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *pc*
Prepared By: *pc*
Checked By: *pc*

South Mesa WQARF

LAW
LAWGIBB Group Member

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1110						
	105					
1105						
	110					
1100						
	115					
1095						
	120					
1090						
	125					
1085						
	130					
1080						
	135					
1075						
	140					
1070						
	145					
1065						
	150					

BORING LB-2 / MW-10 (Continued)

DATE DRILLED: 8/25/2001
 EQUIPMENT USED: AP-1000
 HOLE DIAMETER (in.): 10 WELL: Stickup Size 2
 ELEVATION: 1,211.66

Sand, gravel and cobble, less than 20 percent fines, cobbles to approximately 3 inches diameter, low water yield

Sand, gravel and cobble, less than 5 percent fines, cobbles to approximately 3 inches diameter, moderate water yield

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *fc*
 Prepared By: *fc*
 Checked By: *JL*

South Mesa WQARF

LAW
 LAWGIBB Group Member

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1060						
155						
1055						
160						
1050						
165						
1045						
170						
1040						
175						
1035						
180						
1030						
185						
1025						
190						
1020						
195						
1015						
200						

BORING LB-2 / MW-10 (Continued)

DATE DRILLED: 8/25/2001
 EQUIPMENT USED: AP-1000
 HOLE DIAMETER (in.): 10 WELL: Stickup Size 2
 ELEVATION: 1,211.66

Silty clayey gravel with sand and cobble, very dense, very low water yield

Poorly-graded sand with gravel and cobble, moderate water yield

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *bc*
 Prepared By: *bc*
 Checked By: *JL*

South Mesa WQARF

LAW
 LAWGIBB Group Member

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1010						
205						
1005						
210						
1000						
215						
995						
220						
990						
225						
985						
230						
980						
235						
975						
240						
970						
245						
965						
250						

BORING LB-2 / MW-10 (Continued)

DATE DRILLED: 8/25/2001
 EQUIPMENT USED: AP-1000
 HOLE DIAMETER (in.): 10 WELL: Stickup Size 2
 ELEVATION: 1,211.66

Silty clayey gravel with sand and cobble, very dense, very low water yield

Sand, gravel and cobble, less than 5 percent fines, cobbles to approximately 12 inches diameter, lenses of flowing sand, very large water yield

Field Tech: *PL*
 Prepared By: *PL*
 Checked By: *JL*

South Mesa WQARF

LAW
 LAWGIBB Group Member

LOG OF BORING

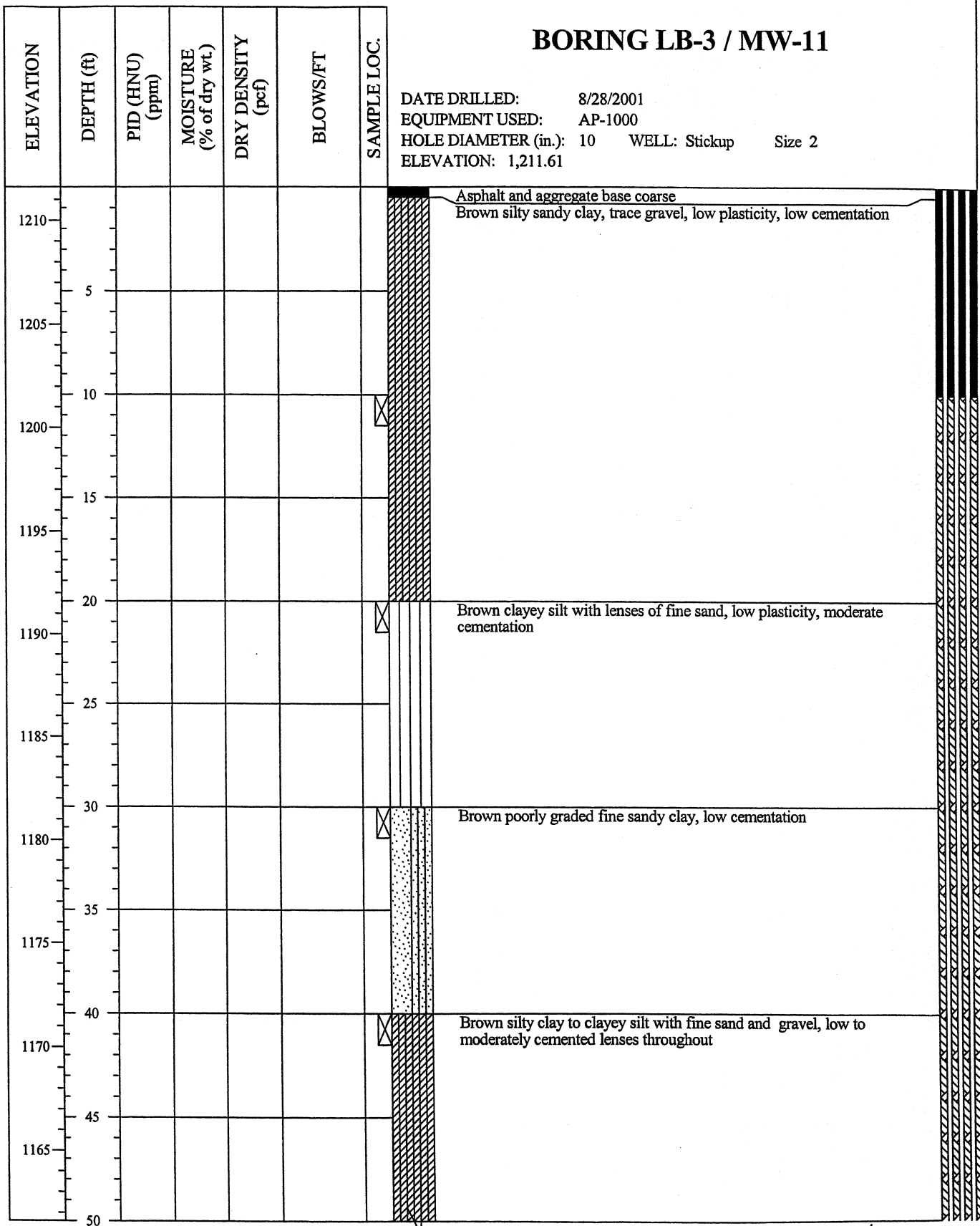
Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

BORING LB-3 / MW-11

DATE DRILLED: 8/28/2001
 EQUIPMENT USED: AP-1000
 HOLE DIAMETER (in.): 10 WELL: Stickup Size 2
 ELEVATION: 1,211.61



(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *lc*
 Prepared By: *lc*
 Checked By: *JL*

South Mesa WQARF

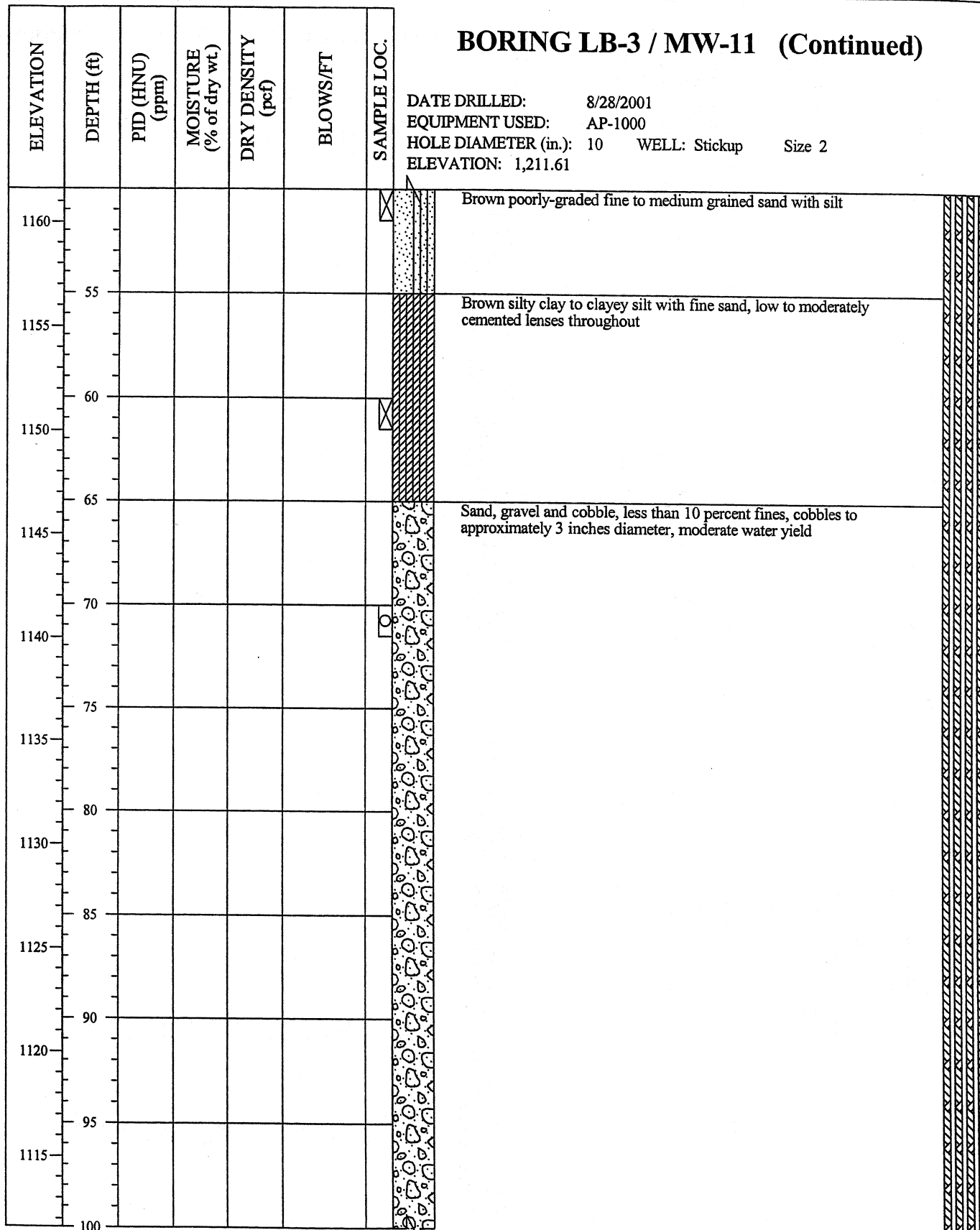
LAW
 LAWGIBB Group Member

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.



(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *fc*
 Prepared By: *fc*
 Checked By: *JL*

South Mesa WQARF

LAW
 LAWGIBB Group Member

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

BORING LB-3 / MW-11 (Continued)

DATE DRILLED: 8/28/2001
 EQUIPMENT USED: AP-1000
 HOLE DIAMETER (in.): 10 WELL: Stickup Size 2
 ELEVATION: 1,211.61

ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1110						
105						
1105						
110						
1100						
115						
1095						
120						
1090						
125						
1085						
130						
1080						
135						
1075						
140						
1070						
145						
1065						
150						

Sand, gravel and cobble, less than 20 percent fines, cobbles to approximately 3 inches diameter, low water yield

Sand, gravel and cobble, less than 5 percent fines, cobbles to approximately 3 inches diameter, moderate water yield

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *PL*
 Prepared By: *PL*
 Checked By: *JL*

South Mesa WQARF



LAW
 LAWGIBB Group Member

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

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ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1060						
155						
1055						
160						
1050						
165						
1045						
170						
1040						
175						
1035						
180						
1030						
185						
1025						
190						
1020						
195						
1015						
200						

BORING LB-3 / MW-11 (Continued)

DATE DRILLED: 8/28/2001
 EQUIPMENT USED: AP-1000
 HOLE DIAMETER (in.): 10 WELL: Stickup Size 2
 ELEVATION: 1,211.61

Silty clayey gravel with sand and cobble, very dense, very low water yield

Poorly-graded sand with gravel and cobble, moderate water yield

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *PC*
 Prepared By: *PC*
 Checked By: *SC*

South Mesa WQARF

LAW
 LAWGIBB Group Member

LOG OF BORING


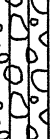
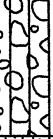


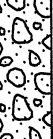




Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

BORING LB-3 / MW-11 (Continued)

DATE DRILLED: 8/28/2001
 EQUIPMENT USED: AP-1000
 HOLE DIAMETER (in.): 10 WELL: Stickup Size 2
 ELEVATION: 1,211.61

ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1010						
205						
1005						
210						
1000						
215						
995						
220						
990						
225						
985						
230						
980						
235						
975						
240						
970						
245						
965						
250						

Field Tech: *PC*
 Prepared By: *PC*
 Checked By: *TC*

South Mesa WQARF

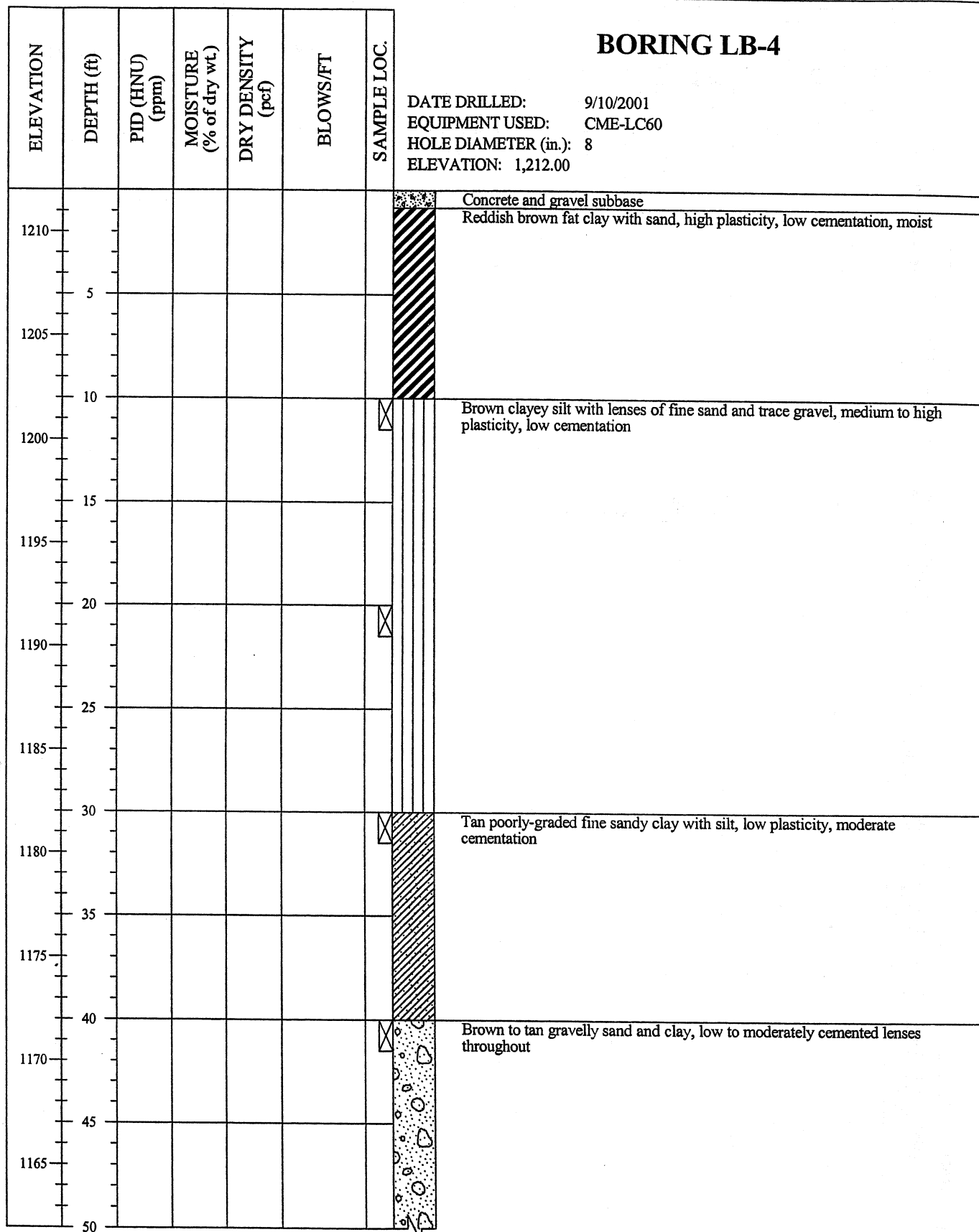
LAW
 LAWGIBB Group Member 

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.



(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *pc*
 Prepared By: *pc*
 Checked By: *JL*

South Mesa WQARF

LAW
 LAWGIBB Group Member

LOG OF BORING


Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

BORING LB-4 (Continued)

DATE DRILLED: 9/10/2001
EQUIPMENT USED: CME-LC60
HOLE DIAMETER (in.): 8
ELEVATION: 1,212.00

ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1160						
55						
1155						
60						
1150						
65						
1145						
70						
1140						
75						
1135						
80						
1130						
85						
1125						
90						
1120						
95						
1115						
100						

Field Tech: *PC*
Prepared By: *PL*
Checked By: *JL*

South Mesa WQARF

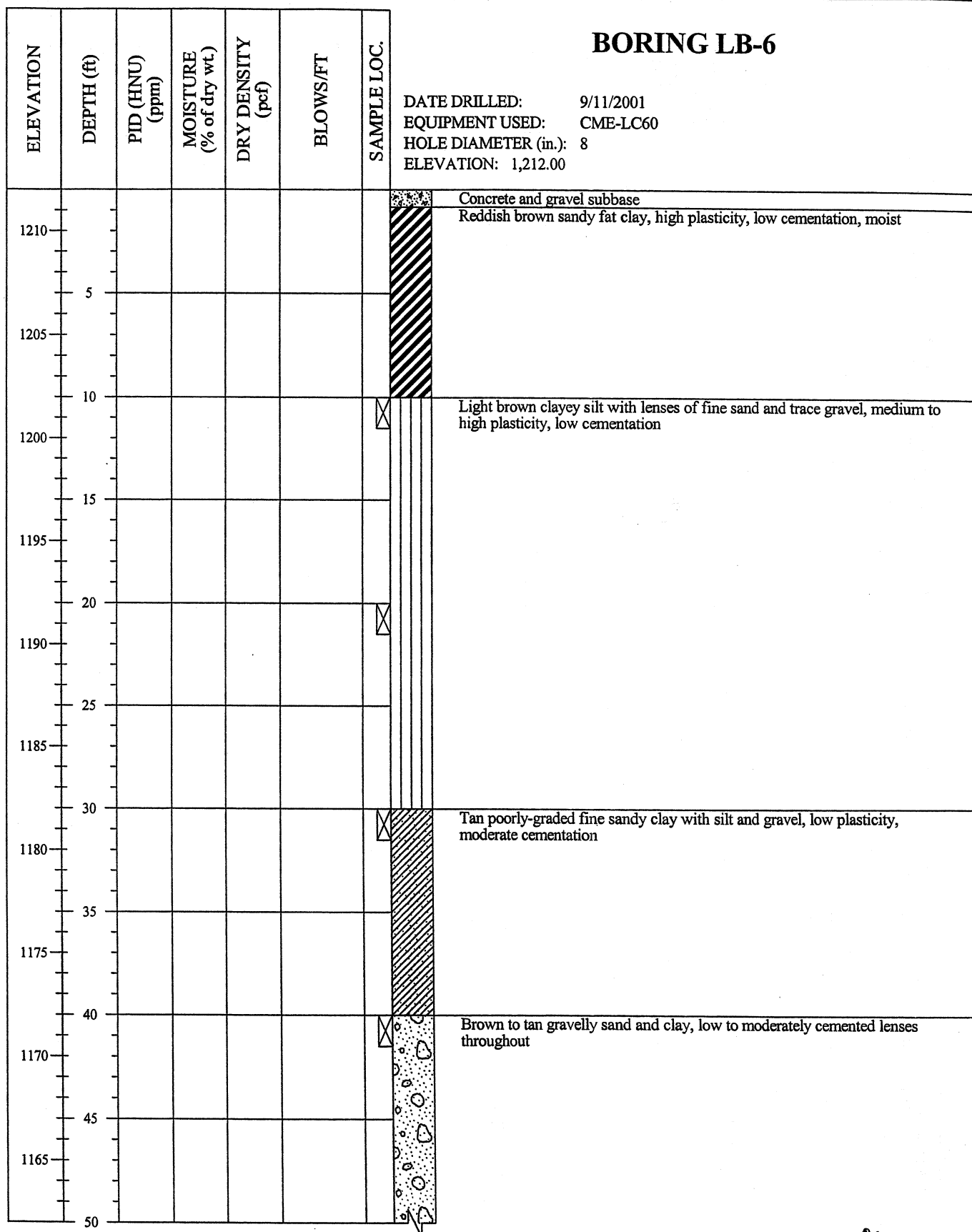
LAW
LAWGIBB Group Member 

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.



(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *PC*
 Prepared By: *PL*
 Checked By: *JC*

South Mesa WQARF

LAW
 LAWGIBB Group Member

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1160						
	55					
1155						
	60					
1150						
	65					
1145						
	70					
1140						
	75					
1135						
	80					
1130						
	85					
1125						
	90					
1120						
	95					
1115						
	100					

BORING LB-6 (Continued)

DATE DRILLED: 9/11/2001
EQUIPMENT USED: CME-LC60
HOLE DIAMETER (in.): 8
ELEVATION: 1,212.00

Field Tech: *PC*
Prepared By: *PC*
Checked By: *JC*

South Mesa WQARF

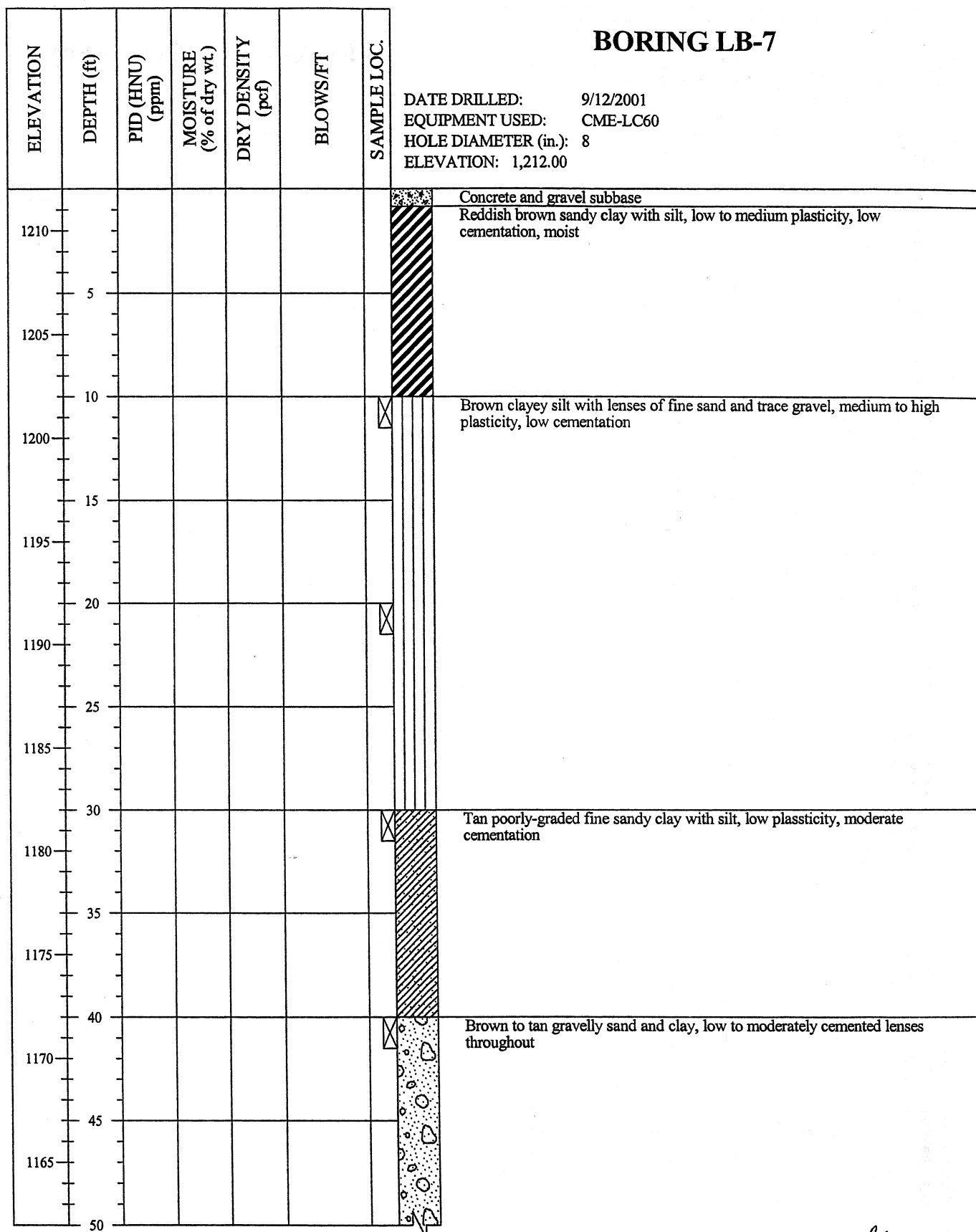
LAW
LAWGIBB Group Member

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.



(CONTINUED ON FOLLOWING FIGURE)

Field Tech: *PC*
 Prepared By: *PL*
 Checked By: *JC*

South Mesa WQARF

LAW
 LAWGIBB Group Member

LOG OF BORING


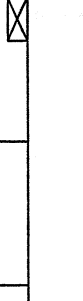
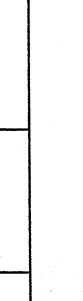
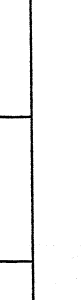


Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

BORING LB-7 (Continued)

DATE DRILLED: 9/12/2001
EQUIPMENT USED: CME-LC60
HOLE DIAMETER (in.): 8
ELEVATION: 1,212.00

ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1160						
55						
1155						
60						
1150						
65						
1145						
70						
1140						
75						
1135						
80						
1130						
85						
1125						
90						
1120						
95						
1115						
100						

Field Tech: *pc*
Prepared By: *pc*
Checked By: *pc*

South Mesa WQARF

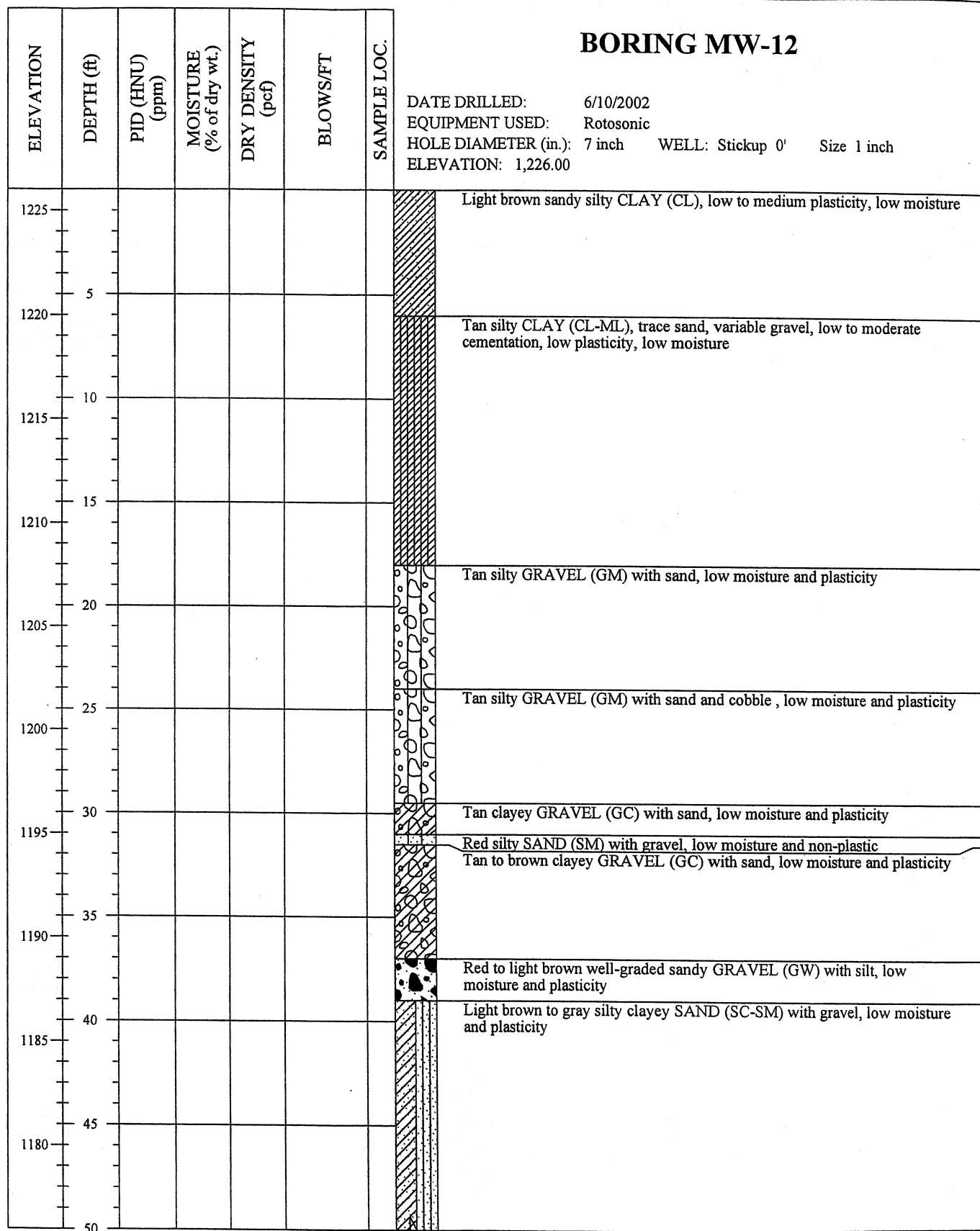
LAW
LAWGIBB Group Member 

LOG OF BORING

Project: 70211-0-0150-02-2.10

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.



(CONTINUED ON FOLLOWING FIGURE)

Field Tech:
Prepared By:
Checked By: JMC

South Mesa WQARF

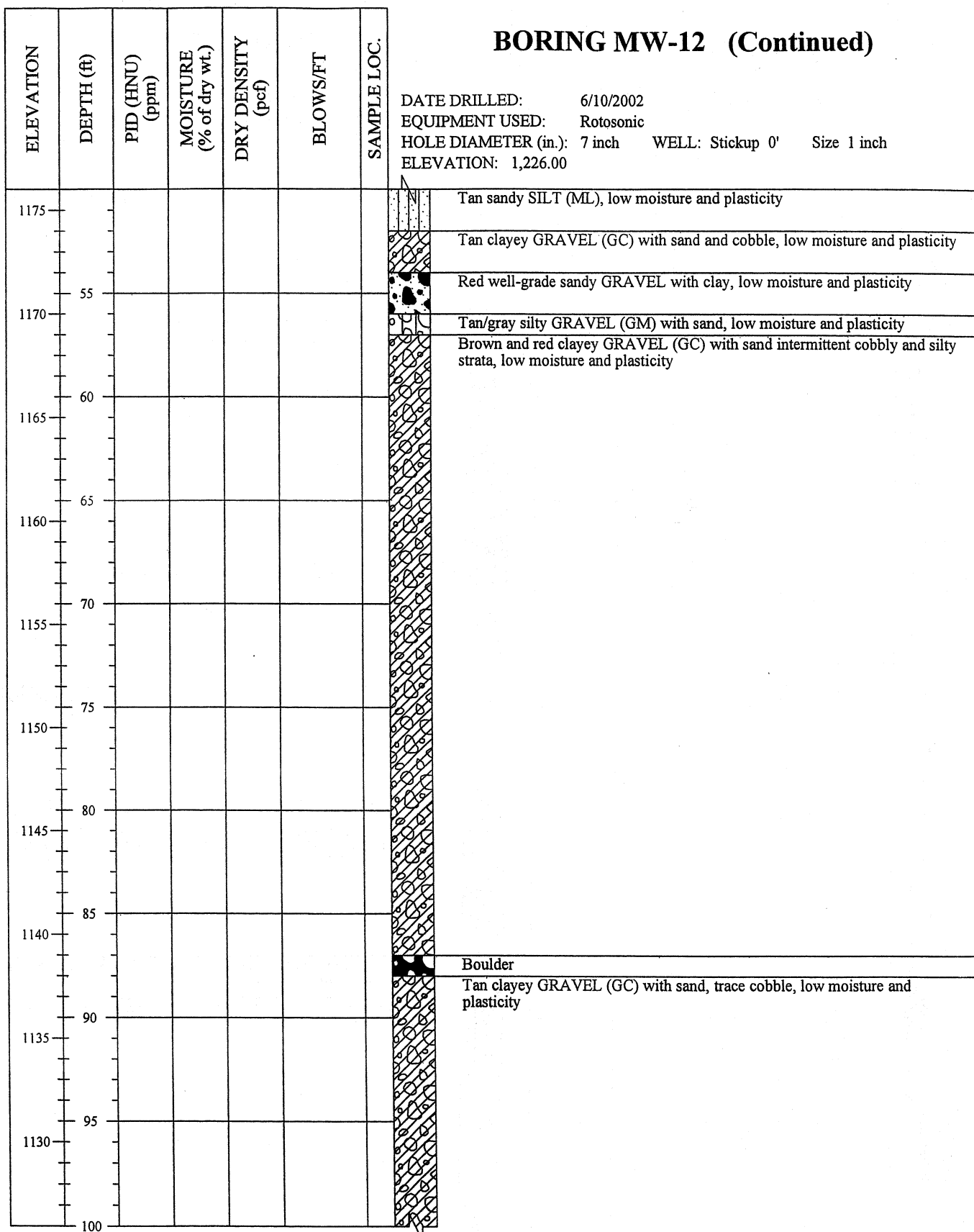
LAW
LAWGIBB Group Member

LOG OF BORING

Project: 70211-2-0150

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.



(CONTINUED ON FOLLOWING FIGURE)

Field Tech:
Prepared By:
Checked By:

South Mesa WQARF

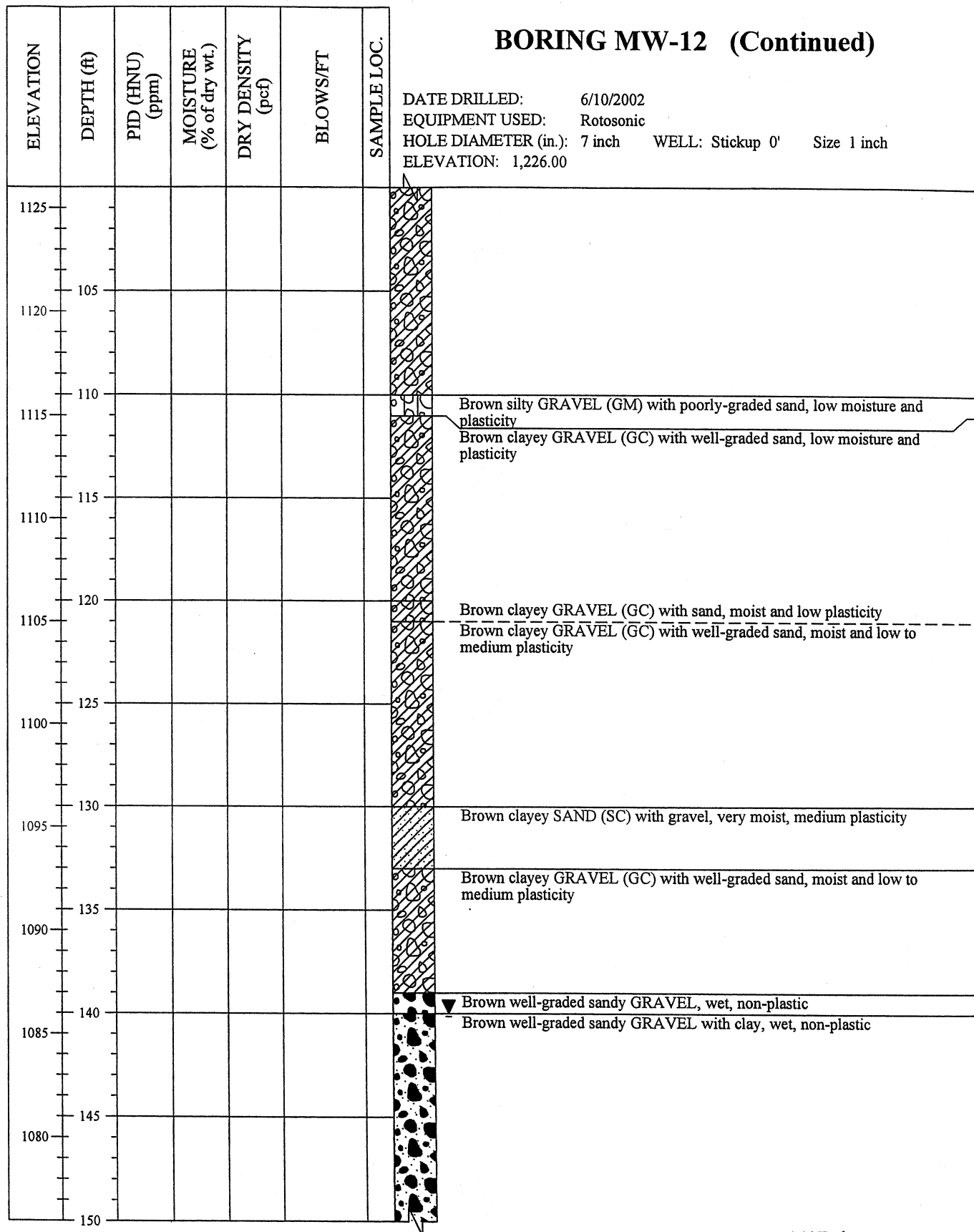
LAW
LAWGIBB Group Member

LOG OF BORING

Project: 70211-2-0150

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.



BORING MW-12 (Continued)

DATE DRILLED: 6/10/2002
EQUIPMENT USED: Rotasonic
HOLE DIAMETER (in.): 7 inch WELL: Stickup 0' Size 1 inch
ELEVATION: 1,226.00

(CONTINUED ON FOLLOWING FIGURE)

Field Tech:
Prepared By:
Checked By:

South Mesa WQARF

LAW
LAWGIBB Group Member

LOG OF BORING

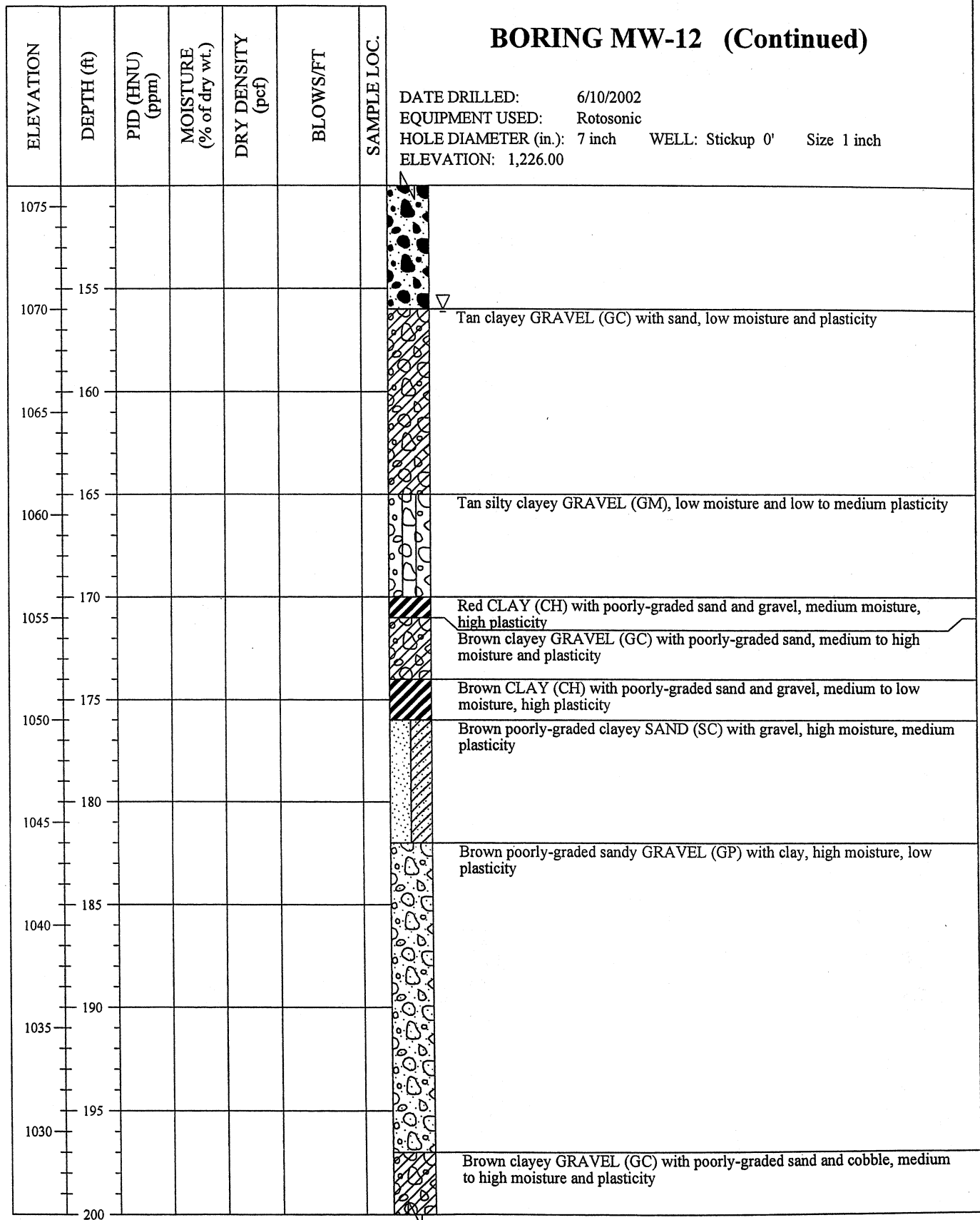
Project: 70211-2-0150

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

BORING MW-12 (Continued)

DATE DRILLED: 6/10/2002
 EQUIPMENT USED: Rotasonic
 HOLE DIAMETER (in.): 7 inch WELL: Stickup 0' Size 1 inch
 ELEVATION: 1,226.00



(CONTINUED ON FOLLOWING FIGURE)

Field Tech:
 Prepared By:
 Checked By:

South Mesa WQARF

LAW
 LAWGIBB Group Member

LOG OF BORING

Project: 70211-2-0150

Figure:

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION	DEPTH (ft)	PID (HNU) (ppm)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOWS/FT	SAMPLE LOC.
1025						
	205					
1020						
	210					
1015						
	215					
1010						
	220					
1005						
	225					
1000						
	230					
995						
	235					
990						
	240					
985						
	245					
980						
	250					

BORING MW-12 (Continued)

DATE DRILLED: 6/10/2002
 EQUIPMENT USED: Rotasonic
 HOLE DIAMETER (in.): 7 inch WELL: Stickup 0' Size 1 inch
 ELEVATION: 1,226.00

Brown poorly-graded sandy GRAVEL (GP) with clay and cobble, medium moisture to saturated, medium plasticity

Brown clayey GRAVEL (GC) with sand, medium to low moisture and plasticity

Brown poorly-graded SAND (SP) with clay and gravel, saturated, medium plasticity

Brown sandy clayey GRAVEL (GC), medium to low moisture and plasticity
 Brown sandy CLAY (CL) with gravel, high moisture, medium plasticity

Brown sandy clayey GRAVEL (GC), high moisture and medium plasticity

Brown poorly-graded clayey SAND (SC), trace gravel, high moisture, medium plasticity

Brown sandy CLAY (CL), high moisture, medium plasticity

Brown CLAY (CL) with gravel, medium moisture and plasticity

Total depth = 244.0 feet

Field Tech:
 Prepared By:
 Checked By:

South Mesa WQARF

LAW
 LAWGIBB Group Member

LOG OF BORING

Project: 70211-2-0150

Figure:

APPENDIX J

PRECISION ANALYTICAL LABORATORY TO-15 ANALYTICAL REPORTS



Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

July 05, 2002

Jim Clarke
Law Engineering
4634 S. 36th Place
Phoenix, AZ 85040

RE: South Mesa WQARF/70211-2-0064

Dear Jim Clarke:

Order No.: 02061078

Precision Analytical Laboratories received 7 samples on 6/28/2002 for the analyses presented in the following report.

This report includes the following information:

- Case Narrative.
- Analytical Report: includes test results, report limit (Limit), any applicable data qualifier (Qual), units, dilution factor (DF), and date analyzed.
- QC Summary Report.

This communication is intended only for the individual or entity to whom it is directed. It may contain information that is privileged, confidential, or otherwise exempt from disclosure under applicable law. Dissemination, distribution, or copying of this communication by anyone other than the intended recipient, or a duly designated employee or agent of such recipient, is prohibited. If you have received this communication in error, please notify us immediately and destroy this message and all attachments thereto. If you have any questions regarding these test results, please do not hesitate to call.

Sincerely,

Lee Ann Heathcote
Project Manager



Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Project: South Mesa WQARF/70211-2-0064
Lab Order: 02061078

CASE NARRATIVE

Samples were analyzed using methods outlined in references such as:

Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992, and 19th Edition, 1995.

Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised March 1983.

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

40 CFR, Part 136, Revised 1995. Appendix A to Part 136 - Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater.

NIOSH Manual of Analytical Methods, Fourth Edition, 1994.

Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition, 1999.

Precision Analytical Laboratories, Inc. (PAL) holds Arizona certification no. AZ0610 and PAL-Tucson holds Arizona certification no. AZ0609.

PAL participates in the AIHA Proficiency Analytical Testing (PAT) program for metals, solvents and formaldehyde.

Analytical Comments:

All method blanks and laboratory control spikes met EPA method and/or laboratory quality control objectives for the analyses included in this report.

Data Qualifiers:

Listed below are the data qualifiers used in your analytical report to explain any analytical or quality control issues. You will find them noted in your report under the column header "QUAL". Any quality control deficiencies that cannot be adequately described by these qualifiers will be addressed in the analytical comments section of this case narrative.

D2 Sample required dilution due to high concentration of target analyte.



Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Lab Order: 02061078
Project: South Mesa WQARF/70211-2-0064
Lab ID: 02061078-01A

Client Sample ID: 4
Tag Number:
Collection Date: 6/27/2002 8:15:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: SP		
1,1,1-Trichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1,2,2-Tetrachloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1,2-Trichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1-Dichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
1,2,4-Trichlorobenzene	< 1.0	1.0		ppbv	1	6/29/2002
1,2,4-Trimethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dibromoethane	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichloropropane	< 0.50	0.50		ppbv	1	6/29/2002
1,3,5-Trimethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,3-Butadiene	< 0.50	0.50		ppbv	1	6/29/2002
1,3-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,4-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,4-Dioxane	< 5.0	5.0		ppbv	1	6/29/2002
2,2,4-Trimethylpentane	< 0.50	0.50		ppbv	1	6/29/2002
2-Butanone (MEK)	4.3	1.0		ppbv	1	6/29/2002
2-Hexanone	< 1.0	1.0		ppbv	1	6/29/2002
2-Propanol	14	1.0		ppbv	1	6/29/2002
4-Ethyltoluene	< 0.50	0.50		ppbv	1	6/29/2002
4-Methyl-2-pentanone	< 1.0	1.0		ppbv	1	6/29/2002
Acetone	15	5.0		ppbv	1	6/29/2002
Allyl chloride	< 0.50	0.50		ppbv	1	6/29/2002
Benzene	< 0.50	0.50		ppbv	1	6/29/2002
Benzyl chloride	< 2.0	2.0		ppbv	1	6/29/2002
Bromodichloromethane	< 0.50	0.50		ppbv	1	6/29/2002
Bromoethene(Vinyl Bromide)	< 0.50	0.50		ppbv	1	6/29/2002
Bromoform	< 0.50	0.50		ppbv	1	6/29/2002
Bromomethane	< 0.50	0.50		ppbv	1	6/29/2002
Carbon disulfide	< 0.50	0.50		ppbv	1	6/29/2002
Carbon tetrachloride	< 0.50	0.50		ppbv	1	6/29/2002
Chlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
Chloroethane	< 0.50	0.50		ppbv	1	6/29/2002
Chloroform	< 0.50	0.50		ppbv	1	6/29/2002
Chloromethane	< 0.50	0.50		ppbv	1	6/29/2002
cis-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
cis-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/29/2002
Cyclohexane	< 0.50	0.50		ppbv	1	6/29/2002
Dibromochloromethane	< 0.50	0.50		ppbv	1	6/29/2002

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Page 1 of 14



Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Lab Order: 02061078
Project: South Mesa WQARF/70211-2-0064
Lab ID: 02061078-01A

Client Sample ID: 4
Tag Number:
Collection Date: 6/27/2002 8:15:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: SP		
Dichlorodifluoromethane(F-12)	0.64	0.50		ppbv	1	6/29/2002
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50		ppbv	1	6/29/2002
Ethyl Acetate	< 0.50	0.50		ppbv	1	6/29/2002
Ethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
Heptane	0.75	0.50		ppbv	1	6/29/2002
Hexachlorobutadiene	< 1.0	1.0		ppbv	1	6/29/2002
Hexane	1.3	0.50		ppbv	1	6/29/2002
m&p-Xylene	< 1.0	1.0		ppbv	1	6/29/2002
Methyl tert-butyl ether	1.6	1.0		ppbv	1	6/29/2002
Methylene chloride	< 0.50	0.50		ppbv	1	6/29/2002
o-Xylene	< 0.50	0.50		ppbv	1	6/29/2002
Propene (Propylene)	< 0.50	0.50		ppbv	1	6/29/2002
Styrene	< 0.50	0.50		ppbv	1	6/29/2002
Tetrachloroethene	< 0.50	0.50		ppbv	1	6/29/2002
Tetrahydrofuran	< 1.0	1.0		ppbv	1	6/29/2002
Toluene	4.8	0.50		ppbv	1	6/29/2002
trans-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
trans-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/29/2002
Trichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
Trichlorofluoromethane(F-11)	< 0.50	0.50		ppbv	1	6/29/2002
Trichlorotrifluoroethane(F-113)	< 0.50	0.50		ppbv	1	6/29/2002
Vinyl acetate	< 0.50	0.50		ppbv	1	6/29/2002
Vinyl chloride	< 0.50	0.50		ppbv	1	6/29/2002
Surr: 4-Bromofluorobenzene	98.9	70-130		%REC	1	6/29/2002

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Lab Order: 02061078
Project: South Mesa WQARF/70211-2-0064
Lab ID: 02061078-02A

Client Sample ID: 5
Tag Number:
Collection Date: 6/27/2002 8:22:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15				Analyst: SP
1,1,1-Trichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1,2,2-Tetrachloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1,2-Trichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1-Dichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
1,2,4-Trichlorobenzene	< 1.0	1.0		ppbv	1	6/29/2002
1,2,4-Trimethylbenzene	0.86	0.50		ppbv	1	6/29/2002
1,2-Dibromoethane	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichloropropane	< 0.50	0.50		ppbv	1	6/29/2002
1,3,5-Trimethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,3-Butadiene	< 0.50	0.50		ppbv	1	6/29/2002
1,3-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,4-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,4-Dioxane	< 5.0	5.0		ppbv	1	6/29/2002
2,2,4-Trimethylpentane	0.81	0.50		ppbv	1	6/29/2002
2-Butanone (MEK)	3.1	1.0		ppbv	1	6/29/2002
2-Hexanone	< 1.0	1.0		ppbv	1	6/29/2002
2-Propanol	15	1.0		ppbv	1	6/29/2002
4-Ethyltoluene	< 0.50	0.50		ppbv	1	6/29/2002
4-Methyl-2-pentanone	< 1.0	1.0		ppbv	1	6/29/2002
Acetone	12	5.0		ppbv	1	6/29/2002
Allyl chloride	< 0.50	0.50		ppbv	1	6/29/2002
Benzene	0.74	0.50		ppbv	1	6/29/2002
Benzyl chloride	< 2.0	2.0		ppbv	1	6/29/2002
Bromodichloromethane	< 0.50	0.50		ppbv	1	6/29/2002
Bromoethene(Vinyl Bromide)	< 0.50	0.50		ppbv	1	6/29/2002
Bromoform	< 0.50	0.50		ppbv	1	6/29/2002
Bromomethane	< 0.50	0.50		ppbv	1	6/29/2002
Carbon disulfide	< 0.50	0.50		ppbv	1	6/29/2002
Carbon tetrachloride	< 0.50	0.50		ppbv	1	6/29/2002
Chlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
Chloroethane	< 0.50	0.50		ppbv	1	6/29/2002
Chloroform	< 0.50	0.50		ppbv	1	6/29/2002
Chloromethane	< 0.50	0.50		ppbv	1	6/29/2002
cis-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
cis-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/29/2002
Cyclohexane	0.78	0.50		ppbv	1	6/29/2002
Dibromochloromethane	< 0.50	0.50		ppbv	1	6/29/2002

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Page 3 of 14



Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Lab Order: 02061078
Project: South Mesa WQARF/70211-2-0064
Lab ID: 02061078-02A

Client Sample ID: 5
Tag Number:
Collection Date: 6/27/2002 8:22:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: SP		
Dichlorodifluoromethane(F-12)	0.62	0.50		ppbv	1	6/29/2002
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50		ppbv	1	6/29/2002
Ethyl Acetate	< 0.50	0.50		ppbv	1	6/29/2002
Ethylbenzene	5.3	0.50		ppbv	1	6/29/2002
Heptane	1.2	0.50		ppbv	1	6/29/2002
Hexachlorobutadiene	< 1.0	1.0		ppbv	1	6/29/2002
Hexane	1.5	0.50		ppbv	1	6/29/2002
m&p-Xylene	19	1.0		ppbv	1	6/29/2002
Methyl tert-butyl ether	3.1	1.0		ppbv	1	6/29/2002
Methylene chloride	< 0.50	0.50		ppbv	1	6/29/2002
o-Xylene	5.9	0.50		ppbv	1	6/29/2002
Propene (Propylene)	< 0.50	0.50		ppbv	1	6/29/2002
Styrene	< 0.50	0.50		ppbv	1	6/29/2002
Tetrachloroethene	2.0	0.50		ppbv	1	6/29/2002
Tetrahydrofuran	1.0	1.0		ppbv	1	6/29/2002
Toluene	22	0.50		ppbv	1	6/29/2002
trans-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
trans-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/29/2002
Trichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
Trichlorofluoromethane(F-11)	< 0.50	0.50		ppbv	1	6/29/2002
Trichlorotrifluoroethane(F-113)	< 0.50	0.50		ppbv	1	6/29/2002
Vinyl acetate	< 0.50	0.50		ppbv	1	6/29/2002
Vinyl chloride	< 0.50	0.50		ppbv	1	6/29/2002
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	6/29/2002

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

* Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Lab Order: 02061078
Project: South Mesa WQARF/70211-2-0064
Lab ID: 02061078-03A

Client Sample ID: 7
Tag Number:
Collection Date: 6/27/2002 8:31:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: SP		
1,1,1-Trichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1,2,2-Tetrachloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1,2-Trichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1-Dichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
1,2,4-Trichlorobenzene	< 1.0	1.0		ppbv	1	6/29/2002
1,2,4-Trimethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dibromoethane	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichloropropane	< 0.50	0.50		ppbv	1	6/29/2002
1,3,5-Trimethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,3-Butadiene	< 0.50	0.50		ppbv	1	6/29/2002
1,3-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,4-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,4-Dioxane	< 5.0	5.0		ppbv	1	6/29/2002
2,2,4-Trimethylpentane	< 0.50	0.50		ppbv	1	6/29/2002
2-Butanone (MEK)	2.0	1.0		ppbv	1	6/29/2002
2-Hexanone	< 1.0	1.0		ppbv	1	6/29/2002
2-Propanol	< 1.0	1.0		ppbv	1	6/29/2002
4-Ethyltoluene	< 0.50	0.50		ppbv	1	6/29/2002
4-Methyl-2-pentanone	< 1.0	1.0		ppbv	1	6/29/2002
Acetone	24	5.0		ppbv	1	6/29/2002
Allyl chloride	< 0.50	0.50		ppbv	1	6/29/2002
Benzene	< 0.50	0.50		ppbv	1	6/29/2002
Benzyl chloride	< 2.0	2.0		ppbv	1	6/29/2002
Bromodichloromethane	< 0.50	0.50		ppbv	1	6/29/2002
Bromoethene(Vinyl Bromide)	< 0.50	0.50		ppbv	1	6/29/2002
Bromoform	< 0.50	0.50		ppbv	1	6/29/2002
Bromomethane	< 0.50	0.50		ppbv	1	6/29/2002
Carbon disulfide	< 0.50	0.50		ppbv	1	6/29/2002
Carbon tetrachloride	< 0.50	0.50		ppbv	1	6/29/2002
Chlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
Chloroethane	< 0.50	0.50		ppbv	1	6/29/2002
Chloroform	< 0.50	0.50		ppbv	1	6/29/2002
Chloromethane	< 0.50	0.50		ppbv	1	6/29/2002
cis-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
cis-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/29/2002
Cyclohexane	< 0.50	0.50		ppbv	1	6/29/2002
Dibromochloromethane	< 0.50	0.50		ppbv	1	6/29/2002

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

* Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT:	Law Engineering	Client Sample ID:	7
Lab Order:	02061078	Tag Number:	
Project:	South Mesa WQARF/70211-2-0064	Collection Date:	6/27/2002 8:31:00 AM
Lab ID:	02061078-03A	Matrix:	AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: SP		
Dichlorodifluoromethane(F-12)	0.57	0.50		ppbv	1	6/29/2002
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50		ppbv	1	6/29/2002
Ethyl Acetate	< 0.50	0.50		ppbv	1	6/29/2002
Ethylbenzene	0.99	0.50		ppbv	1	6/29/2002
Heptane	0.81	0.50		ppbv	1	6/29/2002
Hexachlorobutadiene	< 1.0	1.0		ppbv	1	6/29/2002
Hexane	< 0.50	0.50		ppbv	1	6/29/2002
m&p-Xylene	3.4	1.0		ppbv	1	6/29/2002
Methyl tert-butyl ether	< 1.0	1.0		ppbv	1	6/29/2002
Methylene chloride	< 0.50	0.50		ppbv	1	6/29/2002
o-Xylene	1.1	0.50		ppbv	1	6/29/2002
Propene (Propylene)	< 0.50	0.50		ppbv	1	6/29/2002
Styrene	< 0.50	0.50		ppbv	1	6/29/2002
Tetrachloroethene	< 0.50	0.50		ppbv	1	6/29/2002
Tetrahydrofuran	< 1.0	1.0		ppbv	1	6/29/2002
Toluene	4.0	0.50		ppbv	1	6/29/2002
trans-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
trans-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/29/2002
Trichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
Trichlorofluoromethane(F-11)	< 0.50	0.50		ppbv	1	6/29/2002
Trichlorotrifluoroethane(F-113)	< 0.50	0.50		ppbv	1	6/29/2002
Vinyl acetate	< 0.50	0.50		ppbv	1	6/29/2002
Vinyl chloride	< 0.50	0.50		ppbv	1	6/29/2002
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	6/29/2002

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

* Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Lab Order: 02061078
Project: South Mesa WQARF/70211-2-0064
Lab ID: 02061078-04A

Client Sample ID: 2
Tag Number:
Collection Date: 6/27/2002 8:44:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: SP		
1,1,1-Trichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1,2,2-Tetrachloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1,2-Trichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1-Dichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
1,2,4-Trichlorobenzene	< 1.0	1.0		ppbv	1	6/29/2002
1,2,4-Trimethylbenzene	0.86	0.50		ppbv	1	6/29/2002
1,2-Dibromoethane	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichloropropane	< 0.50	0.50		ppbv	1	6/29/2002
1,3,5-Trimethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,3-Butadiene	< 0.50	0.50		ppbv	1	6/29/2002
1,3-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,4-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,4-Dioxane	< 5.0	5.0		ppbv	1	6/29/2002
2,2,4-Trimethylpentane	< 0.50	0.50		ppbv	1	6/29/2002
2-Butanone (MEK)	2.9	1.0		ppbv	1	6/29/2002
2-Hexanone	< 1.0	1.0		ppbv	1	6/29/2002
2-Propanol	14	1.0		ppbv	1	6/29/2002
4-Ethyltoluene	< 0.50	0.50		ppbv	1	6/29/2002
4-Methyl-2-pentanone	< 1.0	1.0		ppbv	1	6/29/2002
Acetone	12	5.0		ppbv	1	6/29/2002
Allyl chloride	< 0.50	0.50		ppbv	1	6/29/2002
Benzene	0.60	0.50		ppbv	1	6/29/2002
Benzyl chloride	< 2.0	2.0		ppbv	1	6/29/2002
Bromodichloromethane	< 0.50	0.50		ppbv	1	6/29/2002
Bromoethene(Vinyl Bromide)	< 0.50	0.50		ppbv	1	6/29/2002
Bromoform	< 0.50	0.50		ppbv	1	6/29/2002
Bromomethane	< 0.50	0.50		ppbv	1	6/29/2002
Carbon disulfide	< 0.50	0.50		ppbv	1	6/29/2002
Carbon tetrachloride	< 0.50	0.50		ppbv	1	6/29/2002
Chlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
Chloroethane	< 0.50	0.50		ppbv	1	6/29/2002
Chloroform	< 0.50	0.50		ppbv	1	6/29/2002
Chloromethane	< 0.50	0.50		ppbv	1	6/29/2002
cis-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
cis-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/29/2002
Cyclohexane	< 0.50	0.50		ppbv	1	6/29/2002
Dibromochloromethane	< 0.50	0.50		ppbv	1	6/29/2002

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Lab Order: 02061078
Project: South Mesa WQARF/70211-2-0064
Lab ID: 02061078-04A

Client Sample ID: 2
Tag Number:
Collection Date: 6/27/2002 8:44:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: SP		
Dichlorodifluoromethane(F-12)	0.64	0.50		ppbv	1	6/29/2002
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50		ppbv	1	6/29/2002
Ethyl Acetate	< 0.50	0.50		ppbv	1	6/29/2002
Ethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
Heptane	1.2	0.50		ppbv	1	6/29/2002
Hexachlorobutadiene	< 1.0	1.0		ppbv	1	6/29/2002
Hexane	< 0.50	0.50		ppbv	1	6/29/2002
m&p-Xylene	1.1	1.0		ppbv	1	6/29/2002
Methyl tert-butyl ether	1.6	1.0		ppbv	1	6/29/2002
Methylene chloride	< 0.50	0.50		ppbv	1	6/29/2002
o-Xylene	0.57	0.50		ppbv	1	6/29/2002
Propene (Propylene)	< 0.50	0.50		ppbv	1	6/29/2002
Styrene	< 0.50	0.50		ppbv	1	6/29/2002
Tetrachloroethene	57	2.5	D2	ppbv	5	6/30/2002
Tetrahydrofuran	< 1.0	1.0		ppbv	1	6/29/2002
Toluene	1.8	0.50		ppbv	1	6/29/2002
trans-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
trans-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/29/2002
Trichloroethene	0.94	0.50		ppbv	1	6/29/2002
Trichlorofluoromethane(F-11)	2.6	0.50		ppbv	1	6/29/2002
Trichlorotrifluoroethane(F-113)	< 0.50	0.50		ppbv	1	6/29/2002
Vinyl acetate	< 0.50	0.50		ppbv	1	6/29/2002
Vinyl chloride	< 0.50	0.50		ppbv	1	6/29/2002
Surr: 4-Bromofluorobenzene	98.7	70-130		%REC	1	6/29/2002

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Lab Order: 02061078
Project: South Mesa WQARF/70211-2-0064
Lab ID: 02061078-05A

Client Sample ID: 3
Tag Number:
Collection Date: 6/27/2002 8:49:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: SP		
1,1,1-Trichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1,2,2-Tetrachloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1,2-Trichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1-Dichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
1,2,4-Trichlorobenzene	< 1.0	1.0		ppbv	1	6/29/2002
1,2,4-Trimethylbenzene	1.7	0.50		ppbv	1	6/29/2002
1,2-Dibromoethane	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichloropropane	< 0.50	0.50		ppbv	1	6/29/2002
1,3,5-Trimethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,3-Butadiene	< 0.50	0.50		ppbv	1	6/29/2002
1,3-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,4-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,4-Dioxane	< 5.0	5.0		ppbv	1	6/29/2002
2,2,4-Trimethylpentane	< 0.50	0.50		ppbv	1	6/29/2002
2-Butanone (MEK)	< 1.0	1.0		ppbv	1	6/29/2002
2-Hexanone	< 1.0	1.0		ppbv	1	6/29/2002
2-Propanol	16	1.0		ppbv	1	6/29/2002
4-Ethyltoluene	0.53	0.50		ppbv	1	6/29/2002
4-Methyl-2-pentanone	< 1.0	1.0		ppbv	1	6/29/2002
Acetone	11	5.0		ppbv	1	6/29/2002
Allyl chloride	< 0.50	0.50		ppbv	1	6/29/2002
Benzene	< 0.50	0.50		ppbv	1	6/29/2002
Benzyl chloride	< 2.0	2.0		ppbv	1	6/29/2002
Bromodichloromethane	< 0.50	0.50		ppbv	1	6/29/2002
Bromoethene(Vinyl Bromide)	< 0.50	0.50		ppbv	1	6/29/2002
Bromoform	< 0.50	0.50		ppbv	1	6/29/2002
Bromomethane	< 0.50	0.50		ppbv	1	6/29/2002
Carbon disulfide	< 0.50	0.50		ppbv	1	6/29/2002
Carbon tetrachloride	< 0.50	0.50		ppbv	1	6/29/2002
Chlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
Chloroethane	< 0.50	0.50		ppbv	1	6/29/2002
Chloroform	< 0.50	0.50		ppbv	1	6/29/2002
Chloromethane	< 0.50	0.50		ppbv	1	6/29/2002
cis-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
cis-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/29/2002
Cyclohexane	< 0.50	0.50		ppbv	1	6/29/2002
Dibromochloromethane	< 0.50	0.50		ppbv	1	6/29/2002

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Lab Order: 02061078
Project: South Mesa WQARF/70211-2-0064
Lab ID: 02061078-05A

Client Sample ID: 3
Tag Number:
Collection Date: 6/27/2002 8:49:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15				Analyst: SP
Dichlorodifluoromethane(F-12)	0.64	0.50		ppbv	1	6/29/2002
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50		ppbv	1	6/29/2002
Ethyl Acetate	< 0.50	0.50		ppbv	1	6/29/2002
Ethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
Heptane	0.86	0.50		ppbv	1	6/29/2002
Hexachlorobutadiene	< 1.0	1.0		ppbv	1	6/29/2002
Hexane	< 0.50	0.50		ppbv	1	6/29/2002
m&p-Xylene	1.1	1.0		ppbv	1	6/29/2002
Methyl tert-butyl ether	1.3	1.0		ppbv	1	6/29/2002
Methylene chloride	5.1	0.50		ppbv	1	6/29/2002
o-Xylene	0.60	0.50		ppbv	1	6/29/2002
Propene (Propylene)	< 0.50	0.50		ppbv	1	6/29/2002
Styrene	< 0.50	0.50		ppbv	1	6/29/2002
Tetrachloroethene	16	0.50		ppbv	1	6/29/2002
Tetrahydrofuran	< 1.0	1.0		ppbv	1	6/29/2002
Toluene	1.4	0.50		ppbv	1	6/29/2002
trans-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
trans-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/29/2002
Trichloroethene	0.81	0.50		ppbv	1	6/29/2002
Trichlorofluoromethane(F-11)	1.6	0.50		ppbv	1	6/29/2002
Trichlorotrifluoroethane(F-113)	< 0.50	0.50		ppbv	1	6/29/2002
Vinyl acetate	< 0.50	0.50		ppbv	1	6/29/2002
Vinyl chloride	< 0.50	0.50		ppbv	1	6/29/2002
Surr: 4-Bromofluorobenzene	98.5	70-130		%REC	1	6/29/2002

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering

Client Sample ID: 1

Lab Order: 02061078

Tag Number:

Project: South Mesa WQARF/70211-2-0064

Collection Date: 6/27/2002 8:52:00 AM

Lab ID: 02061078-06A

Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: SP		
1,1,1-Trichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1,2,2-Tetrachloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1,2-Trichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1-Dichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,1-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
1,2,4-Trichlorobenzene	< 1.0	1.0		ppbv	1	6/29/2002
1,2,4-Trimethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dibromoethane	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichloroethane	< 0.50	0.50		ppbv	1	6/29/2002
1,2-Dichloropropane	< 0.50	0.50		ppbv	1	6/29/2002
1,3,5-Trimethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,3-Butadiene	< 0.50	0.50		ppbv	1	6/29/2002
1,3-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,4-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
1,4-Dioxane	< 5.0	5.0		ppbv	1	6/29/2002
2,2,4-Trimethylpentane	< 0.50	0.50		ppbv	1	6/29/2002
2-Butanone (MEK)	2.8	1.0		ppbv	1	6/29/2002
2-Hexanone	< 1.0	1.0		ppbv	1	6/29/2002
2-Propanol	4.3	1.0		ppbv	1	6/29/2002
4-Ethyltoluene	< 0.50	0.50		ppbv	1	6/29/2002
4-Methyl-2-pentanone	< 1.0	1.0		ppbv	1	6/29/2002
Acetone	12	5.0		ppbv	1	6/29/2002
Allyl chloride	< 0.50	0.50		ppbv	1	6/29/2002
Benzene	0.53	0.50		ppbv	1	6/29/2002
Benzyl chloride	< 2.0	2.0		ppbv	1	6/29/2002
Bromodichloromethane	< 0.50	0.50		ppbv	1	6/29/2002
Bromoethene(Vinyl Bromide)	< 0.50	0.50		ppbv	1	6/29/2002
Bromoform	< 0.50	0.50		ppbv	1	6/29/2002
Bromomethane	< 0.50	0.50		ppbv	1	6/29/2002
Carbon disulfide	< 0.50	0.50		ppbv	1	6/29/2002
Carbon tetrachloride	< 0.50	0.50		ppbv	1	6/29/2002
Chlorobenzene	< 0.50	0.50		ppbv	1	6/29/2002
Chloroethane	< 0.50	0.50		ppbv	1	6/29/2002
Chloroform	< 0.50	0.50		ppbv	1	6/29/2002
Chloromethane	< 0.50	0.50		ppbv	1	6/29/2002
cis-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
cis-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/29/2002
Cyclohexane	0.53	0.50		ppbv	1	6/29/2002
Dibromochloromethane	< 0.50	0.50		ppbv	1	6/29/2002

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Lab Order: 02061078
Project: South Mesa WQARF/70211-2-0064
Lab ID: 02061078-06A

Client Sample ID: 1
Tag Number:
Collection Date: 6/27/2002 8:52:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: SP		
Dichlorodifluoromethane(F-12)	0.62	0.50		ppbv	1	6/29/2002
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50		ppbv	1	6/29/2002
Ethyl Acetate	< 0.50	0.50		ppbv	1	6/29/2002
Ethylbenzene	< 0.50	0.50		ppbv	1	6/29/2002
Heptane	0.71	0.50		ppbv	1	6/29/2002
Hexachlorobutadiene	< 1.0	1.0		ppbv	1	6/29/2002
Hexane	0.69	0.50		ppbv	1	6/29/2002
m&p-Xylene	1.6	1.0		ppbv	1	6/29/2002
Methyl tert-butyl ether	< 1.0	1.0		ppbv	1	6/29/2002
Methylene chloride	< 0.50	0.50		ppbv	1	6/29/2002
o-Xylene	< 0.50	0.50		ppbv	1	6/29/2002
Propene (Propylene)	< 0.50	0.50		ppbv	1	6/29/2002
Styrene	< 0.50	0.50		ppbv	1	6/29/2002
Tetrachloroethene	20	0.50		ppbv	1	6/29/2002
Tetrahydrofuran	< 1.0	1.0		ppbv	1	6/29/2002
Toluene	1.8	0.50		ppbv	1	6/29/2002
trans-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/29/2002
trans-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/29/2002
Trichloroethene	0.97	0.50		ppbv	1	6/29/2002
Trichlorofluoromethane(F-11)	2.0	0.50		ppbv	1	6/29/2002
Trichlorotrifluoroethane(F-113)	< 0.50	0.50		ppbv	1	6/29/2002
Vinyl acetate	< 0.50	0.50		ppbv	1	6/29/2002
Vinyl chloride	< 0.50	0.50		ppbv	1	6/29/2002
Surr: 4-Bromofluorobenzene	98.6	70-130		%REC	1	6/29/2002

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Lab Order: 02061078
Project: South Mesa WQARF/70211-2-0064
Lab ID: 02061078-07A

Client Sample ID: 6
Tag Number:
Collection Date: 6/27/2002 8:56:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15				Analyst: SP
1,1,1-Trichloroethane	< 0.50	0.50		ppbv	1	6/30/2002
1,1,2,2-Tetrachloroethane	< 0.50	0.50		ppbv	1	6/30/2002
1,1,2-Trichloroethane	< 0.50	0.50		ppbv	1	6/30/2002
1,1-Dichloroethane	< 0.50	0.50		ppbv	1	6/30/2002
1,1-Dichloroethene	< 0.50	0.50		ppbv	1	6/30/2002
1,2,4-Trichlorobenzene	< 1.0	1.0		ppbv	1	6/30/2002
1,2,4-Trimethylbenzene	< 0.50	0.50		ppbv	1	6/30/2002
1,2-Dibromoethane	< 0.50	0.50		ppbv	1	6/30/2002
1,2-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/30/2002
1,2-Dichloroethane	< 0.50	0.50		ppbv	1	6/30/2002
1,2-Dichloropropane	< 0.50	0.50		ppbv	1	6/30/2002
1,3,5-Trimethylbenzene	< 0.50	0.50		ppbv	1	6/30/2002
1,3-Butadiene	< 0.50	0.50		ppbv	1	6/30/2002
1,3-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/30/2002
1,4-Dichlorobenzene	< 0.50	0.50		ppbv	1	6/30/2002
1,4-Dioxane	< 5.0	5.0		ppbv	1	6/30/2002
2,2,4-Trimethylpentane	< 0.50	0.50		ppbv	1	6/30/2002
2-Butanone (MEK)	2.8	1.0		ppbv	1	6/30/2002
2-Hexanone	< 1.0	1.0		ppbv	1	6/30/2002
2-Propanol	4.4	1.0		ppbv	1	6/30/2002
4-Ethyltoluene	< 0.50	0.50		ppbv	1	6/30/2002
4-Methyl-2-pentanone	< 1.0	1.0		ppbv	1	6/30/2002
Acetone	21	5.0		ppbv	1	6/30/2002
Allyl chloride	< 0.50	0.50		ppbv	1	6/30/2002
Benzene	0.64	0.50		ppbv	1	6/30/2002
Benzyl chloride	< 2.0	2.0		ppbv	1	6/30/2002
Bromodichloromethane	< 0.50	0.50		ppbv	1	6/30/2002
Bromoethene(Vinyl Bromide)	< 0.50	0.50		ppbv	1	6/30/2002
Bromoform	< 0.50	0.50		ppbv	1	6/30/2002
Bromomethane	< 0.50	0.50		ppbv	1	6/30/2002
Carbon disulfide	< 0.50	0.50		ppbv	1	6/30/2002
Carbon tetrachloride	< 0.50	0.50		ppbv	1	6/30/2002
Chlorobenzene	< 0.50	0.50		ppbv	1	6/30/2002
Chloroethane	< 0.50	0.50		ppbv	1	6/30/2002
Chloroform	< 0.50	0.50		ppbv	1	6/30/2002
Chloromethane	< 0.50	0.50		ppbv	1	6/30/2002
cis-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/30/2002
cis-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/30/2002
Cyclohexane	0.68	0.50		ppbv	1	6/30/2002
Dibromochloromethane	< 0.50	0.50		ppbv	1	6/30/2002

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering
Lab Order: 02061078
Project: South Mesa WQARF/70211-2-0064
Lab ID: 02061078-07A

Client Sample ID: 6
Tag Number:
Collection Date: 6/27/2002 8:56:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: SP		
Dichlorodifluoromethane(F-12)	0.66	0.50		ppbv	1	6/30/2002
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50		ppbv	1	6/30/2002
Ethyl Acetate	< 0.50	0.50		ppbv	1	6/30/2002
Ethylbenzene	< 0.50	0.50		ppbv	1	6/30/2002
Heptane	0.67	0.50		ppbv	1	6/30/2002
Hexachlorobutadiene	< 1.0	1.0		ppbv	1	6/30/2002
Hexane	0.86	0.50		ppbv	1	6/30/2002
m&p-Xylene	< 1.0	1.0		ppbv	1	6/30/2002
Methyl tert-butyl ether	2.2	1.0		ppbv	1	6/30/2002
Methylene chloride	< 0.50	0.50		ppbv	1	6/30/2002
o-Xylene	< 0.50	0.50		ppbv	1	6/30/2002
Propene (Propylene)	< 0.50	0.50		ppbv	1	6/30/2002
Styrene	< 0.50	0.50		ppbv	1	6/30/2002
Tetrachloroethene	5.5	0.50		ppbv	1	6/30/2002
Tetrahydrofuran	< 1.0	1.0		ppbv	1	6/30/2002
Toluene	2.3	0.50		ppbv	1	6/30/2002
trans-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	6/30/2002
trans-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	6/30/2002
Trichloroethene	0.76	0.50		ppbv	1	6/30/2002
Trichlorofluoromethane(F-11)	2.3	0.50		ppbv	1	6/30/2002
Trichlorotrifluoroethane(F-113)	< 0.50	0.50		ppbv	1	6/30/2002
Vinyl acetate	< 0.50	0.50		ppbv	1	6/30/2002
Vinyl chloride	< 0.50	0.50		ppbv	1	6/30/2002
Surr: 4-Bromofluorobenzene	98.2	70-130		%REC	1	6/30/2002

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories

Date: 05-Jul-02

CLIENT: Law Engineering

Work Order: 02061078

Project: South Mesa WQARF/70211-2-0064

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15

Sample ID	MB-R24682	SampType: MBLK	TestCode: TO15	Units: ppbv	Prep Date:	Run ID: MS04_020629A					
Client ID:	ZZZZZ	Batch ID: R24682	TestNo: TO15		Analysis Date: 6/29/2002	SeqNo: 266705					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.50	0.50									
1,1,2,2-Tetrachloroethane	< 0.50	0.50									
1,1,2-Trichloroethane	< 0.50	0.50									
1,1-Dichloroethane	< 0.50	0.50									
1,1-Dichloroethene	< 0.50	0.50									
1,2,4-Trichlorobenzene	< 1.0	1.0									
1,2,4-Trimethylbenzene	< 0.50	0.50									
1,2-Dibromoethane	< 0.50	0.50									
1,2-Dichlorobenzene	< 0.50	0.50									
1,2-Dichloroethane	< 0.50	0.50									
1,2-Dichloropropane	< 0.50	0.50									
1,3,5-Trimethylbenzene	< 0.50	0.50									
1,3-Butadiene	< 0.50	0.50									
1,3-Dichlorobenzene	< 0.50	0.50									
1,4-Dichlorobenzene	< 0.50	0.50									
1,4-Dioxane	< 5.0	5.0									
2,2,4-Trimethylpentane	< 0.50	0.50									
2-Butanone (MEK)	< 1.0	1.0									
2-Hexanone	< 1.0	1.0									
2-Propanol	< 1.0	1.0									
4-Ethyltoluene	< 0.50	0.50									
4-Methyl-2-pentanone	< 1.0	1.0									
Acetone	< 5.0	5.0									
Allyl chloride	< 0.50	0.50									
Benzene	< 0.50	0.50									
Benzyl chloride	< 2.0	2.0									
Bromodichloromethane	< 0.50	0.50									
Bromoethene(Vinyl Bromide)	< 0.50	0.50									
Bromoform	< 0.50	0.50									
Bromomethane	< 0.50	0.50									
Carbon disulfide	< 0.50	0.50									

CLIENT: Law Engineering

ANALYTICAL QC SUMMARY REPORT

Work Order: 02061078

TestCode: TO15

Project: South Mesa WQARF/70211-2-0064

Sample ID	MB-R24682	SampType: MBLK	TestCode: TO15	Units: ppbv	Prep Date:	Run ID: MS04_020629A					
Client ID:	ZZZZZ	Batch ID: R24682	TestNo: TO15		Analysis Date: 6/29/2002	SeqNo: 266705					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon tetrachloride	< 0.50	0.50									
Chlorobenzene	< 0.50	0.50									
Chloroethane	< 0.50	0.50									
Chloroform	< 0.50	0.50									
Chloromethane	< 0.50	0.50									
cis-1,2-Dichloroethene	< 0.50	0.50									
cis-1,3-Dichloropropene	< 0.50	0.50									
Cyclohexane	< 0.50	0.50									
Dibromochloromethane	< 0.50	0.50									
Dichlorodifluoromethane(F-12)	< 0.50	0.50									
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50									
Ethyl Acetate	< 0.50	0.50									
Ethylbenzene	< 0.50	0.50									
Heptane	< 0.50	0.50									
Hexachlorobutadiene	< 1.0	1.0									
Hexane	< 0.50	0.50									
m&p-Xylene	< 1.0	1.0									
Methyl tert-butyl ether	< 1.0	1.0									
Methylene chloride	< 0.50	0.50									
o-Xylene	< 0.50	0.50									
Propene (Propylene)	< 0.50	0.50									
Styrene	< 0.50	0.50									
Tetrachloroethene	< 0.50	0.50									
Tetrahydrofuran	< 1.0	1.0									
Toluene	< 0.50	0.50									
trans-1,2-Dichloroethene	< 0.50	0.50									
trans-1,3-Dichloropropene	< 0.50	0.50									
Trichloroethene	< 0.50	0.50									
Trichlorofluoromethane(F-11)	< 0.50	0.50									
Trichlorotrifluoroethane(F-113)	< 0.50	0.50									
Vinyl acetate	< 0.50	0.50									
Vinyl chloride	< 0.50	0.50									
Surr: 4-Bromofluorobenzene	9.37		10		0	93.7	70	130	0	0	

CLIENT: Law Engineering
Work Order: 02061078
Project: South Mesa WQA

Project: South Mesa WQARF/70211-2-0064

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ANALYTICAL QC SUMMARY REPORT

CLIENT: Law Engineering
 Work Order: 02061078
 Project: South Mesa WQARF/70211-2-0064

TestCode: TO15

Sample ID	LCS-R24682	SampType: LCS	TestCode: TO15	Units: ppbv	Prep Date:	Run ID: MS04_020629A					
Client ID: ZZZZZ	Batch ID: R24682		TestNo: TO15		Analysis Date: 6/29/2002	SeqNo: 267029					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroethane	7.19	0.50	10	0	71.9	65	135	0	0	0	
Chloroform	8.68	0.50	10	0	86.8	65	135	0	0	0	
Chloromethane	8.21	0.50	10	0	82.1	65	135	0	0	0	
cis-1,2-Dichloroethene	8.69	0.50	10	0	86.9	65	135	0	0	0	
cis-1,3-Dichloropropene	9.43	0.50	10	0	94.3	65	135	0	0	0	
Cyclohexane	9.06	0.50	10	0	90.6	65	135	0	0	0	
Dibromochloromethane	8.83	0.50	10	0	88.3	65	135	0	0	0	
Dichlorodifluoromethane(F-12)	7.38	0.50	10	0	73.8	65	135	0	0	0	
Dichlorotetrafluoroethane(F-114)	8.06	0.50	10	0	80.6	65	135	0	0	0	
Ethyl Acetate	9.44	0.50	10	0	94.4	65	135	0	0	0	
Ethylbenzene	9.28	0.50	10	0	92.8	65	135	0	0	0	
Heptane	8.89	0.50	10	0	88.9	65	135	0	0	0	
Hexachlorobutadiene	8.86	1.0	10	0	88.6	65	135	0	0	0	
Hexane	9.42	0.50	10	0	94.2	65	135	0	0	0	
m&p-Xylene	18.69	1.0	20	0	93.4	65	135	0	0	0	
Methyl tert-butyl ether	8.16	1.0	10	0	81.6	65	135	0	0	0	
Methylene chloride	8.53	0.50	10	0	85.3	65	135	0	0	0	
o-Xylene	9.36	0.50	10	0	93.6	65	135	0	0	0	
Propene (Propylene)	7.67	0.50	10	0	76.7	65	135	0	0	0	
Styrene	9.29	0.50	10	0	92.9	65	135	0	0	0	
Tetrachloroethene	8.77	0.50	10	0	87.7	65	135	0	0	0	
Tetrahydrofuran	9.24	1.0	10	0	92.4	65	135	0	0	0	
Toluene	9.13	0.50	10	0	91.3	65	135	0	0	0	
trans-1,2-Dichloroethene	8.58	0.50	10	0	85.8	65	135	0	0	0	
trans-1,3-Dichloropropene	9.28	0.50	10	0	92.8	65	135	0	0	0	
Trichloroethene	8.76	0.50	10	0	87.6	65	135	0	0	0	
Trichlorofluoromethane(F-11)	9.63	0.50	10	0	96.3	65	135	0	0	0	
Trichlorotrifluoroethane(F-113)	8.59	0.50	10	0	85.9	65	135	0	0	0	
Vinyl acetate	9.54	0.50	10	0	95.4	65	135	0	0	0	
Vinyl chloride	7.45	0.50	10	0	74.5	65	135	0	0	0	
Surr: 4-Bromofluorobenzene	9.99	0.50	10	0	99.9	70	130	0	0	0	

CLIENT: Law Engineering

Work Order: 02061078

Project:

South Mesa WQARF/70211-2-0064

ANALYTICAL QC SUMMARY REPORT

TestCode: T015

Sample ID	LCSD-R24682	SampType: LCSD	TestCode: TO15	Units: ppbv	Prep Date:	Run ID: MS04_020629A						
Client ID: ZZZZZ	Batch ID: R24682	Result	TestNo: TO15		Analysis Date: 6/29/2002	SeqNo: 267030						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane		8.75	0.50	10	0	87.5	65	135	8.82	0.797	25	
1,1,2,2-Tetrachloroethane		8.98	0.50	10	0	89.8	65	135	9.26	3.07	25	
1,1,2-Trichloroethane		8.79	0.50	10	0	87.9	65	135	8.87	0.906	25	
1,1-Dichloroethane		8.69	0.50	10	0	86.9	65	135	8.67	0.230	25	
1,1-Dichloroethene		8.87	0.50	10	0	88.7	65	135	8.67	2.28	25	
1,2,4-Trichlorobenzene		9.41	1.0	10	0	94.1	65	135	9.3	1.18	25	
1,2,4-Trimethylbenzene		9.54	0.50	10	0	95.4	65	135	9.52	0.210	25	
1,2-Dibromoethane		8.73	0.50	10	0	87.3	65	135	8.78	0.571	25	
1,2-Dichlorobenzene		9.12	0.50	10	0	91.2	65	135	9.13	0.110	25	
1,2-Dichloroethane		8.21	0.50	10	0	82.1	65	135	8.13	0.979	25	
1,2-Dichloropropane		8.97	0.50	10	0	89.7	65	135	9.02	0.556	25	
1,3,5-Trimethylbenzene		9.41	0.50	10	0	94.1	65	135	9.37	0.426	25	
1,3-Butadiene		8.8	0.50	10	0	88	65	135	8.09	8.41	25	
1,3-Dichlorobenzene		9.07	0.50	10	0	90.7	65	135	9.12	0.550	25	
1,4-Dichlorobenzene		9.14	0.50	10	0	91.4	65	135	9.18	0.437	25	
1,4-Dioxane		10.95	5.0	10	0	110	65	135	10.19	7.19	25	
2,2,4-Trimethylpentane		9.17	0.50	10	0	91.7	65	135	9.03	1.54	25	
2-Butanone (MEK)		9	1.0	10	0	90	65	135	9.11	1.21	25	
2-Hexanone		8.82	1.0	10	0	88.2	65	135	8.48	3.93	25	
2-Propanol		10.04	1.0	10	0	100	65	135	9.54	5.11	25	
4-Ethyltoluene		9.33	0.50	10	0	93.3	65	135	9.31	0.215	25	
4-Methyl-2-pentanone		9.55	1.0	10	0	95.5	65	135	9.27	2.98	25	
Acetone		7.96	5.0	10	0	79.6	65	135	7.8	2.03	25	
Allyl chloride		8.85	0.50	10	0	88.5	65	135	8.9	0.563	25	
Benzene		9.12	0.50	10	0	91.2	65	135	9.03	0.992	25	
Benzyl chloride		8.29	2.0	10	0	82.9	65	135	8.38	1.08	25	
Bromodichloromethane		8.8	0.50	10	0	88	65	135	8.87	0.792	25	
Bromoethene(Vinyl Bromide)		8.51	0.50	10	0	85.1	65	135	8.26	2.98	25	
Bromoform		9.13	0.50	10	0	91.3	65	135	9.14	0.109	25	
Bromomethane		8.22	0.50	10	0	82.2	65	135	7.98	2.96	25	
Carbon disulfide		8.64	0.50	10	0	86.4	65	135	8.56	0.930	25	
Carbon tetrachloride		8.66	0.50	10	0	86.6	65	135	8.69	0.346	25	
Chlorobenzene		8.85	0.50	10	0	88.5	65	135	8.8	0.567	25	

ANALYTICAL QC SUMMARY REPORT

CLIENT: Law Engineering
Work Order: 02061078
Project: South Mesa WQARF/70211-2-0064

TestCode: TO15

Sample ID	LCSD-R24682	SampType: LCSD	TestCode: TO15	Units: ppbv	Prep Date:	Run ID: MS04_020629A					
Client ID: ZZZZZ	Batch ID: R24682		TestNo: TO15		Analysis Date: 6/29/2002	SeqNo: 267030					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroethane	7.92	0.50	10	0	79.2	65	135	7.19	9.66	25	
Chloroform	8.74	0.50	10	0	87.4	65	135	8.68	0.689	25	
Chloromethane	8.67	0.50	10	0	86.7	65	135	8.21	5.45	25	
cis-1,2-Dichloroethene	8.66	0.50	10	0	86.6	65	135	8.69	0.346	25	
cis-1,3-Dichloropropene	9.28	0.50	10	0	92.8	65	135	9.43	1.60	25	
Cyclohexane	9.12	0.50	10	0	91.2	65	135	9.06	0.660	25	
Dibromochloromethane	8.83	0.50	10	0	88.3	65	135	8.83	0	25	
Dichlorodifluoromethane(F-12)	7.39	0.50	10	0	73.9	65	135	7.38	0.135	25	
Dichlorotetrafluoroethane(F-114)	8.6	0.50	10	0	86	65	135	8.06	6.48	25	
Ethyl Acetate	9.67	0.50	10	0	96.7	65	135	9.44	2.41	25	
Ethylbenzene	9.32	0.50	10	0	93.2	65	135	9.28	0.430	25	
Heptane	9	0.50	10	0	90	65	135	8.89	1.23	25	
Hexachlorobutadiene	8.68	1.0	10	0	86.8	65	135	8.86	2.05	25	
Hexane	9.62	0.50	10	0	96.2	65	135	9.42	2.10	25	
m&p-Xylene	18.82	1.0	20	0	94.1	65	135	18.69	0.693	25	
Methyl tert-butyl ether	8.12	1.0	10	0	81.2	65	135	8.16	0.491	25	
Methylene chloride	8.57	0.50	10	0	85.7	65	135	8.53	0.468	25	
o-Xylene	9.31	0.50	10	0	93.1	65	135	9.36	0.536	25	
Propene (Propylene)	7.83	0.50	10	0	78.3	65	135	7.67	2.06	25	
Styrene	9.23	0.50	10	0	92.3	65	135	9.29	0.648	25	
Tetrachloroethene	8.76	0.50	10	0	87.6	65	135	8.77	0.114	25	
Tetrahydrofuran	9.42	1.0	10	0	94.2	65	135	9.24	1.93	25	
Toluene	9.14	0.50	10	0	91.4	65	135	9.13	0.109	25	
trans-1,2-Dichloroethene	8.74	0.50	10	0	87.4	65	135	8.58	1.85	25	
trans-1,3-Dichloropropene	9.18	0.50	10	0	91.8	65	135	9.28	1.08	25	
Trichloroethene	8.87	0.50	10	0	88.7	65	135	8.76	1.25	25	
Trichlorofluoromethane(F-11)	9.79	0.50	10	0	97.9	65	135	9.63	1.65	25	
Trichlorotrifluoroethane(F-113)	8.63	0.50	10	0	86.3	65	135	8.59	0.465	25	
Vinyl acetate	9.85	0.50	10	0	98.5	65	135	9.54	3.20	25	
Vinyl chloride	8.29	0.50	10	0	82.9	65	135	7.45	10.7	25	
Surr: 4-Bromofluorobenzene	9.97	0.50	10	0	99.7	70	130	0	0		



Precision Analytical Laboratories

a division of Aerotech Laboratories, Inc.

✓ Main Lab - 1725 W. 17th Street, Tempe, AZ 85281 (480) 967-1310 FAX (480) 967-1019
[] North Phoenix - 1501 W. Knudsen, Phoenix, AZ 85027 (623) 780-4700 FAX (623) 780-2934
[] Tucson - 4455 S. Park Ave, Suite 110, Tucson, AZ 85714 (520) 807-3801 FAX (520) 807-3803
www.palabs.com or call toll-free 1-866-7PALABS (1-866-772-5227)

Lab Number:
0-206-1078

Customer Number: Page 1 of 1
Customer: LAW ENG Sampler: PATRICK COOK
Address: 4634 S 36th Pl Project Name: SOUTHERN WRAE
City, State, Zip: PHX AZ 85040 Project Number: 7011-2-0064
Contact: JIM CLARKE P.O. Number:
Phone: 602 437 0250 Fax: 3675 Fax Results:
E-Mail Address: J.M. CLARKE@MAETEC.COM E-Mail Results:

Sample Receipt Turn Around Request
Temperature °C 24 Hours 48 Hours
Custody Seals: Yes No 72 Hours
Custody Seals Intact: Yes No 5 Working Day
Total # of Containers: 7 Standard 10 Working Days
Subject to scheduling and availability (surcharges apply)

Sample Information										Analyses Requested			
Lab #	Canister Serial #	Model	Sample Identification	Date	Time	Type	Final	Receipt		TO-14 List of TO-15	TO-15 list	PCE Only by TO-15	
01	00663	60.0.4	4	6/21/02	0815					X			
02	00203	60.0.4	5		0822					X			
03	00143	60.0.4	7		0831					X			
04	00225	60.0.4	3		0844					X			
05	00207	60.0.4			0849					X			
06	00672	60.0.4	1		0852					X			
07	00667	60.0.4	6		0856					X			
		6, 1, 0.4											
		6, 1, 0.4											
		6, 1, 0.4											

Instructions / Special Requirements:
Date: 6/28/02 Time: 1500 Samples Relinquished By: [Signature]
Received By: [Signature]



Precision Analytical Laboratories

a division of Aerotech Laboratories, Inc.

December 27, 2002

Jim Clarke
Mactec
4634 South 36th Place
Phoenix, AZ 85040

RE: South Mesa WQARF/70211-2-0064-2.55

Dear Jim Clarke:

Order No.: 02120918

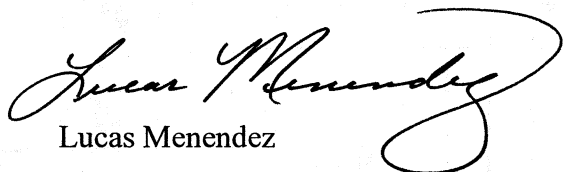
Precision Analytical Laboratories received 5 samples on 12/18/2002 for the analyses presented in the following report.

This report includes the following information:

- Case Narrative.
- Analytical Report: includes test results, report limit (Limit), any applicable data qualifier (Qual), units, dilution factor (DF), and date analyzed.
- QC Summary Report.

This communication is intended only for the individual or entity to whom it is directed. It may contain information that is privileged, confidential, or otherwise exempt from disclosure under applicable law. Dissemination, distribution, or copying of this communication by anyone other than the intended recipient, or a duly designated employee or agent of such recipient, is prohibited. If you have received this communication in error, please notify us immediately and destroy this message and all attachments thereto. If you have any questions regarding these test results, please do not hesitate to call.

Sincerely,



Lucas Menendez
Project Manager



Precision Analytical Laboratories

a division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 27-Dec-02

CLIENT: Mactec

Project: South Mesa WQARF/70211-2-0064-2.55

Lab Order: 02120918

CASE NARRATIVE

Samples were analyzed using methods outlined in references such as:

Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992, and 19th Edition, 1995.

Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised March 1983.

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

40 CFR, Part 136, Revised 1995. Appendix A to Part 136 - Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater.

NIOSH Manual of Analytical Methods, Fourth Edition, 1994.

Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition, 1999.

Precision Analytical Laboratories, Inc. (PAL) holds Arizona certification no. AZ0610 and PAL-Tucson holds Arizona certification no. AZ0609.

PAL participates in the AIHA Proficiency Analytical Testing (PAT) program for metals, solvents and formaldehyde.

Analytical Comments:

All method blanks and laboratory control spikes met EPA method and/or laboratory quality control objectives for the analyses included in this report.

Data Qualifiers:

Listed below are the data qualifiers used in your analytical report to explain any analytical or quality control issues. You will find them noted in your report under the column header "QUAL". Any quality control deficiencies that cannot be adequately described by these qualifiers will be addressed in the analytical comments section of this case narrative.

D2 Sample required dilution due to high concentration of target analyte.



Precision Analytical Laboratories

a division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 27-Dec-02

CLIENT:	Mactec	Client Sample ID:	1
Lab Order:	02120918	Tag Number:	
Project:	South Mesa WQARF/70211-2-0064-2.55	Collection Date:	12/17/2002 9:11:00 AM
Lab ID:	02120918-01A	Matrix:	AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: JG		
1,1,1-Trichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1,2,2-Tetrachloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1,2-Trichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1-Dichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
1,2,4-Trichlorobenzene	< 1.0	1.0		ppbv	1	12/19/2002
1,2,4-Trimethylbenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dibromoethane	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichloropropane	< 0.50	0.50		ppbv	1	12/19/2002
1,3,5-Trimethylbenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,3-Butadiene	< 0.50	0.50		ppbv	1	12/19/2002
1,3-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,4-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
2,2,4-Trimethylpentane	< 0.50	0.50		ppbv	1	12/19/2002
2-Butanone (MEK)	1.3	1.0		ppbv	1	12/19/2002
2-Hexanone	< 1.0	1.0		ppbv	1	12/19/2002
2-Propanol	< 1.0	1.0		ppbv	1	12/19/2002
4-Ethyltoluene	< 0.50	0.50		ppbv	1	12/19/2002
4-Methyl-2-pentanone	< 1.0	1.0		ppbv	1	12/19/2002
Acetone	18	5.0		ppbv	1	12/19/2002
Allyl chloride	< 0.50	0.50		ppbv	1	12/19/2002
Benzene	< 0.50	0.50		ppbv	1	12/19/2002
Benzyl chloride	< 2.0	2.0		ppbv	1	12/19/2002
Bromodichloromethane	< 0.50	0.50		ppbv	1	12/19/2002
Bromoethene(Vinyl Bromide)	< 0.50	0.50		ppbv	1	12/19/2002
Bromoform	< 0.50	0.50		ppbv	1	12/19/2002
Bromomethane	< 0.50	0.50		ppbv	1	12/19/2002
Carbon disulfide	< 0.50	0.50		ppbv	1	12/19/2002
Carbon tetrachloride	< 0.50	0.50		ppbv	1	12/19/2002
Chlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
Chloroethane	< 0.50	0.50		ppbv	1	12/19/2002
Chloroform	< 0.50	0.50		ppbv	1	12/19/2002
Chloromethane	0.52	0.50		ppbv	1	12/19/2002
cis-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
cis-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	12/19/2002
Cyclohexane	< 0.50	0.50		ppbv	1	12/19/2002
Dibromochloromethane	< 0.50	0.50		ppbv	1	12/19/2002
Dichlorodifluoromethane(F-12)	0.62	0.50		ppbv	1	12/19/2002

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories

a division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 27-Dec-02

CLIENT:	Mactec	Client Sample ID:	1
Lab Order:	02120918	Tag Number:	
Project:	South Mesa WQARF/70211-2-0064-2.55	Collection Date:	12/17/2002 9:11:00 AM
Lab ID:	02120918-01A	Matrix:	AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: JG		
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50		ppbv	1	12/19/2002
Ethyl Acetate	< 0.50	0.50		ppbv	1	12/19/2002
Ethylbenzene	< 0.50	0.50		ppbv	1	12/19/2002
Heptane	< 0.50	0.50		ppbv	1	12/19/2002
Hexachlorobutadiene	< 1.0	1.0		ppbv	1	12/19/2002
Hexane	< 0.50	0.50		ppbv	1	12/19/2002
m&p-Xylene	< 1.0	1.0		ppbv	1	12/19/2002
Methyl tert-butyl ether	< 1.0	1.0		ppbv	1	12/19/2002
Methylene chloride	0.58	0.50		ppbv	1	12/19/2002
o-Xylene	< 0.50	0.50		ppbv	1	12/19/2002
Propene (Propylene)	< 0.50	0.50		ppbv	1	12/19/2002
Styrene	< 0.50	0.50		ppbv	1	12/19/2002
Tetrachloroethene	13	0.50		ppbv	1	12/19/2002
Tetrahydrofuran	< 1.0	1.0		ppbv	1	12/19/2002
Toluene	1.1	0.50		ppbv	1	12/19/2002
trans-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
trans-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	12/19/2002
Trichloroethene	1.2	0.50		ppbv	1	12/19/2002
Trichlorofluoromethane(F-11)	< 0.50	0.50		ppbv	1	12/19/2002
Trichlorotrifluoroethane(F-113)	< 0.50	0.50		ppbv	1	12/19/2002
Vinyl acetate	< 0.50	0.50		ppbv	1	12/19/2002
Vinyl chloride	< 0.50	0.50		ppbv	1	12/19/2002
Surr: 4-Bromofluorobenzene	97.4	70-130		%REC	1	12/19/2002

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

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Precision Analytical Laboratories

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Precision Analytical Laboratories

Date: 27-Dec-02

CLIENT: Mactec
Lab Order: 02120918
Project: South Mesa WQARF/70211-2-0064-2.55
Lab ID: 02120918-02A

Client Sample ID: 2
Tag Number:
Collection Date: 12/17/2002 9:17:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: JG		
1,1,1-Trichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1,2,2-Tetrachloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1,2-Trichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1-Dichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
1,2,4-Trichlorobenzene	< 1.0	1.0		ppbv	1	12/19/2002
1,2,4-Trimethylbenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dibromoethane	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichloropropane	< 0.50	0.50		ppbv	1	12/19/2002
1,3,5-Trimethylbenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,3-Butadiene	< 0.50	0.50		ppbv	1	12/19/2002
1,3-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,4-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
2,2,4-Trimethylpentane	< 0.50	0.50		ppbv	1	12/19/2002
2-Butanone (MEK)	1.5	1.0		ppbv	1	12/19/2002
2-Hexanone	< 1.0	1.0		ppbv	1	12/19/2002
2-Propanol	2.4	1.0		ppbv	1	12/19/2002
4-Ethyltoluene	< 0.50	0.50		ppbv	1	12/19/2002
4-Methyl-2-pentanone	< 1.0	1.0		ppbv	1	12/19/2002
Acetone	19	5.0		ppbv	1	12/19/2002
Allyl chloride	< 0.50	0.50		ppbv	1	12/19/2002
Benzene	0.57	0.50		ppbv	1	12/19/2002
Benzyl chloride	< 2.0	2.0		ppbv	1	12/19/2002
Bromodichloromethane	< 0.50	0.50		ppbv	1	12/19/2002
Bromoethene(Vinyl Bromide)	< 0.50	0.50		ppbv	1	12/19/2002
Bromoform	< 0.50	0.50		ppbv	1	12/19/2002
Bromomethane	< 0.50	0.50		ppbv	1	12/19/2002
Carbon disulfide	0.51	0.50		ppbv	1	12/19/2002
Carbon tetrachloride	< 0.50	0.50		ppbv	1	12/19/2002
Chlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
Chloroethane	< 0.50	0.50		ppbv	1	12/19/2002
Chloroform	< 0.50	0.50		ppbv	1	12/19/2002
Chloromethane	0.60	0.50		ppbv	1	12/19/2002
cis-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
cis-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	12/19/2002
Cyclohexane	< 0.50	0.50		ppbv	1	12/19/2002
Dibromochloromethane	< 0.50	0.50		ppbv	1	12/19/2002
Dichlorodifluoromethane(F-12)	0.64	0.50		ppbv	1	12/19/2002

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories

a division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 27-Dec-02

CLIENT: Mactec
Lab Order: 02120918
Project: South Mesa WQARF/70211-2-0064-2.55
Lab ID: 02120918-02A

Client Sample ID: 2
Tag Number:
Collection Date: 12/17/2002 9:17:00 AM
Matrix: AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: JG		
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50		ppbv	1	12/19/2002
Ethyl Acetate	0.57	0.50		ppbv	1	12/19/2002
Ethylbenzene	1.4	0.50		ppbv	1	12/19/2002
Heptane	< 0.50	0.50		ppbv	1	12/19/2002
Hexachlorobutadiene	< 1.0	1.0		ppbv	1	12/19/2002
Hexane	0.65	0.50		ppbv	1	12/19/2002
m&p-Xylene	5.6	1.0		ppbv	1	12/19/2002
Methyl tert-butyl ether	< 1.0	1.0		ppbv	1	12/19/2002
Methylene chloride	< 0.50	0.50		ppbv	1	12/19/2002
o-Xylene	2.0	0.50		ppbv	1	12/19/2002
Propene (Propylene)	< 0.50	0.50		ppbv	1	12/19/2002
Styrene	< 0.50	0.50		ppbv	1	12/19/2002
Tetrachloroethene	180	5.0	D2	ppbv	10	12/19/2002
Tetrahydrofuran	< 1.0	1.0		ppbv	1	12/19/2002
Toluene	2.3	0.50		ppbv	1	12/19/2002
trans-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
trans-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	12/19/2002
Trichloroethene	4.0	0.50		ppbv	1	12/19/2002
Trichlorofluoromethane(F-11)	< 0.50	0.50		ppbv	1	12/19/2002
Trichlorotrifluoroethane(F-113)	< 0.50	0.50		ppbv	1	12/19/2002
Vinyl acetate	< 0.50	0.50		ppbv	1	12/19/2002
Vinyl chloride	< 0.50	0.50		ppbv	1	12/19/2002
Surr: 4-Bromofluorobenzene	99.1	70-130		%REC	1	12/19/2002

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories

Date: 27-Dec-02

CLIENT:	Mactec	Client Sample ID:	3
Lab Order:	02120918	Tag Number:	
Project:	South Mesa WQARF/70211-2-0064-2.55	Collection Date:	12/17/2002 9:19:00 AM
Lab ID:	02120918-03A	Matrix:	AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: JG		
1,1,1-Trichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1,2,2-Tetrachloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1,2-Trichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1-Dichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
1,2,4-Trichlorobenzene	< 1.0	1.0		ppbv	1	12/19/2002
1,2,4-Trimethylbenzene	0.64	0.50		ppbv	1	12/19/2002
1,2-Dibromoethane	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichloropropane	< 0.50	0.50		ppbv	1	12/19/2002
1,3,5-Trimethylbenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,3-Butadiene	< 0.50	0.50		ppbv	1	12/19/2002
1,3-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,4-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
2,2,4-Trimethylpentane	1.0	0.50		ppbv	1	12/19/2002
2-Butanone (MEK)	1.0	1.0		ppbv	1	12/19/2002
2-Hexanone	< 1.0	1.0		ppbv	1	12/19/2002
2-Propanol	3.1	1.0		ppbv	1	12/19/2002
4-Ethyltoluene	< 0.50	0.50		ppbv	1	12/19/2002
4-Methyl-2-pentanone	< 1.0	1.0		ppbv	1	12/19/2002
Acetone	13	5.0		ppbv	1	12/19/2002
Allyl chloride	< 0.50	0.50		ppbv	1	12/19/2002
Benzene	1.1	0.50		ppbv	1	12/19/2002
Benzyl chloride	< 2.0	2.0		ppbv	1	12/19/2002
Bromodichloromethane	< 0.50	0.50		ppbv	1	12/19/2002
Bromoethene(Vinyl Bromide)	< 0.50	0.50		ppbv	1	12/19/2002
Bromoform	< 0.50	0.50		ppbv	1	12/19/2002
Bromomethane	< 0.50	0.50		ppbv	1	12/19/2002
Carbon disulfide	1.5	0.50		ppbv	1	12/19/2002
Carbon tetrachloride	< 0.50	0.50		ppbv	1	12/19/2002
Chlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
Chloroethane	< 0.50	0.50		ppbv	1	12/19/2002
Chloroform	< 0.50	0.50		ppbv	1	12/19/2002
Chloromethane	0.54	0.50		ppbv	1	12/19/2002
cis-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
cis-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	12/19/2002
Cyclohexane	< 0.50	0.50		ppbv	1	12/19/2002
Dibromochloromethane	< 0.50	0.50		ppbv	1	12/19/2002
Dichlorodifluoromethane(F-12)	0.62	0.50		ppbv	1	12/19/2002

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

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Precision Analytical Laboratories

a division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories

Date: 27-Dec-02

CLIENT:	Mactec	Client Sample ID:	3
Lab Order:	02120918	Tag Number:	
Project:	South Mesa WQARF/70211-2-0064-2.55	Collection Date:	12/17/2002 9:19:00 AM
Lab ID:	02120918-03A	Matrix:	AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15				Analyst: JG
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50		ppbv	1	12/19/2002
Ethyl Acetate	< 0.50	0.50		ppbv	1	12/19/2002
Ethylbenzene	0.65	0.50		ppbv	1	12/19/2002
Heptane	1.2	0.50		ppbv	1	12/19/2002
Hexachlorobutadiene	< 1.0	1.0		ppbv	1	12/19/2002
Hexane	0.82	0.50		ppbv	1	12/19/2002
m&p-Xylene	2.4	1.0		ppbv	1	12/19/2002
Methyl tert-butyl ether	< 1.0	1.0		ppbv	1	12/19/2002
Methylene chloride	< 0.50	0.50		ppbv	1	12/19/2002
o-Xylene	0.87	0.50		ppbv	1	12/19/2002
Propene (Propylene)	< 0.50	0.50		ppbv	1	12/19/2002
Styrene	< 0.50	0.50		ppbv	1	12/19/2002
Tetrachloroethene	17	0.50		ppbv	1	12/19/2002
Tetrahydrofuran	< 1.0	1.0		ppbv	1	12/19/2002
Toluene	3.2	0.50		ppbv	1	12/19/2002
trans-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
trans-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	12/19/2002
Trichloroethene	0.78	0.50		ppbv	1	12/19/2002
Trichlorofluoromethane(F-11)	< 0.50	0.50		ppbv	1	12/19/2002
Trichlorotrifluoroethane(F-113)	< 0.50	0.50		ppbv	1	12/19/2002
Vinyl acetate	< 0.50	0.50		ppbv	1	12/19/2002
Vinyl chloride	< 0.50	0.50		ppbv	1	12/19/2002
Surr: 4-Bromofluorobenzene	98.0	70-130		%REC	1	12/19/2002

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

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Precision Analytical Laboratories

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Precision Analytical Laboratories

Date: 27-Dec-02

CLIENT:	Mactec	Client Sample ID:	6
Lab Order:	02120918	Tag Number:	
Project:	South Mesa WQARF/70211-2-0064-2.55	Collection Date:	12/17/2002 9:05:00 AM
Lab ID:	02120918-04A	Matrix:	AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: JG		
1,1,1-Trichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1,2,2-Tetrachloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1,2-Trichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1-Dichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
1,2,4-Trichlorobenzene	< 1.0	1.0		ppbv	1	12/19/2002
1,2,4-Trimethylbenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dibromoethane	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichloropropane	< 0.50	0.50		ppbv	1	12/19/2002
1,3,5-Trimethylbenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,3-Butadiene	< 0.50	0.50		ppbv	1	12/19/2002
1,3-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,4-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
2,2,4-Trimethylpentane	< 0.50	0.50		ppbv	1	12/19/2002
2-Butanone (MEK)	< 1.0	1.0		ppbv	1	12/19/2002
2-Hexanone	< 1.0	1.0		ppbv	1	12/19/2002
2-Propanol	< 1.0	1.0		ppbv	1	12/19/2002
4-Ethyltoluene	< 0.50	0.50		ppbv	1	12/19/2002
4-Methyl-2-pentanone	< 1.0	1.0		ppbv	1	12/19/2002
Acetone	26	5.0		ppbv	1	12/19/2002
Allyl chloride	< 0.50	0.50		ppbv	1	12/19/2002
Benzene	< 0.50	0.50		ppbv	1	12/19/2002
Benzyl chloride	< 2.0	2.0		ppbv	1	12/19/2002
Bromodichloromethane	< 0.50	0.50		ppbv	1	12/19/2002
Bromoethene(Vinyl Bromide)	< 0.50	0.50		ppbv	1	12/19/2002
Bromoform	2.4	0.50		ppbv	1	12/19/2002
Bromomethane	< 0.50	0.50		ppbv	1	12/19/2002
Carbon disulfide	< 0.50	0.50		ppbv	1	12/19/2002
Carbon tetrachloride	< 0.50	0.50		ppbv	1	12/19/2002
Chlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
Chloroethane	< 0.50	0.50		ppbv	1	12/19/2002
Chloroform	< 0.50	0.50		ppbv	1	12/19/2002
Chloromethane	0.50	0.50		ppbv	1	12/19/2002
cis-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
cis-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	12/19/2002
Cyclohexane	< 0.50	0.50		ppbv	1	12/19/2002
Dibromochloromethane	< 0.50	0.50		ppbv	1	12/19/2002
Dichlorodifluoromethane(F-12)	0.62	0.50		ppbv	1	12/19/2002

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

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Precision Analytical Laboratories

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Precision Analytical Laboratories

Date: 27-Dec-02

CLIENT: Mactec **Client Sample ID:** 6
Lab Order: 02120918 **Tag Number:**
Project: South Mesa WQARF/70211-2-0064-2.55 **Collection Date:** 12/17/2002 9:05:00 AM
Lab ID: 02120918-04A **Matrix:** AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: JG		
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50		ppbv	1	12/19/2002
Ethyl Acetate	< 0.50	0.50		ppbv	1	12/19/2002
Ethylbenzene	< 0.50	0.50		ppbv	1	12/19/2002
Heptane	< 0.50	0.50		ppbv	1	12/19/2002
Hexachlorobutadiene	< 1.0	1.0		ppbv	1	12/19/2002
Hexane	< 0.50	0.50		ppbv	1	12/19/2002
m&p-Xylene	< 1.0	1.0		ppbv	1	12/19/2002
Methyl tert-butyl ether	< 1.0	1.0		ppbv	1	12/19/2002
Methylene chloride	< 0.50	0.50		ppbv	1	12/19/2002
o-Xylene	< 0.50	0.50		ppbv	1	12/19/2002
Propene (Propylene)	< 0.50	0.50		ppbv	1	12/19/2002
Styrene	< 0.50	0.50		ppbv	1	12/19/2002
Tetrachloroethene	7.0	0.50		ppbv	1	12/19/2002
Tetrahydrofuran	< 1.0	1.0		ppbv	1	12/19/2002
Toluene	1.3	0.50		ppbv	1	12/19/2002
trans-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
trans-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	12/19/2002
Trichloroethene	0.61	0.50		ppbv	1	12/19/2002
Trichlorofluoromethane(F-11)	< 0.50	0.50		ppbv	1	12/19/2002
Trichlorotrifluoroethane(F-113)	< 0.50	0.50		ppbv	1	12/19/2002
Vinyl acetate	< 0.50	0.50		ppbv	1	12/19/2002
Vinyl chloride	< 0.50	0.50		ppbv	1	12/19/2002
Surr: 4-Bromofluorobenzene	97.2	70-130		%REC	1	12/19/2002

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories

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Precision Analytical Laboratories

Date: 27-Dec-02

CLIENT:	Mactec	Client Sample ID:	7
Lab Order:	02120918	Tag Number:	
Project:	South Mesa WQARF/70211-2-0064-2.55	Collection Date:	12/17/2002 8:59:00 AM
Lab ID:	02120918-05A	Matrix:	AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: JG		
1,1,1-Trichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1,2,2-Tetrachloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1,2-Trichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1-Dichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,1-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
1,2,4-Trichlorobenzene	< 1.0	1.0		ppbv	1	12/19/2002
1,2,4-Trimethylbenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dibromoethane	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichloroethane	< 0.50	0.50		ppbv	1	12/19/2002
1,2-Dichloropropane	< 0.50	0.50		ppbv	1	12/19/2002
1,3,5-Trimethylbenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,3-Butadiene	< 0.50	0.50		ppbv	1	12/19/2002
1,3-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
1,4-Dichlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
2,2,4-Trimethylpentane	< 0.50	0.50		ppbv	1	12/19/2002
2-Butanone (MEK)	< 1.0	1.0		ppbv	1	12/19/2002
2-Hexanone	< 1.0	1.0		ppbv	1	12/19/2002
2-Propanol	< 1.0	1.0		ppbv	1	12/19/2002
4-Ethyltoluene	< 0.50	0.50		ppbv	1	12/19/2002
4-Methyl-2-pentanone	< 1.0	1.0		ppbv	1	12/19/2002
Acetone	< 5.0	5.0		ppbv	1	12/19/2002
Allyl chloride	< 0.50	0.50		ppbv	1	12/19/2002
Benzene	< 0.50	0.50		ppbv	1	12/19/2002
Benzyl chloride	< 2.0	2.0		ppbv	1	12/19/2002
Bromodichloromethane	< 0.50	0.50		ppbv	1	12/19/2002
Bromoethene(Vinyl Bromide)	< 0.50	0.50		ppbv	1	12/19/2002
Bromoform	2.6	0.50		ppbv	1	12/19/2002
Bromomethane	< 0.50	0.50		ppbv	1	12/19/2002
Carbon disulfide	< 0.50	0.50		ppbv	1	12/19/2002
Carbon tetrachloride	< 0.50	0.50		ppbv	1	12/19/2002
Chlorobenzene	< 0.50	0.50		ppbv	1	12/19/2002
Chloroethane	< 0.50	0.50		ppbv	1	12/19/2002
Chloroform	< 0.50	0.50		ppbv	1	12/19/2002
Chloromethane	0.52	0.50		ppbv	1	12/19/2002
cis-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
cis-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	12/19/2002
Cyclohexane	< 0.50	0.50		ppbv	1	12/19/2002
Dibromochloromethane	< 0.50	0.50		ppbv	1	12/19/2002
Dichlorodifluoromethane(F-12)	0.65	0.50		ppbv	1	12/19/2002

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above, quantitation range

* - Value exceeds Maximum Contaminant Level

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Precision Analytical Laboratories

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Precision Analytical Laboratories

Date: 27-Dec-02

CLIENT:	Mactec	Client Sample ID:	7
Lab Order:	02120918	Tag Number:	
Project:	South Mesa WQARF/70211-2-0064-2.55	Collection Date:	12/17/2002 8:59:00 AM
Lab ID:	02120918-05A	Matrix:	AIR

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS IN AIR		TO15		Analyst: JG		
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50		ppbv	1	12/19/2002
Ethyl Acetate	< 0.50	0.50		ppbv	1	12/19/2002
Ethylbenzene	< 0.50	0.50		ppbv	1	12/19/2002
Heptane	< 0.50	0.50		ppbv	1	12/19/2002
Hexachlorobutadiene	< 1.0	1.0		ppbv	1	12/19/2002
Hexane	< 0.50	0.50		ppbv	1	12/19/2002
m&p-Xylene	< 1.0	1.0		ppbv	1	12/19/2002
Methyl tert-butyl ether	< 1.0	1.0		ppbv	1	12/19/2002
Methylene chloride	< 0.50	0.50		ppbv	1	12/19/2002
o-Xylene	< 0.50	0.50		ppbv	1	12/19/2002
Propene (Propylene)	< 0.50	0.50		ppbv	1	12/19/2002
Styrene	< 0.50	0.50		ppbv	1	12/19/2002
Tetrachloroethene	< 0.50	0.50		ppbv	1	12/19/2002
Tetrahydrofuran	< 1.0	1.0		ppbv	1	12/19/2002
Toluene	0.86	0.50		ppbv	1	12/19/2002
trans-1,2-Dichloroethene	< 0.50	0.50		ppbv	1	12/19/2002
trans-1,3-Dichloropropene	< 0.50	0.50		ppbv	1	12/19/2002
Trichloroethene	0.67	0.50		ppbv	1	12/19/2002
Trichlorofluoromethane(F-11)	< 0.50	0.50		ppbv	1	12/19/2002
Trichlorotrifluoroethane(F-113)	< 0.50	0.50		ppbv	1	12/19/2002
Vinyl acetate	< 0.50	0.50		ppbv	1	12/19/2002
Vinyl chloride	< 0.50	0.50		ppbv	1	12/19/2002
Surr: 4-Bromofluorobenzene	97.6	70-130		%REC	1	12/19/2002

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

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Date: 27-Dec-02

CLIENT: Mactec

Work Order: 02120918

Project: South Mesa WQARF/70211-2-0064-2.55

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15

Sample ID	MB-R30598	Sample Type: MBLK	TestCode: TO15	Units: ppbv	Prep Date:	Run ID: MS05_021218A					
Client ID: ZZZZZ		Batch ID: R30598	TestNo: TO15		Analysis Date: 12/18/2002	SeqNo: 341812					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	< 0.50	0.50									
1,1,2,2-Tetrachloroethane	< 0.50	0.50									
1,1,2-Trichloroethane	< 0.50	0.50									
1,1-Dichloroethane	< 0.50	0.50									
1,1-Dichloroethene	< 0.50	0.50									
1,2,4-Trichlorobenzene	< 1.0	1.0									
1,2,4-Trimethylbenzene	< 0.50	0.50									
1,2-Dibromoethane	< 0.50	0.50									
1,2-Dichlorobenzene	< 0.50	0.50									
1,2-Dichloroethane	< 0.50	0.50									
1,2-Dichloropropane	< 0.50	0.50									
1,3,5-Trimethylbenzene	< 0.50	0.50									
1,3-Butadiene	< 0.50	0.50									
1,3-Dichlorobenzene	< 0.50	0.50									
1,4-Dichlorobenzene	< 0.50	0.50									
2,2,4-Trimethylpentane	< 0.50	0.50									
2-Butanone (MEK)	< 1.0	1.0									
2-Hexanone	< 1.0	1.0									
2-Propanol	< 1.0	1.0									
4-Ethyltoluene	< 0.50	0.50									
4-Methyl-2-pentanone	< 1.0	1.0									
Acetone	< 5.0	5.0									
Allyl chloride	< 0.50	0.50									
Benzene	< 0.50	0.50									
Benzyl chloride	< 2.0	2.0									
Bromodichloromethane	< 0.50	0.50									
Bromoethene(Vinyl Bromide)	< 0.50	0.50									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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Corporate Address 1501 W. Knudsen Phoenix, AZ 85027 Phone: 623-780-4800 Toll Free: 800-651-4802 Fax: 623-780-7695 www.aerotechlabs.com
Main Laboratory 1725 W. 17th Street Tempe, AZ 85281 Phone: 480-967-1310 Toll Free: 866-772-5227 Fax: 480-967-1019 www.palabs.com
Tucson Facility 4455 S. Park Ave. Ste. 110 Tucson, AZ 85714 Phone: 520-807-3801 Fax: 520-807-3803



Precision Analytical Laboratories

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CLIENT: Mactec

Work Order: 02120918

Project: South Mesa WQARF/70211-2-0064-2.55

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15

Sample ID	MB-R30598	SampType: MBLK	TestCode: TO15	Units: ppbv	Prep Date:	Run ID: MS05_021218A					
Client ID:	ZZZZZ	Batch ID: R30598	TestNo: TO15		Analysis Date: 12/18/2002	SeqNo: 341812					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	< 0.50	0.50									
Bromomethane	< 0.50	0.50									
Carbon disulfide	< 0.50	0.50									
Carbon tetrachloride	< 0.50	0.50									
Chlorobenzene	< 0.50	0.50									
Chloroethane	< 0.50	0.50									
Chloroform	< 0.50	0.50									
Chloromethane	< 0.50	0.50									
cis-1,2-Dichloroethene	< 0.50	0.50									
cis-1,3-Dichloropropene	< 0.50	0.50									
Cyclohexane	< 0.50	0.50									
Dibromochloromethane	< 0.50	0.50									
Dichlorodifluoromethane(F-12)	< 0.50	0.50									
Dichlorotetrafluoroethane(F-114)	< 0.50	0.50									
Ethyl Acetate	< 0.50	0.50									
Ethylbenzene	< 0.50	0.50									
Heptane	< 0.50	0.50									
Hexachlorobutadiene	< 1.0	1.0									
Hexane	< 0.50	0.50									
m&p-Xylene	< 1.0	1.0									
Methyl tert-butyl ether	< 1.0	1.0									
Methylene chloride	< 0.50	0.50									
o-Xylene	< 0.50	0.50									
Propene (Propylene)	< 0.50	0.50									
Styrene	< 0.50	0.50									
Tetrachloroethene	< 0.50	0.50									
Tetrahydrofuran	< 1.0	1.0									
Toluene	< 0.50	0.50									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

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■ Corporate Address 1501 W. Knudsen Phoenix, AZ 85027 Phone: 623-780-4800 Toll Free: 800-651-4802 Fax: 623-780-7695 www.aerotechlabs.com
■ Main Laboratory 1725 W. 17th Street Tempe, AZ 85281 Phone: 480-967-1310 Toll Free: 866-772-5227 Fax: 480-967-1019 www.palabs.com
■ Tucson Facility 4455 S. Park Ave. Ste. 110 Tucson, AZ 85714 Phone: 520-807-3801 Fax: 520-807-3803



Precision Analytical Laboratories

a division of Aerotech Laboratories, Inc.

CLIENT: Mactec

Work Order: 02120918

Project: South Mesa WQARE/70211-2-0064-2.55

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15

Sample ID	MB-R30598	SampType: MBLK	TestCode: TO15	Units: ppbv	Prep Date:	Run ID: MS05_021218A					
Client ID:	ZZZZZ	Batch ID: R30598	TestNo: TO15		Analysis Date: 12/18/2002	SeqNo: 341812					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

trans-1,2-Dichloroethene	< 0.50										
trans-1,3-Dichloropropene	< 0.50										
Trichloroethene	< 0.50										
Trichlorofluoromethane(F-11)	< 0.50										
Trichlorotrifluoroethane(F-113)	< 0.50										
Vinyl acetate	< 0.50										
Vinyl chloride	< 0.50										
Surr: 4-Bromofluorobenzene	9.6		10	0	96	70	130	0			0

Sample ID	LCS-R30598	SampType: LCS	TestCode: TO15	Units: ppbv	Prep Date:	Run ID: MS05_021218A					
Client ID:	ZZZZZ	Batch ID: R30598	TestNo: TO15		Analysis Date: 12/18/2002	SeqNo: 341817					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	10.67	0.50	10	0	107	65	135	0			0
1,1,2,2-Tetrachloroethane	10.58	0.50	10	0	106	65	135	0			0
1,1,2-Trichloroethane	10.81	0.50	10	0	108	65	135	0			0
1,1-Dichloroethane	10.74	0.50	10	0	107	65	135	0			0
1,1-Dichloroethene	10.25	0.50	10	0	103	65	135	0			0
1,2,4-Trichlorobenzene	10.05	1.0	10	0	100	65	135	0			0
1,2,4-Trimethylbenzene	12.16	0.50	10	0	122	65	135	0			0
1,2-Dibromoethane	11.17	0.50	10	0	112	65	135	0			0
1,2-Dichlorobenzene	10.94	0.50	10	0	109	65	135	0			0
1,2-Dichloroethane	10.84	0.50	10	0	108	65	135	0			0
1,2-Dichloropropane	11.01	0.50	10	0	110	65	135	0			0
1,3,5-Trimethylbenzene	12.58	0.50	10	0	126	65	135	0			0
1,3-Butadiene	10.01	0.50	10	0	100	65	135	0			0
1,3-Dichlorobenzene	11.1	0.50	10	0	111	65	135	0			0
1,4-Dichlorobenzene	11.33	0.50	10	0	113	65	135	0			0

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank



Precision Analytical Laboratories

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CLIENT: Mactec

Work Order: 02120918

Project: South Mesa WQARF/70211-2-0064-2.55

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15

Sample ID	LCS-R30598	SampType: LCS	TestCode: TO15	Units: ppbv	Prep Date:	Run ID: MS05_021218A					
Client ID:	ZZZZZ	Batch ID: R30598	TestNo: TO15		Analysis Date: 12/18/2002	SeqNo: 341817					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2,4-Trimethylpentane	11.47	0.50	10	0	115	65	135	0	0	0	
2-Butanone (MEK)	10.63	1.0	10	0	106	65	135	0	0	0	
2-Hexanone	12.21	1.0	10	0	122	65	135	0	0	0	
2-Propanol	9.04	1.0	10	0	90.4	65	135	0	0	0	
4-Ethyltoluene	12.54	0.50	10	0	125	65	135	0	0	0	
4-Methyl-2-pentanone	11.98	1.0	10	0	120	65	135	0	0	0	
Acetone	10.17	5.0	10	0	102	65	135	0	0	0	
Allyl chloride	11.36	0.50	10	0	114	65	135	0	0	0	
Benzene	11.54	0.50	10	0	115	65	135	0	0	0	
Benzyl chloride	11.52	2.0	10	0	115	65	135	0	0	0	
Bromodichloromethane	10.69	0.50	10	0	107	65	135	0	0	0	
Bromoethene(Vinyl Bromide)	10.05	0.50	10	0	100	65	135	0	0	0	
Bromoform	10.65	0.50	10	0	106	65	135	0	0	0	
Bromomethane	10.21	0.50	10	0	102	65	135	0	0	0	
Carbon disulfide	9.77	0.50	10	0	97.7	65	135	0	0	0	
Carbon tetrachloride	10.82	0.50	10	0	108	65	135	0	0	0	
Chlorobenzene	10.69	0.50	10	0	107	65	135	0	0	0	
Chloroethane	10.07	0.50	10	0	101	65	135	0	0	0	
Chloroform	10.66	0.50	10	0	107	65	135	0	0	0	
Chloromethane	9.88	0.50	10	0	98.8	65	135	0	0	0	
cis-1,2-Dichloroethene	11.41	0.50	10	0	114	65	135	0	0	0	
cis-1,3-Dichloropropene	12.15	0.50	10	0	122	65	135	0	0	0	
Cyclohexane	12.53	0.50	10	0	125	65	135	0	0	0	
Dibromochloromethane	10.66	0.50	10	0	107	65	135	0	0	0	
Dichlorodifluoromethane(F-12)	10.14	0.50	10	0	101	65	135	0	0	0	
Dichlorotetrafluoroethane(F-114)	10.1	0.50	10	0	101	65	135	0	0	0	
Ethyl Acetate	11.49	0.50	10	0	115	65	135	0	0	0	
Ethylbenzene	12.43	0.50	10	0	124	65	135	0	0	0	

Qualifiers:

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Page 4 of 8

Corporate Address 1501 W. Knudsen Phoenix, AZ 85027 Phone: 623-780-4800 Toll Free: 800-651-4802 Fax: 623-780-7695 www.aerotechlabs.com

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Tucson Facility 4455 S. Park Ave. Ste. 110 Tucson, AZ 85714 Phone: 520-807-3801 Fax: 520-807-3803



Precision Analytical Laboratories

a division of Aerotech Laboratories, Inc.

CLIENT: Mactec

Work Order: 02120918

Project: South Mesa WQARE/70211-2-0064-2.55

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15

Sample ID	LCS-R30598	SampType: LCS	TestCode: TO15	Units: ppbv	Prep Date:	Run ID: MS05_021218A					
Client ID:	ZZZZZ	Batch ID: R30598	TestNo: TO15		Analysis Date: 12/18/2002	SeqNo: 341817					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Heptane	11.34	0.50	10	0	113	65	135	0	0		
Hexachlorobutadiene	9.44	1.0	10	0	94.4	65	135	0	0		
Hexane	12.29	0.50	10	0	123	65	135	0	0		
m&p-Xylene	24.55	1.0	20	0	123	65	135	0	0		
Methyl tert-butyl ether	11.25	1.0	10	0	112	65	135	0	0		
Methylene chloride	9.19	0.50	10	0	91.9	65	135	0	0		
o-Xylene	12.35	0.50	10	0	124	65	135	0	0		
Propene (Propylene)	10.29	0.50	10	0	103	65	135	0	0		
Styrene	10.12	0.50	10	0	101	65	135	0	0		
Tetrachloroethene	11.23	0.50	10	0	112	65	135	0	0		
Tetrahydrofuran	11.8	1.0	10	0	118	65	135	0	0		
Toluene	12.55	0.50	10	0	126	65	135	0	0		
trans-1,2-Dichloroethene	10.88	0.50	10	0	109	65	135	0	0		
trans-1,3-Dichloropropene	12.12	0.50	10	0	121	65	135	0	0		
Trichloroethene	11.06	0.50	10	0	111	65	135	0	0		
Trichlorofluoromethane(F-11)	10.33	0.50	10	0	103	65	135	0	0		
Trichlorotrifluoroethane(F-113)	10.33	0.50	10	0	103	65	135	0	0		
Vinyl acetate	12.14	0.50	10	0	121	65	135	0	0		
Vinyl chloride	10.02	0.50	10	0	100	65	135	0	0		
Surr: 4-Bromofluorobenzene	10.17	0.50	10	0	102	70	130	0	0		

Sample ID	LCSD-R30598	SampType: LCSD	TestCode: TO15		Units: ppbv	Prep Date:		Run ID: MS05_021218A				
Client ID: ZZZZZ		Batch ID: R30598	TestNo: TO15			Analysis Date: 12/19/2002		SeqNo: 341818				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane		10.66	0.50	10	0	107	65	135	10.67	0.0938		25
1,1,2,2-Tetrachloroethane		10.64	0.50	10	0	106	65	135	10.58	0.566		25
1,1,2-Trichloroethane		10.91	0.50	10	0	109	65	135	10.81	0.921		25

Qualifiers: ND - Not Detected at the Reporting Limit
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CLIENT: Mactec

Work Order: 02120918

Project: South Mesa WQARF/70211-2-0064-2.55

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15

Sample ID	LCSD-R30598	SampType: LCSD	TestCode: TO15	Units: ppbv	Prep Date:	Run ID: MS05_021218A					
Client ID: ZZZZZ	Batch ID: R30598		TestNo: TO15		Analysis Date: 12/19/2002	SeqNo: 341818					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	10.75	0.50	10	0	108	65	135	10.74	0.0931	25	25
1,1-Dichloroethene	10.14	0.50	10	0	101	65	135	10.25	1.08	25	25
1,2,4-Trichlorobenzene	10.09	1.0	10	0	101	65	135	10.05	0.397	25	25
1,2,4-Trimethylbenzene	12.25	0.50	10	0	122	65	135	12.16	0.737	25	25
1,2-Dibromoethane	11.28	0.50	10	0	113	65	135	11.17	0.980	25	25
1,2-Dichlorobenzene	11.02	0.50	10	0	110	65	135	10.94	0.729	25	25
1,2-Dichloroethane	10.81	0.50	10	0	108	65	135	10.84	0.277	25	25
1,2-Dichloropropane	11.02	0.50	10	0	110	65	135	11.01	0.0908	25	25
1,3,5-Trimethylbenzene	12.63	0.50	10	0	126	65	135	12.58	0.397	25	25
1,3-Butadiene	9.93	0.50	10	0	99.3	65	135	10.01	0.802	25	25
1,3-Dichlorobenzene	11.22	0.50	10	0	112	65	135	11.1	1.08	25	25
1,4-Dichlorobenzene	11.35	0.50	10	0	114	65	135	11.33	0.176	25	25
2,2,4-Trimethylpentane	11.54	0.50	10	0	115	65	135	11.47	0.608	25	25
2-Butanone (MEK)	10.72	1.0	10	0	107	65	135	10.63	0.843	25	25
2-Hexanone	12.4	1.0	10	0	124	65	135	12.21	1.54	25	25
2-Propanol	9.18	1.0	10	0	91.8	65	135	9.04	1.54	25	25
4-Ethyltoluene	12.59	0.50	10	0	126	65	135	12.54	0.398	25	25
4-Methyl-2-pentanone	12.06	1.0	10	0	121	65	135	11.98	0.666	25	25
Acetone	10.41	5.0	10	0	104	65	135	10.17	2.33	25	25
Allyl chloride	11.45	0.50	10	0	114	65	135	11.36	0.789	25	25
Benzene	11.65	0.50	10	0	116	65	135	11.54	0.949	25	25
Benzyl chloride	11.58	2.0	10	0	116	65	135	11.52	0.519	25	25
Bromodichloromethane	10.84	0.50	10	0	108	65	135	10.69	1.39	25	25
Bromoethene(Vinyl Bromide)	10.03	0.50	10	0	100	65	135	10.05	0.199	25	25
Bromoform	10.72	0.50	10	0	107	65	135	10.65	0.655	25	25
Bromomethane	10.16	0.50	10	0	102	65	135	10.21	0.491	25	25
Carbon disulfide	9.78	0.50	10	0	97.8	65	135	9.77	0.102	25	25
Carbon tetrachloride	10.76	0.50	10	0	108	65	135	10.82	0.556	25	25

Qualifiers: ND - Not Detected at the Reporting Limit
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CLIENT: Mactec

Work Order: 02120918

Project: South Mesa WQARF/70211-2-0064-2.55

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15

Sample ID		LCSD-R30598	SampType: LCSD		TestCode: TO15		Units: ppbv		Prep Date:		Run ID: MS05_021218A	
Client ID:		ZZZZZ	Batch ID: R30598		TestNo: TO15				Analysis Date: 12/19/2002		SeqNo: 341818	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Chlorobenzene	10.75	0.50	10	0	108	65	135	10.69	0.560	25		
Chloroethane	10.1	0.50	10	0	101	65	135	10.07	0.297	25		
Chloroform	10.69	0.50	10	0	107	65	135	10.66	0.281	25		
Chloromethane	9.87	0.50	10	0	98.7	65	135	9.88	0.101	25		
cis-1,2-Dichloroethene	11.49	0.50	10	0	115	65	135	11.41	0.699	25		
cis-1,3-Dichloropropene	12.4	0.50	10	0	124	65	135	12.15	2.04	25		
Cyclohexane	12.36	0.50	10	0	124	65	135	12.53	1.37	25		
Dibromochloromethane	10.78	0.50	10	0	108	65	135	10.66	1.12	25		
Dichlorodifluoromethane(F-12)	10.1	0.50	10	0	101	65	135	10.14	0.395	25		
Dichlorotetrafluoroethane(F-114)	10.08	0.50	10	0	101	65	135	10.1	0.198	25		
Ethyl Acetate	11.57	0.50	10	0	116	65	135	11.49	0.694	25		
Ethylbenzene	12.48	0.50	10	0	125	65	135	12.43	0.401	25		
Heptane	11.45	0.50	10	0	114	65	135	11.34	0.965	25		
Hexachlorobutadiene	9.49	1.0	10	0	94.9	65	135	9.44	0.528	25		
Hexane	12.29	0.50	10	0	123	65	135	12.29	0	25		
m&p-Xylene	24.71	1.0	20	0	124	65	135	24.55	0.650	25		
Methyl tert-butyl ether	11.34	1.0	10	0	113	65	135	11.25	0.797	25		
Methylene chloride	9.12	0.50	10	0	91.2	65	135	9.19	0.765	25		
o-Xylene	12.39	0.50	10	0	124	65	135	12.35	0.323	25		
Propene (Propylene)	10.23	0.50	10	0	102	65	135	10.29	0.585	25		
Styrene	10.24	0.50	10	0	102	65	135	10.12	1.18	25		
Tetrachloroethene	11.28	0.50	10	0	113	65	135	11.23	0.444	25		
Tetrahydrofuran	11.78	1.0	10	0	118	65	135	11.8	0.170	25		
Toluene	12.65	0.50	10	0	126	65	135	12.55	0.794	25		
trans-1,2-Dichloroethene	10.83	0.50	10	0	108	65	135	10.88	0.461	25		
trans-1,3-Dichloropropene	12.24	0.50	10	0	122	65	135	12.12	0.985	25		
Trichloroethene	11.14	0.50	10	0	111	65	135	11.06	0.721	25		
Trichlorofluoromethane(F-11)	10.32	0.50	10	0	103	65	135	10.33	0.0969	25		

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CLIENT: Mactec

Work Order: 02120918

Project: South Mesa WQARF/70211-2-0064-2.55

ANALYTICAL QC SUMMARY REPORT

TestCode: TO15

Sample ID	LCSD-R30598	SampType:	LCSD	TestCode:	TO15	Units:	ppbv	Prep Date:	Run ID:	MS05_021218A		
Client ID:	ZZZZ	Batch ID:	R30598	TestNo:	TO15			Analysis Date:	12/19/2002	SeqNo:	341818	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorotrifluoroethane(F-113)		10.28	0.50	10	0	103	65	135	10.33	0.485	25	
Vinyl acetate		12.24	0.50	10	0	122	65	135	12.14	0.820	25	
Vinyl chloride		10.01	0.50	10	0	100	65	135	10.02	0.0999	25	
Surr: 4-Bromofluorobenzene		10.19	0.50	10	0	102	70	130	0	0		

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Sample Receipt Checklist

Client Name MACTECDate and Time Received 12/18/02 1350Lab Number 0-212-0918Received by DPChecklist completed by Chyrousa 12/18/02
Signature / DateContainers: Brass Sleeves _____
Glass Jars _____
Methanol Kits _____Matrix: AirCarrier name: DPShipping container/cooler in good condition? Yes X No _____ Not Present _____Custody seals intact on shipping container/cooler? Yes _____ No _____ Not Present XCustody seals intact on sample bottles? Yes _____ No _____ Not Present XChain of custody present? Yes X No _____Chain of custody signed when relinquished and received? Yes X No _____Chain of custody agrees with sample labels? Yes X No _____Samples in proper container/bottle? Yes X No _____Sample containers intact? Yes X No _____All samples received within holding time? Yes X No _____Water - VOA vials have zero headspace? No VOA submitted X Yes _____ No _____Number of sample bottles: 7 IL Summa Preserved: _____ Unpreserved: _____Temperature of samples? +7 flow regulators Ambient Blue Ice _____ Wet Ice _____ Not Present XWater - pH acceptable upon receipt? Yes _____ No _____ Not applicable XpH: Metals _____ 413.1 _____ Other _____
Cyanide _____ 418.1 _____
Nutrients _____ Sulfide _____

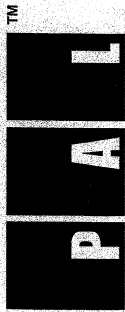
Adjusted? _____ Results? _____

Any No response must be detailed in the comments section below:

Person/Client contacted: _____ Date contacted: _____ Contacted by: _____

Comments: _____

Corrective Action: _____



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[] North Phoenix - 1501 W. Knudsen, Phoenix, AZ 85027 (623) 780-4700 FAX (623) 780-2934
[] Tucson - 4455 S. Park Ave, Suite 110, Tucson, AZ 85714 (520) 807-3801 FAX (520) 807-3803
www.palabs.com or call toll-free 1-866-7PALABS (1-866-772-5227)

Lab Number:

0-212-0918

Customer Number:		Page 1 of 1
Customer:	MACIEL Engineering & Consulting	
Address:	3630 E. Weir Avenue	
City, State, Zip:	Phoenix, AZ 85040	
Contact:	Jim Clarke	
Phone:	602-437-0250	Fax: 602-437-3675
E-Mail Address:	jclarke@maciel.com	
Turn Around Request		
Temperature	°C	
Custody Seals: Yes	No	
Custody Seals Intact: Yes	No	
Total # of Containers:		
Subject to scheduling and availability (surcharges apply)		
Turn Around Request		
24 Hours	48 Hours	
72 Hours		
5 working Day		
Standard 10 Working Days		

Sample Information

Lab #	Canister Serial #	Model	Sample Identification	Date	Time	Type	Final	Receipt	TO-14 List of TO-15	TO-15 list	PCE Only by TO-15	Analyses Requested
01	01382/0919	6, 1, 0.4	1	12/17/02	0911					X		
02	01383/0924	6, 1, 0.4	2	12/17/02	0917					X		
03	01377/0921	6, 1, 0.4	3	12/17/02	0919					X		
04	01381/0933	6, 1, 0.4	6	12/17/02	0905					X		
05	01376/0935	6, 1, 0.4	7	12/17/02	0859					X		
		6, 1, 0.4										
		6, 1, 0.4										
		6, 1, 0.4										
		6, 1, 0.4										
		6, 1, 0.4										
		6, 1, 0.4										

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
12/18/02	0800	Patrick Cook - MACIEL	Jim Clarke - MACIEL
12/18/02		Jim Clarke - MACIEL	
12/18/02	1:50		

All services are performed subject to the Terms & Conditions on the reverse side.

PALCOC01