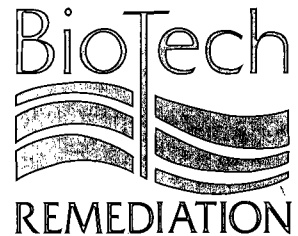


GW - 55

MONITORING REPORTS

DATE:

1999



March 7, 2000

710 E. 20th Street, Suite 400
Farmington, New Mexico 87401
Off: (505) 327-4965
Fax: (505) 564-3604

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MAR 31 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

State of New Mexico
Oil Conservation Division
Mr. William C. Olsen
Hydrologist
2040 S. Pacheco
Santa Fe, New Mexico 87505

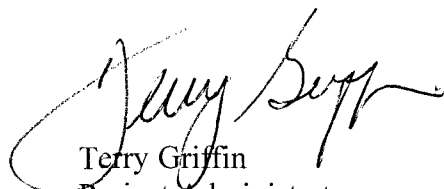
Re: 1999 Annual Groundwater Monitor Report Thriftway Refinery located at
626 Road 5500 in Bloomfield, New Mexico

Dear Mr. Olsen:

Enclosed is the 1999 Annual Monitoring Report for Thriftway Refinery located in Bloomfield, New Mexico. The report details the results of the quarterly sampling and monitoring events conducted at the site in April, June, September and December 1999.

BioTech submits this report on behalf of Thriftway Refining. If you have any questions or comments please call me at (505)- 327-4965.

Respectfully,


Terry Griffin
Project Administrator

TG/ks

CC: Mr. Denny Foust, OCD Aztec District Office

810\1999 Annual Monitoring Report

BioTECH REMEDIATION INC.

**1999 ANNUAL GROUNDWATER MONITOR REPORT
THRIFTWAY REFINERY
626 ROAD 5500
BLOOMFIELD, NEW MEXICO**

RECEIVED

MAR 31 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

prepared for the

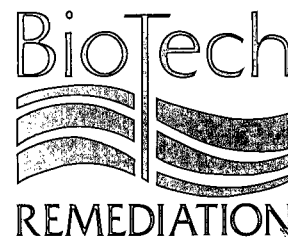
NEW MEXICO OIL CONSERVATION DIVISION

**Mr. Will Olsen, Project Manager, Santa Fe Office
and
Mr. Denny Foust, Aztec Office**

Book 1 of 3

March 7, 2000

**1999 ANNUAL GROUNDWATER MONITOR REPORT
THRIFTWAY REFINERY
626 ROAD 5500
BLOOMFIELD, NEW MEXICO**



710 E. 20th Street, Suite 400
Farmington, New Mexico 87401
Off: (505) 327-4965
Fax: (505) 564-3604

Prepared for the

NEW MEXICO OIL CONSERVATION DIVISION

Mr. Will Olsen, Project Manager, Santa Fe Office
and
Mr. Denny Foust, Aztec Office

Prepared by
BIOTECH REMEDIATION, INC.
710 E. 20th STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401

March 7, 2000

Prepared by:

A handwritten signature in dark ink, appearing to read "Ken Sinks", is written over a horizontal line.

Ken Sinks,
Project Scientist

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- Appendix Groundwater Monitoring Well Laboratory Analysis Reports, QA/QC Data, and Chain of Custody Records
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1.0 INTRODUCTION

In compliance with the Groundwater Discharge Plan GW-55 and pursuant to the requirements of the New Mexico Oil Conservation Division (NMOCD), BioTech Remediation, Inc. (BioTech), on behalf of the Thriftway Company, submits the following 1999 Annual Monitoring and Sampling report for the Thriftway Refinery, 626 County Road 5500, Bloomfield, New Mexico. This report summarizes the monitoring and sampling activities, groundwater measurement and laboratory analyses data compilation, and the phase-separated product recovery activities for groundwater monitor wells for 1999.

2.0 ANNUAL MONITORING AND SAMPLING ACTIVITIES

BioTech personnel completed the monitoring and sampling requirements for the four quarterly monitoring events in 1999. During each monitoring and sampling event, groundwater monitoring well measurements and sample collection strictly followed the procedures outlined below.

2.1 Groundwater Measurement

During each groundwater sampling event, depth to groundwater measurements were made in each monitor well. A Solonist Air/Water Interface Probe was used to measure from the survey point on the top of the well casing to the top of groundwater. Depth measurements were made in 1/100 of a foot and were recorded following the measurement of each monitor well. Groundwater measurement data is summarized and presented in Table 1, and groundwater contour plots based on the quarterly elevation data were constructed and are found in Figures 1A through 1D.

2.2 Groundwater Sample Collection and Analyses

Before groundwater samples were collected, each monitor well was purged of approximately three well volumes and then allowed a short recovery period in order for the groundwater to equilibrate within the well casing. Normally during groundwater purging, the temperature, pH, dissolved Oxygen (DO) and electrical conductivity were measured and recorded onto Water Sampling record forms. Due to field instrument problems several of these readings were not obtained. Each monitor well was considered to be successfully purged and ready for sample collection when the pH and conductivity readings stabilized and did not vary by more than ten percent over two purged well volumes. In the case where the field instruments did not function the sample was taken after three well volumes were purged. Following the use of each measuring instrument, a thorough decontamination and rinsing was performed. The decontamination and rinsing protocols employed are detailed in Section 3.0.

During BTEX sample collection, a disposable bailer was lowered slowly into the well casing, taking care not to agitate the casing water. The bailer was allowed to take on

water and then carefully removed from the well. Once removed, the bailer was fitted with a slow flow device to transfer the samples into the appropriate sample container. Groundwater samples were added to each sample container at an approximate rate of 100 ml/min. In transferring the sample from the bailer to the sample container, extreme care was taken to ensure that each container was filled from the bottom completely until a meniscus formed and no headspace or air bubbles were present. The container caps were replaced and then tightly closed. The sample vial was rotated to further ascertain that it was completely void of air.

2.3 Sample Preservation

For analyses requiring sample preservation beyond retention at a cool temperature, the vials were prepared in advance by the analyzing laboratory with hydrochloric acid (HCl), or other appropriate preservative as required by the laboratory sample protocol. The HCl was added primarily to prevent bacterial degradation of hydrocarbons. Other preservatives were added for stabilization as required by the laboratory protocol. All samples were stored on ice until delivery to the analyzing laboratory.

2.4 Sample Identification

Immediately following sample collection, containers were labeled with the sample origin, time and date of collection, type of sample, sampler identification, preservative used, and the requested analysis. Once labeled, each sample was logged onto a Chain of Custody Record. Properly labeling and logging the samples at the time of collection reduced the potential for sample misidentification.

2.5 Sample Transport

Once each sample had been collected, labeled, and logged onto the Chain of Custody Record, the containers were placed in an insulated cooler containing ice, where the samples were maintained at approximately 4° C until delivered to On-Site Technologies Laboratory, Farmington, New Mexico. The Chain of Custody Record was completed at the laboratory, and samples were then relinquished.

2.6 Analysis

Groundwater sampling of the refinery monitor wells was conducted quarterly, and sampling of the air stripper influent and effluent was conducted monthly. During each sampling event, collected samples were analyzed for Methyl-Tertiary-Butyl-Ether (MTBE), Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX) per EPA Method 8021B. Due to an oversight, air stripper samples for poly-aromatic hydrocarbons (PAH's), Metals, Cations/Anions were not taken quarterly. This has been corrected in the sampling schedule for 2000. Additionally, samples were collected annually and laboratory-analyzed for TDS, Metals, major Cations and Anions, and PAH's. The laboratory results of BTEX analyses are presented in Table 2. The laboratory analyses

for cations and anions, TDS and pH are found in Table 3, PAH's are found in Table 4, and metals are summarized in Table 5.

Several isoconcentration maps were generated from field data and laboratory analysis. They are as follows: 1) quarterly water level contours (Figures 1A-1D); 2) quarterly benzene concentrations (Figures 2A-2D); 3) quarterly MTBE concentrations (Figures 3A-3D); 4) quarterly product thickness (Figures 4A-4D); 5) quarterly conductivity contours (Figures 5A-5D); 6) Chlorides (Figure 6) and TDS (Figure 7). Laboratory reports, QA/QC data and chain of custody records for the groundwater monitor wells and the air stripper influent and effluent are included in Appendix A.

3.0 EQUIPMENT DECONTAMINATION

In order to ensure data validity and prevent cross-contamination, BioTech personnel employed and strictly followed decontamination protocols. During all monitor well measurement and sample collection, the following methods for decontaminating equipment were employed:

- Wash with detergent (Alconox) and distilled water
- Rinse with distilled water
- Wash with detergent (Alconox) and distilled water
- Double rinse with distilled water

4.0 FREE PRODUCT RECOVERY

The results of free product recovery were documented and are presented in Table 1. During 1999, 300 gallons of product was recovered from the groundwater system. Currently, collected product is being stored in a 500-barrel (BBL) above ground storage tank, which is located within a concrete berm and pad area. The total product recovered last year was (525 gallons) but the historical total was incorrectly calculated as 5685.24 gallons. It should have been 5442.81 gallons. The database has been corrected and the current total recovered to date is 5742.81 gallons.

5.0 DISCUSSION AND RECOMMENDATIONS

In reviewing the cumulative data contained within this report as well as previously submitted data, BioTech concludes that the installation of the new air stripper in 1998 has been effective. The groundwater elevation in wells numbered MW-03, 06, 07 and 18 have all been essentially the same since the new stripper has been operating. This fact along with the contaminant concentration reduction in most of these wells indicates marginal capture.

BioTech recommends that the established monitoring and sampling schedule be modified through 2000 as follows: 1) the annual sampling for metals and major cations/anions are changed to every two years from the current annual requirement;

and 2) the quarterly air stripper sampling for metals and major cation/anion be changed to semi-annual. BioTech will continue maintaining the air stripper to insure its high on-stream reliability.

Tables

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	Time	TOC elev	A/O	OW	Product	Prod Elev	Water Elev	Aqj Wl Elev	Accum Prod	Deg. C	pH	DO mg/l	unthos/cm	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
8" rec well MW-01	09/23/98	NM	NM	NM	NM	0.00	5433.40	5433.40	5433.40	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/98	1337	5449.08	15.68	15.68	0.00	5433.40	5433.46	5433.46	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	1610	5449.08	15.62	15.62	0.00	5433.46	5433.43	5433.43	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	1438	5449.08	15.65	15.65	0.00	5433.43	5433.71	5433.71	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97	1006	5449.08	15.37	15.37	0.00	5433.71	5433.00	5434.00	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/97	1550	5449.08	15.08	15.08	0.00	5434.00	5434.00	5434.00	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/23/97	1240	5449.08	15.08	15.08	0.00	5434.00	5434.00	5434.00	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/08/98	1637	5449.08	14.72	14.72	0.00	5434.36	5434.36	5434.36	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/24/98	1205	5449.08	14.97	14.97	0.00	5434.11	5434.11	5434.11	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/23/98	1045	5449.08	15.52	15.52	0.00	5433.56	5433.56	5433.56	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-02	12/30/98	1225	5449.08	15.00	15.00	0.00	5434.08	5434.08	5434.08	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	1030	5449.08	14.75	14.75	0.00	5434.33	5434.33	5434.33	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/03/99	1108	5449.08	14.39	14.39	0.00	5434.69	5434.69	5434.69	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/09/99	1250	5449.08	14.37	14.37	0.00	5434.71	5434.71	5434.71	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/99	1040	5449.08	14.23	14.23	0.00	5434.85	5434.85	5434.85	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/09/96	1530	5442.65	12.16	13.50	1.34	5430.49	5429.15	5430.09	0.20	15.0	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96		5442.65	12.35	12.94	0.19	5430.30	5430.11	5430.24	0.35	15.0	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/17/97		5442.65	12.18	12.37	0.19	5430.47	5430.28	5430.41	0.37	15.0	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5442.65	12.11	12.14	0.03	5430.54	5430.51	5430.53	0.43	15.0	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/97		5442.65	11.86	11.98	0.12	5430.79	5430.67	5430.75	0.43	15.0	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-03	12/18/97		5442.65	11.64	11.69	0.05	5431.01	5430.96	5431.00	0.43	15.0	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98	1055	5442.65	11.75	11.77	0.02	5430.90	5430.88	5430.89	0.44	15.0	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/22/98	1540	5442.65	11.74	11.78	0.04	5430.91	5430.87	5430.90	0.45	15.0	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/23/98	1015	5442.65	12.04	12.04	0.00	5430.61	5430.61	5430.61	0.45	16.8	7.00	0.15	3320	NM	NM	NM	NM	NM	NM
	12/30/98	1739	5442.65	11.60	11.61	0.01	5431.05	5431.05	5431.05	0.45	16.8	7.00	0.15	3320	NM	NM	NM	NM	NM	NM
	04/14/99	1425	5442.65	11.59	11.60	0.01	5431.06	5431.05	5431.06	0.45	16.8	7.00	0.15	3320	NM	NM	NM	NM	NM	NM
	06/03/99	1425	5442.65	11.54	11.54	0.00	5431.11	5431.11	5431.11	0.45	16.8	7.00	0.15	3320	NM	NM	NM	NM	NM	NM
	09/09/99	1425	5442.65	11.31	11.32	0.01	5431.34	5431.33	5431.34	0.45	16.8	7.00	0.15	3320	NM	NM	NM	NM	NM	NM
	12/30/99	950	5442.65	11.40	11.40	0.00	5431.25	5431.25	5431.25	0.45	16.8	7.00	0.15	3320	NM	NM	NM	NM	NM	NM
	10/09/96	1500	5431.43	5.17	5.17	0.00	5426.26	5426.26	5426.26	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-04	12/31/96	1545	5431.43	4.60	4.72	0.12	5426.83	5426.71	5426.79	0.01	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/17/97		5431.43	3.44	3.44	0.00	5427.99	5427.99	5427.99	0.01	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97	1535	5431.43	3.38	3.38	0.00	5428.05	5428.05	5428.05	0.01	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5431.43	3.38	3.38	0.00	5428.05	5428.05	5428.05	0.01	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/18/97		5431.43	3.42	3.42	0.00	5428.01	5428.01	5428.01	0.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5431.43	4.47	4.47	0.00	5426.96	5426.96	5426.96	0.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/24/98	1559	5431.43	4.30	4.30	0.00	5427.13	5427.13	5427.13	0.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/22/98		5431.43	3.57	3.57	0.00	5427.86	5427.86	5427.86	0.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/98	1739	5431.43	3.57	3.57	0.00	5426.35	5426.35	5426.35	0.02	12.1	7.10	0.37	4625	2.37	NM	NM	NM	NM	NM
	04/13/99	1545	5431.43	5.08	5.08	0.00	5426.35	5426.35	5426.35	0.02	12.1	7.10	0.37	4625	2.37	NM	NM	NM	NM	NM
MW-05	06/03/99		5431.43	NM	NM	NM	NM	NM	NM	0.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	1200	5430.12	5.18	5.18	0.00	5424.94	5424.94	5424.94	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97		5430.12	4.29	4.29	0.00	5425.83	5425.83	5425.83	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/17/97	1355	5430.12	4.08	4.08	0.00	5426.04	5426.04	5426.04	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/97	1350	5430.12	4.19	4.19	0.00	5425.93	5425.93	5425.93	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/22/97	956	5430.12	4.31	4.31	0.00	5425.81	5425.81	5425.81	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98																			
	06/22/98																			
	10/09/96	1120	5428.97	5.55	5.55	0.00	5423.42	5423.42	5423.42	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	1130	5428.97	5.19	5.19	0.00	5423.78	5423.78	5423.78	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-06	03/19/97	1050	5428.97	4.63	4.63	0.00	5424.34	5424.34	5424.34	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/17/97	1355	5428.97	4.41	4.41	0.00	5424.56	5424.56	5424.56	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/97	1200	5428.97	3.77	3.77	0.00	5425.20	5425.20	5425.20	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/19/97	1620	5428.97	4.37	4.37	0.00	5424.60	5424.60	5424.60	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/27/98	1505	5428.97	4.47	4.47	0.00	5424.50	5424.50	5424.50	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/24/98	1040	5428.97	4.78	4.78	0.00	5424.19	5424.19	5424.19	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/98	1205	5428.97	5.22	5.22	0.00	5423.75	5423.75	5423.75	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/29/98	1730	5428.97	4.11	4.11	0.00	5424.86	5424.86	5424.86	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/12/99	1545	5428.97	4.19	4.19	0.00	5424.78	5424.78	5424.78	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/02/99	1545	5428.97	4.45	4.45	0.00	5424.52	5424.52	5424.52	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-07	09/08/99	1558	5428.97	4.52	4.52	0.00	5424.45	5424.45	5424.45	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/29/99	932	5428.97	4.82	4.82	0.00	5424.15	5424.15	5424.15	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	Time	TOC elev	A/O	OW	Product	Prod Elev	Water Elev	Adj. Wt. Elev	Accum Prod	Deg. C	pH	DO mg/L	unhios/cm	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
MW-06	10/09/96	1025	5430.70	5.28	5.28	0.00	5425.42	5425.42	5425.42	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96		5430.70	4.65	4.65	0.00	5426.05	5426.05	5426.05	0.00	NM	NM	4.70	4230	NM	NM	NM	NM	NM	NM
	03/19/97	907	5430.70	3.65	3.65	0.00	5427.05	5427.05	5427.05	0.00	NM	NM	NM	4070	NM	NM	NM	NM	NM	NM
	06/17/97	1533	5430.70	3.62	3.62	0.00	5427.08	5427.08	5427.08	0.00	NM	NM	1.71	4250	NM	NM	NM	NM	NM	NM
	09/24/97	1455	5430.70	4.58	4.58	0.00	5426.12	5426.12	5426.12	0.00	NM	NM	0.21	4100	NM	NM	NM	NM	NM	NM
	12/19/97	1345	5430.70	4.23	4.23	0.00	5426.47	5426.47	5426.47	0.00	NM	NM	NM	4100	NM	NM	NM	NM	NM	NM
	04/27/98	1550	5430.70	1.14	1.14	0.00	5429.56	5429.56	5429.56	0.00	NM	NM	0.14	3870	NM	NM	NM	NM	NM	NM
	06/24/98	1525	5430.70	4.53	4.53	0.00	5426.17	5426.17	5426.17	0.00	NM	NM	0.12	3990	NM	NM	NM	NM	NM	NM
	09/22/98	1430	5430.70	4.55	4.55	0.00	5426.15	5426.15	5426.15	0.00	18.8	7.30	0.19	3840	NM	NM	NM	NM	NM	NM
	12/30/98	1120	5430.70	3.72	3.72	0.00	5426.98	5426.98	5426.98	0.00	13.5	7.60	0.62	3650	NM	NM	NM	NM	NM	NM
	04/13/99	1513	5430.70	4.67	4.67	0.00	5426.03	5426.03	5426.03	0.00	12.6	7.60	0.35	3600	NM	NM	NM	NM	NM	NM
MW-07	06/03/99	1340	5430.70	4.92	4.92	0.00	5425.78	5425.78	5425.78	0.00	13.9	7.80	0.12	3300	NM	NM	NM	NM	NM	NM
	09/09/99	1103	5430.70	4.62	4.62	0.00	5426.08	5426.08	5426.08	0.00	NM	7.60	NM	NM	NM	NM	NM	NM	NM	NM
	12/29/99	1645	5430.70	5.09	5.09	0.00	5425.61	5425.61	5425.61	0.00	13.2	7.10	2.07	NM	NM	NM	NM	NM	5.75	NM
	10/07/96		5434.34	8.29	8.50	0.21	5426.05	5426.05	5426.05	0.27	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96		5434.34	7.54	7.54	0.00	5426.80	5426.80	5426.80	0.27	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	1527	5434.34	6.55	6.55	0.00	5427.79	5427.79	5427.79	0.27	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5434.34	6.47	6.47	0.00	5427.87	5427.87	5427.87	0.27	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5434.34	8.01	8.01	0.00	5426.33	5426.33	5426.33	0.27	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/18/97		5434.34	6.61	6.61	0.00	5427.73	5427.73	5427.73	0.27	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98	1040	5434.34	7.65	7.65	0.00	5426.69	5426.69	5426.69	0.27	NM	NM	0.01	4700	NM	NM	NM	NM	NM	NM
	06/24/98	1450	5434.34	7.54	7.54	0.00	5426.80	5426.80	5426.80	0.27	NM	7.51	0.14	4770	NM	NM	NM	NM	NM	NM
MW-08	09/23/98	930	5434.34	7.52	7.53	0.01	5426.82	5426.82	5426.82	0.27	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/98	1130	5434.34	6.57	6.57	0.00	5427.77	5427.77	5427.77	0.27	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	1059	5434.34	7.98	7.98	0.00	5426.36	5426.36	5426.36	0.27	NM	7.40	NM	5220	NM	NM	NM	NM	NM	NM
	06/03/99	1330	5434.34	8.05	8.07	0.02	5426.28	5426.28	5426.28	0.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/09/99	1401	5434.34	8.03	8.08	0.05	5426.31	5426.26	5426.30	0.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/99	910	5434.34	8.05	8.05	0.00	5426.29	5426.29	5426.29	0.30	NM	7.10	NM	NM	NM	NM	NM	NM	2.50	NM
	10/08/96		5432.09	Silted in		NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	1530	5432.09	3.14	3.14	0.00	5428.95	5428.95	5428.95	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/18/97	1500	5432.09	2.93	2.93	0.00	5429.16	5429.16	5429.16	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/16/97		5432.09	3.00	3.00	0.00	5429.09	5429.09	5429.09	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/25/97	1520	5432.09	2.68	2.68	0.00	5429.41	5429.41	5429.41	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-09	12/22/97	1230	5432.09	3.15	3.15	0.00	5428.94	5428.94	5428.94	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/28/98	1135	5435.19	4.28	4.28	0.00	5430.91	5430.91	5430.91	0.00	NM	NM	0.88	7150	NM	NM	NM	NM	NM	NM
	06/23/98	1400	5435.19	4.53	4.53	0.00	5430.66	5430.66	5430.66	0.00	NM	7.60	0.19	7320	NM	NM	NM	NM	NM	NM
	09/22/98	1134	5435.19	4.55	4.55	0.00	5430.64	5430.64	5430.64	0.00	17.1	7.40	0.18	7150	NM	NM	NM	NM	NM	NM
	12/29/98	1435	5435.19	3.75	3.75	0.00	5431.44	5431.44	5431.44	0.00	11.9	7.60	4.45	7840	NM	NM	NM	NM	NM	NM
	04/12/99	1315	5435.19	3.94	3.94	0.00	5431.25	5431.25	5431.25	0.00	10.8	7.70	0.20	7370	NM	NM	NM	NM	NM	NM
	06/02/99	1235	5435.19	4.05	4.05	0.00	5431.14	5431.14	5431.14	0.00	13.1	7.80	0.30	6600	NM	NM	NM	NM	NM	NM
	09/07/99	1550	5435.19	4.10	4.10	0.00	5431.09	5431.09	5431.09	0.00	16.6	7.20	0.37	4870	NM	NM	NM	NM	NM	NM
	12/29/99	1439	5435.19	3.77	3.77	0.00	5431.42	5431.42	5431.42	0.00	NM	7.30	NM	NM	NM	NM	NM	NM	4.25	NM
	10/06/96	1431	5436.56	4.21	4.21	0.00	5432.35	5432.35	5432.35	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	1445	5436.56	4.01	4.01	0.00	5432.55	5432.55	5432.55	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/18/97	1339	5436.56	4.09	4.09	0.00	5432.47	5432.47	5432.47	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-10	06/16/97	1109	5436.56	4.10	4.10	0.00	5432.46	5432.46	5432.46	0.00	NM	NM	0.69	7450	NM	NM	NM	NM	NM	NM
	09/25/97	1145	5436.56	3.81	3.81	0.00	5432.75	5432.75	5432.75	0.00	NM	NM	11.15	7410	NM	NM	NM	NM	NM	NM
	12/22/97	1130	5436.56	3.98	3.98	0.00	5432.58	5432.58	5432.58	0.00	NM	NM	0.61	7170	NM	NM	NM	NM	NM	NM
	04/26/98	1033	5436.56	4.24	4.24	0.00	5432.32	5432.32	5432.32	0.00	NM	NM	0.22	7340	NM	NM	NM	NM	NM	NM
	06/23/98	1155	5436.56	4.49	4.49	0.00	5432.07	5432.07	5432.07	0.00	NM	7.48	0.16	7240	NM	NM	NM	NM	NM	NM
	09/22/98	1037	5436.56	4.54	4.54	0.00	5432.02	5432.02	5432.02	0.00	17.4	7.40	0.16	7150	NM	NM	NM	NM	NM	NM
	12/29/98	1400	5436.56	3.84	3.84	0.00	5432.72	5432.72	5432.72	0.00	13.2	7.50	0.40	7440	NM	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	Time	TOC plev	A/O	OM	Product	Prod Elev	Water Elev	Aqj Wt. Elev	Accum Prod	Deg. C	pH	DO mg/l	unthos/cm	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
MW-11	04/12/99	1135	5436.56	3.90	3.90	0.00	5432.66	5432.66	5432.66	0.00	11.0	7.40	0.60	7060	3.50	NM	NM	NM	NM	NM
	06/02/99	1156	5436.56	3.98	3.98	0.00	5432.58	5432.58	5432.58	0.00	12.3	7.60	0.30	6600	NM	NM	NM	NM	NM	NM
	09/07/99	1515	5436.56	3.90	3.90	0.00	5432.66	5432.66	5432.66	0.00	16.9	7.20	0.26	6600	3.31	NM	NM	NM	NM	NM
	12/28/99	1330	5436.56	3.57	3.57	0.00	5432.99	5432.99	5432.99	0.00	NM	7.10	NM	NM	NM	NM	NM	NM	NM	3.75
	10/06/99	1500	5436.65	5.27	5.27	0.00	5433.38	5433.38	5433.38	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/99	1420	5436.65	5.02	5.02	0.00	5433.63	5433.63	5433.63	0.00	NM	NM	NM	NM	6970	NM	NM	NM	NM	NM
	03/18/97	1145	5436.65	5.01	5.01	0.00	5433.64	5433.64	5433.64	0.00	NM	NM	NM	NM	6870	NM	NM	NM	NM	NM
	06/16/97	1146	5436.65	5.05	5.05	0.00	5433.60	5433.60	5433.60	0.00	NM	NM	NM	NM	6900	NM	NM	NM	NM	NM
	09/25/97	1432	5436.65	4.96	4.96	0.00	5433.69	5433.69	5433.69	0.00	NM	NM	NM	NM	6890	NM	NM	NM	NM	NM
	12/22/97	1215	5436.65	4.91	4.91	0.00	5433.74	5433.74	5433.74	0.00	NM	NM	NM	NM	6900	NM	NM	NM	NM	NM
	04/26/98	954	5436.65	4.97	4.97	0.00	5433.68	5433.68	5433.68	0.00	NM	NM	NM	NM	6900	NM	NM	NM	NM	NM
MW-12	06/23/98	1112	5436.65	5.23	5.23	0.00	5433.42	5433.42	5433.42	0.00	NM	7.73	0.26	6730	NM	NM	NM	NM	NM	NM
	09/22/98	955	5436.65	5.37	5.37	0.00	5433.28	5433.28	5433.28	0.00	16.0	7.40	0.18	6760	NM	NM	NM	NM	NM	NM
	12/29/98	1220	5436.65	4.83	4.83	0.00	5433.82	5433.82	5433.82	0.00	12.7	7.50	0.31	6700	NM	NM	NM	NM	NM	NM
	04/12/99	1155	5436.65	4.83	4.83	0.00	5433.82	5433.82	5433.82	0.00	11.3	7.70	0.17	6680	3.35	NM	NM	NM	NM	NM
	06/02/99	1127	5436.65	4.82	4.82	0.00	5433.83	5433.83	5433.83	0.00	12.5	7.20	0.32	6100	NM	NM	NM	NM	NM	NM
	09/07/99	1440	5436.65	4.99	4.99	0.00	5433.66	5433.66	5433.66	0.00	16.0	7.30	0.32	6320	3.16	NM	NM	NM	NM	NM
	12/28/99	1402	5436.65	4.42	4.42	0.00	5434.23	5434.23	5434.23	0.00	NM	7.30	NM	NM	NM	NM	NM	NM	NM	5.00
	10/07/96		5446.09	14.15	15.62	1.47	5431.94	5434.47	5431.50	28.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96		5446.09	14.20	15.60	1.40	5431.89	5430.49	5431.47	29.34	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/17/97		5446.09	14.24	15.39	1.25	5431.95	5430.70	5431.59	29.56	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5446.09	14.13	14.98	0.75	5431.86	5431.11	5431.64	30.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5446.09	13.98	14.53	0.55	5432.11	5431.56	5431.95	30.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-13	12/18/97		5446.09	13.87	14.39	0.52	5432.22	5431.70	5432.06	30.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5446.09	13.73	14.15	0.42	5432.36	5431.94	5432.23	31.20	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/22/98	1115	5446.09	13.89	14.21	0.32	5432.20	5431.88	5432.10	31.77	NM	7.01	NM	7060	NM	NM	NM	NM	NM	NM
	09/23/98	1340	5446.09	14.18	15.22	1.04	5431.91	5430.87	5431.60	31.99	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/98	1258	5446.09	13.94	14.43	0.49	5432.15	5431.66	5432.00	32.18	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	1315	5446.09	13.78	13.94	0.16	5432.31	5432.15	5432.26	32.18	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/04/99	1125	5446.09	13.68	13.88	0.20	5432.41	5432.21	5432.35	32.22	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/09/99	1447	5446.09	13.65	13.83	0.18	5432.44	5432.26	5432.39	32.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/99	1200	5446.09	13.49	13.77	0.28	5432.60	5432.32	5432.52	32.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.00
	10/08/96	1150	5452.12	18.11	18.11	0.00	5434.01	5434.01	5434.01	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96	1530	5452.12	18.04	18.04	0.00	5434.08	5434.08	5434.08	0.00	NM	NM	5.20	6140	NM	NM	NM	NM	NM	NM
	03/18/97	1055	5452.12	17.98	17.98	0.00	5434.14	5434.14	5434.14	0.00	NM	NM	0.19	6260	NM	NM	NM	NM	NM	NM
MW-14	06/16/97	900	5452.12	17.93	17.93	0.00	5434.19	5434.19	5434.19	0.00	NM	NM	0.28	6350	NM	NM	NM	NM	NM	NM
	09/23/97	1640	5452.12	17.81	17.81	0.00	5434.31	5434.31	5434.31	0.00	NM	NM	0.09	6260	NM	NM	NM	NM	NM	NM
	12/19/97	1540	5452.12	17.48	17.48	0.00	5434.64	5434.64	5434.64	0.00	NM	NM	0.24	6260	NM	NM	NM	NM	NM	NM
	04/24/98	1645	5452.12	17.22	17.22	0.00	5434.90	5434.90	5434.90	0.00	NM	NM	0.19	6260	NM	NM	NM	NM	NM	NM
	06/23/98	1457	5452.12	17.48	17.48	0.00	5434.64	5434.64	5434.64	0.00	NM	7.27	0.28	6260	NM	NM	NM	NM	NM	NM
	09/24/98	1530	5452.12	17.92	17.92	0.00	5434.20	5434.20	5434.20	0.00	15.9	7.10	0.28	6320	NM	NM	NM	NM	NM	NM
	12/29/98	1645	5452.12	17.52	17.52	0.00	5434.60	5434.60	5434.60	0.00	15.7	6.90	0.22	6330	NM	NM	NM	NM	NM	NM
	04/12/99	1105	5452.12	17.24	17.24	0.00	5434.88	5434.88	5434.88	0.00	15.1	7.00	0.25	6170	3.04	NM	NM	NM	NM	NM
	06/02/99	1031	5452.12	17.11	17.11	0.00	5435.01	5435.01	5435.01	0.00	15.5	7.10	0.22	6000	NM	NM	NM	NM	NM	NM
	09/07/99	1114	5452.12	17.12	17.12	0.00	5435.00	5435.00	5435.00	0.00	15.4	7.10	0.30	6120	3.06	NM	NM	NM	NM	NM
	12/29/99	1130	5452.12	16.83	16.83	0.00	5435.29	5435.29	5435.29	0.00	NM	7.20	NM	NM	NM	NM	NM	NM	NM	5.00
	10/07/96	1135	5446.93	13.05	13.05	0.00	5433.86	5433.86	5433.86	3.10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-15	03/17/97		5446.93	12.97	12.97	0.00	5433.96	5433.96	5433.96	3.10	NM	NM	1.60	6070	NM	NM	NM	NM	NM	NM
	06/18/97		5446.93	12.73	13.50	0.77	5434.20	5433.43	5433.97	3.26	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5446.93	12.67	13.09	0.42	5434.26	5433.84	5434.13	3.58	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5446.93	12.46	12.63	0.17	5434.47	5434.30	5434.42	3.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/16/97		5446.93	12.42	12.45	0.03	5434.51	5434.48	5434.50	3.59	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/28/98	1555	5446.93	12.24	12.24	0.00	5434.69	5434.69	5434.69	3.59	NM	NM	0.07	5620	NM	NM	NM	NM	NM	NM
	06/24/98	1700	5446.93	12.37	12.37	0.00	5434.56	5434.56	5434.56	3.59	NM	7.25	0.08	4950	NM	NM	NM	NM	NM	NM
	09/23/98	1130	5446.93	12.78	12.78	0.00	5434.15	5434.15	5434.15	3.59	16.5	6.90	0.12	5230	NM	NM	NM	NM	NM	NM
	12/30/98	1140	5446.93	12.48	12.66	0.18	5434.45	5434.27	5434.40	3.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	1525	5446.93	12.14	12.24	0.10	5434.79	5434.69	5434.76	3.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/03/99	1058	5446.93	12.02	12.06	0.04	5434.91	5434.87	5434.90	3.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/09/99	1345	5446.93	11.96	11.98	0.02	5434.97	5434.95	5434.96	3.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/99	1125	5446.93	11.87	11.87	0.00	5435.06	5435.06	5435.06	3.78	NM	7.20	NM	NM	NM	NM	NM	NM	NM	5.25
	10/08/96	1108	5449.51	13.86	13.86	0.00	5435.65	5435.65	5435.65	0.00	NM	NM	6.80	4850	NM	NM	NM	NM	NM	NM
	12/30/96	1445	5449.51	13.72	13.72	0.00	5435.79	5435.79	5435.79	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	Time	TOC elev	AO	OW	Product	Prot Elev	Water Elev	Auj. Wl. Elev	Accum Prod	Deg. C	pH	DO mg/l	umhos/cm	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
MW-16	03/16/97	1000	5449.51	13.49	13.49	0.00	5436.02	5436.02	5436.02	0.00	NM	NM	NM	NM	4810	NM	NM	NM	NM	NM
	06/17/97	959	5449.51	13.28	13.28	0.00	5436.02	5436.02	5436.23	0.00	NM	NM	NM	NM	4890	NM	NM	NM	NM	NM
	09/26/97	1200	5449.51	12.67	12.67	0.00	5436.84	5436.84	5436.84	0.00	NM	NM	NM	NM	5050	NM	NM	NM	NM	NM
	12/22/97	1345	5449.51	12.98	12.98	0.00	5436.53	5436.53	5436.53	0.00	NM	NM	NM	NM	5000	NM	NM	NM	NM	NM
	04/24/98	1605	5449.51	12.73	12.73	0.00	5436.78	5436.78	5436.78	0.00	NM	NM	NM	NM	4920	NM	NM	NM	NM	NM
	06/23/98	1018	5449.51	12.94	12.94	0.00	5436.57	5436.57	5436.57	0.00	NM	NM	NM	NM	4500	NM	NM	NM	NM	NM
	09/24/98	1135	5449.51	13.34	13.34	0.00	5436.17	5436.17	5436.17	0.00	NM	NM	NM	NM	4430	NM	NM	NM	NM	NM
	12/28/98	1125	5449.51	12.83	12.83	0.00	5436.68	5436.68	5436.68	0.00	NM	NM	NM	NM	4800	NM	NM	NM	NM	NM
	04/12/99	1400	5449.51	12.50	12.50	0.00	5437.01	5437.01	5437.01	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/02/99	1650	5449.51	12.51	12.51	0.00	5437.00	5437.00	5437.00	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/99	1343	5449.51	12.41	12.41	0.00	5437.10	5437.10	5437.10	0.00	NM	NM	NM	NM	4610	NM	NM	NM	NM	NM
MW-17	12/28/99	1625	5449.51	12.30	12.30	0.00	5437.21	5437.21	5437.21	0.00	NM	NM	NM	NM	NM	2.31	NM	NM	NM	NM
	10/08/96	1245	5442.63	9.33	9.33	0.00	5433.30	5433.30	5433.30	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96	1615	5442.63	9.07	9.07	0.00	5433.56	5433.56	5433.56	0.00	NM	NM	NM	NM	7510	NM	NM	NM	NM	NM
	03/19/97	1515	5442.63	8.98	8.98	0.00	5433.65	5433.65	5433.65	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97	1526	5442.63	8.91	8.91	0.00	5433.72	5433.72	5433.72	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5442.63	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/22/97		5442.63	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5442.63	8.77	8.77	0.00	5433.86	5433.86	5433.86	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/24/98	1117	5442.63	8.97	8.97	0.00	5433.66	5433.66	5433.66	0.00	NM	NM	NM	NM	7190	NM	NM	NM	NM	NM
	09/23/98		5442.63	9.87	9.87	0.00	5432.76	5432.76	5432.76	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/28/98		5442.63	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/13/99	1110	5442.63	8.61	8.61	0.00	5434.02	5434.02	5434.02	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-18	06/02/99	1012	5442.63	8.58	8.58	0.00	5434.05	5434.05	5434.05	0.00	NM	NM	NM	NM	8600	NM	NM	NM	NM	NM
	09/09/99		5442.63	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/96		5435.57	5.98	6.09	0.11	5429.59	5429.48	5429.56	5.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96		5435.57	5.91	6.30	0.39	5429.66	5429.27	5429.54	5.91	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97		5435.57	5.63	5.67	0.04	5429.94	5429.90	5429.93	5.92	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5435.57	5.59	5.59	0.00	5429.98	5429.98	5429.98	5.92	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5435.57	5.53	5.82	0.29	5430.04	5429.75	5429.95	5.92	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/18/97		5435.57	5.54	5.78	0.24	5430.03	5429.79	5429.96	6.05	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5435.57	5.50	5.98	0.49	5430.07	5429.98	5429.92	6.36	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/24/98	1340	5435.57	5.60	6.51	0.91	5429.97	5429.08	5429.70	7.62	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/23/98	1544	5435.57	5.74	6.66	0.94	5429.83	5428.89	5429.55	8.62	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/28/98	1404	5435.57	5.39	5.71	0.32	5430.18	5429.86	5429.88	8.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-19	04/14/99	1515	5435.57	5.52	6.00	0.48	5430.05	5429.57	5429.91	9.97	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/04/99	1027	5435.57	5.49	6.19	0.70	5430.08	5429.38	5429.87	11.03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/09/99	1436	5435.57	5.38	5.97	0.59	5430.19	5429.60	5430.01	11.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/99	1150	5435.57	5.53	5.86	0.33	5430.04	5429.71	5429.94	11.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/09/96	1440	5429.10	4.24	4.24	0.00	5424.86	5424.86	5424.86	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96	1045	5429.10	4.06	4.06	0.00	5425.04	5425.04	5425.04	0.00	NM	NM	NM	NM	4620	NM	NM	NM	NM	NM
	03/19/97	1400	5429.10	3.26	3.26	0.00	5425.84	5425.84	5425.84	0.00	NM	NM	NM	NM	4860	NM	NM	NM	NM	NM
	06/18/97	852	5429.10	3.00	3.00	0.00	5426.10	5426.10	5426.10	0.00	NM	NM	NM	NM	4670	NM	NM	NM	NM	NM
	09/24/97	1035	5429.10	2.50	2.50	0.00	5426.60	5426.60	5426.60	0.00	NM	NM	NM	NM	3330	NM	NM	NM	NM	NM
	12/23/97	1140	5429.10	3.29	3.29	0.00	5425.81	5425.81	5425.81	0.00	NM	NM	NM	NM	2310	NM	NM	NM	NM	NM
	04/26/98	1515	5429.10	3.42	3.42	0.00	5425.68	5425.68	5425.68	0.00	NM	NM	NM	NM	4450	NM	NM	NM	NM	NM
	06/24/98	1635	5429.10	3.72	3.72	0.00	5425.38	5425.38	5425.38	0.00	NM	NM	NM	NM	4570	NM	NM	NM	NM	NM
MW-19	09/23/98	1542	5429.10	3.94	3.94	0.00	5425.16	5425.16	5425.16	0.00	NM	NM	NM	NM	4440	NM	NM	NM	NM	NM
	12/29/98	1635	5429.10	3.19	3.19	0.00	5425.91	5425.91	5425.91	0.00	NM	NM	NM	NM	3260	NM	NM	NM	NM	NM
	04/13/99	1715	5429.10	3.68	3.68	0.00	5425.42	5425.42	5425.42	0.00	NM	NM	NM	NM	4680	NM	NM	NM	NM	NM
	06/03/99	1607	5429.10	3.97	3.97	0.00	5425.13	5425.13	5425.13	0.00	NM	NM	NM	NM	4200	NM	NM	NM	NM	NM
	09/09/99	1021	5429.10	3.81	3.81	0.00	5425.29	5425.29	5425.29	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/29/99	1450	5429.10	4.39	4.39	0.00	5424.71	5424.71	5424.71	0.00	NM	NM	NM	NM	0.41	NM	NM	NM	NM	NM
	10/09/96	1420	5428.69	3.70	3.70	0.00	5424.98	5424.98	5424.99	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96	1715	5428.69	3.77	3.77	0.00	5424.92	5424.92	5424.92	0.00	NM	NM	NM	NM	6450	NM	NM	NM	NM	NM
	03/19/97	1123	5428.69	3.32	3.32	0.00	5425.37	5425.37	5425.37	0.00	NM	NM	NM	NM	6300	NM	NM	NM	NM	NM
	06/17/97	1625	5428.69	3.12	3.12	0.00	5425.57	5425.57	5425.57	0.00	NM	NM	NM	NM	4570	NM	NM	NM	NM	NM
	09/26/97	1400	5428.69	2.36	2.36	0.00	5426.33	5426.33	5426.33	0.00	NM	NM	NM	NM	0.15	NM	NM	NM	NM	NM
	12/23/97	1050	5428.69	2.91	2.91	0.00	5425.78	5425.78	5425.78	0.00	NM	NM	NM	NM	6240	NM	NM	NM	NM	NM
MW-20	04/28/98	1427	5428.69	2.99	2.99	0.00	5425.70	5425.70	5425.70	0.00	NM	NM	NM	NM	6210	NM	NM	NM	NM	NM
	06/23/98	1531	5428.69	3.38	3.38	0.00	5425.31	5425.31	5425.31	0.00	NM	NM	NM	NM	5910	NM	NM	NM	NM	NM
	09/22/98	1500	5428.69	3.57	3.57	0.00	5425.12	5425.12	5425.12	0.00	NM	NM	NM	NM	7400	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	Time	TOC elev	A/O	OW	Product	Prod Elev	Water Elev	Adj. WL Elev	Accum Prod	Deg. C	pH	DO mg/l	unthos/cm	TDS	ORP	NTU's	% Salinity	Pumped	DEPTH
MW-20	12/29/98	1805	5428.69	3.19	3.19	0.00	5425.60	5425.60	5425.50	0.00	9.7	8.00	0.10	3250	2.31	NM	NM	NM	NM	NM
	04/13/99	1654	5428.69	3.08	3.08	0.00	5425.61	5425.61	5425.45	0.00	12.1	7.60	0.10	4570	2.31	NM	NM	NM	NM	NM
	06/03/99	1134	5428.69	3.24	3.24	0.00	5425.45	5425.45	5425.45	0.00	NM	7.50	NM	3600	NM	NM	NM	NM	NM	NM
	09/09/99	950	5428.69	3.01	3.01	0.00	5425.68	5425.68	5425.68	0.00	NM	6.90	NM	NM	NM	NM	NM	NM	NM	NM
	12/29/99	1340	5428.69	3.47	3.47	0.00	5425.22	5425.22	5425.22	0.00	10.9	7.30	0.35	NM	NM	NM	NM	NM	3.25	NM
	10/08/98	1615	5430.36	5.72	5.72	0.00	5424.64	5424.64	5424.64	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	900	5430.36	5.74	5.74	0.00	5424.62	5424.62	5424.62	0.00	NM	NM	0.90	NM	5330	NM	NM	NM	NM	NM
	03/18/97	1515	5430.36	5.39	5.39	0.00	5424.97	5424.97	5424.97	0.00	NM	NM	0.25	NM	6260	NM	NM	NM	NM	NM
	06/16/97	1515	5430.36	5.21	5.21	0.00	5425.15	5425.15	5425.15	0.00	NM	NM	0.27	NM	5730	NM	NM	NM	NM	NM
	09/24/97	1705	5430.36	4.41	4.41	0.00	5425.95	5425.95	5425.95	0.00	NM	NM	0.22	NM	3500	NM	NM	NM	NM	NM
MW-21	12/22/97	1555	5430.36	4.90	4.90	0.00	5425.46	5425.46	5425.46	0.00	NM	NM	0.31	NM	6520	NM	NM	NM	NM	NM
	04/27/98	1050	5430.36	5.02	5.02	0.00	5425.34	5425.34	5425.34	0.00	NM	7.18	0.08	NM	6540	NM	NM	NM	NM	NM
	06/23/98	1738	5430.36	5.35	5.35	0.00	5425.01	5425.01	5425.01	0.00	NM	7.10	NM	NM	6540	NM	NM	NM	NM	NM
	12/31/96	1850	5430.36	18.50	19.29	0.79	5411.96	5411.96	5411.62	0.00	NM	7.00	0.15	NM	NM	NM	NM	NM	NM	NM
	09/22/98	1430	5430.36	5.67	5.67	0.00	5424.69	5424.69	5424.69	0.00	17.3	7.00	0.15	NM	5640	NM	NM	NM	NM	NM
	12/28/98	1400	5430.36	5.02	5.02	0.00	5425.34	5425.34	5425.34	0.00	8.4	7.00	0.10	NM	5290	NM	NM	NM	NM	NM
	04/12/99	1730	5430.36	5.02	5.02	0.00	5425.34	5425.34	5425.34	0.00	11.0	7.30	0.03	NM	7740	NM	NM	NM	NM	NM
	06/02/99	1515	5430.36	5.19	5.19	0.00	5425.17	5425.17	5425.17	0.00	NM	7.30	NM	NM	3000	NM	NM	NM	NM	NM
	09/08/99	1257	5430.36	4.90	4.90	0.00	5425.46	5425.46	5425.46	0.00	NM	7.10	NM	NM	1847	NM	NM	NM	NM	NM
	12/29/99	1550	5430.36	5.36	5.36	0.00	5425.00	5425.00	5425.00	0.00	10.3	7.10	0.15	NM	NM	NM	NM	NM	4.25	NM
MW-22	03/18/97	1600	5428.62	2.76	2.76	0.00	5425.06	5425.06	5425.06	0.00	NM	NM	1.20	NM	5070	NM	NM	NM	NM	NM
	06/17/97	900	5428.62	2.93	2.93	0.00	5425.86	5425.86	5425.86	0.00	NM	NM	0.23	NM	7500	NM	NM	NM	NM	NM
	09/25/97	1700	5428.62	3.03	3.03	0.00	5425.59	5425.59	5425.59	0.00	NM	NM	0.09	NM	6050	NM	NM	NM	NM	NM
	12/22/97	1525	5428.62	3.07	3.07	0.00	5425.55	5425.55	5425.55	0.00	NM	NM	0.40	NM	4980	NM	NM	NM	NM	NM
	04/27/98	1145	5428.62	3.16	3.16	0.00	5425.46	5425.46	5425.46	0.00	NM	NM	0.07	NM	5400	NM	NM	NM	NM	NM
	06/23/98	1705	5428.62	3.72	3.72	0.00	5424.90	5424.90	5424.90	0.00	NM	7.06	0.07	NM	4790	NM	NM	NM	NM	NM
	09/24/98	1040	5428.62	3.81	3.81	0.00	5424.81	5424.81	5424.81	0.00	20.0	7.10	0.15	NM	4430	NM	NM	NM	NM	NM
	12/28/98	1650	5428.62	2.86	2.86	0.00	5425.96	5425.96	5425.96	0.00	8.1	7.00	0.31	NM	7190	NM	NM	NM	NM	NM
	04/12/99	1700	5428.62	2.90	2.90	0.00	5425.72	5425.72	5425.72	0.00	11.0	7.10	0.25	NM	7040	NM	NM	NM	NM	NM
	06/02/99	1420	5428.62	3.24	3.24	0.00	5425.38	5425.38	5425.38	0.00	14.0	7.10	0.09	NM	5100	NM	NM	NM	NM	NM
MW-23	09/08/99	1030	5428.62	3.18	3.18	0.00	5425.44	5425.44	5425.44	0.00	19.7	6.70	0.24	NM	6760	NM	NM	NM	NM	NM
	12/29/99	1120	5428.62	3.30	3.30	0.00	5425.32	5425.32	5425.32	0.00	9.0	6.70	0.16	NM	NM	NM	NM	NM	3.75	NM
	10/08/96	1145	5430.75	5.35	5.35	0.00	5425.40	5425.40	5425.40	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	1000	5430.75	4.64	4.64	0.00	5426.11	5426.11	5426.11	0.00	NM	NM	1.80	NM	6660	NM	NM	NM	NM	NM
	03/18/97	1640	5430.75	3.88	3.88	0.00	5426.87	5426.87	5426.87	0.00	NM	NM	NM	NM	6490	NM	NM	NM	NM	NM
	06/16/97	1615	5430.75	4.15	4.15	0.00	5426.60	5426.60	5426.60	0.00	NM	NM	0.21	NM	7250	NM	NM	NM	NM	NM
	09/26/97	1045	5430.75	4.36	4.36	0.00	5426.39	5426.39	5426.39	0.00	NM	NM	0.32	NM	7970	NM	NM	NM	NM	NM
	12/22/97	1447	5430.75	4.25	4.25	0.00	5426.50	5426.50	5426.50	0.00	NM	NM	1.27	NM	8690	NM	NM	NM	NM	NM
	04/27/98	1405	5430.75	4.31	4.31	0.00	5426.44	5426.44	5426.44	0.00	NM	NM	1.54	NM	8910	NM	NM	NM	NM	NM
	06/23/98	1635	5430.75	4.97	4.97	0.00	5425.78	5425.78	5425.78	0.00	NM	7.25	0.27	NM	9060	NM	NM	NM	NM	NM
MW-24	09/24/98	1101	5430.75	5.03	5.03	0.00	5425.72	5425.72	5425.72	0.00	19.4	7.10	0.11	NM	8460	NM	NM	NM	NM	NM
	12/28/98	1745	5430.75	3.83	3.83	0.00	5426.92	5426.92	5426.92	0.00	8.1	7.60	0.84	NM	9160	NM	NM	NM	NM	NM
	04/12/99	1635	5430.75	4.31	4.31	0.00	5426.44	5426.44	5426.44	0.00	10.2	7.30	0.22	NM	10550	NM	NM	NM	NM	NM
	06/02/99	1446	5430.75	4.53	4.53	0.00	5426.22	5426.22	5426.22	0.00	13.4	6.90	0.20	NM	8900	NM	NM	NM	NM	NM
	09/08/99	1100	5430.75	4.28	4.28	0.00	5426.47	5426.47	5426.47	0.00	18.7	7.20	0.33	NM	12630	NM	NM	NM	NM	NM
	12/29/99	1040	5430.75	4.12	4.12	0.00	5426.63	5426.63	5426.63	0.00	10.0	6.80	0.41	NM	NM	NM	NM	NM	3.00	NM
	10/07/96	1435	5448.32	DRY	DRY	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	1638	5448.32	DRY	DRY	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	1620	5448.32	DRY	DRY	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5448.32	NM	NM	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-25	09/29/97		5448.32	NM	NM	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/18/97		5448.32	NM	NM	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/27/98		5448.32	NM	NM	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/25/98		5448.32	DRY	DRY	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/98		5448.32	DRY	DRY	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/98		5448.32	DRY	DRY	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	1335	5448.32	DRY	DRY	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/04/99	1303	5448.32	DRY	DRY	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/09/99		5448.32	NM	NM	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/99	1637	5447.53	15.00	15.00	0.00	5432.53	5432.53	5432.53	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-26	03/19/97	1621	5447.53	15.01	15.01	0.00	5432.52	5432.52	5432.52	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	Time	TOC elev	A/Q	O/W	Product	Prod Elev	Water Elev	Adj Wt. Elev	Accum Prod	Deg. C	pH	DO mg/l	umhos/cm	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
MW-25	06/18/97		5447.53	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5447.53	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/18/97		5447.53	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5447.53	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/25/98		5447.53	14.40	14.40	0.00	5433.13	5433.13	5433.13	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/98		5447.53	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/98		5447.53	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	1340	5447.53	DRY	DRY	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/04/99	1307	5447.53	13.96	13.96	0.00	5433.57	5433.57	5433.57	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/09/99		5447.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-26	10/07/96	1440	5447.62	14.70	14.70	0.00	5432.92	5432.92	5432.92	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	1635	5447.62	DRY	DRY	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	1622	5447.62	DRY	DRY	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97	1622	5447.62	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5447.62	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/19/97		5447.62	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5447.62	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/25/98		5447.62	14.92	14.92	0.00	5432.70	5432.70	5432.70	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/98		5447.62	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/98		5447.62	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-27	04/14/99	1405	5447.62	14.81	14.81	0.00	5432.81	5432.81	5432.81	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/04/99	1310	5447.62	14.73	14.73	0.00	5432.89	5432.89	5432.89	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/96		5447.26	DRY	DRY	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96		5447.26	WELL COVERED																
	10/07/96		5448.04	DRY	DRY	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	1645	5448.04	DRY	DRY	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	1619	5448.04	DRY	DRY	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5448.04	NM	NM	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5448.04	NM	NM	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/19/97		5448.04	NM	NM	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-28	04/29/98		5448.04	NM	NM	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/96	1435	5448.06	14.98	14.98	0.00	5433.08	5433.08	5433.08	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	1630	5448.06	14.97	14.97	0.00	5433.09	5433.09	5433.09	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	1617	5448.06	14.96	14.96	0.00	5433.10	5433.10	5433.10	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5448.06	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5448.06	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/19/97		5448.06	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5448.06	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/96	1442	5448.90	14.59	14.82	0.23	5432.31	5432.31	5432.31	7.11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	1442	5448.90	14.65	14.78	0.13	5432.26	5432.26	5432.26	7.11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-29	03/17/97		5448.90	14.61	14.69	0.08	5432.29	5432.29	5432.29	7.11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5448.90	14.50	14.52	0.02	5432.40	5432.38	5432.39	7.13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5448.90	14.36	14.40	0.04	5432.54	5432.50	5432.53	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/19/97		5448.90	14.36	14.40	0.04	5432.54	5432.50	5432.53	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5448.90	NM	NM	NM	NM	NM	NM	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/24/98	1710	5448.90	14.09	14.09	0.00	5432.81	5432.81	5432.81	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/98		5448.90	NM	NM	NM	NM	NM	NM	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/98		5448.90	NM	NM	NM	NM	NM	NM	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	1325	5448.90	14.00	14.00	0.00	5432.90	5432.90	5432.90	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/04/99	1313	5448.90	13.84	13.84	0.00	5433.06	5433.06	5433.06	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
POND	06/02/99	1112		NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
POND	09/09/99	1335	NM	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-24	10/07/96	1512	5445.72	13.87	15.34	1.47	5431.65	5430.38	5431.41	103.52	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96		5445.72	13.94	15.34	1.40	5431.78	5430.38	5431.36	104.07	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	Time	TOC elev	A/O	O/W	Product	Prod Elev	Water Elev	Adj. Wt. Elev	Accum Prod	Deg. C	pH	DO mg/l	umhos/cm	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
RW-25	03/17/97	13:30	5445.72	13.90	14.94	1.04	5431.82	5430.78	5431.51	104.21	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5445.72	13.77	14.52	0.75	5431.95	5431.20	5431.73	104.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/23/97		5445.72	13.73	14.25	0.52	5431.99	5431.47	5431.83	104.81	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/18/97		5445.72	13.72	14.21	0.49	5432.00	5431.51	5431.85	104.92	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5445.72	13.55	13.75	0.20	5432.17	5431.97	5432.11	104.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/22/98	1420	5445.72	13.63	14.04	0.41	5432.09	5431.68	5431.97	105.03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/23/98	1402	5445.72	13.88	14.88	1.00	5431.84	5430.84	5431.54	105.16	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/98	1335	5445.72	13.80	14.42	0.62	5431.92	5431.30	5431.73	105.26	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	1245	5445.72	13.63	13.83	0.20	5432.09	5431.89	5432.03	105.26	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/04/99	1110	5445.72	13.45	13.57	0.12	5432.27	5432.15	5432.23	105.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-26	09/09/99	1458	5445.72	13.37	13.43	0.06	5432.35	5432.29	5432.33	105.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/99	1458	5445.72	13.37	13.43	0.06	5432.35	5432.29	5432.33	105.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/99	1458	5445.72	13.37	13.43	0.06	5432.35	5432.29	5432.33	105.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/17/97		5446.67	14.89	15.02	0.13	5431.78	5431.65	5431.74	49.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5446.67	14.77	15.02	0.25	5431.90	5431.65	5431.83	49.54	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5446.67	14.50	15.29	0.79	5432.17	5431.36	5431.93	49.54	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5446.67	14.49	14.97	0.48	5432.18	5431.70	5432.04	49.60	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/18/97		5446.67	14.39	14.54	0.15	5432.28	5432.13	5432.24	49.69	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5446.67	13.25	13.25	0.00	5433.42	5432.42	5432.42	49.69	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/22/98	1320	5446.67	14.36	14.38	0.02	5432.31	5432.29	5432.30	49.69	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-26	09/23/98	1420	5446.67	14.66	15.42	0.76	5432.01	5431.25	5431.78	49.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/98	1324	5446.67	14.44	14.86	0.42	5432.23	5431.81	5432.10	49.93	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	1300	5446.67	14.28	14.31	0.03	5432.39	5432.36	5432.38	49.93	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/04/99	1118	5446.67	14.16	14.18	0.02	5432.51	5432.49	5432.50	49.93	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/09/99	1453	5446.67	13.10	13.11	0.01	5433.57	5433.56	5433.57	49.93	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/17/97		5443.98	12.00	12.56	0.56	5431.98	5431.42	5431.81	0.87	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5443.98	11.60	12.35	0.75	5432.38	5431.63	5432.16	2.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5443.98	11.64	11.77	0.13	5432.34	5432.21	5432.30	2.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/18/97		5443.98	11.63	11.64	0.01	5432.35	5432.34	5432.35	2.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5443.98	11.47	11.47	0.00	5432.51	5432.51	5432.51	2.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
T-17-1	06/22/98	1505	5443.98	11.59	11.59	0.00	5432.39	5432.39	5432.39	2.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	08/24/98		5443.98	NM	NM	NM	NM	NM	NM	2.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/98	1352	5443.98	11.65	11.75	0.10	5432.33	5432.23	5432.30	2.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	1430	5443.98	11.50	11.50	0.00	5432.48	5432.48	5432.48	2.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/03/99	1459	5443.98	11.29	11.29	0.00	5432.69	5432.69	5432.69	2.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/09/99		5443.98	NM	NM	NM	NM	NM	NM	2.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/10/99		5452.41	18.05	18.11	0.06	5434.36	5434.30	5434.34	6.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/99		5452.41	DRY	DRY	NM	NM	NM	NM	6.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	1628	5452.41	DRY	DRY	NM	NM	NM	NM	6.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5452.41	DRY	DRY	NM	NM	NM	NM	6.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
T-17-2	09/29/97		5452.41	NM	NM	NM	NM	NM	NM	6.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/18/97		5452.41	NM	NM	NM	NM	NM	NM	6.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5452.41	NM	NM	NM	NM	NM	NM	6.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/25/98		5452.41	17.52	17.94	0.42	5434.89	5434.47	5434.76	6.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/98		5452.41	NM	NM	NM	NM	NM	NM	6.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/98		5452.41	NM	NM	NM	NM	NM	NM	6.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	1415	5452.41	16.35	16.35	0.00	5436.06	5436.06	5436.06	6.41	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/03/99	1520	5452.41	17.30	17.34	0.04	5435.11	5435.07	5435.10	6.41	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/09/99		5452.41	NM	NM	NM	NM	NM	NM	6.41	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/99		5453.51	17.35	17.35	0.00	5436.16	5436.16	5436.16	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
T-17-3	03/19/97	1629	5453.51	19.74	19.74	0.00	5433.77	5433.77	5433.77	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5453.51	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5453.51	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/18/97		5453.51	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98		5453.51	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/25/98		5453.51	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/98		5453.51	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	1629	5450.98	17.20	17.20	0.00	5433.78	5433.78	5433.78	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97		5450.98	17.38	17.38	0.00	5433.60	5433.60	5433.60	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97		5450.98	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	Time	TOC elev	A/O	OW	Product	Prod Elev	Water Elev	Adj WL Elev	Accum Prod	Deg. C	pH	DO mg/l	umhos/cm	TDS	ORP	NTU's	% Salinity	Purged	DEPTH	
UST	12/18/97		5450.98	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	04/29/98		5450.98	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/25/98	1130	5450.98	16.39	16.39	0.00	5434.59	5434.59	5434.59	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	09/24/98		5450.98	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	12/31/98	1430	5450.98	16.70	16.70	0.00	5434.28	5434.28	5434.28	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	04/14/99	1420	5450.98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/03/99	1520	5450.98	16.10	16.10	0.00	5434.88	5434.88	5434.88	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	09/09/99		5450.98	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
UST	04/21/95								GALLONS	ACCUM											
	06/19/95								633.25	633.25											
	08/25/95								1055.40	1688.65											
	11/12/95								0.00	1688.65											
	03/05/96								79.16	1767.81											
	06/04/96								0.00	1767.81											
	10/10/96								250.00	2017.81											
	12/30/96								2650.00	4667.81											
	03/19/97								0.00	4667.81											
	06/18/97								0.00	4667.81											
UST	07/09/97								0.00	4667.81											
	10/01/97								250.00	4917.81											
	12/18/97								0.00	4917.81											
	04/29/98								250.00	5167.81											
	06/25/98								275.00	5442.81											
	09/24/98								0.00	5442.81											
	12/31/98								0.00	5442.81											
	04/12/99								0.00	5442.81											
	06/03/99								300.00	5742.81											
	09/09/99								0.00	5742.81											
									0.00	5742.81											

NOTE: NM SIGNIFIES NOT MEASURED
TOTAL PRODUCT RECOVERED TO DATE 5742.81 GALLONS

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
EFFLUENT	EFFLUENT	06/22/94		SYSTEM SHUT DOWN			
	EFFLUENT	09/20/94	ND	9.3	0.9	ND	0.7
	EFFLUENT	01/20/95	NS	NS	NS	NS	NS
	EFFLUENT	04/12/95	7.5	97.5	363.0	278.0	2638.0
	EFFLUENT	11/12/95	3.2	33.9	12.3	8.9	48.1
	EFFLUENT	03/05/96	7.0	50.0	21.2	7.1	43.4
	EFFLUENT	06/04/96	3.5	2.4	0.7	0.9	3.8
	EFFLUENT	07/18/96	7.4	62.6	43.7	13.1	88.9
	EFFLUENT	10/09/96	1.2	3.7	ND	1.4	4.4
	EFFLUENT	12/31/96		SYSTEM SHUT DOWN			
	EFFLUENT	03/20/97		AIR STRIPPER MODIFIED			
	EFFLUENT	03/24/97	NM	3.4	1.9	0.9	2.7
	EFFLUENT	03/28/97	NM	18.7	10.5	5.3	16.0
	EFFLUENT	04/02/97	NM	5.4	2.6	1.4	4.8
	EFFLUENT	04/03/97	NM	ND	ND	ND	ND
	EFFLUENT	04/04/97	NM	ND	ND	ND	0.1
	EFFLUENT	04/10/97	NM	0.5	0.3	0.2	1.2
	EFFLUENT	04/18/97	4.8	4.0	0.4	0.4	1.2
	EFFLUENT	05/30/97		LARGER BLOWER INSTALLED			
	EFFLUENT	06/09/97	NM	ND	ND	0.5	0.5
	EFFLUENT	06/27/97	NM	ND	0.2	0.2	0.4
	EFFLUENT	07/25/97	NM	ND	ND	ND	ND
	EFFLUENT	07/31/97	NM	ND	ND	ND	ND
	EFFLUENT	09/03/97	NM	0.8	0.5	1.1	6.2
	EFFLUENT	12/22/97	NM	122.6	97.2	44.5	131.9
EFFLUENT	EFFLUENT	02/09/98	5.9	77.5	115.5	47.1	134.1
	EFFLUENT	02/19/98	10.0	110.0	110.0	46.0	171.0
	EFFLUENT	02/20/98	5.6	83.0	96.0	46.0	209.0
	EFFLUENT	02/23/98	13.0	200.0	160.0	81.0	289.0
	EFFLUENT	03/03/98	30.0	220.0	140.0	84.0	243.0
	EFFLUENT	03/04/98	22.0	200.0	140.0	80.0	247.0
	EFFLUENT	03/05/98	17.0	130.0	94.0	56.0	176.0
	EFFLUENT	03/05/98		SYSTEM SHUT DOWN FOR CLEANING			
	EFFLUENT	04/24/98	54.0	310.0	410.0	230.0	970.0
	EFFLUENT	04/28/98	42.0	770.0	350.0	280.0	580.0
	EFFLUENT	04/28/98		SYSTEM SHUT DOWN FOR TRAY REPAIRS			
	EFFLUENT	06/11/98		117.0			
	EFFLUENT	06/12/98		270.0			
	EFFLUENT	06/15/98		200.0			
	EFFLUENT	06/17/98		NEW STRIPPER INSTALLATION			

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	EFFLUENT	06/24/98	NEW STRIPPER INSTALLATION				
	EFFLUENT	09/24/98	6.2	2.6	1.6	ND	2.7
	EFFLUENT	10/21/98	ND	2.6	1.6	ND	2.7
	EFFLUENT	11/16/98	ND	ND	ND	ND	2.0
	EFFLUENT	12/31/98	71.0	9.6	7.7	5.8	21.4
EFFLUENT	EFFLUENT	02/16/99	4.8	1.0	2.6	2.3	8.2
	EFFLUENT	03/02/99	12.0	2.2	1.5	1.9	6.0
	EFFLUENT	03/05/99	13.0	2.0	1.3	1.9	5.5
	EFFLUENT	03/12/99	5.7	1.0	1.9	1.5	7.0
	EFFLUENT	03/19/99	4.8	1.6	1.4	1.4	5.4
	EFFLUENT	03/26/99	14.0	2.1	1.1	0.6	6.6
	EFFLUENT	04/13/99	34.0	50.0	130.0	14.0	81.0
	EFFLUENT	05/04/99	16.0	0.7	3.6	1.0	4.0
	EFFLUENT	06/02/99	21.0	2.3	3.8	2.3	10.4
	EFFLUENT	07/07/99	14.0	1.9	5.4	0.6	3.5
	EFFLUENT	08/09/99	ND	ND	1.0	ND	1.2
	EFFLUENT	09/02/99	ND	0.9	2.6	1.1	4.7
	EFFLUENT	09/09/99	ND	1.8	9.6	2.6	12.1
	EFFLUENT	10/04/99	ND	2.8	2.5	1.3	5.7
	EFFLUENT	11/01/99	2.9	2.6	1.9	2.1	10.3
	EFFLUENT	12/17/99	11.0	5.5	7.2	3.5	17.0
	EFFLUENT	12/28/99	6.8	1.9	2.6	2.1	9.5
	EFFLUENT	02/08/00	8.7	3.3	1.3	1.3	5.7
EFFLUENT DUP	EFFLUENT DUP	02/09/98	5.9	77.5	97.2	44.5	131.9
EFFLUENT DUP	EFFLUENT DUP	02/16/99	ND	0.6	2.2	0.8	3.6
INFLUENT	INFLUENT	06/22/94	SYSTEM SHUT DOWN				
	INFLUENT	09/20/94	50.0	9670.0	754.0	158.0	633.0
	INFLUENT	01/20/95	NS	NS	NS	NS	NS
	INFLUENT	04/12/95	24.5	2060.0	987.0	246.0	1689.0
	INFLUENT	03/05/96	155.0	6990.0	3570.0	1300.0	6680.0
	INFLUENT	06/04/96	95.0	4607.7	1794.7	523.8	2254.0
	INFLUENT	10/09/96	13.2	3116.0	1332.2	504.2	1588.0
	INFLUENT	12/31/96	SYSTEM SHUT DOWN				
	INFLUENT	03/24/97	NM	2110.0	1011.0	47.0	1279.0
	INFLUENT	03/28/97	NM	1827.0	850.0	40.6	1146.0
	INFLUENT	04/02/97	NM	1436.0	650.0	361.0	1279.0
	INFLUENT	07/31/97	NM	4641.0	4939.0	1128.0	4708.0
	INFLUENT	09/24/97	NM	1600.0	923.0	660.0	1529.0
	INFLUENT	12/22/97	NM	2078.0	1610.0	729.0	2053.0
	INFLUENT	02/09/98	37.0	1761.0	2542.0	963.0	461.0

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	INFLUENT	06/23/98		SYSTEM SHUT DOWN			
	INFLUENT	12/31/98	440.0	1200.0	860.0	760.0	1800.0
	INFLUENT	02/16/99	40.0	120.0	270.0	230.0	1000.0
	INFLUENT	03/02/99	100.0	650.0	250.0	470.0	890.0
	INFLUENT	03/05/99	120.0	760.0	280.0	530.0	1000.0
	INFLUENT	03/12/99	140.0	370.0	370.0	440.0	1520.0
	INFLUENT	03/19/99	170.0	1100.0	460.0	750.0	1760.0
	INFLUENT	03/26/99	140.0	980.0	430.0	710.0	1900.0
	INFLUENT	04/13/99	ND	6400.0	16000.0	1600.0	6800.0
	INFLUENT	05/04/99	190.0	1200.0	2700.0	860.0	2720.0
	INFLUENT	06/02/99	200.0	1200.0	1800.0	900.0	3190.0
	INFLUENT	07/07/99	960.0	2600.0	6700.0	1000.0	3230.0
	INFLUENT	08/09/99	150.0	840.0	1800.0	670.0	1740.0
	INFLUENT	09/02/99	350.0	1300.0	2500.0	720.0	2080.0
	INFLUENT	09/09/99	360.0	1800.0	5900.0	1200.0	5000.0
	INFLUENT	10/04/99	370.0	2000.0	1600.0	820.0	2960.0
	INFLUENT	11/01/99	270.0	1800.0	1000.0	790.0	3300.0
	INFLUENT	12/17/99	220.0	1500.0	1700.0	820.0	3560.0
	INFLUENT	12/28/99	230.0	1500.0	1300.0	800.0	3400.0
	INFLUENT	02/08/00	190.0	1800.0	540.0	640.0	2230.0
MW-01	MW-01	03/05/96	FREE PRODUCT FOUND IN WELL				
	MW-01	05/31/96	FREE PRODUCT FOUND IN WELL				
	MW-01	10/07/96	244.6	255.1	10.9	36.5	192.8
	MW-01	12/31/96	219.6	164.0	5.3	9.8	176.6
	MW-01	03/19/97	NM	45.6	1.3	5.1	39.8
	MW-01	06/18/97	NM	26.7	0.7	3.8	39.7
	MW-01	09/24/97	NM	134.9	5.9	15.8	94.7
	MW-01	12/23/97	NM	58.7	1.6	4.9	94.7
	MW-01	04/28/98	79.0	58.0	2.8	4.9	21.1
	MW-01	06/24/98	59.0	14.0	ND	1.4	1.8
	MW-01	09/23/98	71.0	15.0	ND	1.8	ND
	MW-01	12/30/98	120.0	120.0	1.4	7.5	25.0
	MW-01	04/14/99	140.0	190.0	0.8	5.3	4.4
	MW-01	06/03/99	78.0	29.0	ND	1.1	ND
	MW-01	09/09/99	73.0	560.0	1.0	21.0	6.7
	MW-01	12/30/99	46.0	320.0	ND	18.0	5.2
	MW-01 DUP	06/03/99	80.0	27.0	ND	1.0	ND
MW-02	MW-02	03/05/96	664.0	3120.0	53.5	484.0	519.8
	MW-02	10/09/96	FREE PRODUCT FOUND IN WELL				
	MW-02	12/31/96	FREE PRODUCT FOUND IN WELL				

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	MW-02	03/19/97	FREE PRODUCT FOUND IN WELL				
	MW-02	06/17/97	FREE PRODUCT FOUND IN WELL				
	MW-02	09/24/97	FREE PRODUCT FOUND IN WELL				
	MW-02	12/23/97	FREE PRODUCT FOUND IN WELL				
	MW-02	04/28/98	FREE PRODUCT FOUND IN WELL				
	MW-02	06/22/98	FREE PRODUCT FOUND IN WELL				
	MW-02	09/23/98	150.0	2000.0	40.0	610.0	1120.0
	MW-02	12/30/98	Product	Product	Product	Product	Product
	MW-02	04/14/99	Product	Product	Product	Product	Product
	MW-02	06/03/99	160.0	2000.0	31.0	650.0	1070.0
	MW-02	09/09/99	Product	Product	Product	Product	Product
	MW-02	12/30/99	110.0	1900.0	5.6	620.0	670.0
MW-2 DUP	MW-02 DUP	09/23/98	160.0	2000.0	42.0	630.0	1280.0
MW-03	MW-03	03/05/96	298.0	117.0	5.9	28.2	16.9
	MW-03	06/04/96	NOT SAMPLED				
	MW-03	10/09/96	224.7	41.7	4.0	5.8	4.3
	MW-03	12/31/96	NOT SAMPLED				
	MW-03	03/19/97	NOT SAMPLED				
	MW-03	06/17/97	NOT SAMPLED				
	MW-03	09/24/97	FREE PRODUCT FOUND IN WELL				
	MW-03	12/23/97	FREE PRODUCT FOUND IN WELL				
	MW-03	04/28/98	FREE PRODUCT FOUND IN WELL				
	MW-03	06/24/98	200.0	120.0	ND	8.2	ND
	MW-03	09/22/98	NS	NS	NS	NS	NS
	MW-03	12/30/98	NS	NS	NS	NS	NS
	MW-03	04/13/99	180.0	170.0	1.4	23.0	4.2
	MW-03	06/03/99	NS	NS	NS	NS	NS
MW-04	MW-04	03/05/96	31.5	50.0	5.6	ND	8.3
	MW-04	06/04/96	35.0	1.0	3.3	3.3	7.0
	MW-04	10/09/96	33.0	0.9	2.1	2.2	1.2
	MW-04	12/31/96	27.0	3.5	1.4	1.7	1.6
	MW-04	03/19/97	NM	21.7	0.5	2.6	2.3
	MW-04	06/17/97	NM	8.4	1.6	2.2	1.4
	MW-04	09/24/97	NM	3.7	3.0	5.1	2.0
	MW-04	12/22/97	NM	3.8	3.1	3.0	1.3
	MW-04	04/28/98	WELL DESTROYED BY AZTEC WELL SERVICE				
MW-05	MW-05	03/05/96	52.9	2.0	0.4	0.6	1.2
	MW-05	06/04/96	47.2	0.3	ND	0.2	ND
	MW-05	10/09/96	48.6	0.6	ND	ND	ND
	MW-05	12/31/96	47.9	4.8	ND	0.2	1.1

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	MW-05	03/19/97	NM	5.8	ND	0.4	0.2
	MW-05	06/17/97	NM	6.7	0.3	0.5	0.2
	MW-05	09/24/97	NM	9.6	9.6	9.6	9.6
	MW-05	12/19/97	NM	8.6	0.3	0.4	ND
	MW-05	04/27/98	56.0	9.2	ND	ND	ND
	MW-05	06/24/98	56.0	10.0	ND	0.6	ND
	MW-05	09/21/98	56.0	11.0	ND	ND	ND
	MW-05	12/29/98	52.0	12.0	ND	0.7	ND
	MW-05	04/12/99	43.0	6.7	ND	0.5	ND
	MW-05	06/02/99	56.0	12.0	ND	0.8	ND
	MW-05	09/08/99	54.0	12.0	0.5	ND	ND
	MW-05	12/29/99	49.0	10.0	ND	0.6	ND
MW-05 DUP	MW-05 DUP	06/02/99	57.0	13.0	ND	0.7	ND
	MW-05 DUP	12/29/99	49.0	10.0	ND	0.6	ND
MW-06	MW-06	03/05/96	0.9	0.2	ND	ND	ND
	MW-06	06/04/96	8.3	1.0	2.5	0.2	0.8
	MW-06	10/09/96	33.5	1.9	3.7	3.2	1.3
	MW-06	12/31/96	0.9	0.3	5.4	0.9	1.1
	MW-06	03/19/97	NM	0.6	0.8	0.8	4.0
	MW-06	06/17/97	NM	19.1	3.3	2.4	0.3
	MW-06	09/24/97	NM	20.3	6.2	4.5	1.9
	MW-06	12/23/97	NM	ND	ND	ND	ND
	MW-06	04/27/98	3.7	6.3	0.6	ND	ND
	MW-06	06/24/98	36.0	20.0	4.8	3.3	ND
	MW-06	09/22/98	47.0	8.5	1.8	4.5	3.6
	MW-06	12/30/98	2.8	ND	ND	ND	ND
	MW-06	04/13/99	4.4	5.6	ND	ND	ND
	MW-06	06/03/99	47.0	29.0	0.5	2.9	1.2
	MW-06	09/09/99	64.0	24.0	0.8	4.3	1.9
	MW-06	12/29/99	1.3	ND	ND	ND	ND
MW-07	MW-07	03/05/96	FREE PRODUCT FOUND IN WELL				
	MW-07	05/31/96	FREE PRODUCT FOUND IN WELL				
	MW-07	10/09/96	FREE PRODUCT FOUND IN WELL				
	MW-07	12/31/96	FREE PRODUCT FOUND IN WELL				
	MW-07	03/19/97	NOT SAMPLED				
	MW-07	06/17/97	NOT SAMPLED				
	MW-07	09/24/97	NOT SAMPLED				
	MW-07	12/23/97	NOT SAMPLED				
	MW-07	04/28/98	NOT SAMPLED				
	MW-07	06/24/98	190.0	240.0	1.1	444.0	97.4

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	MW-07	09/24/98	Sheen	Sheen	Sheen	Sheen	Sheen
	MW-07	12/30/98	Sheen	Sheen	Sheen	Sheen	Sheen
	MW-07	04/14/99	260.0	30.0	6.8	24.0	162.0
	MW-07	06/03/99	Product	Product	Product	Product	Product
	MW-07	09/09/99	Product	Product	Product	Product	Product
	MW-07	12/30/99	300.0	9.3	ND	16.0	101.7
MW-07 DUP	MW-07 DUP	12/30/99	300.0	13.0	ND	22.0	162.0
MW-08	MW-08	03/05/96		DRY			
	MW-08	06/03/96	SILTED IN TO 3.8 FEET BELOW GRADE				
	MW-08	10/09/96	SILTED IN TO 3.8 FEET BELOW GRADE				
	MW-08	12/31/96	35.8	ND	ND	ND	ND
	MW-08	03/18/97	NM	NM	NM	NM	NM
	MW-08	06/16/97	SILTED IN TO 3.6 FEET BELOW GRADE				
	MW-08	09/25/97	NM	ND	ND	ND	ND
	MW-08	12/22/97	NM	1.2	ND	ND	ND
	MW-08	04/28/98	42.0	3.6	0.6	0.6	ND
	MW-08	06/23/98		DRY			
	MW-08	09/22/98		DRY			
	MW-08	12/29/98	SILTED IN TO 1.5 FEET BELOW GRADE				
MW-09	MW-09	03/05/96	16.8	0.8	0.3	1.1	1.3
	MW-09	06/03/96	15.8	0.4	ND	ND	ND
	MW-09	10/09/96	16.5	ND	ND	ND	ND
	MW-09	12/31/96	7.2	ND	ND	ND	ND
	MW-09	03/18/97	NM	ND	ND	ND	0.3
	MW-09	06/16/97	NM	ND	ND	ND	ND
	MW-09	09/25/97	NM	ND	ND	ND	ND
	MW-09	12/22/97	NM	ND	ND	ND	ND
	MW-09	04/28/98	ND	ND	ND	ND	ND
	MW-09	06/23/98	11.0	ND	ND	ND	ND
	MW-09	09/22/98	19.0	ND	ND	ND	ND
	MW-09	12/29/98	3.8	ND	ND	ND	ND
	MW-09	04/12/99	3.0	ND	ND	ND	ND
	MW-09	06/02/99	4.0	ND	ND	ND	ND
	MW-09	09/07/99	18.0	ND	ND	ND	ND
	MW-09	12/28/99	14.0	ND	ND	ND	ND
MW-10	MW-10	03/05/96	ND	1.0	ND	0.9	0.4
	MW-10	06/03/96	ND	ND	ND	ND	ND
	MW-10	10/09/96	ND	ND	ND	ND	ND
	MW-10	12/31/96	ND	ND	ND	ND	ND
	MW-10	03/18/97	NM	ND	ND	ND	ND

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	MW-10	06/16/97	NM	ND	ND	ND	ND
	MW-10	09/25/97	NM	ND	ND	ND	ND
	MW-10	12/22/97	NM	ND	ND	ND	ND
	MW-10	04/28/98	ND	ND	ND	ND	ND
	MW-10	06/23/98	ND	ND	ND	ND	ND
	MW-10	09/22/98	ND	ND	ND	ND	ND
	MW-10	12/29/98	ND	ND	ND	ND	ND
	MW-10	04/12/99	ND	ND	ND	ND	ND
	MW-10	06/02/99	ND	ND	ND	ND	ND
	MW-10	09/07/99	ND	ND	ND	ND	ND
	MW-10	12/28/99	ND	ND	ND	ND	ND
MW-11	MW-11	03/05/96	ND	ND	ND	ND	0.3
	MW-11	06/03/96	ND	ND	ND	ND	ND
	MW-11	10/09/96	ND	ND	ND	ND	ND
	MW-11	12/31/96	ND	ND	ND	ND	ND
	MW-11	03/18/97	NM	ND	ND	ND	ND
	MW-11	06/16/97	NM	ND	ND	ND	ND
	MW-11	09/25/97	NM	ND	ND	ND	ND
	MW-11	12/22/97	NM	ND	ND	ND	ND
	MW-11	04/28/98	ND	ND	ND	ND	ND
	MW-11	06/23/98	ND	ND	ND	ND	ND
	MW-11	09/22/98	ND	ND	ND	ND	ND
	MW-11	12/29/98	ND	ND	ND	ND	ND
	MW-11	04/12/99	ND	ND	ND	ND	ND
	MW-11	06/02/99	ND	ND	ND	ND	ND
	MW-11	09/07/99	ND	ND	ND	ND	ND
	MW-11	12/28/99	ND	ND	ND	ND	ND
MW-12	MW-12	03/05/96	FREE PRODUCT FOUND IN WELL				
	MW-12	05/31/96	FREE PRODUCT FOUND IN WELL				
	MW-12	10/09/96	FREE PRODUCT FOUND IN WELL				
	MW-12	12/31/96	FREE PRODUCT FOUND IN WELL				
	MW-12	03/18/97	FREE PRODUCT FOUND IN WELL				
	MW-12	06/18/97	FREE PRODUCT FOUND IN WELL				
	MW-12	09/25/97	FREE PRODUCT FOUND IN WELL				
	MW-12	12/22/97	FREE PRODUCT FOUND IN WELL				
	MW-12	04/28/98	FREE PRODUCT FOUND IN WELL				
	MW-12	06/24/98	FREE PRODUCT FOUND IN WELL				
	MW-12	09/23/98	Product	Product	Product	Product	Product
	MW-12	12/30/98	Product	Product	Product	Product	Product
	MW-12	04/12/99	Product	Product	Product	Product	Product

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	MW-12	06/02/99	Product	Product	Product	Product	Product
MW-13	MW-13	03/05/96	ND	ND	ND	ND	0.5
	MW-13	06/04/96	ND	ND	ND	ND	ND
	MW-13	10/09/96	ND	ND	ND	ND	ND
	MW-13	12/30/96	ND	ND	ND	ND	ND
	MW-13	03/18/97	NM	ND	ND	ND	ND
	MW-13	06/16/97	NM	ND	ND	ND	ND
	MW-13	09/23/97	NM	ND	ND	ND	ND
	MW-13	12/19/97	NM	ND	ND	ND	ND
	MW-13	04/24/98	ND	ND	ND	ND	ND
	MW-13	06/23/98	ND	ND	ND	ND	ND
	MW-13	09/21/98	ND	ND	ND	ND	ND
	MW-13	12/29/98	ND	ND	ND	ND	ND
	MW-13	04/12/99	ND	ND	ND	ND	ND
	MW-13	06/02/99	ND	ND	ND	ND	ND
	MW-13	09/07/99	ND	ND	ND	ND	ND
	MW-13	12/28/99	ND	ND	ND	ND	ND
MW-14	MW-14	03/05/96	FREE PRODUCT FOUND IN WELL				
	MW-14	05/31/96	FREE PRODUCT FOUND IN WELL				
	MW-14	10/09/96	103.7	7698.8	361.7	2107.7	2917.8
	MW-14	12/30/96	94.8	6673.5	179.4	857.3	940.5
	MW-14	03/19/97	NOT SAMPLED				
	MW-14	06/18/97	NOT SAMPLED				
	MW-14	09/23/97	NOT SAMPLED				
	MW-14	12/19/97	NOT SAMPLED				
	MW-14	04/28/98	69.0	2900.0	800.0	1100.0	1940.0
	MW-14	06/24/98	89.0	2000.0	150.0	1100.0	360.0
	MW-14	09/23/98	87.0	950.0	91.0	780.0	256.0
	MW-14	12/30/98	Product	Product	Product	Product	Product
	MW-14	04/12/99	Product	Product	Product	Product	Product
	MW-14	06/02/99	Product	Product	Product	Product	Product
	MW-14	09/09/99	Product	Product	Product	Product	Product
	MW-14	12/30/99	85.0	780.0	470.0	1600.0	1660.0
MW-15	MW-15	03/05/96	ND	1.6	0.4	3.8	3.5
	MW-15	06/03/96	ND	ND	ND	ND	ND
	MW-15	10/09/96	ND	ND	ND	ND	ND
	MW-15	12/30/96	ND	ND	ND	ND	ND
	MW-15	03/18/97	NM	ND	ND	ND	ND
	MW-15	06/17/97	NM	ND	ND	ND	ND
	MW-15	09/26/97	NM	ND	ND	ND	ND

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	MW-15	12/22/97	NM	ND	ND	ND	ND
	MW-15	04/24/98	ND	ND	ND	ND	ND
	MW-15	06/23/98	ND	ND	ND	ND	ND
	MW-15	09/21/98	ND	ND	ND	ND	ND
	MW-15	12/28/98	ND	ND	ND	ND	ND
	MW-15	04/12/99	ND	ND	ND	ND	ND
	MW-15	06/02/99	ND	ND	ND	ND	ND
	MW-15	09/07/99	ND	ND	ND	ND	ND
	MW-15	12/28/99	ND	ND	ND	ND	ND
MW-16	MW-16	03/05/96	ND	ND	ND	ND	ND
	MW-16	06/04/96	NOT SAMPLED				
	MW-16	10/09/96	ND	ND	ND	ND	ND
	MW-16	12/30/96	ND	ND	ND	ND	ND
	MW-16	03/19/97	NOT SAMPLED				
	MW-16	06/18/97	NOT SAMPLED				
	MW-16	09/23/97	NOT SAMPLED				
	MW-16	12/19/97	NOT SAMPLED				
	MW-16	06/24/98	ND	ND	ND	ND	ND
	MW-16	09/23/98	NS	NS	NS	NS	NS
	MW-16	12/30/98	ND	ND	ND	ND	ND
	MW-16	04/12/99	NS	NS	NS	NS	NS
	MW-16	06/03/99	ND	ND	ND	ND	ND
	MW-16	09/09/99	NS	NS	NS	NS	NS
	MW-16	12/30/99	NS	NS	NS	NS	NS
MW-16 DUP	MW-16 DUP	12/30/98	ND	ND	ND	ND	ND
MW-17	MW-17	03/05/96	FREE PRODUCT FOUND IN WELL				
	MW-17	06/04/96	FREE PRODUCT FOUND IN WELL				
	MW-17	10/09/96	FREE PRODUCT FOUND IN WELL				
	MW-17	12/30/96	FREE PRODUCT FOUND IN WELL				
	MW-17	03/18/97	FREE PRODUCT FOUND IN WELL				
	MW-17	06/18/97	FREE PRODUCT FOUND IN WELL				
	MW-17	09/23/97	FREE PRODUCT FOUND IN WELL				
	MW-17	12/22/97	FREE PRODUCT FOUND IN WELL				
	MW-17	04/28/98	FREE PRODUCT FOUND IN WELL				
	MW-17	06/23/98	FREE PRODUCT FOUND IN WELL				
	MW-17	09/23/98	FREE PRODUCT FOUND IN WELL				
	MW-17	12/29/98	Product	Product	Product	Product	Product
	MW-17	04/12/99	Product	Product	Product	Product	Product
	MW-17	06/03/99	Product	Product	Product	Product	Product
	MW-17	09/09/99	Product	Product	Product	Product	Product

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	MW-17	12/30/99	Product	Product	Product	Product	Product
MW-18	MW-18	03/05/96	53.0	6.8	2.4	1.8	14.1
	MW-18	06/04/96	36.8	136.4	2.5	6.6	4.7
	MW-18	10/09/96	31.9	60.1	1.1	1.5	0.7
	MW-18	12/31/96	43.1	176.0	1.9	1.3	0.7
	MW-18	03/19/97	NM	150.9	2.4	0.6	2.1
	MW-18	06/18/97	NM	34.0	2.1	1.2	0.2
	MW-18	09/24/97	NM	33.2	2.3	3.4	1.4
	MW-18	12/23/97	NM	63.8	1.2	4.2	0.8
	MW-18	04/28/98	56.0	68.0	3.9	6.8	2.2
	MW-18	06/24/98	60.0	150.0	0.8	13.0	2.1
	MW-18	09/22/98	74.0	76.0	3.6	12.0	2.5
	MW-18	12/29/98	56.0	31.0	1.2	5.1	1.0
	MW-18	04/13/99	35.0	27.0	0.6	3.1	ND
	MW-18	06/03/99	80.0	36.0	0.9	4.2	1.2
	MW-18	09/09/99	10.0	12.0	ND	2.3	ND
MW-18 DUP	MW-18	09/09/99	10.0	13.0	ND	2.5	ND
	MW-18	12/29/99	42.0	30.0	0.5	2.6	ND
MW-19	MW-19	03/05/96	80.6	6.1	2.8	24.9	55.3
	MW-19	06/04/96	80.5	15.3	2.8	92.9	150.5
	MW-19	10/09/96	11.1	1.4	3.0	39.5	58.0
	MW-19	12/30/96	65.7	17.9	3.5	43.0	62.5
	MW-19	03/19/97	NM	24.6	4.1	164.1	352.2
	MW-19	06/17/97	NM	8.1	2.4	96.7	160.5
	MW-19	09/26/97	NM	0.8	1.8	11.7	11.0
	MW-19	12/23/97	NM	36.9	3.8	244.0	357.4
	MW-19	04/28/98	98.0	44.0	3.4	190.0	280.8
	MW-19	06/23/98	130.0	60.0	7.0	280.0	341.9
	MW-19	09/22/98	46.0	13.0	2.2	31.0	4.0
	MW-19	12/29/98	37.0	14.0	ND	43.0	23.0
	MW-19	04/13/99	36.0	0.7	ND	1.7	ND
	MW-19	06/03/99	45.0	7.6	0.9	35.0	16.2
	MW-19	09/09/99	1.7	ND	ND	0.6	ND
	MW-19	12/29/99	170.0	39.0	0.5	110.0	55.0
MW-20	MW-20	03/05/96	133.4	3.6	16.8	3.3	21.8
	MW-20	06/03/96	106.3	11.4	3.8	0.8	1.4
	MW-20	10/09/96	73.3	2.5	11.5	7.5	4.4
	MW-20	12/31/96	53.3	2.7	14.3	9.5	5.7
	MW-20	03/18/97	NM	2.3	2.2	4.4	3.2
	MW-20	06/16/97	NM	1.4	4.4	4.0	4.2

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	MW-20	09/24/97	NM	1.7	4.5	3.8	2.4
	MW-20	12/22/97	NM	4.5	6.7	9.3	6.8
	MW-20	04/27/98	83.0	6.8	9.4	18.0	20.1
	MW-20	06/23/98	91.0	4.8	7.5	7.0	3.6
	MW-20	09/22/98	60.0	2.6	ND	5.8	ND
	MW-20	12/28/98	71.0	4.0	ND	1.7	ND
	MW-20	04/12/99	80.0	7.8	ND	2.4	1.9
	MW-20	06/02/99	86.0	5.8	4.7	3.7	ND
	MW-20	09/08/99	20.0	1.1	ND	ND	ND
	MW-20	12/29/99	95.0	5.7	ND	2.5	ND
MW-21	MW-21	03/05/96	82.0	6.0	2.0	29.3	6.1
	MW-21	06/03/96	82.1	0.4	0.3	1.1	0.9
	MW-21	10/09/96	46.0	0.7	ND	0.5	0.3
	MW-21	12/31/96	51.3	ND	ND	0.5	0.2
	MW-21	03/18/97	NM	0.3	ND	0.4	ND
	MW-21	06/17/97	NM	ND	ND	0.2	ND
	MW-21	09/25/97	NM	ND	0.4	0.9	0.4
	MW-21	12/22/97	NM	1.3	1.5	2.4	0.8
	MW-21	04/27/98	49.0	2.1	1.4	ND	ND
	MW-21	06/23/98	80.0	ND	ND	1.8	0.5
	MW-21	09/21/98	91.0	ND	ND	ND	ND
	MW-21	12/28/98	81.0	ND	ND	1.1	ND
	MW-21	04/12/99	92.0	ND	ND	ND	ND
	MW-21	06/02/99	120.0	2.6	ND	0.6	ND
	MW-21	09/08/99	100.0	ND	ND	ND	ND
	MW-21	12/29/99	64.0	ND	ND	ND	ND
MW-21 DUP	MW-21 DUP	09/08/99	98.0	ND	ND	ND	ND
MW-22	MW-22	03/05/96	36.7	ND	ND	0.2	0.4
	MW-22	06/03/96	25.3	ND	ND	ND	0.4
	MW-22	10/09/96	22.9	ND	ND	ND	ND
	MW-22	12/31/96	22.1	ND	ND	ND	ND
	MW-22	03/18/97	NM	ND	ND	ND	ND
	MW-22	06/16/97	NM	ND	ND	ND	ND
	MW-22	09/26/97	NM	ND	ND	ND	ND
	MW-22	12/22/97	NM	ND	ND	ND	ND
	MW-22	04/27/98	18.0	ND	ND	ND	ND
	MW-22	06/23/98	24.0	ND	ND	ND	ND
	MW-22	09/21/98	28.0	ND	ND	ND	ND
	MW-22	12/28/98	28.0	ND	ND	ND	ND
	MW-22	04/12/99	27.0	ND	ND	ND	ND

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	MW-22	06/02/99	29.0	ND	ND	ND	ND
	MW-22	09/08/99	24.0	ND	ND	ND	ND
	MW-22	12/29/99	19.0	ND	ND	ND	ND
MW-23	MW-23	03/05/96	DRY	DRY	DRY	DRY	DRY
	MW-23	06/04/96	NS	NS	NS	NS	NS
	MW-23	10/09/96	NS	NS	NS	NS	NS
	MW-23	12/31/96	NS	NS	NS	NS	NS
	MW-23	03/18/97	NS	NS	NS	NS	NS
	MW-23	06/18/97	NS	NS	NS	NS	NS
	MW-23	09/25/97	NS	NS	NS	NS	NS
	MW-23	12/19/97	NS	NS	NS	NS	NS
	MW-23	04/27/98	NS	NS	NS	NS	NS
	MW-23	06/23/98	NS	NS	NS	NS	NS
	MW-23	09/22/98	NS	NS	NS	NS	NS
	MW-23	12/30/98	NS	NS	NS	NS	NS
	MW-23	06/02/99	NS	NS	NS	NS	NS
	MW-23	06/08/99	NS	NS	NS	NS	NS
MW-24	MW-24	10/09/96	25.6	231.7	144.1	122.5	988.8
	MW-24	12/31/96	NS	NS	NS	NS	NS
	MW-24	03/18/97	NS	NS	NS	NS	NS
	MW-24	06/18/97	NS	NS	NS	NS	NS
	MW-24	09/25/97	NS	NS	NS	NS	NS
	MW-24	12/19/97	NS	NS	NS	NS	NS
	MW-24	04/27/98	NS	NS	NS	NS	NS
	MW-24	06/25/98	84.0	640.0	65.0	130.0	820.0
	MW-24	09/22/98	NS	NS	NS	NS	NS
	MW-24	12/30/98	NS	NS	NS	NS	NS
	MW-24	04/12/99	NS	NS	NS	NS	NS
	MW-24	06/02/99	NS	NS	NS	NS	NS
	MW-24	09/09/99	NS	NS	NS	NS	NS
MW-25	MW-25	03/05/96	DRY	DRY	DRY	DRY	DRY
	MW-25	06/04/96	NS	NS	NS	NS	NS
	MW-25	10/09/96	1.0	39.9	11.3	7.4	14.3
	MW-25	12/31/96	NS	NS	NS	NS	NS
	MW-25	03/18/97	NS	NS	NS	NS	NS
	MW-25	06/18/97	NS	NS	NS	NS	NS
	MW-25	09/25/97	NS	NS	NS	NS	NS
	MW-25	12/19/97	NS	NS	NS	NS	NS
	MW-25	06/25/98	3.2	32.0	58.0	8.5	91.0
	MW-25	09/22/98	NS	NS	NS	NS	NS

TABLE 2
SUMMARY OF MTBE AND BTEX LABORATORY ANALYSIS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/L)

Well #	Well A #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	MW-25	12/30/98	NS	NS	NS	NS	NS
	MW-25	04/12/99	NS	NS	NS	NS	NS
	MW-25	06/02/99	NS	NS	NS	NS	NS
MW-29	MW-29	09/24/98	NS	NS	NS	NS	NS
	MW-29	12/31/98	NS	NS	NS	NS	NS
	MW-29	04/14/99	NS	NS	NS	NS	NS
	MW-29	06/02/99	NS	NS	NS	NS	NS
POND	POND	04/13/99	5.0	ND	ND	0.6	ND
	POND	06/02/99	4.6	ND	ND	ND	ND
	POND	09/09/99	ND	ND	ND	ND	ND
	POND	12/28/99	5.7	2.1	2.5	3.5	12.1
RW-26	RW-26	06/03/99	520.0	2500.0	470.0	190.0	1350.0
T-17-3	T-17-3	06/25/98	670.0	3300.0	150.0	220.0	510.0
	T-17-3	09/22/98	NS	NS	NS	NS	NS
	T-17-3	12/30/98	NS	NS	NS	NS	NS
	T-17-3	04/12/99	NS	NS	NS	NS	NS
	T-17-3	06/02/99	NS	NS	NS	NS	NS

NOTE: NM SIGNIFIES NOT MEASURED
NS SIGNIFIES NOT SAMPLED

TABLE 3
SUMMARY OF LABORATORY ANALYSIS DATA
MAJOR CATIONS AND ANIONS, TDS AND pH
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in mg/L)

Well No.	Date	Calcium	Potassium	Magnesium	Sodium	HCO ₃ as CaCO ₃		CO ₃ as CaCO ₃		OH as CaCO ₃		TOTAL Alkalinity	TOTAL Hardness	Chloride	Conductivity @ 25° C		pH	Dried at 180° C		Filterable
						Bicarbonate	Carbonate	Carbonate	Carbonate	Hydroxide	Hydroxide				Specific	Conductance		Sulfate	TDS	
EFFLUENT	12/22/97	274	6.6	31.6	732	278	<1	<1	<1	<1	<1	730	814	648.0	4,470	4,470	7.57	1,401	3,416	3,371
INFLUENT	12/31/98	220	8.6	48.0	780	730	ND	ND	NS	NS	NS	730	NS	110.0	3,800	3,800	7.98	1,600	3,500	NS
	12/28/99	320	8.5	45.0	815	130	ND	ND	ND	ND	ND	130	NS	680.0	4,870	4,870	7.97	1,500	3,620	3,490
	12/22/97	272	6.6	31.2	728	86	<1	<1	<1	<1	<1	86	808	766.0	4,530	4,530	5.47	1,414	3,410	3,304
	12/31/98	240	8.7	47.0	790	800	ND	ND	NS	NS	NS	800	NS	110.0	3,700	3,700	7.14	1,600	3,600	NS
MW-01	12/28/99	310	8.5	45.0	775	890	ND	ND	ND	ND	ND	890	NS	160.0	4,380	4,380	7.19	1,520	3,480	3,700
	03/19/97	482	5.5	44.0	646	336	<1	<1	<1	<1	<1	336	1,365	47.6	4,470	4,470	7.05	2,518	4,166	4,079
	12/23/97	458	5.2	34.0	645	289	<1	<1	<1	<1	<1	1,284	1,284	47.2	4,290	4,290	7.06	2,495	4,024	3,973
	12/30/98	370	5.6	52.0	64	290	ND	ND	NS	NS	NS	3,800	3,800	39.0	4,000	4,000	7.04	2,400	3,800	NS
MW-02	12/30/99	460	5.6	47.0	578	290	ND	ND	ND	ND	ND	290	NS	32.0	4,050	4,050	7.16	2,250	3,640	3,670
	12/30/99	46	4.8	14.0	800	1700	ND	ND	ND	ND	ND	1,700	NS	130.0	3,300	3,300	7.21	33	2,290	2,050
MW-04	03/19/97	199	8.6	19.6	866	863	<1	<1	<1	<1	<1	863	578	196.0	4,250	4,250	7.31	1,332	3,276	3,484
	12/22/97	96	6.7	31.0	648	914	<1	<1	<1	<1	<1	367	367	116.0	3,270	3,270	7.29	875	2,458	2,687
MW-05	12/30/98	Well destroyed																		
	03/19/97	44	7.5	10.6	1,282	864	2.66	<1	<1	<1	<1	867	153	478.0	5,610	5,610	8.33	1,518	4,022	4,204
	12/19/97	37	7.0	7.2	1,325	868	<1	<1	<1	<1	<1	868	123	385.0	5,690	5,690	8.39	1,798	4,132	4,428
	12/29/98	120	11.0	34.0	1,600	750	ND	NS	NS	NS	NS	750	NS	240.0	6,400	6,400	7.83	2,700	5,500	NS
MW-05 DUP MW-06	12/29/99	160	10.5	30.0	1,110	740	ND	ND	ND	ND	ND	740	NS	140.0	5,100	5,100	7.79	1,970	3,990	4,170
	12/29/99	160	10.2	31.0	1,100	730	ND	ND	ND	ND	ND	730	NS	140.0	5,090	5,090	7.74	2,000	3,980	4,170
	03/19/97	192	9.2	25.0	793	691	<1	<1	<1	<1	<1	691	582	100.5	4,010	4,010	7.79	1,495	3,142	3,306
	12/23/97	106	7.5	15.5	762	772	<1	<1	<1	<1	<1	762	329	94.4	3,730	3,730	7.69	1,314	2,744	3,071
MW-07	12/30/98	88	8.4	27.0	740	760	ND	ND	NS	NS	NS	760	NS	94.0	3,200	3,200	7.60	1,000	2,800	NS
	12/29/99	140	9.2	26.0	784	800	ND	ND	ND	ND	ND	800	NS	100.0	3,670	3,670	7.63	1,160	2,740	3,020
	12/30/99	290	11.4	36.0	990	510	ND	ND	ND	ND	ND	510	NS	52.0	5,090	5,090	7.31	2,480	4,250	4,370
	12/30/99	290	10.8	36.0	980	510	ND	ND	ND	ND	ND	510	NS	42.0	5,060	5,060	7.25	2,440	4,200	4,300
MW-08	12/22/97	INSUFFICIENT SAMPLE FOR THESE TESTS																		
	12/29/98	WELL SIFTED IN																		
MW-09	03/18/97	395	9.4	42.4	1,528	330	<1	<1	<1	<1	<1	330	1,161	89.5	7,020	7,020	7.62	3,761	6,164	6,155
	12/22/97	326	6.4	28.4	1,510	365	<1	<1	<1	<1	<1	365	931	65.1	7,040	7,040	7.71	3,936	6,398	6,237
	12/29/98	320	7.8	66.0	1,700	370	ND	NS	NS	NS	NS	370	NS	54.0	6,200	6,200	7.51	4,100	6,600	NS
	12/28/99	380	7.8	54.0	1,430	400	ND	ND	ND	ND	ND	400	NS	53.0	6,860	6,860	7.42	3,740	6,050	6,060
MW-10	03/18/97	365	10.6	36.6	1,522	313	<1	<1	<1	<1	<1	313	1,062	52.4	7,190	7,190	7.40	3,868	6,062	6,168
	12/22/97	318	6.3	19.5	1,455	326	<1	<1	<1	<1	<1	326	874	50.6	6,740	6,740	7.45	3,747	5,970	5,922
	12/29/98	290	8.2	50.0	1,600	320	ND	NS	NS	NS	NS	320	NS	54.0	6,300	6,300	7.39	3,900	6,200	NS
	12/28/99	370	9.1	46.0	1,360	310	ND	ND	ND	ND	ND	310	NS	56.0	6,600	6,600	7.29	3,640	5,840	5,800
MW-11	03/18/97	421	15.0	36.4	1,315	244	<1	<1	<1	<1	<1	244	1,129	29.4	6,670	6,670	7.41	3,875	5,900	5,936
	12/22/97	420	11.0	19.5	1,290	241	<1	<1	<1	<1	<1	241	1,129	17.8	6,470	6,470	7.41	3,902	6,018	5,901
	12/29/98	350	14.0	42.0	1,300	230	ND	NS	NS	NS	NS	230	NS	20.0	5,600	5,600	7.30	3,600	5,600	NS
	12/28/99	420	12.6	38.0	1,230	230	ND	ND	ND	ND	ND	230	NS	24.0	6,270	6,270	7.32	3,630	5,650	5,590
MW-13	03/18/97	432	11.4	41.8	1,126	288	<1	<1	<1	<1	<1	288	1,251	119.0	6,210	6,210	7.28	3,378	5,488	5,396
	12/19/97	416	7.9	31.0	1,155	300	<1	<1	<1	<1	<1	300	1,166	125.0	5,980	5,980	7.28	3,437	5,456	5,472
	12/29/98	360	9.6	56.0	1,200	270	ND	NS	NS	NS	NS	270	NS	110.0	5,500	5,500	7.20	3,200	5,200	NS
	12/28/99	450	10.3	59.0	1,160	260	ND	ND	ND	ND	ND	260	NS	78.0	5,950	5,950	7.02	3,500	5,520	5,520
MW-14	12/30/99	440	6.8	51.0	808	530	ND	ND	ND	ND	ND	530	NS	29.0	5,020	5,020	6.92	2,610	4,400	4,480
	03/18/97	381	8.8	36.8	776	200	<1	<1	<1	<1	<1	200	1,103	48.1	4,610	4,610	7.60	2,568	4,066	4,019
MW-15	12/22/97	375	6.8	21.4	825	204	<1	<1	<1	<1	<1	204	1,025	78.5	4,640	4,640	7.62	2,696	4,258	4,207

TABLE 3
SUMMARY OF LABORATORY ANALYSIS DATA
MAJOR CATIONS AND ANIONS, TDS AND pH
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in mg/L)

Well No.	Date	Calcium	Potassium	Magnesium	Sodium	HCO ₃ as CaCO ₃		CO ₃ as CaCO ₃		OH as CaCO ₃		TOTAL Alkalinity	TOTAL Hardness	Chloride	Conductivity @ 25° C		Dried at 180 C		Filterable	
						Bicarbonate	Carbonate	Carbonate	Hydroxide	Hydroxide	Specific Conductance				pH	Sulfate	TDS	TDS		
MW-18	12/29/98	390	8.6	44.0	840	180	ND	ND	NS	NS	180	NS	140.0	4,800	7.38	2,600	4,200	NS		
	12/28/99	440	6.0	64.0	1,300	220	ND	ND	ND	NS	220	NS	130.0	6,630	7.39	3,740	6,010	5,900		
	03/19/97	198	9.1	25.8	882	757	<1	<1	<1	<1	757	601	91.3	4,470	7.28	1,720	3,532	3,683		
	12/23/97	93	4.9	10.6	565	597	<1	<1	<1	<1	597	276	65.0	2,830	7.59	928	2,008	2,263		
MW-19	12/29/98	76	4.6	14.0	430	500	ND	ND	NS	NS	500	NS	73.0	2,100	7.40	620	1,700	NS		
	12/29/99	140	9.1	26.0	734	920	ND	ND	NS	NS	920	NS	82.0	3,630	7.03	1,080	2,700	3,000		
	03/19/97	196	6.0	45.8	1,335	995	<1	<1	<1	<1	995	678	273.0	6,060	7.63	2,390	4,850	5,241		
	12/23/97	118	4.6	30.6	1,215	1,228	<1	<1	<1	<1	1,228	421	264.0	5,560	7.41	1,880	4,238	4,740		
MW-20	12/29/98	82	3.4	24.0	470	540	ND	ND	NS	NS	540	NS	66.0	2,200	7.68	680	1,800	NS		
	12/29/99	260	9.2	59.0	960	1,130	ND	ND	NS	NS	1,130	NS	130.0	4,950	7.48	1,760	3,880	4,310		
	03/18/97	464	8.1	52.4	969	836	<1	<1	<1	<1	836	1,374	115.0	5,590	7.00	2,649	4,892	5,094		
	12/22/97	500	6.3	42.6	1,060	756	<1	<1	<1	<1	756	1,424	222.0	5,860	7.02	2,796	5,218	5,383		
MW-21	12/28/98	370	8.1	66.0	970	670	ND	NS	NS	NS	670	NS	150.0	4,900	6.98	2,500	4,700	NS		
	12/29/99	530	10.4	79.0	1,180	900	ND	ND	NS	NS	900	NS	210.0	6,650	7.07	3,150	5,870	6,060		
	03/18/97	338	11.4	39.8	1,315	682	<1	<1	<1	<1	682	1,008	78.5	5,890	7.08	2,800	5,050	5,265		
	12/22/97	180	6.8	24.4	985	974	<1	<1	<1	<1	974	550	68.6	4,610	7.16	1,704	3,546	3,943		
MW-22	12/28/98	320	11.0	68.0	1,400	700	ND	NS	NS	NS	700	NS	110.0	5,700	6.97	3,200	5,800	NS		
	12/29/99	410	11.0	72.0	1,450	820	ND	NS	NS	NS	820	NS	93.0	7,060	7.08	3,450	6,180	6,310		
	03/18/97	379	10.3	37.0	1,229	388	<1	<1	<1	<1	388	1,099	30.6	6,250	7.11	3,422	5,518	5,496		
	12/22/97	494	10.2	25.5	1,740	449	<1	<1	<1	<1	449	1,339	67.8	8,180	7.17	4,733	7,602	7,520		
	12/28/98	420	14.0	71.0	2,000	460	ND	NS	NS	NS	460	NS	98.0	6,300	6.95	5,000	8,100	NS		
	12/29/99	430	16.9	110.0	3,240	480	ND	NS	NS	NS	480	NS	160.0	13,400	7.11	7,680	12,300	12,100		
		ND Signifies Not detected at method lowest detection limit.																		
		NS Signifies Not sampled.																		

TABLE 4
SUMMARY OF LABORATORY ANALYSIS
POLYCYCLIC AROMATIC HYDROCARBONS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(Concentrations in mg/L)

Location	Date	Acenaphthene	Acenaphthylene	Anthracene	Benz (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (ghi) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indene (1,2,3-cd) pyrene	2-Methyl naphthalene	Naphthalene	Phenanthrene	Pyrene	Quinoline
EFFLUENT	10/05/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
EFFLUENT	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	NA
EFFLUENT	12/31/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24.9	ND	ND	NA
EFFLUENT	12/28/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
INFLUENT	10/06/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	133	176	ND	ND	NA
INFLUENT	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	87	ND	ND	NA
INFLUENT	12/31/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	108	U	U	U
INFLUENT	12/28/99	U	U	U	U	U	U	U	U	U	U	U	U	U	60.5	U	U	U	U
MW-01	04/03/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-01	12/23/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-01	12/30/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40.5	81.5	ND	ND	NA
MW-01	12/30/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-02	03/19/97	ND	ND	ND	ND	ND	ND	ND	ND	16.4	U	U	74	U	467	335	132	9.00J	U
MW-04	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-04	12/30/98	WELL DESTROYED																	
MW-05	04/03/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-05	12/29/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-05	12/19/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-05	12/29/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-05 DU	12/29/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-06	04/03/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-06	12/23/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-06	12/30/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-06	12/29/99	U	U	U	U	U	U	U	U	U	U	U	U	U	10.6	8.20J	U	U	U
MW-07	12/30/99	U	U	U	U	U	U	U	U	U	U	U	U	U	9.55	6.50J	U	U	U
MW-07 DU	12/30/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-08	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-08	12/30/98	WELL SANDED IN																	
MW-09	03/18/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-09	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-09	12/29/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-09	12/28/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-10	03/18/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-10	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-10	12/29/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-10	12/28/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-11	03/18/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-11	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-11	12/29/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-11	12/28/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-13	04/03/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-13	12/19/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-13	12/29/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-13	12/28/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-14	12/30/98	9.00J	U	U	U	U	U	U	U	U	U	U	24.2	U	746	800	36.2	U	U
MW-15	03/18/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-15	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-15	12/29/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-15	12/28/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-18	03/18/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-18	12/23/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-18	12/29/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-18	12/29/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-19	03/18/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-19	12/23/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-19	12/29/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-19	12/29/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-20	03/18/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA

TABLE 4
SUMMARY OF LABORATORY ANALYSIS
POLYCYCLIC AROMATIC HYDROCARBONS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in mg/L)

Location	Date	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)acridine	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indene (1,2,3-cd)pyrene	2-Methyl naphthalene	Naphthalene	Phenanthrene	Pyrene	Quinoline
MW-20	12/22/87	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	NA
MW-20	12/28/88	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	NA
MW-20	12/29/89	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-21	04/03/87	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	NA
MW-21	12/22/87	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	NA
MW-21	12/28/88	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	NA
MW-21	12/29/89	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-22	04/03/87	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	NA
MW-22	12/22/87	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	NA
MW-22	12/28/88	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	NA
MW-22	12/29/89	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

ND - Not detectable
NA - Not analyzed
U Not detectable above the MDL
J - Analyte detected below the PQL

NOTE: Indene, Dibenz(a,h)acridine and Quinoline are reported for the first time in this report

B - Analyte detected in the associated Method blank
E - result is outside of quantification range
S - Results outside normal recovery limits
R - RPD outside normal precision limits

TABLE 5
SUMMARY OF METALS LABORATORY ANALYSIS DATA
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
 (concentrations in mg/L)
EPA METHOD

Location	Date	EPA 300.0 Bromide	EPA 300.0 Fluoride	SW-846 7470 Mercury	SW-846 6010A Arsenic	SW-846 6010A Barium	SW-846 6010A Cadmium	SW-846 6010A Chromium	SW-846 6010A Lead	SW-846 6010A Selenium	SW-846 6010A Silver
EFFLUENT	10/06/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EFFLUENT	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EFFLUENT	12/31/98	3.2	ND	NA	NA	NA	NA	ND	ND	NA	NA
EFFLUENT	12/31/98	3.19	1.43	NA	ND	0.063	ND	ND	ND	0.02	ND
EFFLUENT	12/28/99	1.30J	0.987J	U	U	0.0549	U	U	U	U	U
INFLUENT	10/06/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
INFLUENT	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
INFLUENT	12/31/98	3.1	NA	NA	NA	NA	NA	ND	ND	NA	NA
INFLUENT	12/28/99	U	0.888J	U	U	0.0554	U	U	U	U	U
MW-01	03/19/97	0.2	ND	ND	ND	0.09	ND	ND	ND	ND	ND
MW-01	12/23/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-01	12/30/98	ND	NA	NA	NA	NA	NA	ND	ND	NA	NA
MW-01	12/30/98	ND	1.53	NA	ND	0.223	ND	0.013	0.019	ND	ND
MW-01	12/30/99	U	1.04	U	U	0.364	U	0.0200J	U	U	U
MW-02	12/30/99	1.55J	0.793J	1.140J	U	3.03	U	0.0260J	U	U	U
MW-04	03/19/97	0.4	ND	ND	ND	0.49	ND	ND	ND	ND	ND
MW-04	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-04	12/30/98		WELL DESTROYED								
MW-05	03/19/97	0.5	ND	ND	ND	0.2	ND	ND	ND	ND	ND
MW-05	12/19/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-05	12/29/98	3.1	NA	NA	NA	NA	NA	ND	ND	NA	NA
MW-05	12/29/98	3.11	1.65	NA	0.06	1.39	ND	0.037	0.069	ND	ND
MW-05	12/29/99	1.78J	1.14	0.140J	U	0.129	U	0.0100J	U	U	U
MW-05 DUP	12/29/99	1.21J	1.10	U	U	0.522	U	0.0100J	U	U	U
MW-06	03/19/97	0.6	ND	ND	ND	0.05	ND	ND	ND	ND	ND
MW-06	12/23/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-06	12/30/98	3.1	NA	NA	NA	NA	NA	ND	ND	NA	NA
MW-06	12/30/98	3.06	1.50	NA	ND	0.106	ND	ND	ND	ND	ND
MW-06	12/29/99	1.28J	0.990J	U	U	0.16	U	U	U	U	U
MW-07	12/30/99	U	0.963J	0.210J	0.268	2.39	U	0.104	0.110J	U	U
MW-07 DUP	12/30/99	U	1.04	U	0.166	4.55	U	0.0741	0.0740J	U	U
MW-08	12/22/97		INSUFFICIENT SAMPLE FOR THESE TESTS								
MW-08	12/30/98		MONITOR WELL SITED IN TO SURFACE								
MW-09	03/18/97	0.2	ND	ND	ND	0.09	ND	ND	ND	ND	ND

TABLE 5
SUMMARY OF METALS LABORATORY ANALYSIS DATA
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
 (concentrations in mg/L)
EPA METHOD

Location	Date	EPA 300.0 Bromide	EPA 300.0 Fluoride	SW-846 7470 Mercury	SW-846 6010A Arsenic	SW-846 6010A Barium	SW-846 6010A Cadmium	SW-846 6010A Chromium	SW-846 6010A Lead	SW-846 6010A Selenium	SW-846 6010A Silver
MW-09	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-09	12/29/98	ND	NA	NA	NA	NA	NA	ND	ND	NA	NA
MW-09	12/29/98	ND	1.59	NA	ND	0.41	ND	0.028	0.027	ND	ND
MW-09	12/28/99	1.14J	1.08	U	U	0.186	U	0.0140J	U	U	U
MW-10	03/18/97	0.3	ND	ND	ND	0.32	ND	ND	ND	ND	ND
MW-10	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-10	12/29/98	3	NA	NA	NA	NA	NA	ND	ND	NA	NA
MW-10	12/29/98	3	1.63	NA	0.02	0.632	ND	0.022	0.016	ND	ND
MW-10	12/28/99	U	1.26	U	U	0.366	U	U	U	U	U
MW-11	03/18/97	ND	ND	ND	ND	1.15	ND	ND	ND	ND	ND
MW-11	12/22/97	ND	ND	ND	ND	ND	ND	0.053	ND	ND	ND
MW-11	12/29/98	ND	NA	NA	NA	NA	NA	ND	ND	NA	NA
MW-11	12/29/98	ND	1.41	NA	0.06	0.813	ND	0.023	0.025	ND	ND
MW-11	12/28/99	U	1.00	U	U	0.192	U	U	U	U	U
MW-11	03/18/97	0.4	ND	ND	ND	0.43	ND	ND	ND	ND	ND
MW-13	12/19/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-13	12/29/98	3.1	NA	NA	NA	NA	NA	ND	ND	NA	NA
MW-13	12/29/98	3.08	1.67	NA	ND	0.175	ND	0.014	0.016	ND	0.003
MW-13	12/28/99	2.80J	1.82J	U	U	0.0428	U	U	U	U	U
MW-14	12/30/99	U	1.18	0.160J	U	0.391	U	0.0310J	0.0350J	U	U
MW-15	03/18/97	0.3	ND	ND	ND	0.08	ND	ND	ND	ND	ND
MW-15	12/22/97	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-15	12/29/98	3.5	NA	NA	NA	NA	NA	ND	ND	NA	NA
MW-15	12/29/98	3.53	1.60	NA	0.02	0.718	ND	0.032	0.032	ND	ND
MW-15	12/28/99	1.91J	1.18	U	U	0.327	U	0.0170J	U	U	U
MW-18	03/19/97	0.3	ND	0.003	ND	0.14	ND	ND	ND	ND	ND
MW-18	12/23/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-18	12/29/98	3.1	NA	NA	NA	NA	NA	0.05	ND	NA	NA
MW-18	12/29/98	3.08	1.29	NA	0.07	1.07	ND	0.052	0.043	ND	ND
MW-18	12/29/99	U	0.798J	0.657	0.101	0.703	U	0.0450J	0.0870J	U	U
MW-19	03/19/97	0.5	ND	ND	ND	0.31	ND	ND	ND	ND	ND
MW-19	12/23/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-19	12/29/98	3	NA	NA	NA	NA	NA	ND	ND	NA	NA
MW-19	12/29/98	2.99	1.49	NA	0.04	0.597	ND	0.026	0.032	ND	0.003

TABLE 5
SUMMARY OF METALS LABORATORY ANALYSIS DATA
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
 (concentrations in mg/L)
EPA METHOD

Location	Date	EPA 300.0 Bromide	EPA 300.0 Fluoride	SW-846 7470 Mercury	SW-846 6010A Arsenic	SW-846 6010A Barium	SW-846 6010A Cadmium	SW-846 6010A Chromium	SW-846 6010A Lead	SW-846 6010A Selenium	SW-846 6010A Silver
MW-19	12/29/99	1.63J	0.883J	U	U	0.131	U	U	U	U	U
MW-20	03/18/97	0.6	ND	ND	ND	0.35	ND	ND	ND	ND	ND
MW-20	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-20	12/28/98	3.3	NA	NA	NA	NA	NA	ND	ND	NA	NA
MW-20	12/28/98	3.27	1.44	NA	0.04	0.382	ND	0.028	0.047	ND	ND
MW-20	12/29/99	U	1.06	0.110J	0.0370J	0.386	U	0.0380J	0.0600J	U	U
MW-21	03/18/97	0.4	ND	ND	ND	0.19	ND	ND	ND	ND	ND
MW-21	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-21	12/28/98	3.2	NA	NA	NA	NA	NA	ND	ND	NA	NA
MW-21	12/28/98	3.24	1.33	NA	0.08	0.165	ND	0.019	0.023	ND	ND
MW-21	12/29/99	U	0.914J	U	0.0700J	0.204	U	0.0290J	U	U	U
MW-22	03/18/97	0.4	ND	ND	ND	0.22	ND	ND	ND	ND	ND
MW-22	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-22	12/28/98	3.4	NA	NA	NA	NA	NA	ND	0.14	NA	NA
MW-22	12/28/98	3.43	1.28	NA	ND	0.048	ND	0.006	0.135	ND	ND
MW-22	12/29/99	U	1.55J	U	U	0.0147	U	U	0.100J	U	U

ND - Not detectable

NA - NOT ANALYZED

NS - NOT SAMPLED

U - Not detectable above the MDL

J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank

E - Result is outside of quantification range

S - Results outside normal recovery limits

R - RPD outside normal precision limits

Figures

7-2



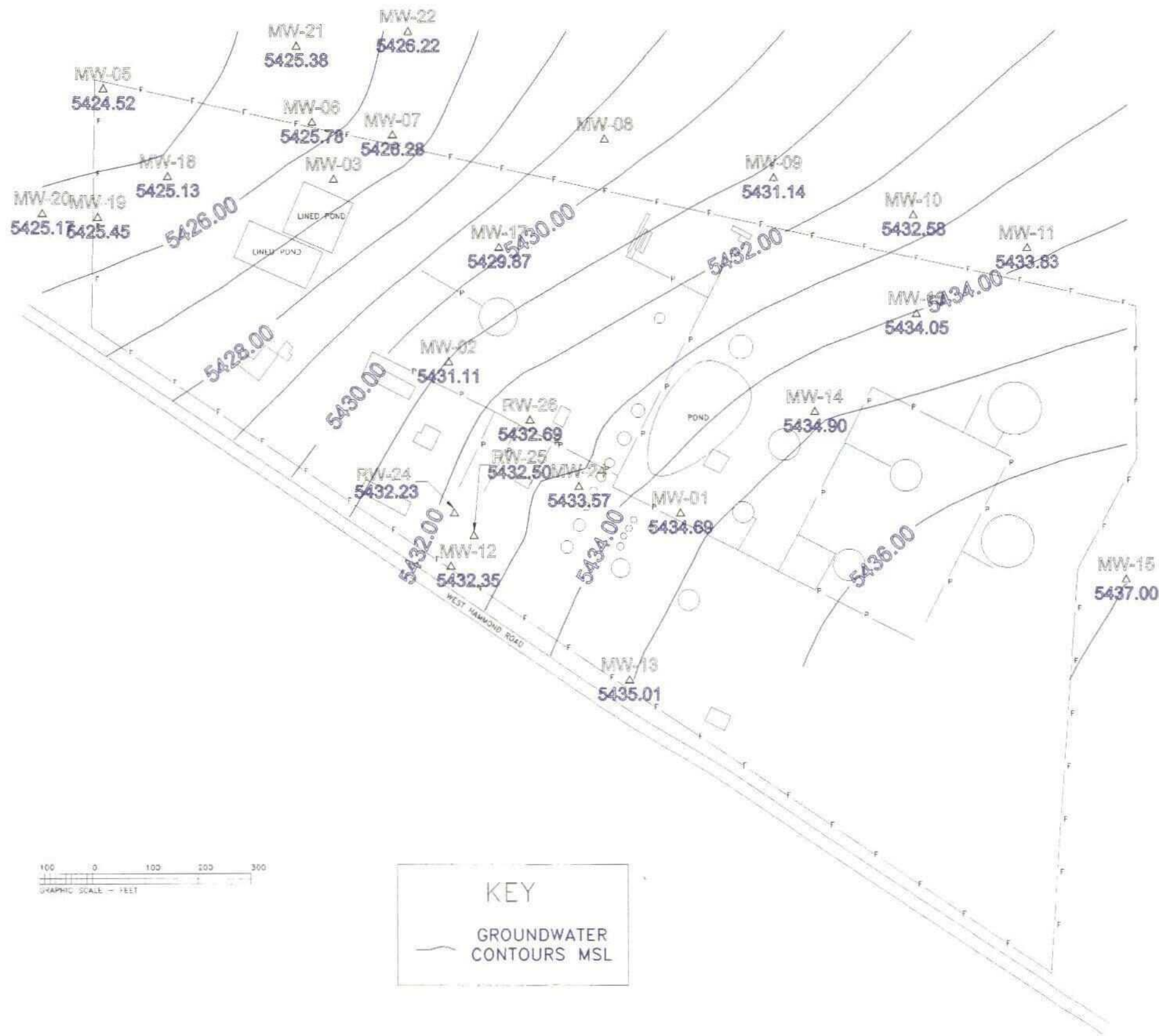
710 EAST 20TH STREET, SUITE 400
 FARMINGTON, NEW MEXICO 87401
 PHONE 505-327-4955
 FAX 505-564-3604



DRAWN BY: K. SINKS
 FIGURE 1A
 WATER LEVEL
 CONTOUR MAP
 APRIL 12, 1999

THRIFTWAY REFINERY
 626 RD 5500
 BLOOMFIELD, NM

STC\01129AWL



GASAMAT #226
1101 E. THIRD
LA JUNTA, COLORADO

810\560296.wl

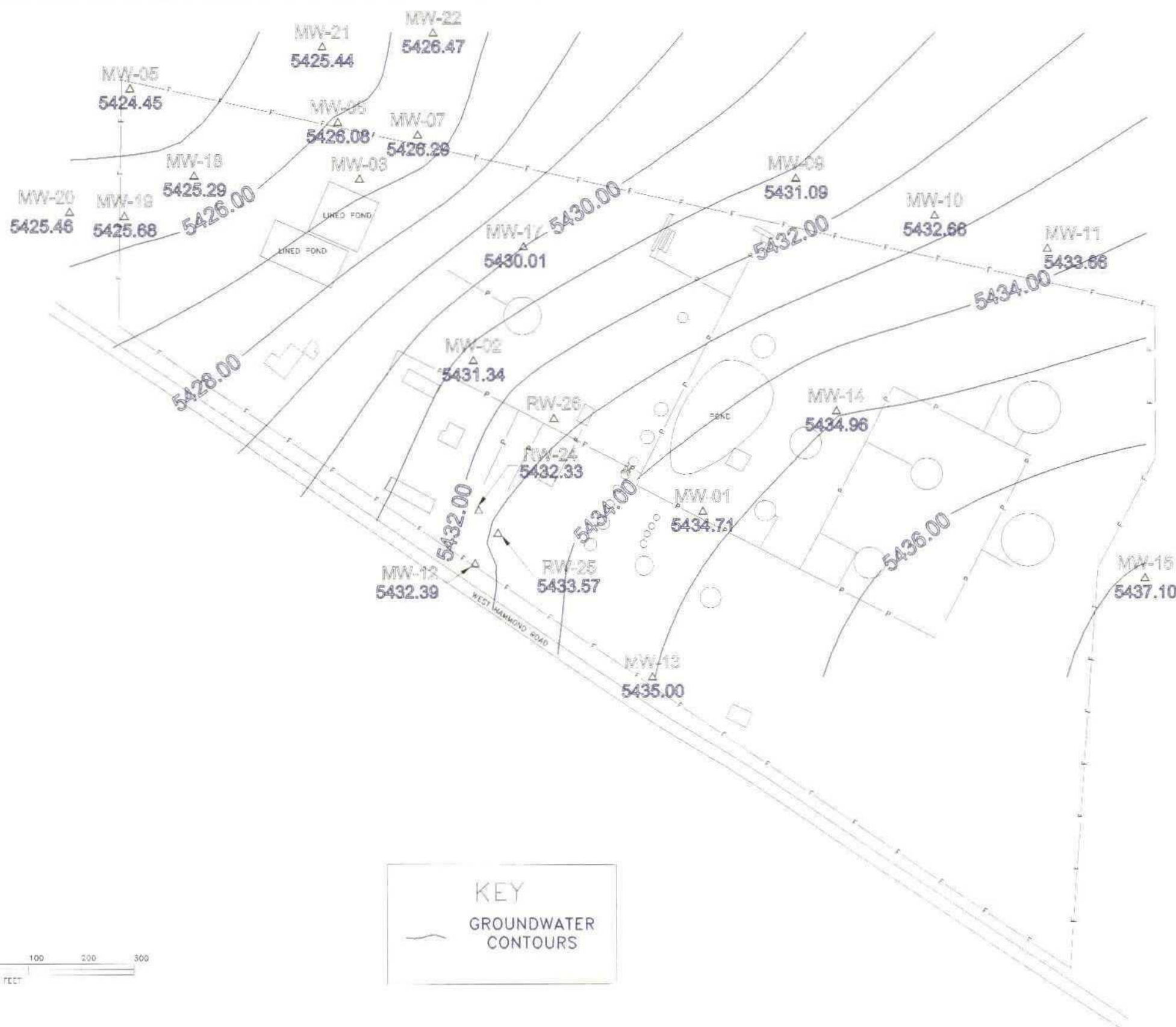
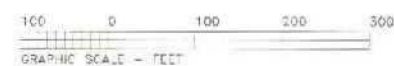
DRAWN BY: K. SINKS

FIGURE 1B
WATER LEVEL
CONTOUR MAP

JUNE 2, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\090999w1

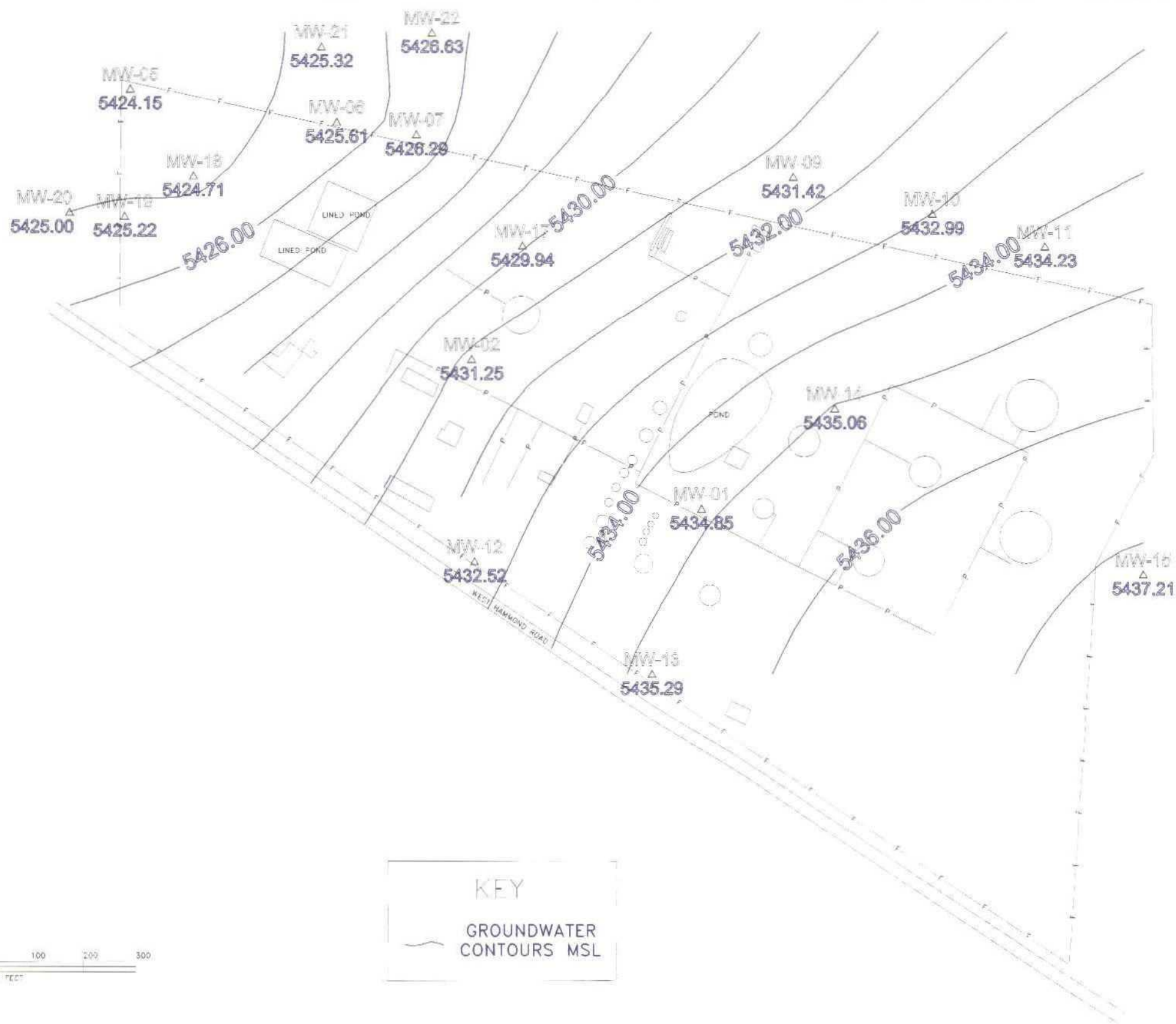
DRAWN BY: K. SINKS

FIGURE 1C
WATER LEVEL
CONTOUR MAP

SEPTEMBER 9, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\12289v1

DRAWN BY: K. SINKS

FIGURE 1D
WATER LEVEL
CONTOUR MAP

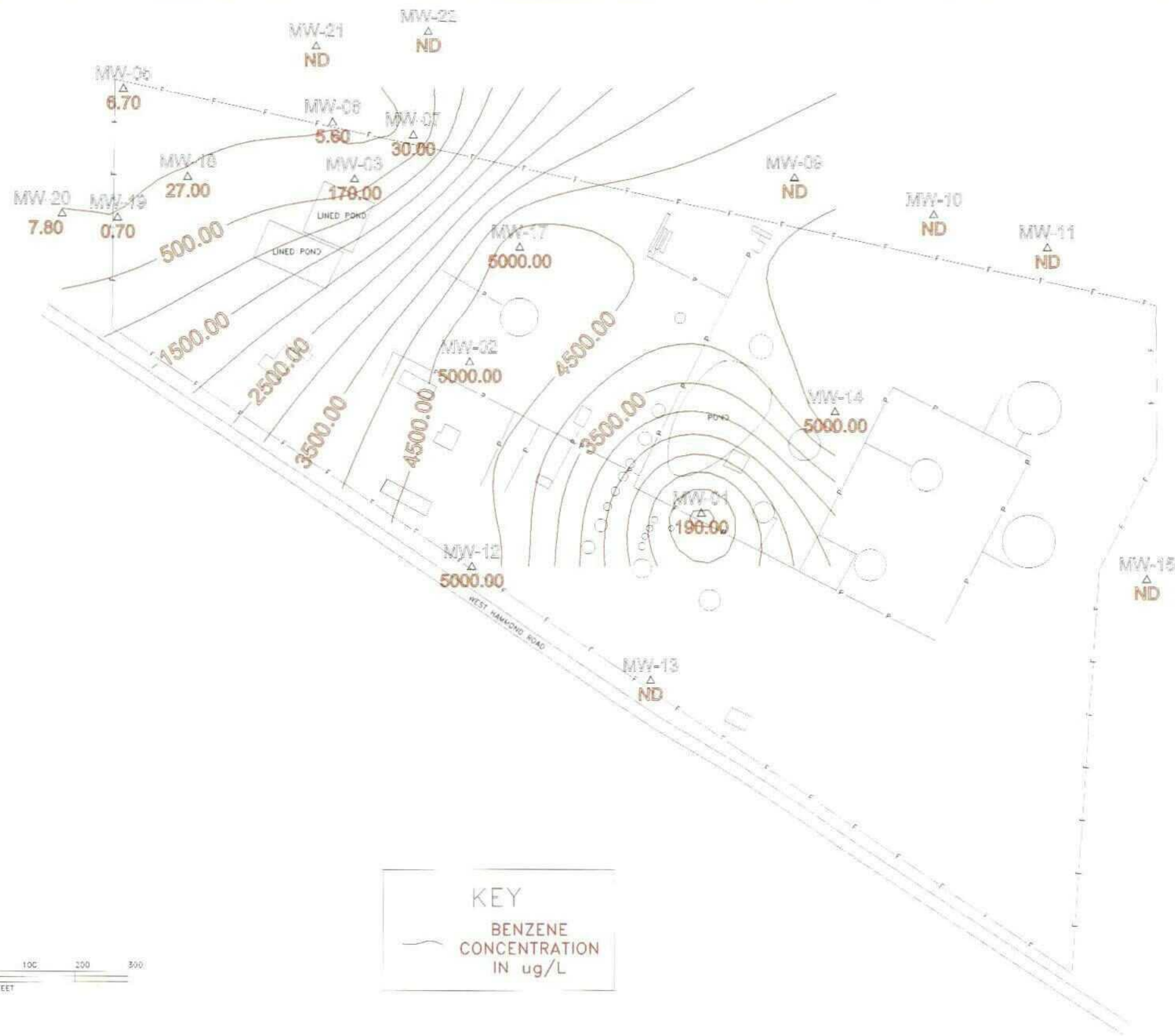
DECEMBER 28, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



KEY
 — BENZENE
 CONCENTRATION
 IN ug/L



THRIFTWAY REFINERY
 626 RD 5500
 BLOOMFIELD, NM

810\0.11299WL

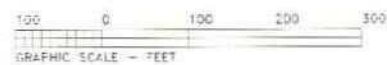
DRAWN BY: K. SINKS

FIGURE 2A
 BENZENE
 CONCENTRATION
 MAP

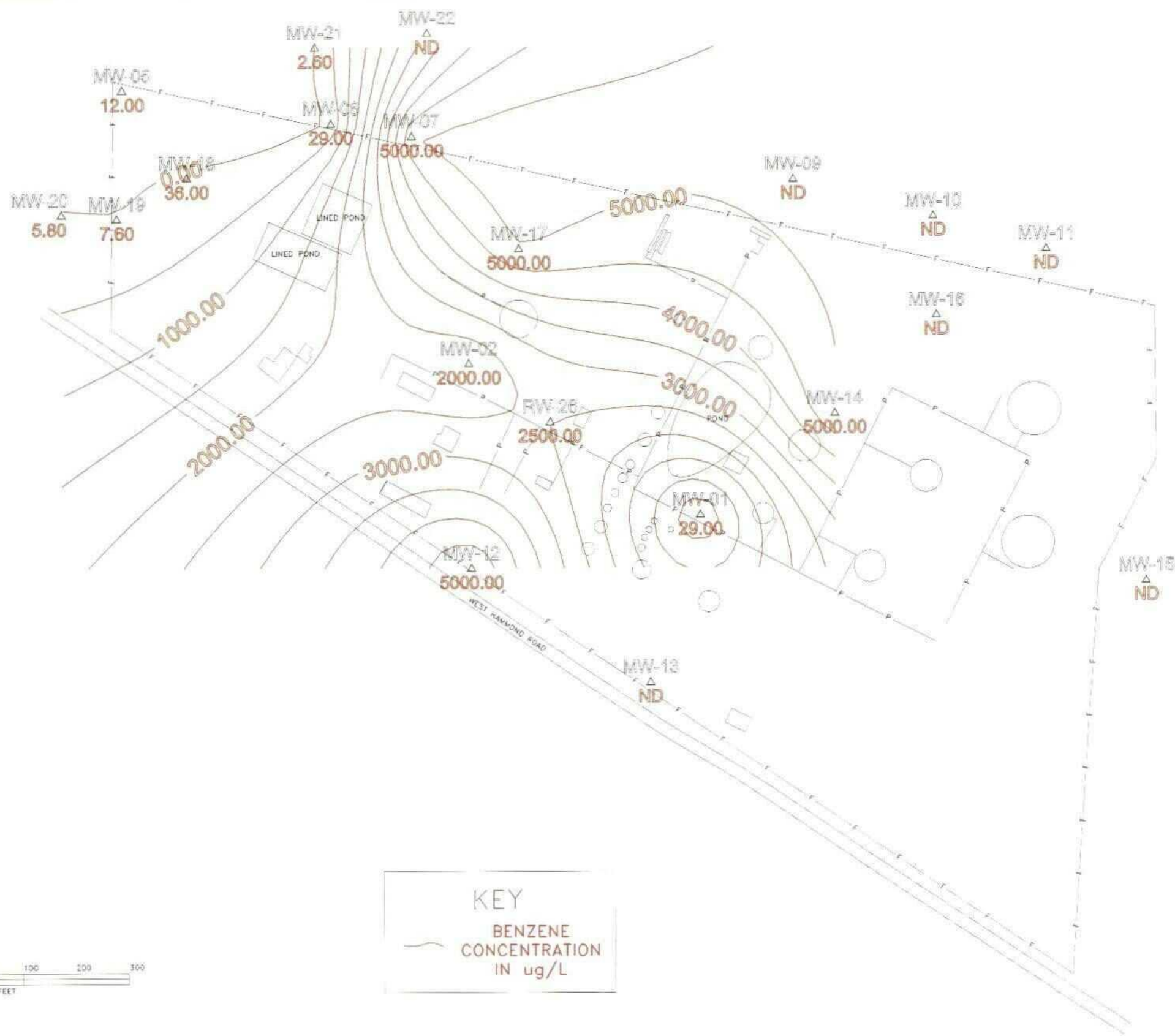
APRIL 12, 1999



710 EAST 20TH STREET, SUITE 400
 FARMINGTON, NEW MEXICO 87401
 PHONE 505-327-4965
 FAX 505-564-3604



KEY
BENZENE
CONCENTRATION
IN $\mu\text{g/L}$



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\04125902

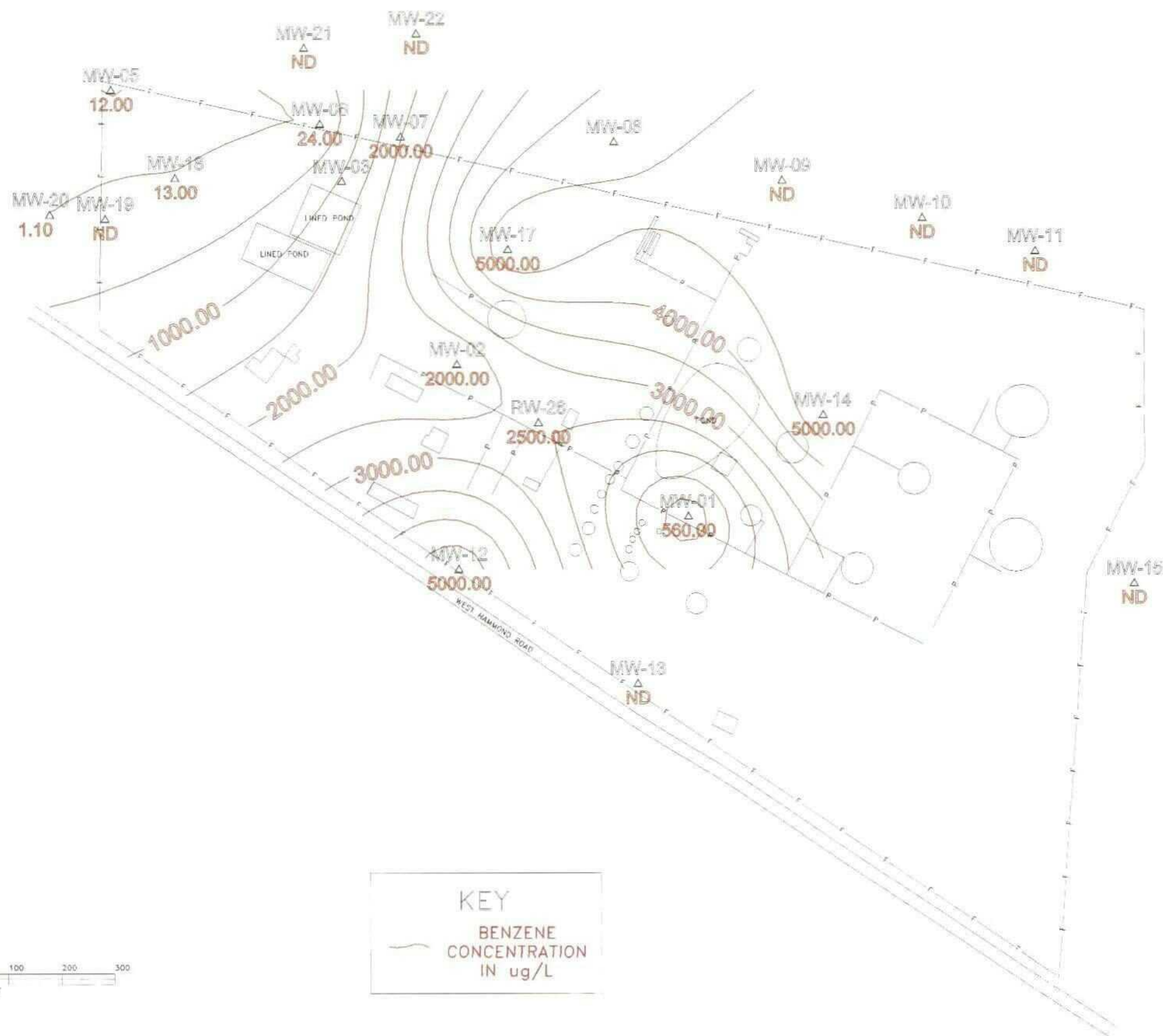
DRAWN BY: K. SINKS
FIGURE 2B
BENZENE
CONCENTRATION
MAP
JUNE 2, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



100 0 100 200 300
GRAPHIC SCALE - FEET



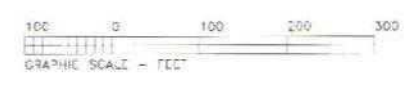
THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\09095982

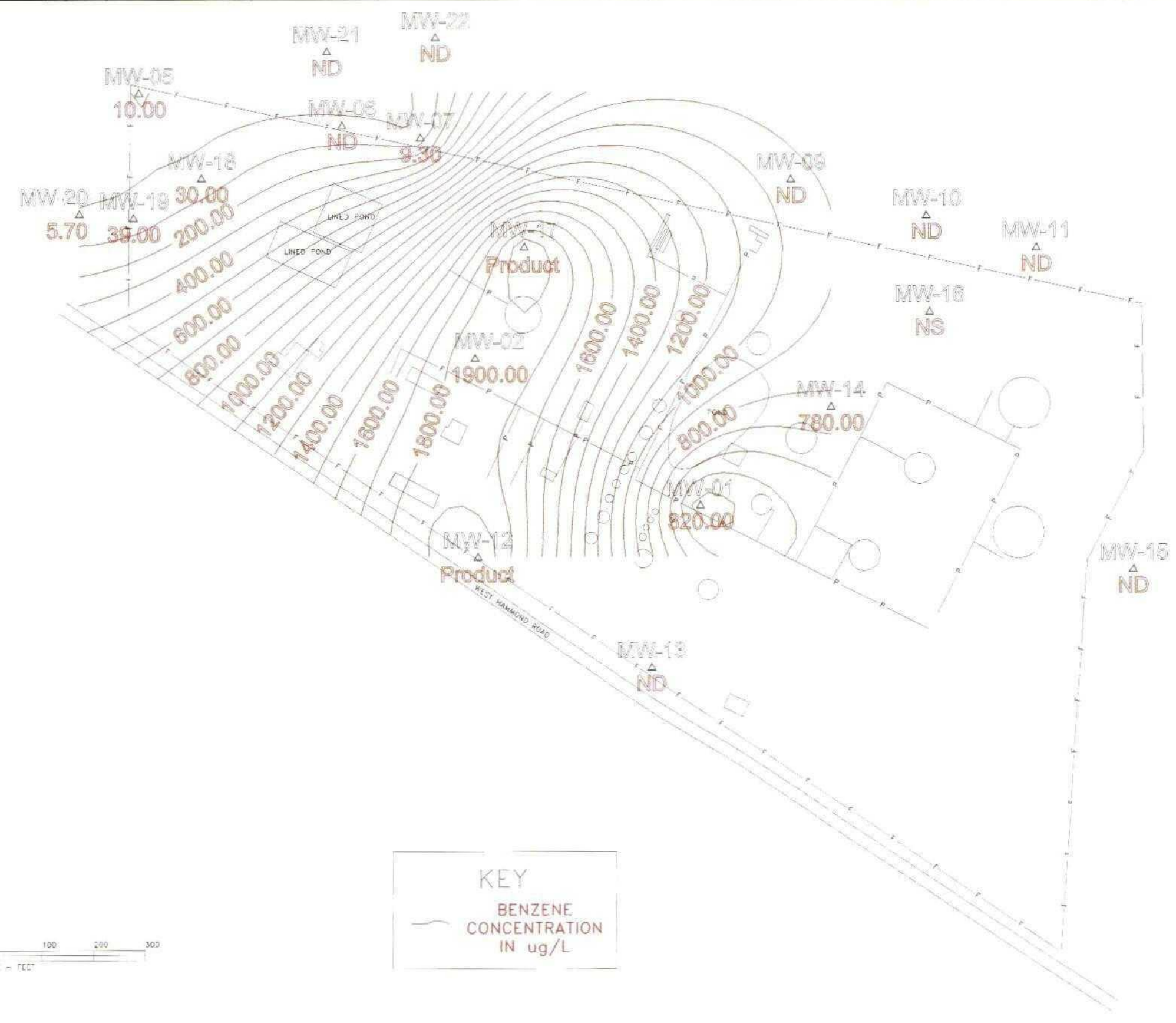
DRAWN BY: K. SINKS
FIGURE 2C
BENZENE
CONCENTRATION
MAP
SEPTEMBER 9, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



KEY
— BENZENE
CONCENTRATION
IN ug/L



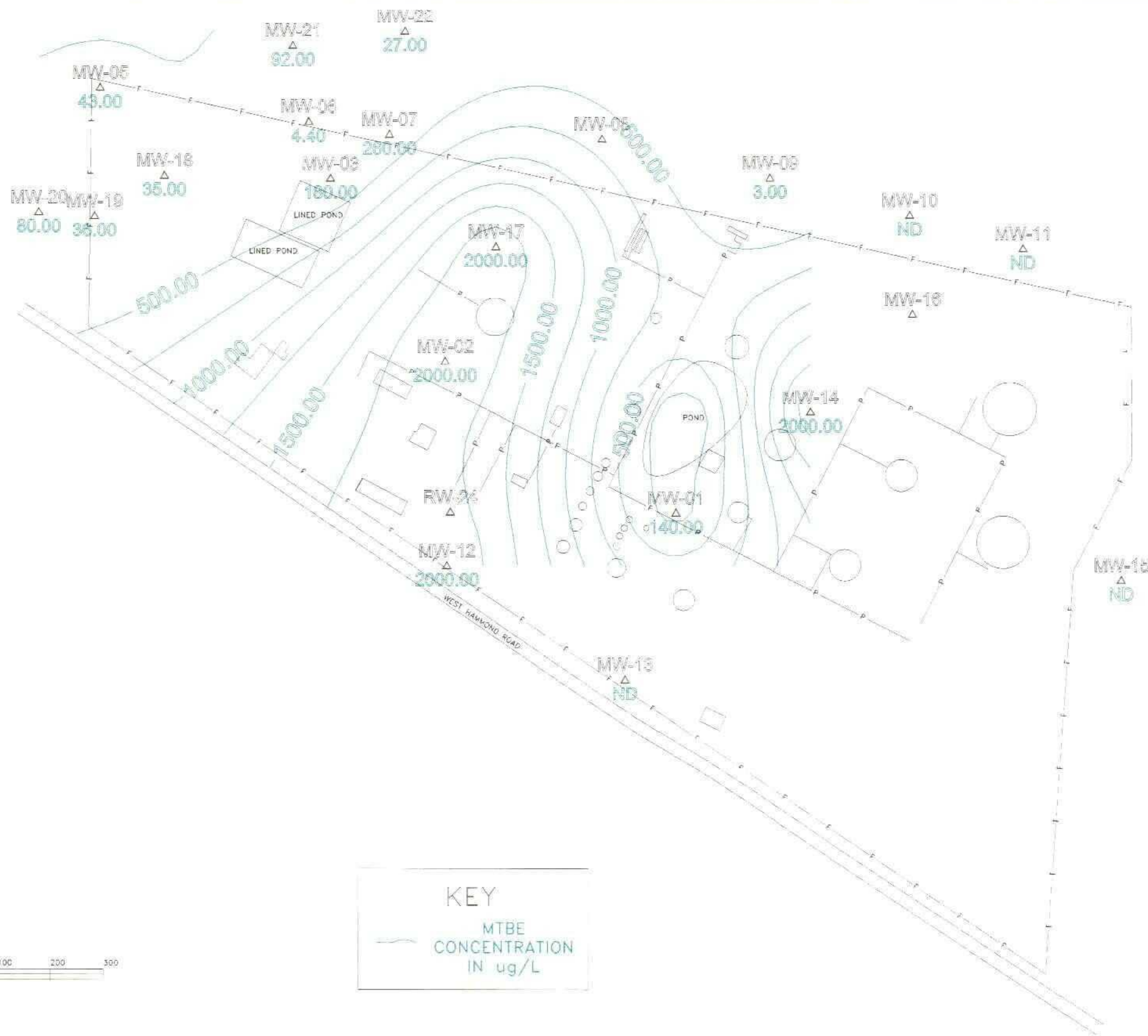
THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\12289987

DRAWN BY: K. SINKS
FIGURE 2D
BENZENE
CONCENTRATION
MAP
DECEMBER 28, 1999

BioTech
REMEDATION

710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\041299MT

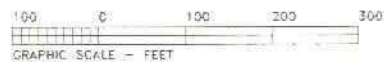
DRAWN BY: K. SINKS

FIGURE 3A
MTBE CONCENTRATION
MAP

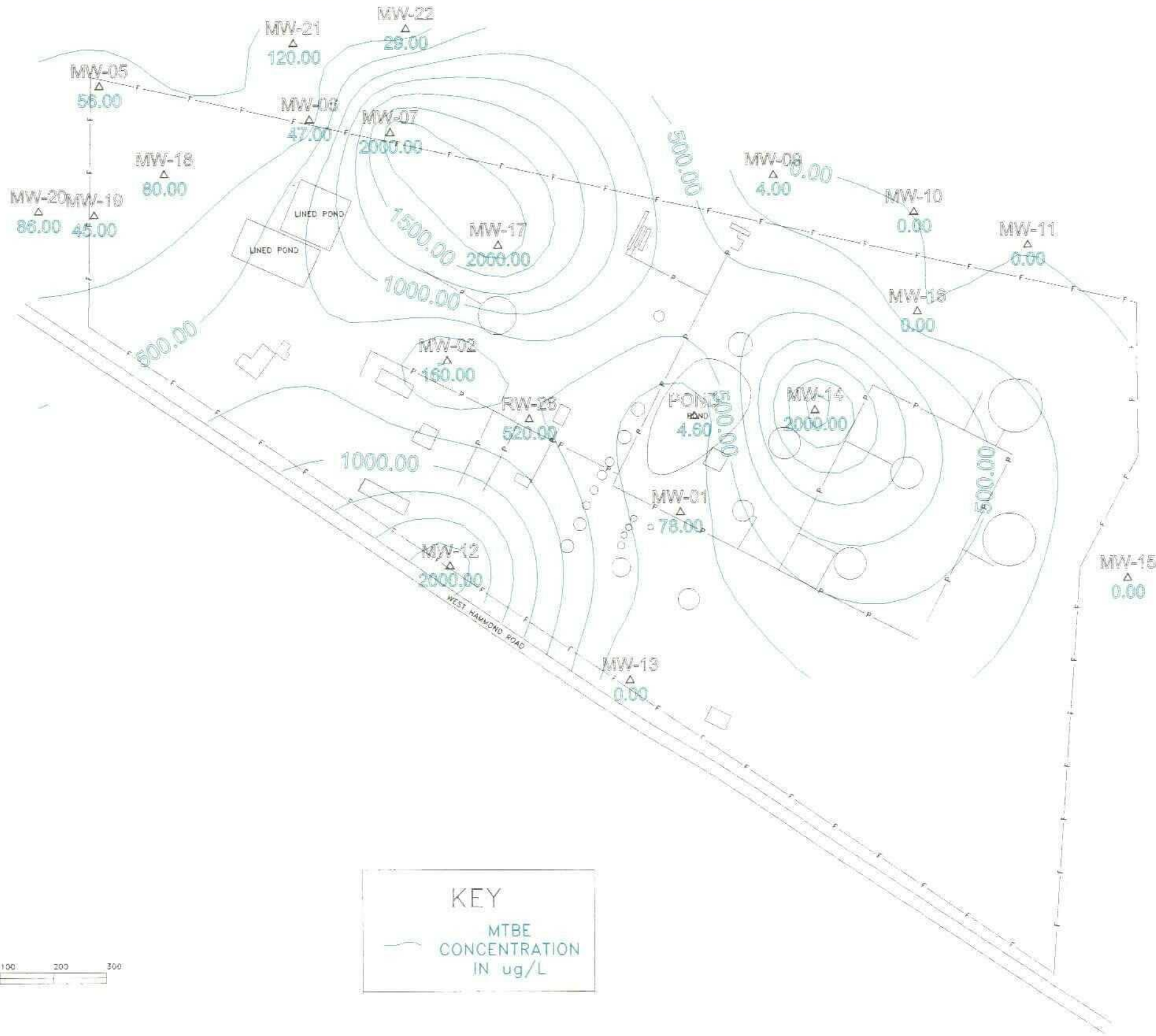
APRIL 12, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



KEY
 — MTBE
 CONCENTRATION
 IN ug/L



THRIFTWAY REFINERY
 626 RD 5500
 BLOOMFIELD, NM

810\050299MT

DRAWN BY: K. SINKS
 FIGURE 3B
 MTBE CONCENTRATION
 MAP

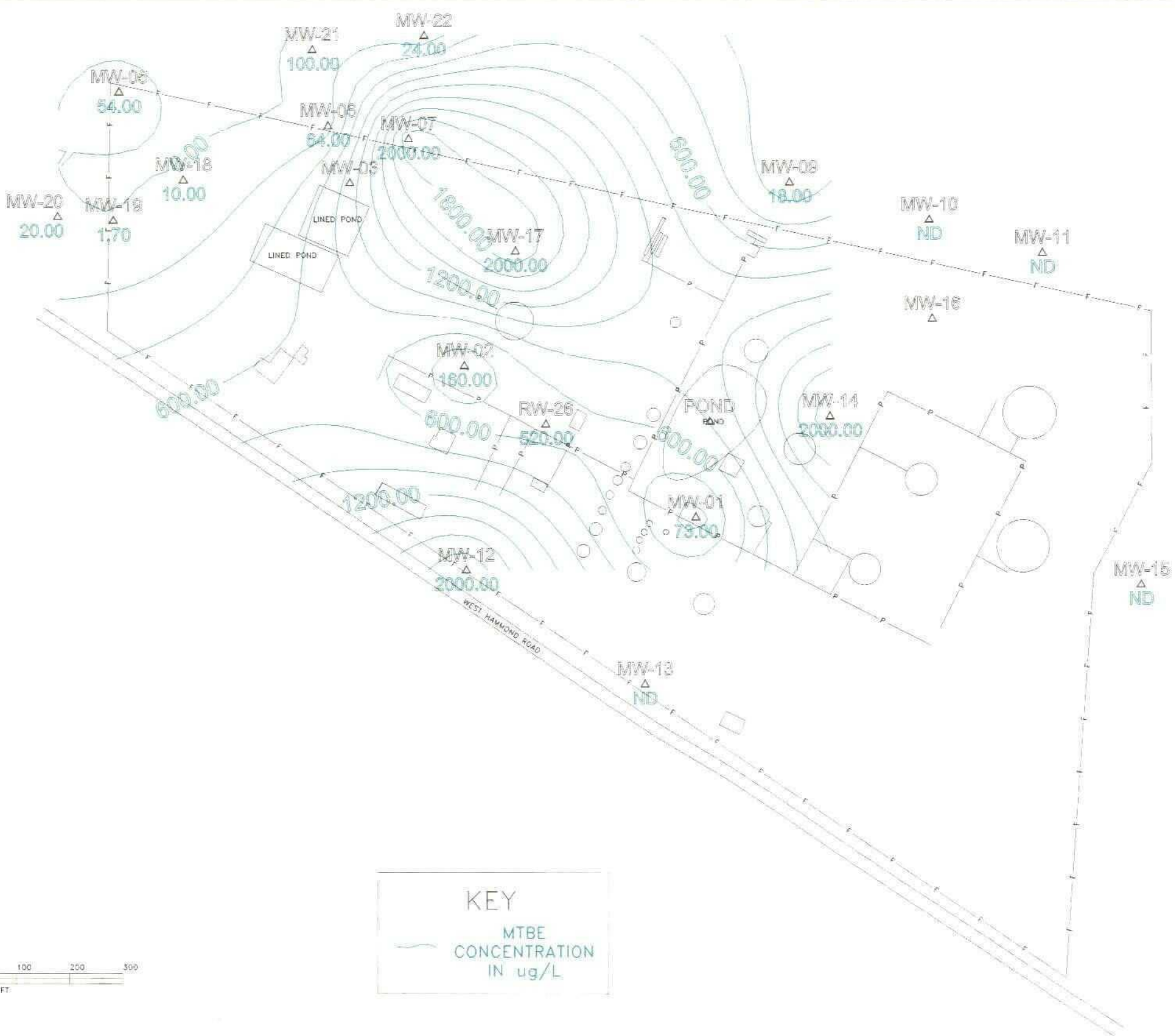
JUNE 2, 1999



710 EAST 20TH STREET, SUITE 400
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 PHONE 505-327-4965
 FAX 505-564-3604



GRAPHIC SCALE = FEET



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\030999MT

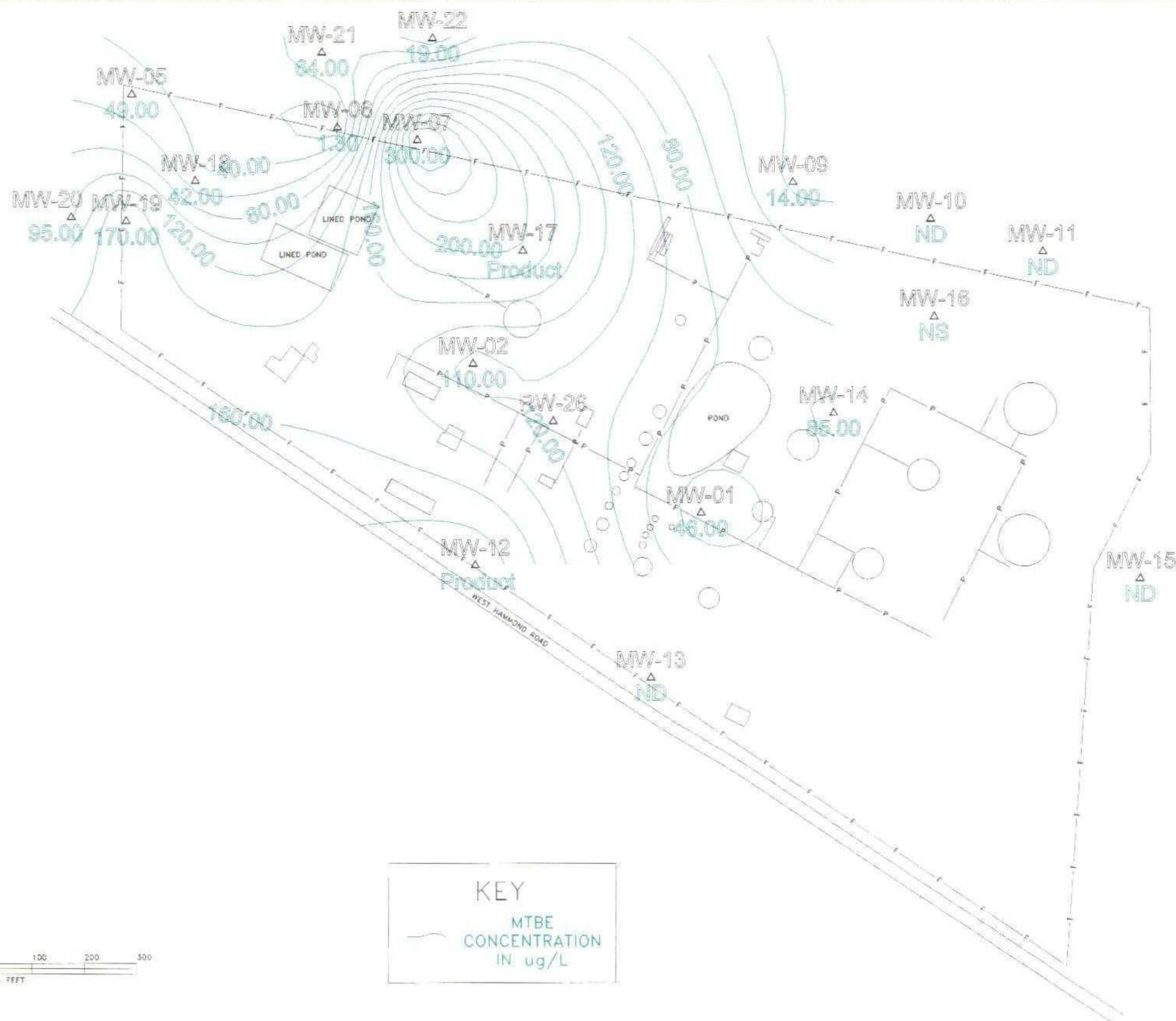
DRAWN BY: K. SINKS
FIGURE 3C
MTBE CONCENTRATION
MAP
SEPTEMBER 9, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



KEY
— MTBE
CONCENTRATION
IN ug/L



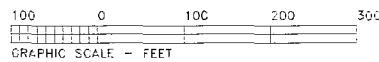
DRAWN BY: K. SINKS
FIGURE 3D
MTBE CONCENTRATION
MAP
DECEMBER 28, 1999

THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

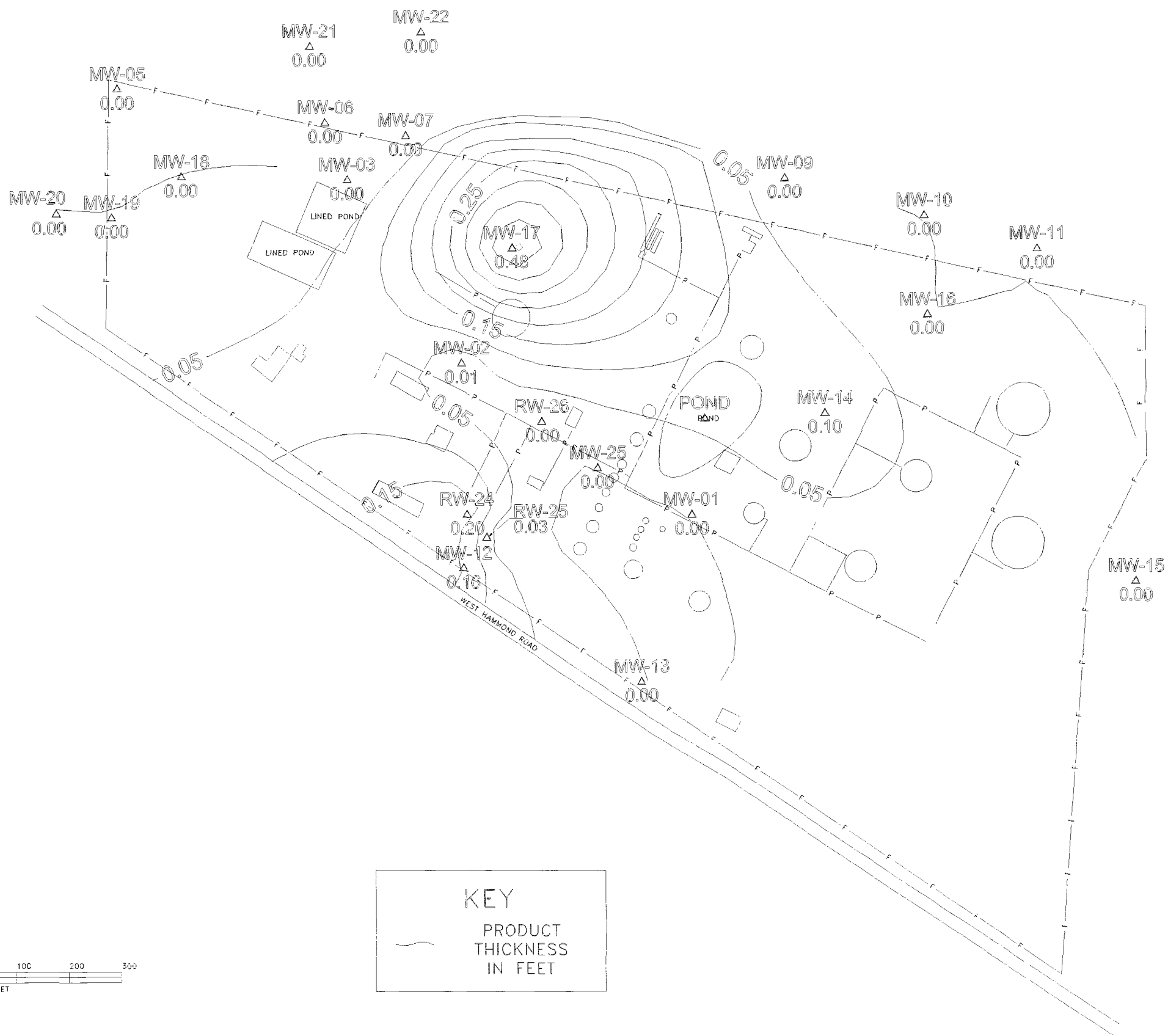
810\122859MT



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



KEY
—
PRODUCT
THICKNESS
IN FEET



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\011299PL

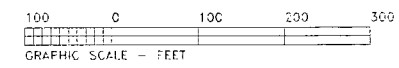
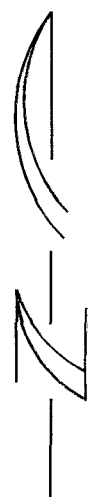
DRAWN BY: K. SINKS

FIGURE 4A PRODUCT
THICKNESS MAP

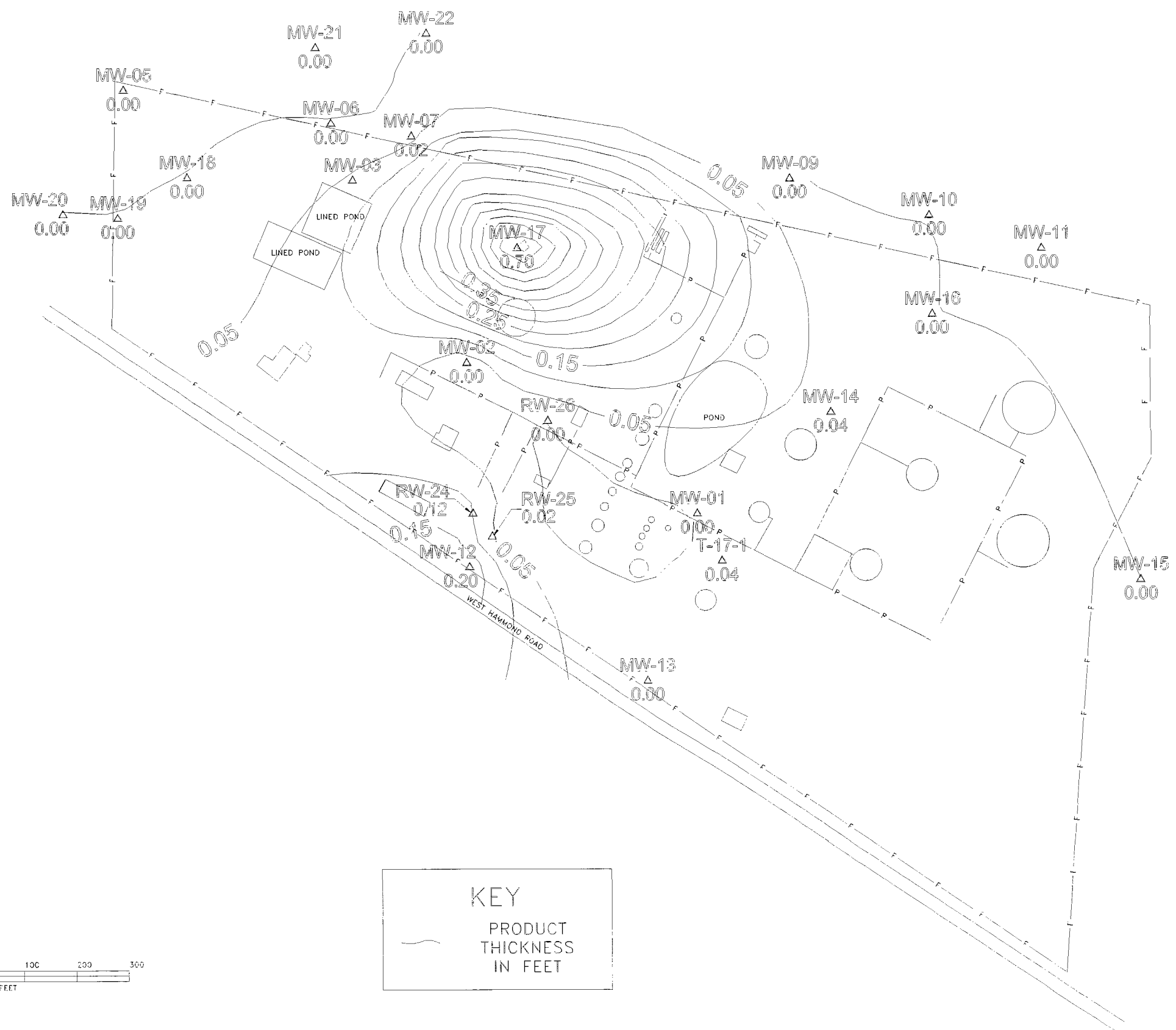
APRIL 12, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



KEY
—
PRODUCT
THICKNESS
IN FEET



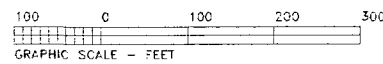
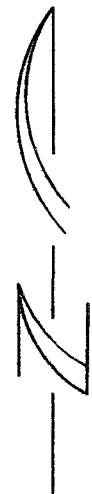
THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\060299nL

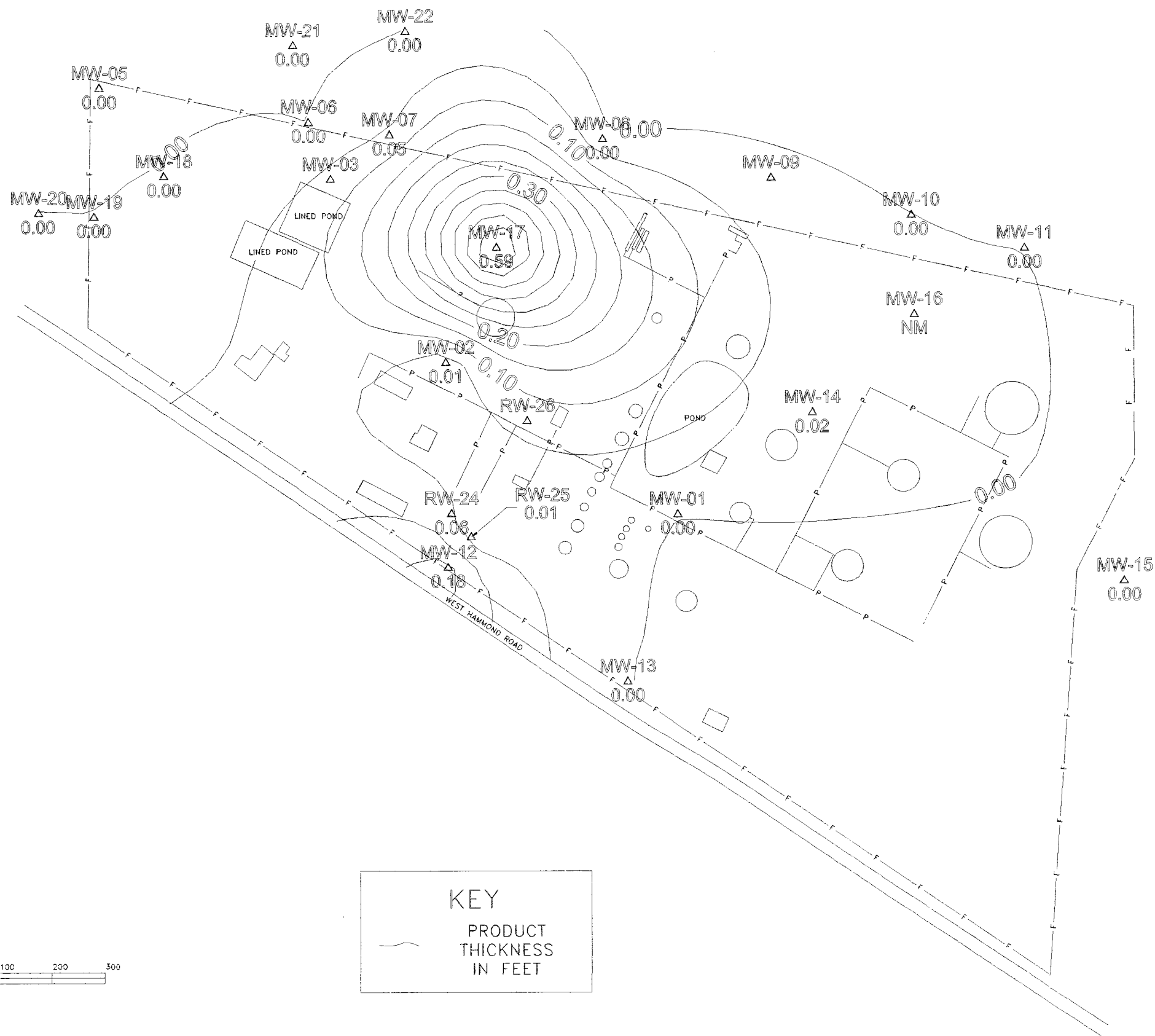
DRAWN BY: K. SINKS
FIGURE 4B PRODUCT
THICKNESS MAP
JUNE 2, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



KEY
—
PRODUCT
THICKNESS
IN FEET



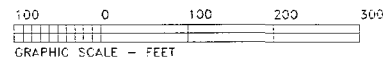
THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\090999PL

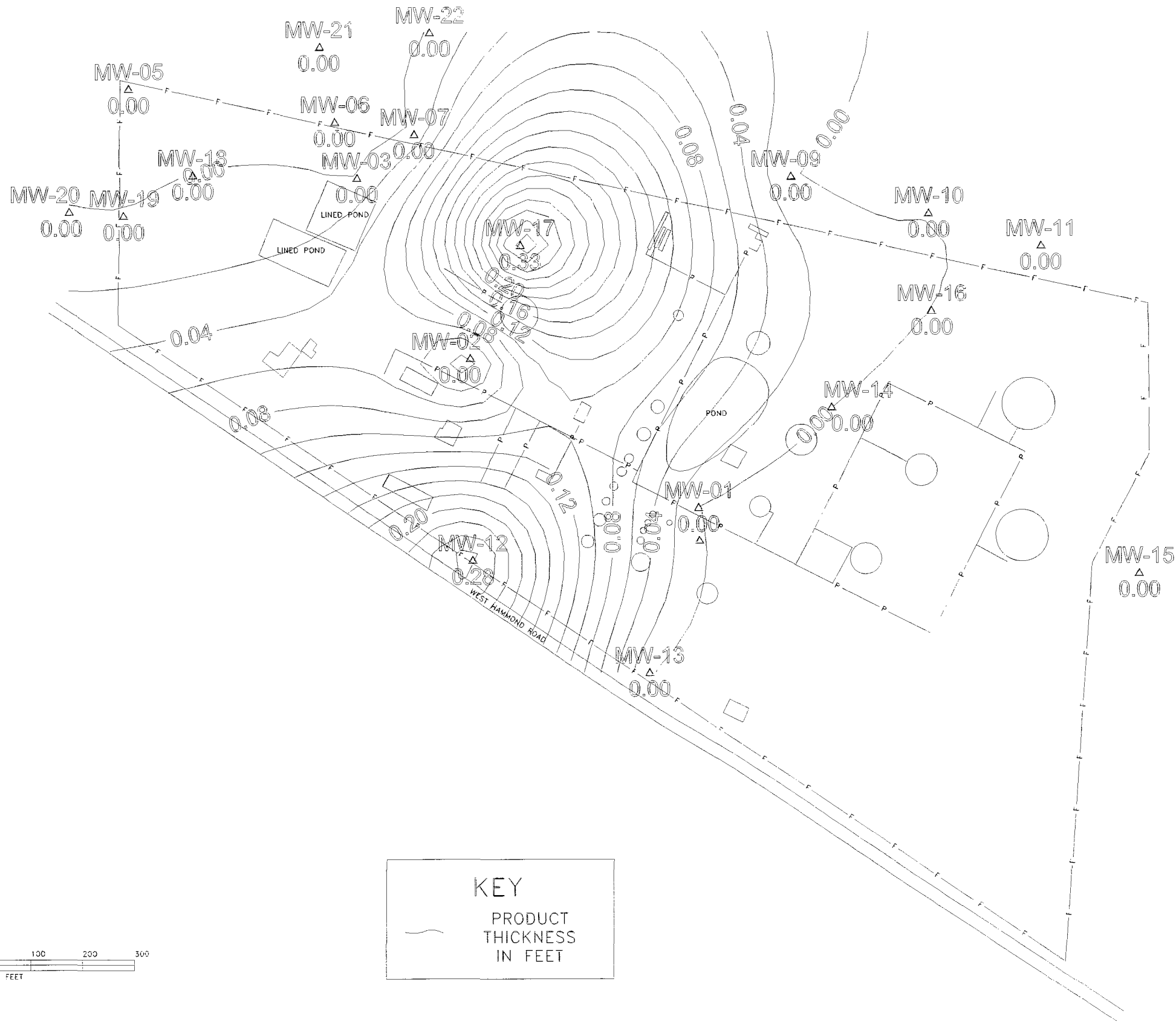
DRAWN BY: K. SINKS
FIGURE 4C PRODUCT
THICKNESS MAP
SEPTEMBER 9, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



KEY
—
PRODUCT THICKNESS IN FEET



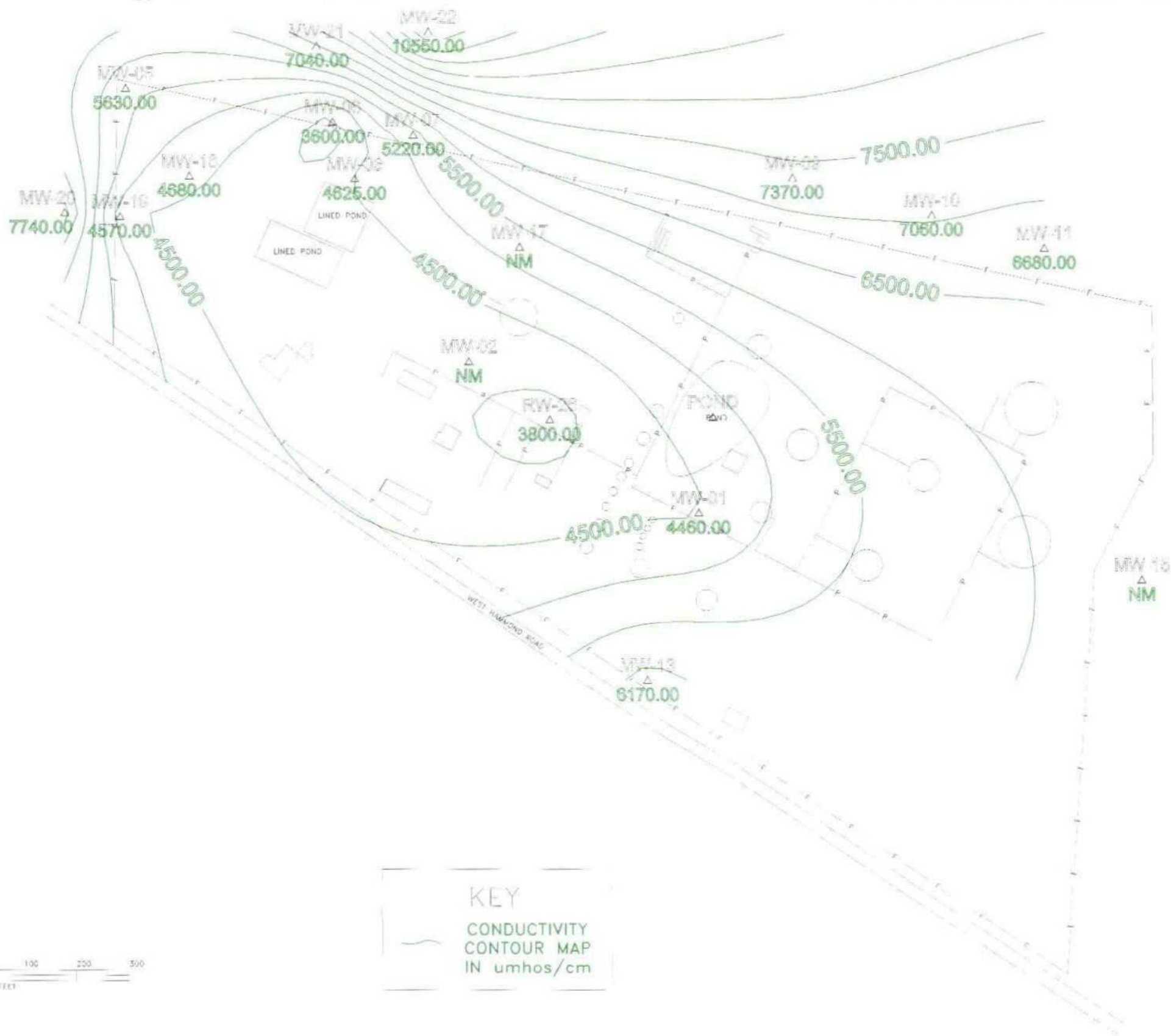
THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\122899PL

DRAWN BY: K. SINKS
FIGURE 4D PRODUCT THICKNESS MAP
DECEMBER 28, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\01129900

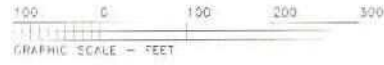
DRAWN BY: K. SNKS

FIGURE 5A
CONDUCTIVITY
CONTOUR MAP

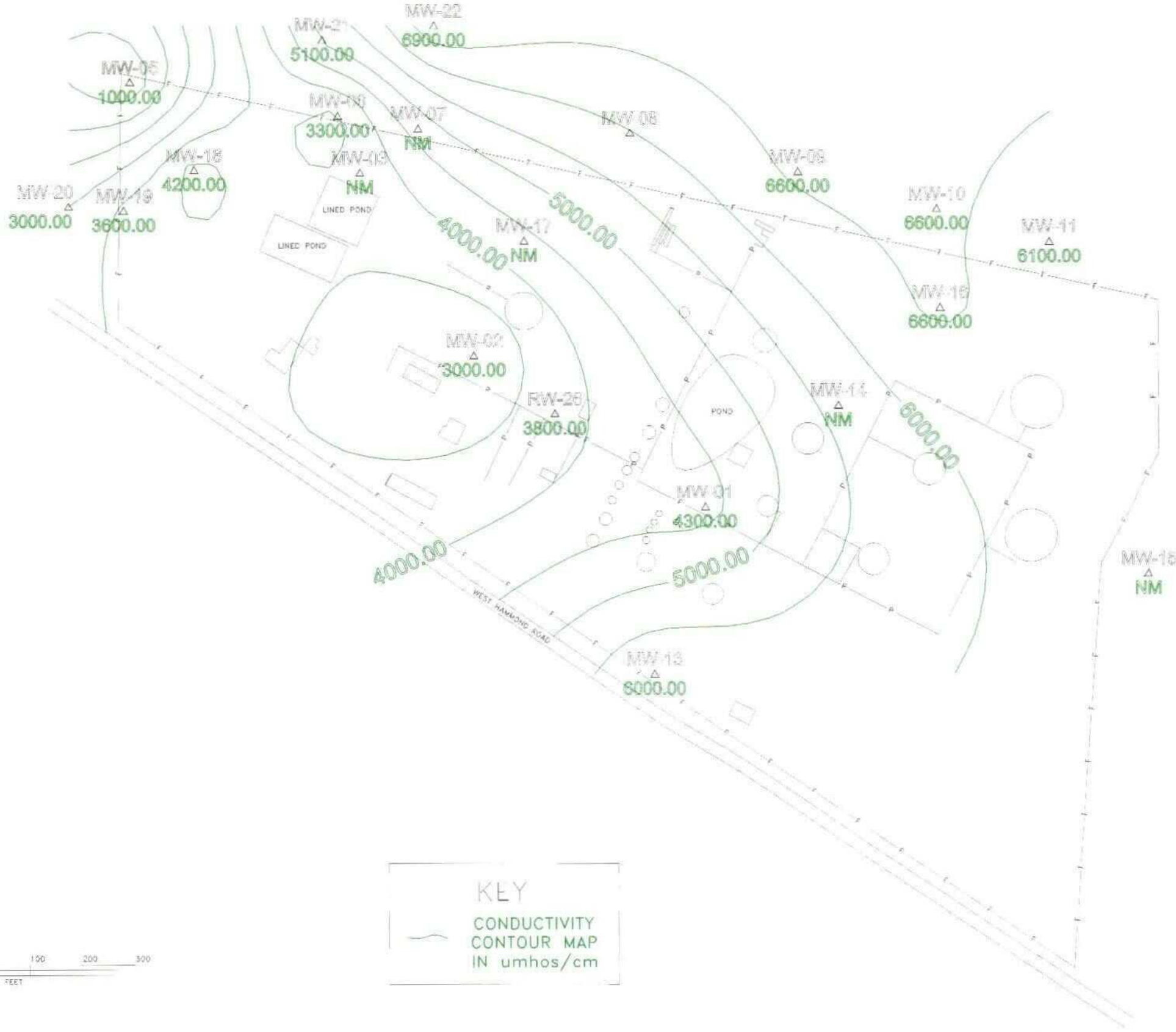
APRIL 12, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



KEY
 — CONDUCTIVITY
 CONTOUR MAP
 IN umhos/cm



THRIFTWAY REFINERY
 626 RD 5500
 BLOOMFIELD, NM

810\060299C0

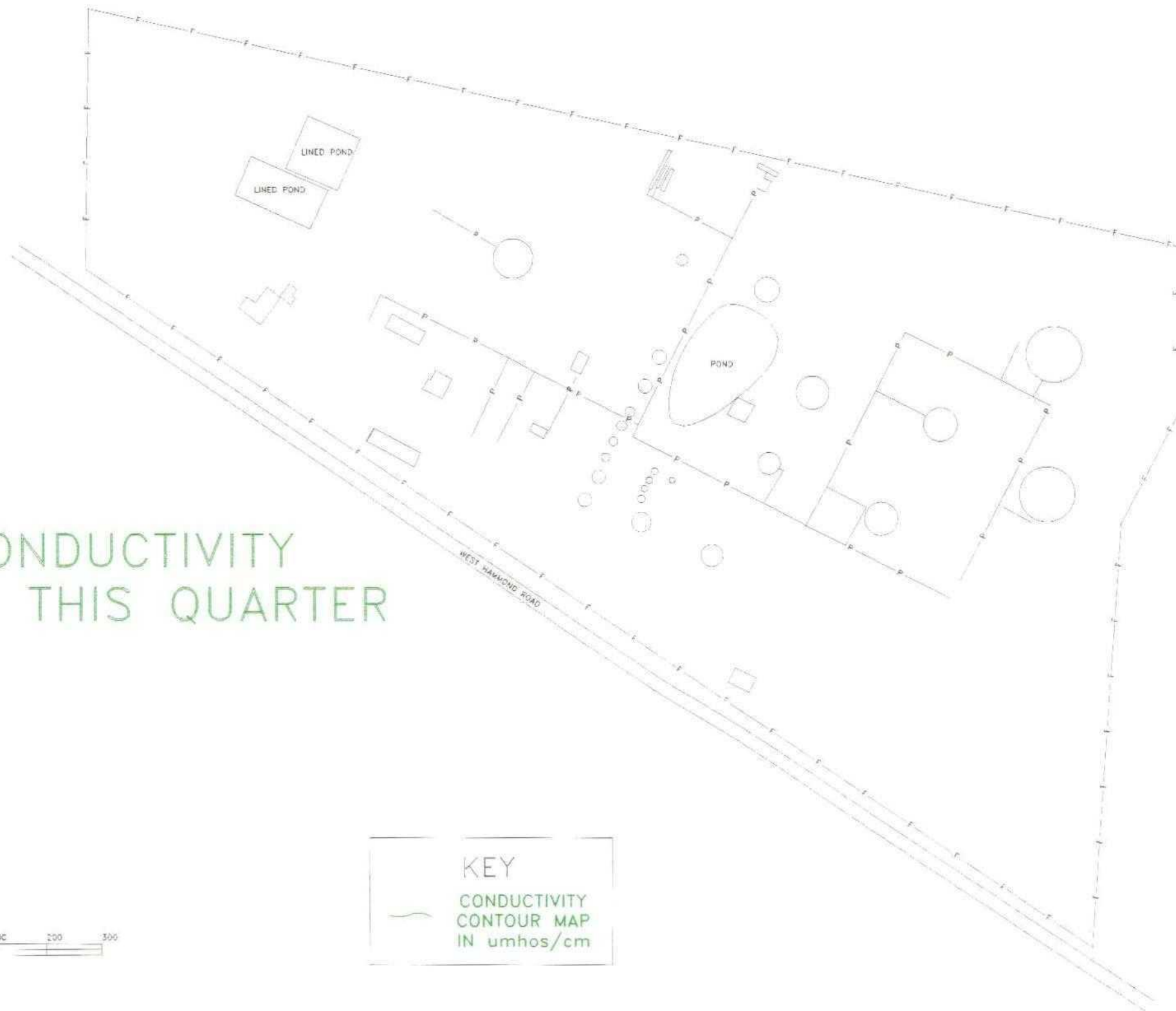
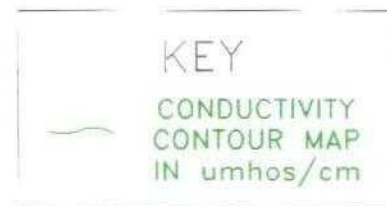
DRAWN BY: K. SINKS
 FIGURE 5B
 CONDUCTIVITY
 CONTOUR MAP
 JUNE 2, 1999



710 EAST 20TH STREET, SUITE 400
 FARMINGTON, NEW MEXICO 87401
 PHONE 505-327-4965
 FAX 505-564-3604



NO CONDUCTIVITY
READINGS THIS QUARTER



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\090999CD

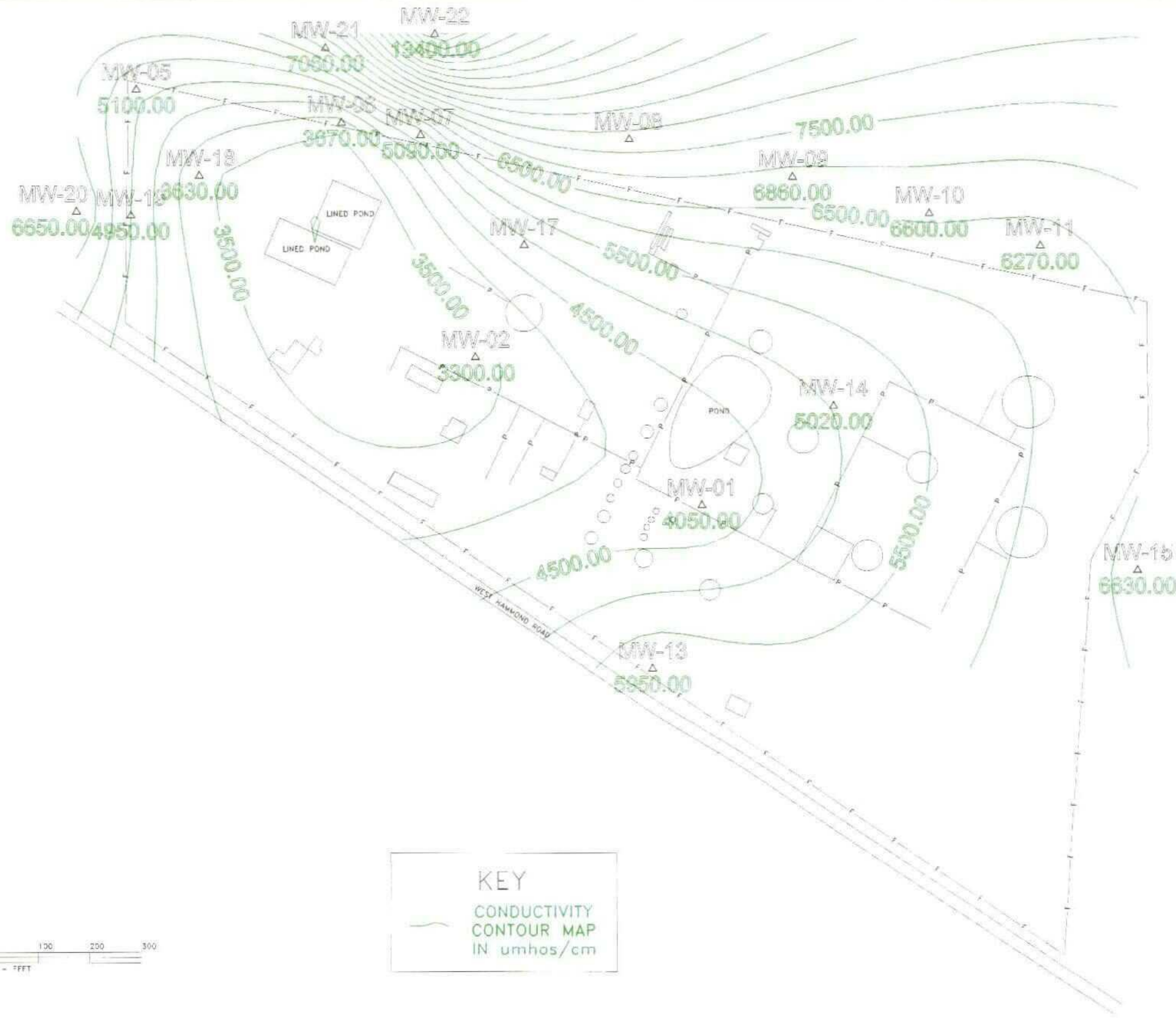
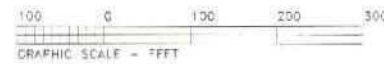
DRAWN BY: K. SINKS

FIGURE 5C
CONDUCTIVITY
CONTOUR MAP

SEPTEMBER 9, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



KEY
CONDUCTIVITY
CONTOUR MAP
IN umhos/cm

THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\22899CD

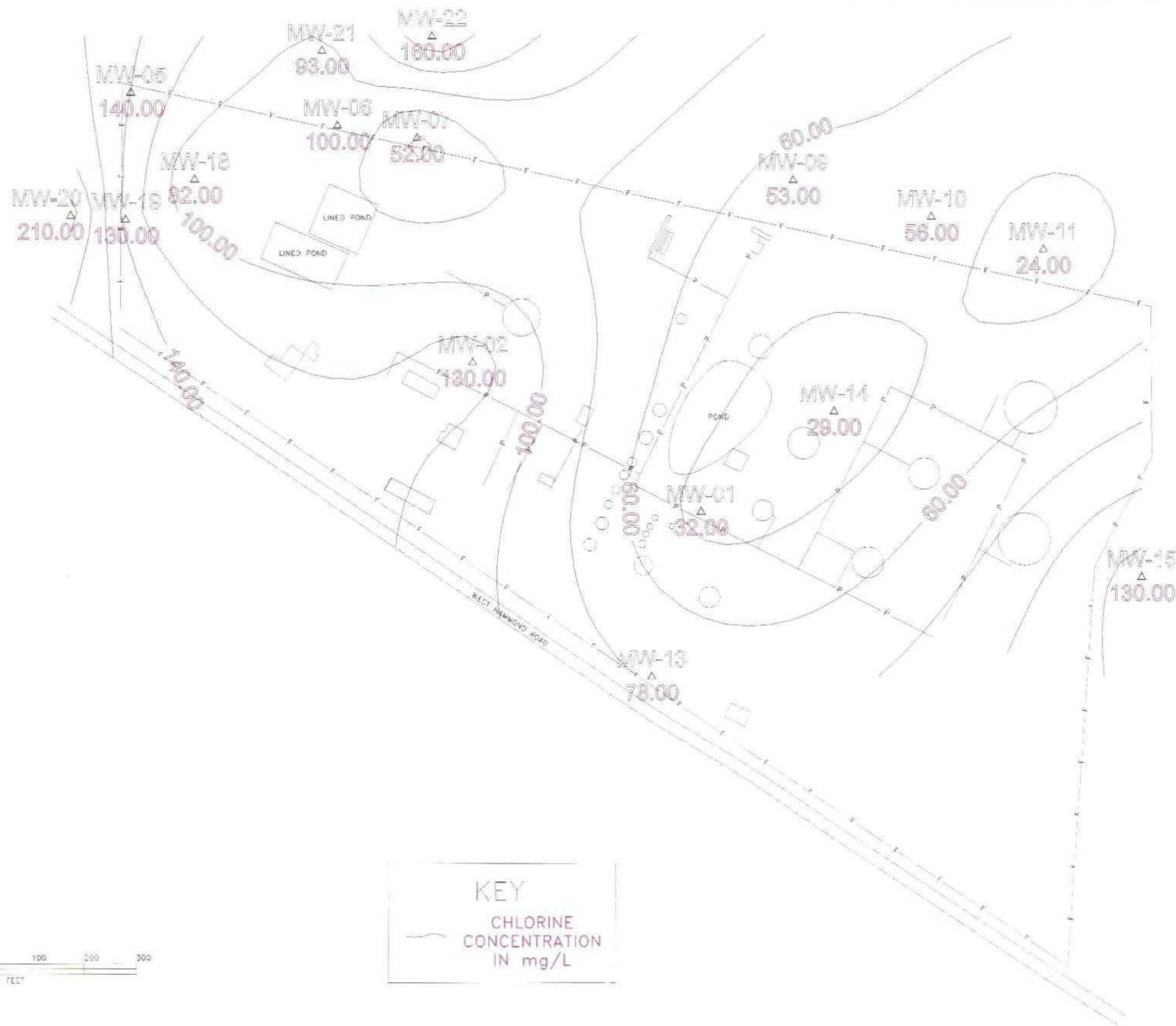
DRAWN BY: K. SINKS
FIGURE 5D
CONDUCTIVITY
CONTOUR MAP
DECEMBER 28, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



100 0 100 200 300
GRAPHIC SCALE - FEET



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\127859C1

DRAWN BY: K. SINKS

FIGURE 6 CHLORIDE
CONCENTRATION
MAP

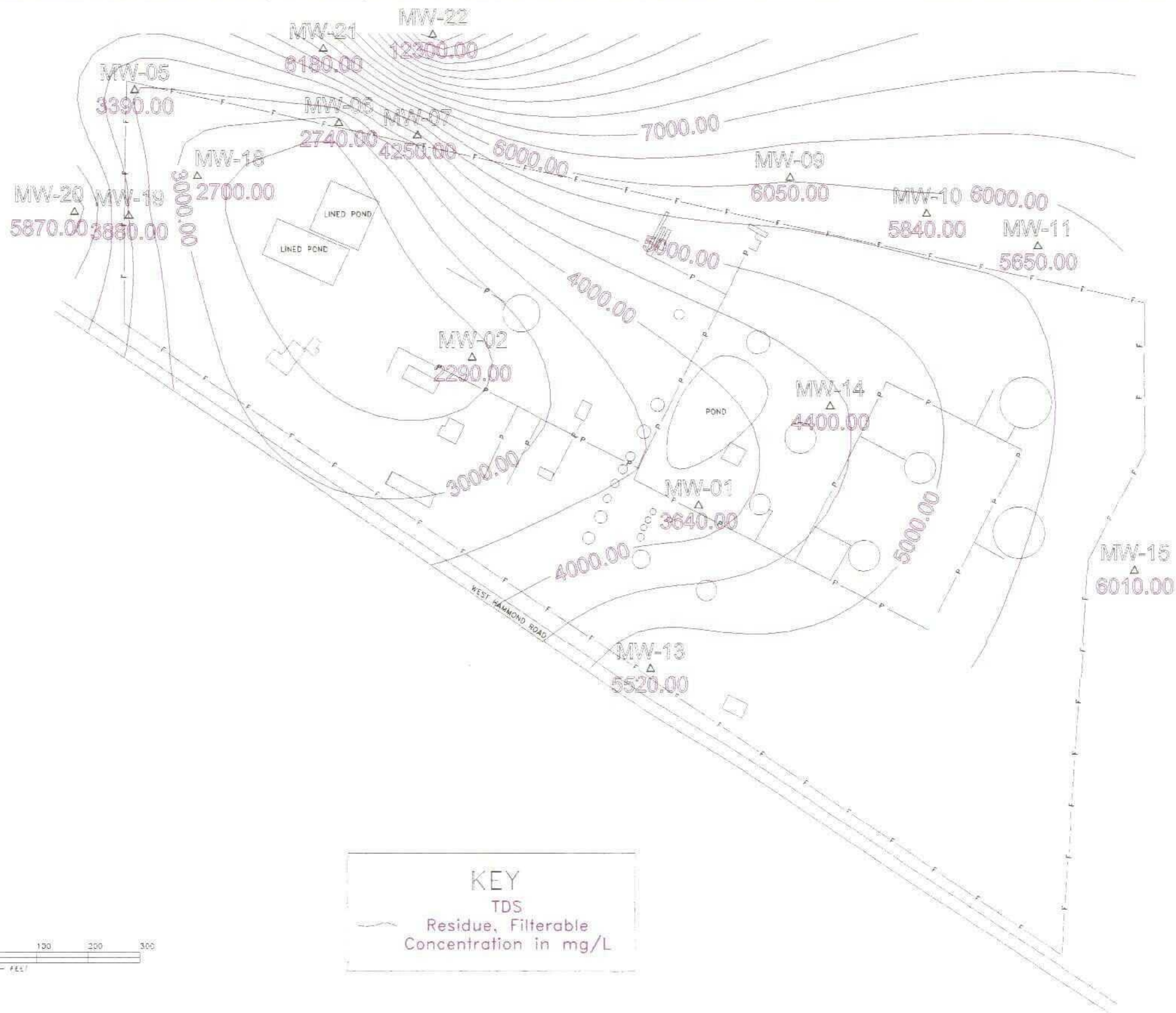
DECEMBER 28, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



KEY
TDS
Residue, Filterable
Concentration in mg/L



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\1225910

DRAWN BY: K. SINKS

FIGURE 7 TDS
CONCENTRATION
MAP

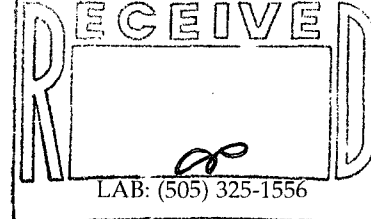
DECEMBER 28, 1999



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604

Appendices

OFF: (505) 325-5667



January 28, 2000

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

RE: BIO1001_Annual Refinery

Order No.: 9912031

Dear Terry Griffin,

On Site Technologies, LTD. received 29 samples on 12/30/1999 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

- Alkalinity, Total (M2320 B)
- Aromatic Volatiles by GC/PID (SW8021B)
- Arsenic, Total (SW6010B)
- Barium, Total (SW6010B)
- Bromide (E300)
- Cadmium, Total (SW6010B)
- Calcium, Dissolved (E215.1)
- Chloride (E325.3)
- Chromium, Total (SW6010B)
- Conductivity @ 25C (E120.1)
- Fluoride (E300)
- Lead, Total (SW6010B)
- Magnesium, Dissolved (E242.1)
- Mercury, Total (SW7470)
- pH (E150.1)
- Polynuclear Aromatic Hydrocarbons (SW8270C)
- Potassium, Dissolved (E258.1)
- Selenium, Total (SW6010B)
- Silver, Total (SW6010B)
- Sodium, Dissolved (E273.1)
- Sulfate (M4500-SO4 D)
- Total Dissolved Solids (E160.1)

OFF: (505) 325-5667



LAB: (505) 325-1556

January 28, 2000

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

RE: BIO1001_Annual Refinery

Order No.: 9912031

Dear Terry Griffin,

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 28-Jan-00

CLIENT: BioTech Remediation, Inc.

Project: BIO1001_Annual Refinery

Lab Order: 9912031

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition. Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983.

Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	Stripper Effluent
Lab ID:	9912031-09A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 4:35:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
	SW8021B					Analyst: DM
Methyl tert-Butyl Ether	6.8	1		µg/L	1	1/3/2000
Benzene	1.9	0.5		µg/L	1	1/3/2000
Toluene	2.6	0.5		µg/L	1	1/3/2000
Ethylbenzene	2.1	0.5		µg/L	1	1/3/2000
m,p-Xylene	8.1	1		µg/L	1	1/3/2000
o-Xylene	1.4	0.5		µg/L	1	1/3/2000
CALCIUM, DISSOLVED						
	E215.1					Analyst: HR
Calcium	320	25		mg/L	100	1/19/2000
POTASSIUM, DISSOLVED						
	E258.1					Analyst: HR
Potassium	8.5	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
	E242.1					Analyst: HR
Magnesium	45	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
	E273.1					Analyst: HR
Sodium	815	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
	M2320 B					Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	130	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	130	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
	E325.3					Analyst: HR
Chloride	680	1		mg/L	1	1/10/2000
CONDUCTIVITY @ 25C						
	E120.1					Analyst: DM
Specific Conductance	4870	2		uS/cm	1	12/31/1999
PH						
	E150.1					Analyst: DM
pH	7.97	2		pH units	1	12/31/1999
SULFATE						
	M4500-SO4 D					Analyst: DM
Sulfate	1500	8		mg/L	1	1/10/2000
TOTAL DISSOLVED SOLIDS						
	E160.1					Analyst: DM
Total Dissolved Solids (Residue, Filterable)	3620	40		mg/L	1	1/4/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	Field Blank
Lab ID:	9912031-02A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 10:45:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	ND	1		µg/L	1	1/3/2000
Benzene	ND	0.5		µg/L	1	1/3/2000
Toluene	ND	0.5		µg/L	1	1/3/2000
Ethylbenzene	ND	0.5		µg/L	1	1/3/2000
m,p-Xylene	ND	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	Field Blank
Lab ID:	9912031-28A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 11:06:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	ND	1		µg/L	1	1/4/2000
Benzene	ND	0.5		µg/L	1	1/4/2000
Toluene	ND	0.5		µg/L	1	1/4/2000
Ethylbenzene	ND	0.5		µg/L	1	1/4/2000
m,p-Xylene	ND	1		µg/L	1	1/4/2000
o-Xylene	ND	0.5		µg/L	1	1/4/2000

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	Field Blank
Lab ID:	9912031-20A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 9:00:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	ND	1		µg/L	1	1/3/2000
Benzene	ND	0.5		µg/L	1	1/3/2000
Toluene	ND	0.5		µg/L	1	1/3/2000
Ethylbenzene	ND	0.5		µg/L	1	1/3/2000
m,p-Xylene	ND	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT**Date:** 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	Stripper Influent
Lab ID:	9912031-10A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 4:55:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	230	10		µg/L	10	1/3/2000
Benzene	1500	5		µg/L	10	1/3/2000
Toluene	1300	5		µg/L	10	1/3/2000
Ethylbenzene	800	5		µg/L	10	1/3/2000
m,p-Xylene	3000	10		µg/L	10	1/3/2000
o-Xylene	400	5		µg/L	10	1/3/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	310	25		mg/L	100	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	8.5	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	45	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	775	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	890	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	890	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	160	1		mg/L	1	1/10/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	4380	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.19	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	1520	8		mg/L	1	1/10/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	3480	40		mg/L	1	1/4/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-01
Lab ID:	9912031-25A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 10:40:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	46	1		µg/L	1	1/5/2000
Benzene	320	5		µg/L	10	1/4/2000
Toluene	ND	0.5		µg/L	1	1/5/2000
Ethylbenzene	18	0.5		µg/L	1	1/5/2000
m,p-Xylene	4.3	1		µg/L	1	1/5/2000
o-Xylene	0.9	0.5		µg/L	1	1/5/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	460	50		mg/L	200	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	5.6	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	47	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	578	50		mg/L	200	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	290	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	290	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	32	1		mg/L	1	1/12/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	4050	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.16	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	2250	8		mg/L	1	1/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	3640	40		mg/L	1	1/6/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-02
Lab ID:	9912031-24A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 9:50:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	110	10		µg/L	10	1/5/2000
Benzene	1900	5		µg/L	10	1/5/2000
Toluene	5.6	5		µg/L	10	1/5/2000
Ethylbenzene	620	5		µg/L	10	1/5/2000
m,p-Xylene	520	10		µg/L	10	1/5/2000
o-Xylene	150	5		µg/L	10	1/5/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	46	5		mg/L	20	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	4.8	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	14	2.5		mg/L	10	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	800	50		mg/L	200	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	1700	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	1700	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	130	1		mg/L	1	1/10/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	3300	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.21	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO₄ D				Analyst: DM
Sulfate	33	8		mg/L	1	1/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	2290	40		mg/L	1	1/6/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-05
Lab ID:	9912031-11A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 9:40:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	49	1		µg/L	1	1/3/2000
Benzene	10	0.5		µg/L	1	1/3/2000
Toluene	ND	0.5		µg/L	1	1/3/2000
Ethylbenzene	0.6	0.5		µg/L	1	1/3/2000
m,p-Xylene	ND	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	160	12		mg/L	50	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	10.5	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	30	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1110	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	740	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	740	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	140	1		mg/L	1	1/10/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	5100	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.79	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	1970	8		mg/L	1	1/10/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	3990	40		mg/L	1	1/4/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-05 Dup
Lab ID:	9912031-12A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 9:40:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	49	1		µg/L	1	1/3/2000
Benzene	10	0.5		µg/L	1	1/3/2000
Toluene	ND	0.5		µg/L	1	1/3/2000
Ethylbenzene	0.6	0.5		µg/L	1	1/3/2000
m,p-Xylene	ND	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	160	12		mg/L	50	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	10.2	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	31	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1100	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	730	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	730	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	140	1		mg/L	1	1/10/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	5090	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.74	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	2000	8		mg/L	1	1/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	3980	40		mg/L	1	1/5/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-06
Lab ID:	9912031-18A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 4:45:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	1.3	1		µg/L	1	1/4/2000
Benzene	ND	0.5		µg/L	1	1/4/2000
Toluene	ND	0.5		µg/L	1	1/4/2000
Ethylbenzene	ND	0.5		µg/L	1	1/4/2000
m,p-Xylene	ND	1		µg/L	1	1/4/2000
o-Xylene	ND	0.5		µg/L	1	1/4/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	140	12		mg/L	50	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	9.2	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	26	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	784	50		mg/L	200	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	800	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	800	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	100	1		mg/L	1	1/10/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	3670	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.63	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	1160	8		mg/L	1	1/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	2740	40		mg/L	1	1/5/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-07
Lab ID:	9912031-21A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 9:10:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	300	20		µg/L	20	1/4/2000
Benzene	9.3	0.5		µg/L	1	1/5/2000
Toluene	ND	0.5		µg/L	1	1/5/2000
Ethylbenzene	16	0.5		µg/L	1	1/5/2000
m,p-Xylene	94	1		µg/L	1	1/5/2000
o-Xylene	7.7	0.5		µg/L	1	1/5/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	290	25		mg/L	100	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	11.4	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	36	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	990	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	510	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	510	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	52	1		mg/L	1	1/12/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	5090	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.31	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	2480	8		mg/L	1	1/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	4250	40		mg/L	1	1/5/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-07 Dup
Lab ID:	9912031-22A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 9:10:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	300	20		µg/L	20	1/4/2000
Benzene	13	0.5		µg/L	1	1/5/2000
Toluene	ND	0.5		µg/L	1	1/5/2000
Ethylbenzene	22	0.5		µg/L	1	1/5/2000
m,p-Xylene	150	1		µg/L	1	1/5/2000
o-Xylene	12	0.5		µg/L	1	1/5/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	290	25		mg/L	100	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	10.8	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	36	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	980	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	510	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	510	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	42	1		mg/L	1	1/12/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	5060	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.25	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	2440	8		mg/L	1	1/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	4200	40		mg/L	1	1/6/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-09
Lab ID:	9912031-07A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 2:39:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	14	1		µg/L	1	1/3/2000
Benzene	ND	0.5		µg/L	1	1/3/2000
Toluene	ND	0.5		µg/L	1	1/3/2000
Ethylbenzene	ND	0.5		µg/L	1	1/3/2000
m,p-Xylene	ND	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	380	25		mg/L	100	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	7.8	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	54	12		mg/L	50	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1430	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	400	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	400	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	53	1		mg/L	1	1/12/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	6860	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.42	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO₄ D				Analyst: DM
Sulfate	3740	8		mg/L	1	1/10/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	6050	40		mg/L	1	1/4/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-10
Lab ID:	9912031-05A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 1:30:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	ND	1		µg/L	1	1/3/2000
Benzene	ND	0.5		µg/L	1	1/3/2000
Toluene	ND	0.5		µg/L	1	1/3/2000
Ethylbenzene	ND	0.5		µg/L	1	1/3/2000
m,p-Xylene	ND	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	370	25		mg/L	100	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	9.1	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	46	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1360	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	310	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	310	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	56	1		mg/L	1	1/12/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	6600	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.29	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	3640	8		mg/L	1	1/10/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	5840	40		mg/L	1	1/4/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-11
Lab ID:	9912031-06A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 2:06:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	ND	1		µg/L	1	1/3/2000
Benzene	ND	0.5		µg/L	1	1/3/2000
Toluene	ND	0.5		µg/L	1	1/3/2000
Ethylbenzene	ND	0.5		µg/L	1	1/3/2000
m,p-Xylene	ND	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	420	50		mg/L	200	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	12.6	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	38	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1230	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	230	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	230	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	24	1		mg/L	1	1/12/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	6270	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.32	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	3630	8		mg/L	1	1/10/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	5650	40		mg/L	1	1/4/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-13
Lab ID:	9912031-03A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 11:30:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	ND	1		µg/L	1	1/3/2000
Benzene	ND	0.5		µg/L	1	1/3/2000
Toluene	ND	0.5		µg/L	1	1/3/2000
Ethylbenzene	ND	0.5		µg/L	1	1/3/2000
m,p-Xylene	ND	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	450	50		mg/L	200	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	10.3	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	59	12		mg/L	50	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1160	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	260	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	260	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	78	1		mg/L	1	1/12/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	5950	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.02	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	3500	8		mg/L	1	1/10/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	5520	40		mg/L	1	1/4/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-14
Lab ID:	9912031-26A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 11:25:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
	SW8021B					Analyst: DM
Methyl tert-Butyl Ether	85	50		µg/L	50	1/5/2000
Benzene	780	50		µg/L	100	1/4/2000
Toluene	470	50		µg/L	100	1/4/2000
Ethylbenzene	1600	50		µg/L	100	1/4/2000
m,p-Xylene	1100	100		µg/L	100	1/4/2000
o-Xylene	560	50		µg/L	100	1/4/2000
CALCIUM, DISSOLVED						
	E215.1					Analyst: HR
Calcium	440	50		mg/L	200	1/19/2000
POTASSIUM, DISSOLVED						
	E258.1					Analyst: HR
Potassium	6.8	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
	E242.1					Analyst: HR
Magnesium	51	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
	E273.1					Analyst: HR
Sodium	808	50		mg/L	200	1/17/2000
ALKALINITY, TOTAL						
	M2320 B					Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	530	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	530	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
	E325.3					Analyst: HR
Chloride	29	1		mg/L	1	1/12/2000
CONDUCTIVITY @ 25C						
	E120.1					Analyst: DM
Specific Conductance	5020	2		uS/cm	1	12/31/1999
PH						
	E150.1					Analyst: DM
pH	6.92	2		pH units	1	12/31/1999
SULFATE						
	M4500-SO4 D					Analyst: DM
Sulfate	2610	8		mg/L	1	1/12/2000
TOTAL DISSOLVED SOLIDS						
	E160.1					Analyst: DM
Total Dissolved Solids (Residue, Filterable)	4400	40		mg/L	1	1/6/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-15
Lab ID:	9912031-08A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 4:25:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	ND	1		µg/L	1	1/3/2000
Benzene	ND	0.5		µg/L	1	1/3/2000
Toluene	ND	0.5		µg/L	1	1/3/2000
Ethylbenzene	ND	0.5		µg/L	1	1/3/2000
m,p-Xylene	ND	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	440	50		mg/L	200	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	6	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	64	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1300	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	220	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	220	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	130	1		mg/L	1	1/10/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	6630	2		µS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.39	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	3740	8		mg/L	1	1/10/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	6010	40		mg/L	1	1/4/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-18
Lab ID:	9912031-16A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 2:50:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	42	1		µg/L	1	1/3/2000
Benzene	30	0.5		µg/L	1	1/3/2000
Toluene	0.5	0.5		µg/L	1	1/3/2000
Ethylbenzene	2.6	0.5		µg/L	1	1/3/2000
m,p-Xylene	ND	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	140	12		mg/L	50	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	9.1	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	26	2.5		mg/L	10	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	734	50		mg/L	200	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	920	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	920	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	82	1		mg/L	1	1/12/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	3630	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.03	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	1080	8		mg/L	1	1/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	2700	40		mg/L	1	1/5/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-19
Lab ID:	9912031-15A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 1:40:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	170	1		µg/L	1	1/3/2000
Benzene	39	0.5		µg/L	1	1/3/2000
Toluene	0.5	0.5		µg/L	1	1/3/2000
Ethylbenzene	110	0.5		µg/L	1	1/3/2000
m,p-Xylene	55	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	260	25		mg/L	100	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	9.2	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	59	5		mg/L	20	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	960	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	1130	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	1130	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	130	1		mg/L	1	1/10/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	4950	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.48	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	1760	8		mg/L	1	1/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	3880	40		mg/L	1	1/5/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-20
Lab ID:	9912031-17A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 3:50:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	95	1		µg/L	1	1/4/2000
Benzene	5.7	0.5		µg/L	1	1/4/2000
Toluene	ND	0.5		µg/L	1	1/4/2000
Ethylbenzene	2.5	0.5		µg/L	1	1/4/2000
m,p-Xylene	ND	1		µg/L	1	1/4/2000
o-Xylene	ND	0.5		µg/L	1	1/4/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	530	50		mg/L	200	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	10.4	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	79	12		mg/L	50	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1180	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	900	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	900	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	210	1		mg/L	1	1/10/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	6650	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.07	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	3150	8		mg/L	1	1/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	5870	40		mg/L	1	1/5/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-21
Lab ID:	9912031-14A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 11:20:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	64	1		µg/L	1	1/4/2000
Benzene	ND	0.5		µg/L	1	1/4/2000
Toluene	ND	0.5		µg/L	1	1/4/2000
Ethylbenzene	ND	0.5		µg/L	1	1/4/2000
m,p-Xylene	ND	1		µg/L	1	1/4/2000
o-Xylene	ND	0.5		µg/L	1	1/4/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	410	50		mg/L	200	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	11	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	72	12		mg/L	50	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1450	125		mg/L	500	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	820	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	820	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	93	1		mg/L	1	1/10/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	7060	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.08	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	3450	8		mg/L	1	1/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	6180	40		mg/L	1	1/5/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-22
Lab ID:	9912031-13A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 10:40:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	19	1		µg/L	1	1/4/2000
Benzene	ND	0.5		µg/L	1	1/4/2000
Toluene	ND	0.5		µg/L	1	1/4/2000
Ethylbenzene	ND	0.5		µg/L	1	1/4/2000
m,p-Xylene	ND	1		µg/L	1	1/4/2000
o-Xylene	ND	0.5		µg/L	1	1/4/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	430	50		mg/L	200	1/19/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	16.9	1.2		mg/L	5	1/17/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	110	12		mg/L	50	1/19/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	3240	250		mg/L	1000	1/17/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	480	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	1/7/2000
Alkalinity, Total (As CaCO ₃)	480	5		mg/L CaCO ₃	1	1/7/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	160	1		mg/L	1	1/10/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: DM
Specific Conductance	13400	2		uS/cm	1	12/31/1999
PH						
		E150.1				Analyst: DM
pH	7.11	2		pH units	1	12/31/1999
SULFATE						
		M4500-SO4 D				Analyst: DM
Sulfate	7680	8		mg/L	1	1/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: DM
Total Dissolved Solids (Residue, Filterable)	12300	40		mg/L	1	1/5/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	Pond
Lab ID:	9912031-04A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 12:00:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	5.7	1		µg/L	1	1/3/2000
Benzene	2.1	0.5		µg/L	1	1/3/2000
Toluene	2.5	0.5		µg/L	1	1/3/2000
Ethylbenzene	3.5	0.5		µg/L	1	1/3/2000
m,p-Xylene	10	1		µg/L	1	1/3/2000
o-Xylene	2.1	0.5		µg/L	1	1/3/2000

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	Rinse Blank
Lab ID:	9912031-29A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 9:59:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	ND	1		µg/L	1	1/4/2000
Benzene	ND	0.5		µg/L	1	1/4/2000
Toluene	ND	0.5		µg/L	1	1/4/2000
Ethylbenzene	ND	0.5		µg/L	1	1/4/2000
m,p-Xylene	ND	1		µg/L	1	1/4/2000
o-Xylene	ND	0.5		µg/L	1	1/4/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	Rinse Blank
Lab ID:	9912031-23A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 9:38:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	ND	1		µg/L	1	1/4/2000
Benzene	ND	0.5		µg/L	1	1/4/2000
Toluene	ND	0.5		µg/L	1	1/4/2000
Ethylbenzene	ND	0.5		µg/L	1	1/4/2000
m,p-Xylene	ND	1		µg/L	1	1/4/2000
o-Xylene	ND	0.5		µg/L	1	1/4/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	Travel Blank
Lab ID:	9912031-01A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 9:00:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	ND	1		µg/L	1	1/3/2000
Benzene	ND	0.5		µg/L	1	1/3/2000
Toluene	ND	0.5		µg/L	1	1/3/2000
Ethylbenzene	ND	0.5		µg/L	1	1/3/2000
m,p-Xylene	ND	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client: BioTech Remediation, Inc.
Work Order: 9912031
Lab ID: 9912031-27A **Matrix:** AQUEOUS
Project: BIO1001_Annual Refinery

Client Sample Info: Thriftway Refinery Site 810
Client Sample ID: Travel Blank
Collection Date: 12/29/1999
COC Record: 10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	ND	1		µg/L	1	1/4/2000
Benzene	ND	0.5		µg/L	1	1/4/2000
Toluene	ND	0.5		µg/L	1	1/4/2000
Ethylbenzene	ND	0.5		µg/L	1	1/4/2000
m,p-Xylene	ND	1		µg/L	1	1/4/2000
o-Xylene	ND	0.5		µg/L	1	1/4/2000

Qualifiers:
PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 31-Jan-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	Travel Blank
Lab ID:	9912031-19A	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 8:50:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	ND	1		µg/L	1	1/3/2000
Benzene	ND	0.5		µg/L	1	1/3/2000
Toluene	ND	0.5		µg/L	1	1/3/2000
Ethylbenzene	ND	0.5		µg/L	1	1/3/2000
m,p-Xylene	ND	1		µg/L	1	1/3/2000
o-Xylene	ND	0.5		µg/L	1	1/3/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 24-Jan-00

CLIENT: BioTech Remediation, Inc.

Work Order: 9912031

Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000103	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/3/2000	Prep Date:
Client ID: 9912031	Run ID: GC-1_000103A	PQL	SPK value	SeqNo: 22416	
Analyte	Result	PQL	SPK Ref Val	LowLimit	HighLimit
Benzene	.1802	0.5		%REC	RPDLimit
Ethylbenzene	.1777	0.5		%RPD	Qual
m,p-Xylene	.3227	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.1156	0.5			
Toluene	.2051	0.5			

Sample ID: MB1	Batch ID: GC-1_000104	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/4/2000	Prep Date:
Client ID: 9912031	Run ID: GC-1_000104A	PQL	SPK value	SeqNo: 22441	
Analyte	Result	PQL	SPK Ref Val	LowLimit	HighLimit
Benzene	.0818	0.5		%REC	RPDLimit
Ethylbenzene	.0546	0.5		%RPD	Qual
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.1188	0.5			

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT
Method Blank

Sample ID: MB1	Batch ID: GC-1_000105	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/5/2000	Prep Date:
Client ID: 9912031	Run ID: GC-1_000105A	PQL	SPK value	SeqNo: 22456	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.1773	0.5			J
Ethylbenzene	.1232	0.5			J
m,p-Xylene	.1894	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0695	0.5			J
Toluene	.1583	0.5			J

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

On Site Technologies, LTD.

Date: 24-Jan-00

CLIENT: BioTech Remediation, Inc.

Work Order: 9912031

Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000103	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/3/2000		Prep Date:				
Client ID:		9912031	Run ID: GC-1_000103A		SeqNo: 22415						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.49	0.5	40	0.1802	100.8%	87	119				
Ethylbenzene	40.64	0.5	40	0.1777	101.2%	89	117				
m,p-Xylene	77.8	1	80	0.3227	96.9%	88	114				
Methyl tert-Butyl Ether	40.63	1	40	0	101.6%	69	129				
o-Xylene	40.69	0.5	40	0.1156	101.4%	90	116				
Toluene	40.54	0.5	40	0.2051	100.8%	90	115				

Sample ID: LCS WATER	Batch ID: GC-1_000104	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/4/2000	Prep Date:				
Client ID:	Run ID:	PQL	SPK value	SeqNo:					
	9912031		GC-1_000104A	22440					
Analyte	Result		SPK Ref Val	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.65	0.5	40	0.0818	87	119			
Ethylbenzene	41.2	0.5	40	0.0546	89	117			
m,m,p-Xylene	78.92	1	80	0	88	114			
Methyl tert-Butyl Ether	41.29	1	40	0	69	129			
o-Xylene	41.13	0.5	40	0	90	116			
Toluene	41.07	0.5	40	0.1188	90	115			

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_000105	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/5/2000	Prep Date:
Client ID: 9912031	Run ID: GC-1_000105A	PQL	SPK value	SeqNo: 22455	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Benzene	41.1	0.5	40	0.1773	102.3%
Ethylbenzene	40.96	0.5	40	0.1232	102.1%
m,p-Xylene	78.38	1	80	0.1894	97.7%
Methyl tert-Butyl Ether	40.64	1	40	0	101.6%
o-Xylene	41.11	0.5	40	0.0695	102.6%
Toluene	40.72	0.5	40	0.1583	101.4%
				LowLimit	HighLimit
				87	119
				89	117
				88	114
				69	129
				90	116
				90	115
				RPD Ref Val	%RPD
					RPDLimit
					Qual

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

On Site Technologies, LTD.

Date: 24-Jan-00

CLIENT: BioTech Remediation, Inc.

Work Order: 9912031

Project: BIO1001_Annual Refinery

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID: 9912031-10AMS	Batch ID: GC-1_000103	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/3/2000	Prep Date:
Client ID: Stripper Influent	9912031	Run ID: GC-1_000103A		SeqNo: 22417	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Benzene	2041	5	400	1541	124.9%
Ethylbenzene	1217	5	400	795.2	105.5%
m,p-Xylene	3971	10	800	3010	120.2%
Methyl tert-Butyl Ether	594.1	10	400	231.8	90.6%
o-Xylene	817.2	5	400	405	103.0%
Toluene	1752	5	400	1296	113.9%
				80	116

Sample ID: 9912031-10AMSD	Batch ID: GC-1_000103	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/3/2000	Prep Date:
Client ID: Stripper Influent	9912031	Run ID: GC-1_000103A		SeqNo: 22418	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Benzene	1995	5	400	1541	113.3%
Ethylbenzene	1193	5	400	795.2	99.5%
m,p-Xylene	3886	10	800	3010	109.5%
Methyl tert-Butyl Ether	591.5	10	400	231.8	89.9%
o-Xylene	804.2	5	400	405	99.8%
Toluene	1715	5	400	1296	104.5%
				80	116
				116	116
				116	116
				122	122
				117	117
				80	116

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9912031-21AMS	Batch ID: GC-1_000104	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/4/2000	Prep Date:
Client ID: MW-07	Run ID: 9912031	PQL	SPK value	SeqNo: 22442	
Analyte	Result		SPK Ref Val	LowLimit	HighLimit
Benzene	811.8	10	800	80	116
Ethylbenzene	824.4	10	800	80	118
m,p-Xylene	1662	20	1600	77	116
Methyl tert-Butyl Ether	1118	20	800	62	122
o-Xylene	820.8	10	800	83	117
Toluene	814.4	10	800	80	116

Sample ID: 9912031-21AMSD	Batch ID: GC-1_000104	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/4/2000	Prep Date:
Client ID: MW-07	Run ID: 9912031	PQL	SPK value	SeqNo: 22443	
Analyte	Result		SPK Ref Val	LowLimit	HighLimit
Benzene	794.2	10	800	80	116
Ethylbenzene	808.6	10	800	80	118
m,p-Xylene	1631	20	1600	77	116
Methyl tert-Butyl Ether	1114	20	800	62	122
o-Xylene	808.3	10	800	83	117
Toluene	799	10	800	80	116

Sample ID: 9912031-24AMS	Batch ID: GC-1_000105	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/5/2000	Prep Date:
Client ID: MW-02	Run ID: 9912031	PQL	SPK value	SeqNo: 22457	
Analyte	Result		SPK Ref Val	LowLimit	HighLimit
Benzene	2292	5	400	80	116
Ethylbenzene	1184	5	400	80	118
m,p-Xylene	1413	10	800	77	116
Methyl tert-Butyl Ether	502.7	10	400	62	122
o-Xylene	567.2	5	400	83	117
Toluene	421	5	400	80	116

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID: 9912031-24AMSD		Batch ID: GC-1_000105		Test Code: SW8021B		Units: µg/L		Analysis Date: 1/5/2000		Prep Date:		
Client ID: MW-02	9912031	Run ID: GC-1_000105A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	2256		5	400	1898	89.5%	80	116	2292	1.6%	7	E
Ethylbenzene	1181		5	400	616.1	141.1%	80	118	1184	0.3%	7	S
m,p-Xylene	1406		10	800	521.4	110.6%	77	116	1413	0.5%	7	
Methyl tert-Butyl Ether	499.4		10	400	113.8	96.4%	62	122	502.7	0.7%	7	
o-Xylene	566.9		5	400	152.8	103.5%	83	117	567.2	0.0%	6	
Toluene	415.2		5	400	5.569	102.4%	80	116	421	1.4%	6	

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

On Site Technologies, LTD.

Date: 24-Jan-00

CLIENT: BioTech Remediation, Inc.

Work Order: 9912031

Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0001		Batch ID: GC-1_000103		Test Code: SW8021B		Units: µg/L		Analysis Date: 1/3/2000		Prep Date:	
Client ID:		9912031		Run ID: GC-1_000103A				SeqNo: 22412			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.59	0.5	20	0	108.0%	85	115				
Ethylbenzene	22.36	0.5	20	0	111.8%	85	115				
m,p-Xylene	42.5	1	40	0	106.2%	85	115				
Methyl tert-Butyl Ether	21.28	1	20	0	106.4%	85	115				
o-Xylene	22.24	0.5	20	0	111.2%	85	115				
Toluene	21.9	0.5	20	0	109.5%	85	115				
1,4-Difluorobenzene	90.2	0	100	0	90.2%	80	120				
4-Bromochlorobenzene	90.19	0	100	0	90.2%	80	120				
Fluorobenzene	89.75	0	100	0	89.8%	80	120				

Sample ID: CCV2 BTEX_0001		Batch ID: GC-1_000103		Test Code: SW8021B		Units: µg/L		Analysis Date: 1/3/2000			Prep Date:	
Client ID:		9912031		Run ID:		GC-1_000103A		SeqNo: 22413				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	20.97	0.5	20	0	104.8%	85	115					
Ethylbenzene	21.61	0.5	20	0	108.0%	85	115					
m,p-Xylene	41.15	1	40	0	102.9%	85	115					
Methyl tert-Butyl Ether	21.82	1	20	0	109.1%	85	115					
o-Xylene	21.64	0.5	20	0	108.2%	85	115					
Toluene	21.28	0.5	20	0	106.4%	85	115					
1,4-Difluorobenzene	89.98	0	100	0	90.0%	80	120					
4-Bromochlorobenzene	88.01	0	100	0	88.0%	80	120					
Fluorobenzene	89.92	0	100	0	89.9%	80	120					

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0001	Batch ID: GC-1_000103	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/3/2000	Prep Date:
Client ID: 9912031	Run ID: GC-1_000103A	PQL	SPK value	SPK Ref Val	SeqNo: 22414
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	20.83	0.5	20	0	104.1% 85 115
Ethylbenzene	20.55	0.5	20	0	102.7% 85 115
m,p-Xylene	39.06	1	40	0	97.7% 85 115
Methyl tert-Butyl Ether	21.87	1	20	0	109.4% 85 115
o-Xylene	20.54	0.5	20	0	102.7% 85 115
Toluene	20.43	0.5	20	0	102.2% 85 115
1,4-Difluorobenzene	90.45	0	100	0	90.4% 80 120
4-Bromochlorobenzene	88.92	0	100	0	88.9% 80 120
Fluorobenzene	90.16	0	100	0	90.2% 80 120

Sample ID: CCV1 BTEX_0001	Batch ID: GC-1_000104	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/4/2000	Prep Date:
Client ID: 9912031	Run ID: GC-1_000104A	PQL	SPK value	SPK Ref Val	SeqNo: 22437
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	21.34	0.5	20	0	106.7% 85 115
Ethylbenzene	22.28	0.5	20	0	111.4% 85 115
m,p-Xylene	42.34	1	40	0	105.8% 85 115
Methyl tert-Butyl Ether	21.83	1	20	0	109.2% 85 115
o-Xylene	22.26	0.5	20	0	111.3% 85 115
Toluene	21.72	0.5	20	0	108.6% 85 115
1,4-Difluorobenzene	89.77	0	100	0	89.8% 80 120
4-Bromochlorobenzene	90.03	0	100	0	90.0% 80 120
Fluorobenzene	89.34	0	100	0	89.3% 80 120

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0001	Batch ID: GC-1_000104	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/4/2000	Prep Date:
Client ID: 9912031	Run ID: GC-1_000104A	PQL	SPK value	SeqNo: 22438	
Analyte	Result	PQL	SPK Ref Val	LowLimit	HighLimit
Benzene	20.37	0.5	0	85	115
Ethylbenzene	21.23	0.5	0	85	115
m,p-Xylene	40.33	1	40	85	115
Methyl tert-Butyl Ether	21.37	1	20	85	115
o-Xylene	21.36	0.5	0	85	115
Toluene	20.81	0.5	20	85	115
1,4-Difluorobenzene	89.6	0	100	80	120
4-Bromochlorobenzene	89.98	0	100	80	120
Fluorobenzene	89.2	0	100	80	120

Sample ID: CCV3 BTEX_0001	Batch ID: GC-1_000104	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/4/2000	Prep Date:
Client ID: 9912031	Run ID: GC-1_000104A	PQL	SPK value	SeqNo: 22439	
Analyte	Result	PQL	SPK Ref Val	LowLimit	HighLimit
Benzene	20.51	0.5	0	85	115
Ethylbenzene	20.86	0.5	0	85	115
m,p-Xylene	39.65	1	40	85	115
Methyl tert-Butyl Ether	21.14	1	20	85	115
o-Xylene	20.95	0.5	0	85	115
Toluene	20.65	0.5	20	85	115
1,4-Difluorobenzene	89.96	0	100	80	120
4-Bromochlorobenzene	88.85	0	100	80	120
Fluorobenzene	88.97	0	100	80	120

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9912031

Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0001		Batch ID: GC-1_000105	Test Code: SW8021B	Units: µg/L	Analysis Date: 1/5/2000			Prep Date:				
Client ID: 9912031		Run ID: GC-1_000105A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	20.5		0.5	20	0	102.5%	85	115				
Ethylbenzene	20.64		0.5	20	0	103.2%	85	115				
m,p-Xylene	39.09		1	40	0	97.7%	85	115				
Methyl tert-Butyl Ether	20.38		1	20	0	101.9%	85	115				
o-Xylene	20.49		0.5	20	0	102.5%	85	115				
Toluene	20.41		0.5	20	0	102.0%	85	115				
1,4-Difluorobenzene	89.92		0	100	0	89.9%	80	120				
4-Bromochlorobenzene	89.65		0	100	0	89.7%	80	120				
Fluorobenzene	89.28		0	100	0	89.3%	80	120				

Sample ID: CCV2 BTEX_0001		Batch ID: GC-1_000105	Test Code: SW8021B	Units: µg/L		Analysis Date: 1/5/2000			Prep Date:					
Client ID:		9912031	Run ID:	GC-1_000105A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result												
Benzene		20.2			0.5	20	0	101.0%	85	115				
Ethylbenzene		20.35			0.5	20	0	101.8%	85	115				
m,p-Xylene		38.59			1	40	0	96.5%	85	115				
Methyl tert-Butyl Ether		21.12			1	20	0	105.6%	85	115				
o-Xylene		20.34			0.5	20	0	101.7%	85	115				
Toluene		20.2			0.5	20	0	101.0%	85	115				
1,4-Difluorobenzene		89.97			0	100	0	90.0%	80	120				
4-Bromochlorobenzene		89.54			0	100	0	89.5%	80	120				
Fluorobenzene		88.99			0	100	0	89.0%	80	120				

Qualifiers:

NID - 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

On Site Technologies, LTD.

Date: 24-Jan-00

CLIENT: BioTech Remediation, Inc.

Work Order: 9912031

Project: BIO1001_Annual Refinery

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0001002-01A	90.2	88.6	89.8
0001002-02A	90.4	89.4	89.4
0001002-03A	90.1	89.6	89.9
0001002-04A	90	89.5	89.7
9912031-01A	90.9	89.4	90.6
9912031-02A	90.7	89.4	90.4
9912031-03A	90.5	89.8	90.6
9912031-04A	90.3	88	90.2
9912031-05A	90.6	88.8	90.6
9912031-06A	90.4	89.9	90.6
9912031-07A	90.9	88.7	90.5
9912031-08A	90.7	89.6	90.7
9912031-09A	89.5	88	89.8
9912031-10A	90.1	90.5	88.1
9912031-10AMS	90.3	90.7	88.2
9912031-10AMSD	90.3	89.9	88.4
9912031-11A	90.2	88.5	89.9
9912031-12A	90.5	89.7	90.1
9912031-13A	90.7	89.8	90.4
9912031-14A	90.6	90.4	90
9912031-15A	89.5	88.9	89.1
9912031-16A	87.2	90.2	86.9
9912031-17A	92.2	88.8	89.3
9912031-18A	89.3	90	89.5
9912031-19A	90.4	90	90.5
9912031-20A	90.6	89.5	90.6
9912031-21A	86	83.8	85.6

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-120
4BCBZ	= 4-Bromochlorobenzene	80-120
FLBZ	= Fluorobenzene	80-120

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
9912031-21AMS	88.8	89.9	88.3
9912031-21AMSD	88.9	89.8	88.4
9912031-22A	86.3	84.2	85.4
9912031-23A	90.3	90.1	89.9
9912031-24A	90.4	89.4	88.6
9912031-24AMS	90.1	89.3	88
9912031-24AMSD	90.2	88.8	88.5
9912031-25A	89.4	89.8	89.2
9912031-26A	95.3	87.2	90.4
9912031-27A	90.5	90.3	89.7
9912031-28A	90.4	89.8	89.8
9912031-29A	89.9	90	90
CCV1 BTEX_00010	89.9	89.6	89.3
CCV2 BTEX_00010	90	89.5	89
CCV3 BTEX_00010	90	88.8	89
LCS WATER	89.5	90.3	89
MB1	90.1	89.3	90

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-120
4BCBZ	= 4-Bromochlorobenzene	80-120
FLBZ	= Fluorobenzene	80-120

* Surrogate recovery outside acceptance limits

On Site Technologies, LTD.

Date: 24-Jan-00

CLIENT: BioTech Remediation, Inc.

Work Order: 9912031

Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB	Batch ID: API_991231A	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 1/10/2000	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231C			SeqNo: 22602	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	8			
Sample ID: MBBlank	Batch ID: API_991231A	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 1/12/2000	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231C			SeqNo: 22613	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	8			
Sample ID: MBBlank	Batch ID: API_991231A	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 1/12/2000	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231C			SeqNo: 22624	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	8			
Sample ID: MBBlank	Batch ID: API_991231A	Test Code: E120.1	Units: uS/cm	Analysis Date: 12/31/1999	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231B			SeqNo: 22633	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	2.04	2			

Qualifiers:

ND - Not Detected at the Reporting Limit
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CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: API_991231A	Test Code: M320 B	Units: mg/L CaCO3	Analysis Date: 1/7/2000	Prep Date:
Client ID:	9912031	Run ID: WET CHEM_991231D		SeqNo: 22660	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	4.3	5			
Alkalinity, Carbonate (As CaCO3)	ND	5			J
Alkalinity, Hydroxide	ND	5			
Alkalinity, Total (As CaCO3)	4.3	5			J

Sample ID: MBlank	Batch ID: API_991231A	Test Code: E325.3	Units: mg/L	Analysis Date: 1/12/2000	Prep Date:
Client ID:	9912031	Run ID: WET CHEM_991231E		SeqNo: 22687	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	ND	1			

Sample ID: MBlank	Batch ID: API_991231A	Test Code: E160.1	Units: mg/L	Analysis Date: 1/4/2000	Prep Date:
Client ID:	9912031	Run ID: WET CHEM_991231F		SeqNo: 22716	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	ND	40			

Sample ID: MBLK	Batch ID: API_991231A	Test Code: E120.1	Units: uS/cm	Analysis Date: 12/31/1999	Prep Date:
Client ID:	9912031	Run ID: WET CHEM_991231B		SeqNo: 22657	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	ND	2			

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBLK	Batch ID: API_991231A	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date: 1/7/2000	Prep Date:
Client ID:	9912031	Run ID:	WET CHEM_991231D	SeqNo: 22673	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	3.7	5			
Alkalinity, Carbonate (As CaCO3)	ND	5			J
Alkalinity, Hydroxide	ND	5			
Alkalinity, Total (As CaCO3)	3.7	5			J

Sample ID: MBLK	Batch ID: API_991231A	Test Code: E325.3	Units: mg/L	Analysis Date: 1/10/2000	Prep Date:
Client ID:	9912031	Run ID:	WET CHEM_991231E	SeqNo: 22699	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	ND	1			

Sample ID: MBLK	Batch ID: API_991231A	Test Code: E160.1	Units: mg/L	Analysis Date: 1/5/2000	Prep Date:
Client ID:	9912031	Run ID:	WET CHEM_991231F	SeqNo: 22727	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	ND	40			

Sample ID: MBLK	Batch ID: API_991231A	Test Code: E160.1	Units: mg/L	Analysis Date: 1/6/2000	Prep Date:
Client ID:	9912031	Run ID:	WET CHEM_991231F	SeqNo: 22739	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	ND	40			

Qualifiers: ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 24-Jan-00

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 9912031-03BD		Batch ID: API_991231A		Test Code: M4500-SO4 D		Units: mg/L		Analysis Date: 1/10/2000		Prep Date:	
Client ID: MW-13		9912031		Run ID: WET CHEM_991231C				SeqNo: 22605			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3546	8	0	0	0.0%	0	0	3503	1.2%	6	
Sample ID: 9912031-03BD		Batch ID: API_991231A		Test Code: M2320 B		Units: mg/L CaCO3		Analysis Date: 1/17/2000		Prep Date:	
Client ID: MW-13		9912031		Run ID: WET CHEM_991231D				SeqNo: 22663			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	260	5	0	0	0.0%	0	0	256	1.6%	4	
Alkalinity, Carbonate (As CaCO3)	ND	5	0	0	0.0%	0	0	0	0.0%	4	
Alkalinity, Hydroxide	ND	5	0	0	0.0%	0	0	0	0.0%	4	
Alkalinity, Total (As CaCO3)	260	5	0	0	0.0%	0	0	256	1.6%	4	
Sample ID: 9912031-03BD		Batch ID: API_991231A		Test Code: E325.3		Units: mg/L		Analysis Date: 1/12/2000		Prep Date:	
Client ID: MW-13		9912031		Run ID: WET CHEM_991231E				SeqNo: 22690			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	78	1	0	0	0.0%	0	0	78	0.0%	10	
Sample ID: 9912031-09BD		Batch ID: API_991231A		Test Code: E325.3		Units: mg/L		Analysis Date: 1/10/2000		Prep Date:	
Client ID: Stripper Effluent		9912031		Run ID: WET CHEM_991231E				SeqNo: 22703			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	681	1	0	0	0.0%	0	0	675	0.9%	10	

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 9912031-11BD	Batch ID: APL_991231A	Test Code: E160.1	Units: mg/L	Analysis Date: 1/4/2000	Prep Date:
Client ID: MW-05	Run ID: 9912031	WET CHEM_991231F		SeqNo: 22726	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	3992	40	0	0	3990 0.1% 5

Sample ID: 9912031-12BD	Batch ID: APL_991231A	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 1/12/2000	Prep Date:
Client ID: MW-05 Dup	Run ID: 9912031	WET CHEM_991231C		SeqNo: 22616	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	2016	8	0	0	2004 0.6% 6

Sample ID: 9912031-12BD	Batch ID: APL_991231A	Test Code: E160.1	Units: mg/L	Analysis Date: 1/5/2000	Prep Date:
Client ID: MW-05 Dup	Run ID: 9912031	WET CHEM_991231F		SeqNo: 22731	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	4000	40	0	0	3984 0.4% 5

Sample ID: 9912031-14BD	Batch ID: APL_991231A	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date: 1/7/2000	Prep Date:
Client ID: MW-21	Run ID: 9912031	WET CHEM_991231D		SeqNo: 22676	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	826	5	0	0	822 0.5% 4
Alkalinity, Carbonate (As CaCO3)	ND	5	0	0	0 0.0% 4
Alkalinity, Hydroxide	ND	5	0	0	0 0.0% 4
Alkalinity, Total (As CaCO3)	826	5	0	0	822 0.5% 4

Sample ID: 9912031-22BD	Batch ID: APL_991231A	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 1/12/2000	Prep Date:
Client ID: MW-07 Dup	Run ID: 9912031	WET CHEM_991231C		SeqNo: 22627	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	2408	8	0	0	2437 1.2% 6

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT
Sample Duplicate

Sample ID: 9912031-22BD	Batch ID: API_991231A	Test Code: E160.1	Units: mg/L	Analysis Date: 1/6/2000	Prep Date:
Client ID: MW-07 Dup	9912031	Run ID: WET CHEM_991231F		SeqNo: 22742	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	4196	40	0	0	0.0% 0 4200 0.1% 5

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

CLIENT: BioTech Remediation, Inc.
 Work Order: 9912031
 Project: BIO1001_Annual Refinery

Date: 24-Jan-00

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS	Batch ID: API_991231A	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 1/10/2000	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231C			SeqNo: 22603	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	176	8	182	0	96.7% 80 120
Sample ID: LCS	Batch ID: API_991231A	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 1/12/2000	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231C			SeqNo: 22614	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	174	8	182	0	95.6% 80 120
Sample ID: LCS	Batch ID: API_991231A	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 1/12/2000	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231C			SeqNo: 22625	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	185	8	182	0	101.6% 80 120
Sample ID: LCS 3004	Batch ID: API_991231A	Test Code: E325.3	Units: mg/L	Analysis Date: 1/12/2000	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231E			SeqNo: 22688	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	46	1	50	0	92.0% 83 113
Sample ID: LCS 3011	Batch ID: API_991231A	Test Code: E150.1	Units: pH units	Analysis Date: 12/31/1999	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231A			SeqNo: 22571	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
pH	5.794	2	5.84	0	99.2% 97 102

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
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 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3011		Batch ID: API_991231A		Test Code: E150.1		Units: pH units		Analysis Date: 12/31/1999		Prep Date:	
Client ID:		9912031		Run ID: WET CHEM_991231A				SeqNo: 22592			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	5.763	2	5.84	0	98.7%	97	102				

Sample ID: LCS 3011	Batch ID: API_991231A	Test Code: E150.1	Units: pH units	Analysis Date: 12/31/1999	Prep Date:						
Client ID:	9912031	Run ID: WET CHEM_991231A	SeqNo: 22593								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	5.758	2	5.84	0	98.6%	97	102				

Sample ID: LCS 3012	Batch ID: API_991231A	Test Code: E120.1	Units: uS/cm	Analysis Date: 12/31/1999		Prep Date:					
Client ID:	9912031	Run ID:	WET CHEM_991231B	SeqNo:	22634						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	767	2	758	0	101.2%	96	103				

Sample ID: LCS 3012	Batch ID: API_991231A	Test Code: E120.1	Units: uS/cm	Analysis Date: 12/31/1999		Prep Date:					
Client ID:	9912031	Run ID: WET CHEM_991231B		SeqNo: 22655							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	770	2	758	0	101.6%	96	103				

Sample ID: LCS 3012	Batch ID: API_991231A	Test Code: E120.1	Units: uS/cm	Analysis Date: 12/31/1999		Prep Date:					
Client ID:	9912031	Run ID: WET CHEM_991231B		SeqNo: 22656							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	774	2	758	0	102.1%	96	103				

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3012	Batch ID: API_991231A	Test Code: E160.1	Units: mg/L	Analysis Date: 1/4/2000	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231F			SeqNo: 22717	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	450	40	461	0 97.6%	88 105

Sample ID: LCS 3012	Batch ID: API_991231A	Test Code: E160.1	Units: mg/L	Analysis Date: 1/5/2000	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231F			SeqNo: 22728	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	456	40	461	0 98.9%	88 105

Sample ID: LCS 3012	Batch ID: API_991231A	Test Code: E160.1	Units: mg/L	Analysis Date: 1/6/2000	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231F			SeqNo: 22740	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	468	40	461	0 101.5%	88 105

Sample ID: LCS 3015	Batch ID: API_991231A	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date: 1/7/2000	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231D			SeqNo: 22661	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Total (As CaCO3)	164	5	163	4 98.2%	89 109

Sample ID: LCS 3015	Batch ID: API_991231A	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date: 1/7/2000	Prep Date:
Client ID: 9912031	Run ID: WET CHEM_991231D			SeqNo: 22674	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Total (As CaCO3)	164	5	163	4 98.2%	89 109

Qualifiers: NID - 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

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: LCS 3015	Batch ID: API_991231A	Test Code: E325.3	Units: mg/L	Analysis Date: 1/10/2000	Prep Date:
Client ID:	9912031	Run ID: WET CHEM_991231E		SeqNo: 22700	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	162	1	173	0	93.6% 83 113
Sample ID: LCS 3015	Batch ID: API_991231A	Test Code: E325.3	Units: mg/L	Analysis Date: 1/10/2000	Prep Date:
Client ID:	9912031	Run ID: WET CHEM_991231E		SeqNo: 22714	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	164	1	173	0	94.8% 83 113

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

On Site Technologies, LTD.

Date: 24-Jan-00

CLIENT: BioTech Remediation, Inc.

Work Order: 9912031

Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: AA_000117A	Test Code: E236.1	Units: mg/L	Analysis Date: 1/13/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000113B			SeqNo: 22541	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	ND		0.1		

Sample ID: MBlank	Batch ID: AA_000117A	Test Code: E273.1	Units: mg/L	Analysis Date: 1/17/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000117A			SeqNo: 22784	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	ND		0.25		

Sample ID: MBlank	Batch ID: AA_000117A	Test Code: E258.1	Units: mg/L	Analysis Date: 1/17/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000117B			SeqNo: 22812	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	ND		0.25		

Sample ID: MBlank	Batch ID: AA_000117A	Test Code: E242.1	Units: mg/L	Analysis Date: 1/19/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000117C			SeqNo: 22915	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	ND		0.25		

Sample ID: MBlank	Batch ID: AA_000117A	Test Code: E215.1	Units: mg/L	Analysis Date: 1/19/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000117D			SeqNo: 22943	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	ND		0.25		

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

On Site Technologies, LTD.

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

Date: 24-Jan-00

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0001001-01AMS	Batch ID: AA_000117A	Test Code: E236.1	Units: mg/L	Analysis Date: 1/13/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000113B	SeqNo: 22544			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	83.6	2	20	61.8	109.0% 80 136
Sample ID: 0001001-01AMS	Batch ID: AA_000117A	Test Code: E273.1	Units: mg/L	Analysis Date: 1/17/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000117A	SeqNo: 22810			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	34100	1250	20000	13800	101.5% 84 118
Sample ID: 0001001-01AMS	Batch ID: AA_000117A	Test Code: E258.1	Units: mg/L	Analysis Date: 1/17/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000117B	SeqNo: 22837			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	305.6	20	80	195.2	138.0% 51 167
Sample ID: 0001001-01AMS	Batch ID: AA_000117A	Test Code: E242.1	Units: mg/L	Analysis Date: 1/19/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000117C	SeqNo: 22941			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	470	25	100	368	102.0% 84 131
Sample ID: 9912031-14BMS	Batch ID: AA_000117A	Test Code: E242.1	Units: mg/L	Analysis Date: 1/19/2000	Prep Date:
Client ID: MW-21	Run ID: AA_000117C	SeqNo: 22929			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	175	12	100	72	103.0% 84 131

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9912031-14BMS	Batch ID: AA_000117A	Test Code: E215.1	Units: mg/L	Analysis Date: 1/19/2000	Prep Date:
Client ID: MW-21	9912031	Run ID: AA_000117D		SeqNo: 22957	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	1242	50	800	100.0%	90 126
Sample ID: 9912031-22BMS	Batch ID: AA_000117A	Test Code: E273.1	Units: mg/L	Analysis Date: 1/17/2000	Prep Date:
Client ID: MW-07 Dup	9912031	Run ID: AA_000117A		SeqNo: 22804	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	3000	125	2000	101.0%	84 118
Sample ID: 9912031-22BMS	Batch ID: AA_000117A	Test Code: E258.1	Units: mg/L	Analysis Date: 1/17/2000	Prep Date:
Client ID: MW-07 Dup	9912031	Run ID: AA_000117B		SeqNo: 22832	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	18.6	1.2	5	156.0%	51 167
Sample ID: 9912031-26BMS	Batch ID: AA_000117A	Test Code: E215.1	Units: mg/L	Analysis Date: 1/19/2000	Prep Date:
Client ID: MW-14	9912031	Run ID: AA_000117D		SeqNo: 22968	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	1204	50	800	95.3%	90 126

Qualifiers: NID - 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

On Site Technologies, LTD.

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

Date: 24-Jan-00

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1	Batch ID: AA_000117A	Test Code: E236.1	Units: mg/L	Analysis Date: 1/13/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000113B			SeqNo: 22542	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	2	0.1	2	0	100.0% 90 110

Sample ID: CCV1	Batch ID: AA_000117A	Test Code: E273.1	Units: mg/L	Analysis Date: 1/17/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000117A			SeqNo: 22785	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	3.44	0.25	3.55	0	96.9% 90 110

Sample ID: CCV1	Batch ID: AA_000117A	Test Code: E258.1	Units: mg/L	Analysis Date: 1/17/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000117B			SeqNo: 22813	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	2.01	0.25	2	0	100.5% 90 110

Sample ID: CCV1	Batch ID: AA_000117A	Test Code: E242.1	Units: mg/L	Analysis Date: 1/19/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000117C			SeqNo: 22916	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	2.07	0.25	2	0	103.5% 90 110

Sample ID: CCV1	Batch ID: AA_000117A	Test Code: E215.1	Units: mg/L	Analysis Date: 1/19/2000	Prep Date:
Client ID: 9912031	Run ID: AA_000117D			SeqNo: 22944	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	2.96	0.25	3.04	0	97.4% 90 110

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9912031

Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2	Batch ID: AA_000117A	Test Code: E236.1	Units: mg/L	Analysis Date: 1/13/2000	Prep Date:
Client ID:	9912031	Run ID: AA_000113B		SeqNo: 22545	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	2.01	0.1	2	0	100.5% 90 110

Sample ID: CCV2	Batch ID: AA_000117A	Test Code: E273.1	Units: mg/L	Analysis Date: 1/17/2000	Prep Date:
Client ID:	9912031	Run ID: AA_000117A		SeqNo: 22796	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	3.45	0.25	3.55	0	97.2% 90 110

Sample ID: CCV2	Batch ID: AA_000117A	Test Code: E258.1	Units: mg/L	Analysis Date: 1/17/2000	Prep Date:
Client ID:	9912031	Run ID: AA_000117B		SeqNo: 22824	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	2.02	0.25	2	0	101.0% 90 110

Sample ID: CCV3	Batch ID: AA_000117A	Test Code: E273.1	Units: mg/L	Analysis Date: 1/17/2000	Prep Date:
Client ID:	9912031	Run ID: AA_000117A		SeqNo: 22805	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	3.44	0.25	3.55	0	96.9% 90 110

Sample ID: CCV3	Batch ID: AA_000117A	Test Code: E258.1	Units: mg/L	Analysis Date: 1/17/2000	Prep Date:
Client ID:	9912031	Run ID: AA_000117B		SeqNo: 22838	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	1.99	0.25	2	0	99.5% 90 110

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9912031

Project: BIO1001_Annual Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3	Batch ID: AA_000117A	Test Code: E242.1	Units: mg/L	Analysis Date: 1/19/2000		Prep Date:
Client ID:	9912031	Run ID: AA_000117C		SeqNo: 22927		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	2.12	0.25	2	0	106.0%	90 110

Sample ID: CCV3	Batch ID: AA_000117A	Test Code: E242.1	Units: mg/L	Analysis Date: 1/19/2000		Prep Date:					
Client ID:	9912031	Run ID: AA_000117C		SeqNo: 22936							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	2.06	0.25	2	0	103.0%	90	110				

Sample ID: CCV3	Batch ID: AA_000117A	Test Code: E215.1	Units: mg/L	Analysis Date: 1/19/2000	Prep Date:					
Client ID:	9912031	Run ID: AA_000117D		SeqNo: 22955						
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	3.03	0.25	3.04	99.7%	90	110				

Sample ID: CCV3	Batch ID: AA_000117A	Test Code: E215.1	Units: mg/L	Analysis Date: 1/19/2000		Prep Date:					
Client ID:	9912031	Run ID: AA_000117D		SeqNo: 22964							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	2.98	0.25	3.04	0	98.0%	90	110				

Sample ID: CCV4	Batch ID: AA_000117A	Test Code: E273.1	Units: mg/L	Analysis Date: 1/17/2000		Prep Date:
Client ID:	9912031	Run ID: AA_000117A		SeqNo: 22811		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	3.42	0.25	3.55	0	96.3%	90 110

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9912031
Project: BIO1001_Annual Refinery

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: CCV4	Batch ID: AA_000117A	Test Code: E242.1	Units: mg/L		Analysis Date: 1/19/2000			Prep Date:			
Client ID:	9912031	Run ID: AA_000117C			SeqNo: 22942						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	2.02	0.25	2	0	101.0%	90	110				

Sample ID: CCV4	Batch ID: AA_000117A	Test Code: E215.1	Units: mg/L		Analysis Date: 1/19/2000			Prep Date:			
Client ID:	9912031	Run ID: AA_000117D			SeqNo: 22970						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	3	0.25	3.04	0	98.7%	90	110				

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

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	Stripper Effluent
Lab ID:	9912031-09B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 4:35:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	3490	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	Stripper Influent
Lab ID:	9912031-10B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 4:55:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	3700	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-01
Lab ID:	9912031-25B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 10:40:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	3670	40		mg/L	1	12/31/2000

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-02
Lab ID:	9912031-24B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 9:50:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	2050	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-05
Lab ID:	9912031-11B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 9:40:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	4170	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr - Surrogate

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P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-05 Dup
Lab ID:	9912031-12B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 9:40:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	4170	40		mg/L	1	12/31/2000

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-06
Lab ID:	9912031-18B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 4:45:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	3020	40		mg/L	1	12/31/2000

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-07
Lab ID:	9912031-21B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 9:10:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	4370	40		mg/L	1	12/31/2000

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-07 Dup
Lab ID:	9912031-22B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 9:10:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	4300	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

17 of 20

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-09
Lab ID:	9912031-07B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 2:39:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	6060	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thirtway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-10
Lab ID:	9912031-05B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 1:30:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	5800	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-11
Lab ID:	9912031-06B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 2:06:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	5590	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

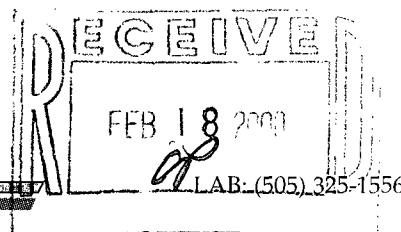
E - Value above quantitation range

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-13
Lab ID:	9912031-03B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 11:30:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	5520	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-14
Lab ID:	9912031-26B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/30/1999 11:25:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	4480		40	mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-15
Lab ID:	9912031-08B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/28/1999 4:25:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	5900	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-18
Lab ID:	9912031-16B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 2:50:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	3000	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-19
Lab ID:	9912031-15B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 1:40:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	4310	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-20
Lab ID:	9912031-17B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 3:50:00 PM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	6060	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-21
Lab ID:	9912031-14B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 11:20:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	6310	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Site 810
Work Order:	9912031	Client Sample ID:	MW-22
Lab ID:	9912031-13B	Matrix:	AQUEOUS
Project:	BIO1001_Annual Refinery	Collection Date:	12/29/1999 10:40:00 AM
		COC Record:	10453

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	12100	40		mg/L	1	12/31/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



BioTECH REMEDIATION INC.

**1999 ANNUAL GROUNDWATER MONITOR REPORT
THRIFTWAY REFINERY
626 ROAD 5500
BLOOMFIELD, NEW MEXICO**

RECEIVED

MAR 31 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RECEIVED

MAR 31 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

prepared for the

NEW MEXICO OIL CONSERVATION DIVISION

**Mr. Will Olsen, Project Manager, Santa Fe Office
and
Mr. Denny Foust, Aztec Office**

Book 2 of 3

March 7, 2000



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

January 18, 2000

Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-2432 Fax: (505) 325-6256

Project: PAH & Metals Analysis

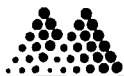
Work Order: 0001009

Dear Mr. David Cox,

Mountain States Analytical, Inc. received 20 samples on Tuesday, January 04, 2000, for the analyses presented in the following report. Please note that this report is designated as Report Number 0001009-1 and consists of 108 pages. In accordance with the inseparability requirement of Utah Administrative Code R444-14-12(10)(a), this report may not be reproduced, except in full, without the express written consent of Mountain States Analytical, Inc.

If you have any questions regarding these test results, please feel free to call.
Mountain States Analytical, Inc.

Rolf E. Larsen
Project Manager



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Work Order Receipt Summary

Client: On Site Technologies, Ltd.

Project: PAH & Metals Analysis

Project ID:

Report Number: 0001009-1

Date Reported: 01/18/00

Work Order: 0001009

Received by: Pamela Olsen

Cooler Number/ID: 1/B

Thermometer ID: 2986

Air Bill: 1Z-66E-585-01-1001-366-2

Packing Material: Newspaper, foam paper, bubble wrap, ice bags.

Samples: 9912031-13,14,15,16,17,21,22,24

Carrier name: UPS

Date Received: 01/04/00 09:45

Temperature: 6.1 °C

Coolant Used: Wet Ice

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Shipping container sealed?	Yes ☐	No ☒	Not Applicable ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	Yes ☐	No ☐	None submitted ☒
Water - pH acceptable upon receipt?	Yes ☒	No ☐	Not Applicable ☐

Preservative: All HNO₃ pH <2

Comments: The temperature may exceed project requirements. Tape around cooler not intact.



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Work Order Receipt Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Received by: Pamela Olsen
Cooler Number/ID: 2/K
Thermometer ID: 2390
Air Bill: 1Z-66E-585-01-1001-364-4
Packing Material: Newspaper, foam paper, ice bags.
Samples: 9912031-07,11,12,18,25,26
Carrier name: UPS

Date Received: 01/04/00 09:45
Temperature: 6.1 °C
Coolant Used: Wet Ice

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Shipping container sealed?	Yes ☒	No ☐	Not Applicable ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	Yes ☐	No ☐	None submitted ☒
Water - pH acceptable upon receipt?	Yes ☒	No ☐	Not Applicable ☐

Preservative: All HNO₃ pH <2

Comments: The temperature may exceed project requirements. Tape around cooler present and sealed only on one end.



Mountain States Analytical, Inc.

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Work Order Receipt Summary

Client: On Site Technologies, Ltd.

Project: PAH & Metals Analysis

Project ID:

Report Number: 0001009-1

Date Reported: 01/18/00

Work Order: 0001009

Received by: Pamela Olsen

Cooler Number/ID: 3/F

Thermometer ID: 1049

Air Bill: 1Z-663-585-01-1001-365-3

Packing Material: Foam paper, ice bags.

Samples: 9912031-03,05,06,08,09,10,21D,22D,24C

Carrier name: UPS

Date Received: 01/04/00 09:45

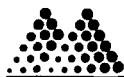
Temperature: 4.1 °C

Coolant Used: Wet Ice

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Shipping container sealed?	Yes ☐	No ☒	Not Applicable ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	Yes ☐	No ☐	None submitted ☒
Water - pH acceptable upon receipt?	Yes ☒	No ☐	Not Applicable ☐

Preservative: All HNO₃ pH <2

Comments: The temperature may exceed project requirements. Tape around cooler not intact.



Mountain States Analytical, Inc.

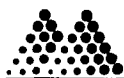
1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Sample Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0001009-01A	9912031-03C		Water	12/28/99
0001009-01B	9912031-03D		Water	12/28/99
0001009-01C	9912031-03E		Water	12/28/99
0001009-02A	9912031-05C		Water	12/28/99
0001009-02B	9912031-05D		Water	12/28/99
0001009-02C	9912031-05E		Water	12/28/99
0001009-03A	9912031-06C		Water	12/28/99
0001009-03B	9912031-06D		Water	12/28/99
0001009-03C	9912031-06E		Water	12/28/99
0001009-04A	9912031-07C		Water	12/28/99
0001009-04B	9912031-07D		Water	12/28/99
0001009-04C	9912031-07E		Water	12/28/99
0001009-05A	9912031-08C		Water	12/28/99
0001009-05B	9912031-08D		Water	12/28/99
0001009-05C	9912031-08E		Water	12/28/99
0001009-06A	9912031-09C		Water	12/28/99
0001009-06B	9912031-09D		Water	12/28/99
0001009-06C	9912031-09E		Water	12/28/99
0001009-07A	9912031-10C		Water	12/28/99
0001009-07B	9912031-10D		Water	12/28/99
0001009-07C	9912031-10E		Water	12/28/99
0001009-08A	9912031-11C		Water	12/29/99
0001009-08B	9912031-11D		Water	12/29/99
0001009-08C	9912031-11E		Water	12/29/99
0001009-09A	9912031-12C		Water	12/29/99
0001009-09B	9912031-12D		Water	12/29/99
0001009-09C	9912031-12E		Water	12/29/99
0001009-10A	9912031-13C		Water	12/29/99
0001009-10B	9912031-13D		Water	12/29/99
0001009-10C	9912031-13E		Water	12/29/99
0001009-11A	9912031-14C		Water	12/29/99
0001009-11B	9912031-14D		Water	12/29/99
0001009-11C	9912031-14E		Water	12/29/99



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Sample Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0001009-12A	9912031-15C		Water	12/29/99
0001009-12B	9912031-15D		Water	12/29/99
0001009-12C	9912031-15E		Water	12/29/99
0001009-13A	9912031-16C		Water	12/29/99
0001009-13B	9912031-16D		Water	12/29/99
0001009-13C	9912031-16E		Water	12/29/99
0001009-14A	9912031-17C		Water	12/29/99
0001009-14B	9912031-17D		Water	12/29/99
0001009-14C	9912031-17E		Water	12/29/99
0001009-15A	9912031-18C		Water	12/29/99
0001009-15B	9912031-18D		Water	12/29/99
0001009-15C	9912031-18E		Water	12/29/99
0001009-16A	9912031-21C		Water	12/30/99
0001009-16B	9912031-21D		Water	12/30/99
0001009-16C	9912031-21E		Water	12/30/99
0001009-17A	9912031-22C		Water	12/30/99
0001009-17B	9912031-22D		Water	12/30/99
0001009-17C	9912031-22E		Water	12/30/99
0001009-18A	9912031-24C		Water	12/30/99
0001009-18B	9912031-24D		Water	12/30/99
0001009-18C	9912031-24E		Water	12/30/99
0001009-19A	9912031-25C		Water	12/30/99
0001009-19B	9912031-25D		Water	12/30/99
0001009-19C	9912031-25E		Water	12/30/99
0001009-20A	9912031-26C		Water	12/30/99
0001009-20B	9912031-26D		Water	12/30/99
0001009-20C	9912031-26E		Water	12/30/99



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Holding Time Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Sample ID	Client Sample ID	Date Collected					
0001009-01A	9912031-03C	12/28/99 11:30					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/06/00 11:58	28	
0001009-01B	9912031-03D	12/28/99 11:30					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 11:49	28	
Metals by ICP			01/05/00 12:32		01/05/00 16:19	180	
0001009-01C	9912031-03E	12/28/99 11:30					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/05/00 16:36	40	
0001009-02A	9912031-05C	12/28/99 13:30					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/06/00 13:59	28	
0001009-02B	9912031-05D	12/28/99 13:30					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 11:54	28	
Metals by ICP			01/05/00 12:32		01/05/00 16:39	180	
0001009-02C	9912031-05E	12/28/99 13:30					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/05/00 17:14	40	
0001009-03A	9912031-06C	12/28/99 14:06					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/06/00 16:19	28	

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Holding Time Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Sample ID	Client Sample ID	Date Collected					
0001009-03B	9912031-06D	12/28/99 14:06					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 11:55	28	
Metals by ICP			01/05/00 12:32		01/05/00 16:42	180	
0001009-03C	9912031-06E	12/28/99 14:06					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/05/00 17:52	40	
0001009-04A	9912031-07C	12/28/99 14:39					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/06/00 16:49	28	
0001009-04B	9912031-07D	12/28/99 14:39					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 11:57	28	
Metals by ICP			01/05/00 12:32		01/05/00 16:45	180	
0001009-04C	9912031-07E	12/28/99 14:39					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/05/00 18:30	40	
0001009-05A	9912031-08C	12/28/99 16:25					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/06/00 17:19	28	
0001009-05B	9912031-08D	12/28/99 16:25					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Holding Time Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Sample ID	Client Sample ID	Date Collected			
Mercury by CVAA		01/05/00 19:15	01/06/00 11:58	28	
Metals by ICP		01/05/00 12:32	01/05/00 16:47	180	
0001009-05C	9912031-08E	12/28/99 16:25			
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date
Semi-Volatiles			01/04/00 10:15	7	01/05/00 19:08
					40
0001009-06A	9912031-09C	12/28/99 16:35			
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date
Anions by I. C. (B, Cl, Fl, SO4)					01/06/00 17:50
					28
0001009-06B	9912031-09D	12/28/99 16:35			
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date
Mercury by CVAA			01/05/00 19:15		01/06/00 11:38
Metals by ICP			01/05/00 12:32		01/05/00 16:50
					180
0001009-06C	9912031-09E	12/28/99 16:35			
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date
Semi-Volatiles			01/04/00 10:15	7	01/05/00 19:46
					40
0001009-07A	9912031-10C	12/28/99 16:55			
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date
Anions by I. C. (B, Cl, Fl, SO4)					01/06/00 19:05
					28
0001009-07B	9912031-10D	12/28/99 16:55			
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date
Mercury by CVAA			01/05/00 19:15		01/06/00 12:00
Metals by ICP			01/05/00 12:32		01/05/00 16:53
					180

* - The recommended holding time was exceeded



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Holding Time Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Sample ID	Client Sample ID	Date Collected					
0001009-07C	9912031-10E	12/28/99 16:55					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/05/00 20:24	40	
0001009-08A	9912031-11C	12/29/99 09:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/06/00 19:36	28	
0001009-08B	9912031-11D	12/29/99 09:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:01	28	
Metals by ICP			01/05/00 12:32		01/05/00 16:56	180	
0001009-08C	9912031-11E	12/29/99 09:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/05/00 21:02	40	
0001009-09A	9912031-12C	12/29/99 09:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/11/94 12:21	28	
0001009-09B	9912031-12D	12/29/99 09:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:03	28	
Metals by ICP			01/05/00 12:32		01/05/00 16:58	180	
0001009-09C	9912031-12E	12/29/99 09:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/05/00 21:40	40	

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Holding Time Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Sample ID	Client Sample ID	Date Collected					
0001009-10A	9912031-13C	12/29/99 10:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/11/00 17:14	28	
0001009-10B	9912031-13D	12/29/99 10:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:04	28	
Metals by ICP			01/05/00 12:32		01/05/00 17:01	180	
0001009-10C	9912031-13E	12/29/99 10:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/05/00 22:18	40	
0001009-11A	9912031-14C	12/29/99 11:20					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/11/94 14:07	28	
0001009-11B	9912031-14D	12/29/99 11:20					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:06	28	
Metals by ICP			01/05/00 12:32		01/05/00 17:04	180	
0001009-11C	9912031-14E	12/29/99 11:20					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/05/00 22:56	40	
0001009-12A	9912031-15C	12/29/99 13:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

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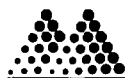
Holding Time Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Sample ID	Client Sample ID	Date Collected					
Anions by I. C. (B, Cl, Fl, SO4)		01/11/94 14:23 28					
0001009-12B	9912031-15D	12/29/99 13:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:11	28	
Metals by ICP			01/05/00 12:32		01/05/00 17:11	180	
0001009-12C	9912031-15E	12/29/99 13:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/05/00 23:34	40	
0001009-13A	9912031-16C	12/29/99 14:50					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/11/94 14:50	28	
0001009-13B	9912031-16D	12/29/99 14:50					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:12	28	
Metals by ICP			01/05/00 12:32		01/05/00 17:13	180	
0001009-13C	9912031-16E	12/29/99 14:50					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/06/00 11:51	40	
0001009-14A	9912031-17C	12/29/99 15:50					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/11/94 15:08	28	

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

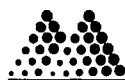
Holding Time Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Sample ID	Client Sample ID	Date Collected					
0001009-14B	9912031-17D	12/29/99 15:50					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:14		28
Metals by ICP			01/05/00 12:32		01/05/00 17:16		180
0001009-14C	9912031-17E	12/29/99 15:50					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/06/00 12:29		40
0001009-15A	9912031-18C	12/29/99 16:45					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/11/00 14:12		28
0001009-15B	9912031-18D	12/29/99 16:45					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:15		28
Metals by ICP			01/05/00 12:32		01/05/00 17:19		180
0001009-15C	9912031-18E	12/29/99 16:45					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/06/00 13:07		40
0001009-16A	9912031-21C	12/30/99 09:10					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/11/00 14:27		28
0001009-16B	9912031-21D	12/30/99 09:10					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:17		28

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Holding Time Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Sample ID	Client Sample ID	Date Collected					
Metals by ICP		01/05/00 12:32		01/05/00 17:22		180	
0001009-16C	9912031-21E					12/30/99 09:10	
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/06/00 13:46	40	
0001009-17A	9912031-22C					12/30/99 09:10	
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/11/00 15:28	28	
0001009-17B	9912031-22D					12/30/99 09:10	
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:18	28	
Metals by ICP			01/05/00 12:32		01/05/00 17:25	180	
0001009-17C	9912031-22E					12/30/99 09:10	
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/06/00 14:24	40	
0001009-18A	9912031-24C					12/30/99 09:50	
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/11/00 15:43	28	
0001009-18B	9912031-24D					12/30/99 09:50	
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:20	28	
Metals by ICP			01/05/00 12:32		01/05/00 17:28	180	

* - The recommended holding time was exceeded



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

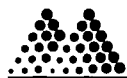
Holding Time Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Sample ID	Client Sample ID	Date Collected					
0001009-18C	9912031-24E	12/30/99 09:50					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/06/00 15:02	40	
Semi-Volatiles			01/04/00 10:15	7	01/07/00 16:14	40	
0001009-19A	9912031-25C	12/30/99 10:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/11/00 16:13	28	
0001009-19B	9912031-25D	12/30/99 10:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:21	28	
Metals by ICP			01/05/00 12:32		01/05/00 17:32	180	
0001009-19C	9912031-25E	12/30/99 10:40					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles			01/04/00 10:15	7	01/06/00 15:40	40	
0001009-20A	9912031-26C	12/30/99 11:25					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)					01/11/00 16:59	28	
0001009-20B	9912031-26D	12/30/99 11:25					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA			01/05/00 19:15		01/06/00 12:23	28	
Metals by ICP			01/05/00 12:32		01/05/00 17:35	180	
0001009-20C	9912031-26E	12/30/99 11:25					
Parameter	TCLP Date	HT	Prep Date	HT	Analysis Date	HT	

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Holding Time Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Sample ID	Client Sample ID	Date Collected			
Semi-Volatiles		01/04/00 10:15	7	01/07/00 16:52	40
Semi-Volatiles		01/04/00 10:15	7	01/06/00 16:19	40

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-06A
Client Sample ID: 9912031-09C
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

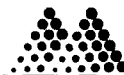
Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; Stripper Effluent**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, Fl, SO4), Water							
Bromide	1.30 J	0.4	2	mg/L	20	01/06/00 17:50	NWL
Fluoride	0.987 J	0.2	1	mg/L	20	01/06/00 17:50	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-06B
Client Sample ID: 9912031-09D
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; Stripper Effluent**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 11:38	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 16:50	MM
Barium	0.0549	0.002	0.01	mg/L	1	01/05/00 16:50	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 16:50	MM
Chromium	U	0.01	0.05	mg/L	1	01/05/00 16:50	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 16:50	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 16:50	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 16:50	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-07A
Client Sample ID: 9912031-10C
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; Stripper Influent**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, F, SO ₄), Water							
Bromide	U	0.4	2	mg/L	20	01/06/00 19:05	NWL
Fluoride	0.888 J	0.2	1	mg/L	20	01/06/00 19:05	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-07B
Client Sample ID: 9912031-10D
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; Stripper Influent**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 12:00	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 16:53	MM
Barium	0.0554	0.002	0.01	mg/L	1	01/05/00 16:53	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 16:53	MM
Chromium	U	0.01	0.05	mg/L	1	01/05/00 16:53	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 16:53	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 16:53	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 16:53	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Client: Mr. David Cox
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(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-19A
Client Sample ID: 9912031-25C
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

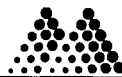
Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-01**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, F, SO ₄), Water							
Bromide	U	0.4	2	mg/L	20	01/11/00 16:13	NWL
Fluoride	1.04	0.2	1	mg/L	20	01/11/00 16:13	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Farmington, NM 87401
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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-19B
Client Sample ID: 9912031-25D
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-01**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 12:21	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 17:32	MM
Barium	0.364	0.002	0.01	mg/L	1	01/05/00 17:32	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 17:32	MM
Chromium	0.0200 J	0.01	0.05	mg/L	1	01/05/00 17:32	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 17:32	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 17:32	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 17:32	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-18A
Client Sample ID: 9912031-24C
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-02**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, F, SO ₄), Water							
Bromide	1.55 J	0.4	2	mg/L	20	01/11/00 15:43	NWL
Fluoride	0.793 J	0.2	1	mg/L	20	01/11/00 15:43	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-18B
Client Sample ID: 9912031-24D
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis *ac*
Project ID:
Purchase Order: **Site 810; MW-02**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	0.140 J	0.1	0.5	µg/L	1	01/06/00 12:20	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 17:28	MM
Barium	3.03	0.002	0.01	mg/L	1	01/05/00 17:28	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 17:28	MM
Chromium	0.0260 J	0.01	0.05	mg/L	1	01/05/00 17:28	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 17:28	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 17:28	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 17:28	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-18C
Client Sample ID: 9912031-24E
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-02**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

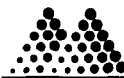
B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-08A
Client Sample ID: 9912031-11C
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

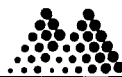
Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-05

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, Fl, SO4), Water							
Bromide	1.78 J	0.4	2	mg/L	20	01/06/00 19:36	NWL
Fluoride	1.14	0.2	1	mg/L	20	01/06/00 19:36	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-08B
Client Sample ID: 9912031-11D
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis *pl*
Project ID:
Purchase Order: **Site 810; MW-05**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	0.140 J	0.1	0.5	µg/L	1	01/06/00 12:01	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 16:56	MM
Barium	0.129	0.002	0.01	mg/L	1	01/05/00 16:56	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 16:56	MM
Chromium	0.0100 J	0.01	0.05	mg/L	1	01/05/00 16:56	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 16:56	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 16:56	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 16:56	MM

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S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-09A
Client Sample ID: 9912031-12C
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-05 Dup**

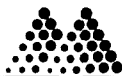
Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, Fl, SO4), Water							
Bromide	1.21 J	0.4	2	mg/L	20	01/11/94 12:21	NWL
Fluoride	1.10	0.2	1	mg/L	20	01/11/94 12:21	NWL

Note for 01/11/94 12:21 analysis: Only bromide and fluoride reported for samples in group 0001009.

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S -Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-09B
Client Sample ID: 9912031-12D
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-05 Dup**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 12:03	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 16:58	MM
Barium	0.522	0.002	0.01	mg/L	1	01/05/00 16:58	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 16:58	MM
Chromium	0.0100 J	0.01	0.05	mg/L	1	01/05/00 16:58	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 16:58	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 16:58	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 16:58	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-15A
Client Sample ID: 9912031-18C
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-06**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, F, SO ₄), Water							
Bromide	1.28 J	0.4	2	mg/L	20	01/11/00 14:12	NWL
Fluoride	0.990 J	0.2	1	mg/L	20	01/11/00 14:12	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-15B
Client Sample ID: 9912031-18D
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-06**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 12:15	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 17:19	MM
Barium	0.160	0.002	0.01	mg/L	1	01/05/00 17:19	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 17:19	MM
Chromium	U	0.01	0.05	mg/L	1	01/05/00 17:19	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 17:19	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 17:19	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 17:19	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-16A
Client Sample ID: 9912031-21C
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

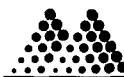
Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-07**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, F, SO ₄), Water							
Bromide	U	0.4	2	mg/L	20	01/11/00 14:27	NWL
Fluoride	0.963 J	0.2	1	mg/L	20	01/11/00 14:27	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-16B
Client Sample ID: 9912031-21D
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-07**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	0.210 J	0.1	0.5	µg/L	1	01/06/00 12:17	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	0.268	0.02	0.1	mg/L	1	01/05/00 17:22	MM
Barium	2.39	0.002	0.01	mg/L	1	01/05/00 17:22	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 17:22	MM
Chromium	0.104	0.01	0.05	mg/L	1	01/05/00 17:22	MM
Lead	0.110 J	0.03	0.15	mg/L	1	01/05/00 17:22	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 17:22	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 17:22	MM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-17A
Client Sample ID: 9912031-22C
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-07 Dup**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, F, SO4), Water							
Bromide	U	0.4	2	mg/L	20	01/11/00 15:28	NWL
Fluoride	1.04	0.2	1	mg/L	20	01/11/00 15:28	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits

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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-17B
Client Sample ID: 9912031-22D
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-07 Dup**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 12:18	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	0.166	0.02	0.1	mg/L	1	01/05/00 17:25	MM
Barium	4.55	0.002	0.01	mg/L	1	01/05/00 17:25	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 17:25	MM
Chromium	0.0741	0.01	0.05	mg/L	1	01/05/00 17:25	MM
Lead	0.0740 J	0.03	0.15	mg/L	1	01/05/00 17:25	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 17:25	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 17:25	MM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



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Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-04A
Client Sample ID: 9912031-07C
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

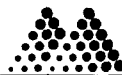
Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-09

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, F1, SO4), Water							
Bromide	1.14 J	0.4	2	mg/L	20	01/06/00 16:49	NWL
Fluoride	1.08	0.2	1	mg/L	20	01/06/00 16:49	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-04B
Client Sample ID: 9912031-07D
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis *oc*
Project ID:
Purchase Order: **Site 810; MW-09**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 11:57	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 16:45	MM
Barium	0.186	0.002	0.01	mg/L	1	01/05/00 16:45	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 16:45	MM
Chromium	0.0140 J	0.01	0.05	mg/L	1	01/05/00 16:45	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 16:45	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 16:45	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 16:45	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-02A
Client Sample ID: 9912031-05C
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-10**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, Fl, SO4), Water							
Bromide	U	0.4	2	mg/L	20	01/06/00 13:59	NWL
Fluoride	1.26	0.2	1	mg/L	20	01/06/00 13:59	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-02B
Client Sample ID: 9912031-05D
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-10**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 11:54	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 16:39	MM
Barium	0.366	0.002	0.01	mg/L	1	01/05/00 16:39	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 16:39	MM
Chromium	U	0.01	0.05	mg/L	1	01/05/00 16:39	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 16:39	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 16:39	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 16:39	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-03A
Client Sample ID: 9912031-06C
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-11

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, Fl, SO4), Water							
Bromide	U	0.4	2	mg/L	20	01/06/00 16:19	NWL
Fluoride	1.00	0.2	1	mg/L	20	01/06/00 16:19	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-03B
Client Sample ID: 9912031-06D
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-11**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 11:55	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 16:42	MM
Barium	0.192	0.002	0.01	mg/L	1	01/05/00 16:42	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 16:42	MM
Chromium	U	0.01	0.05	mg/L	1	01/05/00 16:42	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 16:42	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 16:42	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 16:42	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-01A
Client Sample ID: 9912031-03C
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-13**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, Fl, SO4), Water							
Bromide	2.80 J	1	5	mg/L	50	01/06/00 11:58	NWL
Fluoride	1.82 J	0.5	2.5	mg/L	50	01/06/00 11:58	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-01B
Client Sample ID: 9912031-03D
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis *pc*
Project ID:
Purchase Order: **Site 810; MW-13**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 11:49	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 16:19	MM
Barium	0.0428	0.002	0.01	mg/L	1	01/05/00 16:19	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 16:19	MM
Chromium	U	0.01	0.05	mg/L	1	01/05/00 16:19	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 16:19	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 16:19	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 16:19	MM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-20A
Client Sample ID: 9912031-26C
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-14**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, F, SO ₄), Water							
Bromide	U	0.4	2	mg/L	20	01/11/00 16:59	NWL
Fluoride	1.18	0.2	1	mg/L	20	01/11/00 16:59	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Client: Mr. David Cox
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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-20B
Client Sample ID: 9912031-26D
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-14**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	0.160 J	0.1	0.5	µg/L	1	01/06/00 12:23	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 17:35	MM
Barium	0.391	0.002	0.01	mg/L	1	01/05/00 17:35	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 17:35	MM
Chromium	0.0310 J	0.01	0.05	mg/L	1	01/05/00 17:35	MM
Lead	0.0350 J	0.03	0.15	mg/L	1	01/05/00 17:35	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 17:35	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 17:35	MM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-20C
Client Sample ID: 9912031-26E
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis *oc*
Project ID:
Purchase Order: **Site 810; MW-14**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-05A
Client Sample ID: 9912031-08C
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-15**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, Fl, SO4), Water							
Bromide	1.91 J	0.4	2	mg/L	20	01/06/00 17:19	NWL
Fluoride	1.18	0.2	1	mg/L	20	01/06/00 17:19	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-05B
Client Sample ID: 9912031-08D
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis *OL*
Project ID:
Purchase Order: **Site 810; MW-15**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 11:58	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 16:47	MM
Barium	0.327	0.002	0.01	mg/L	1	01/05/00 16:47	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 16:47	MM
Chromium	0.0170 J	0.01	0.05	mg/L	1	01/05/00 16:47	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 16:47	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 16:47	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 16:47	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-13A
Client Sample ID: 9912031-16C
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-18

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, Fl, SO4), Water							
Bromide	U	0.4	2	mg/L	20	01/11/94 14:50	NWL
Fluoride	0.798 J	0.2	1	mg/L	20	01/11/94 14:50	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-13B
Client Sample ID: 9912031-16D
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-18**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	0.657	0.1	0.5	µg/L	1	01/06/00 12:12	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	0.101	0.02	0.1	mg/L	1	01/05/00 17:13	MM
Barium	0.703	0.002	0.01	mg/L	1	01/05/00 17:13	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 17:13	MM
Chromium	0.0450 J	0.01	0.05	mg/L	1	01/05/00 17:13	MM
Lead	0.0870 J	0.03	0.15	mg/L	1	01/05/00 17:13	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 17:13	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 17:13	MM

U - Not detected above the MDL

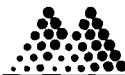
B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

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On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-12A
Client Sample ID: 9912031-15C
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-19**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, F, SO ₄), Water							
Bromide	1.63 J	0.4	2	mg/L	20	01/11/94 14:23	NWL
Fluoride	0.883 J	0.2	1	mg/L	20	01/11/94 14:23	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-12B
Client Sample ID: 9912031-15D
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis *α*
Project ID:
Purchase Order: **Site 810; MW-19**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 12:11	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 17:11	MM
Barium	0.131	0.002	0.01	mg/L	1	01/05/00 17:11	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 17:11	MM
Chromium	U	0.01	0.05	mg/L	1	01/05/00 17:11	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 17:11	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 17:11	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 17:11	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-14A
Client Sample ID: 9912031-17C
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-20**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, Fl, SO4), Water							
Bromide	U	0.4	2	mg/L	20	01/11/94 15:08	NWL
Fluoride	1.06	0.2	1	mg/L	20	01/11/94 15:08	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-14B
Client Sample ID: 9912031-17D
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-20**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	0.110 J	0.1	0.5	µg/L	1	01/06/00 12:14	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	0.0370 J	0.02	0.1	mg/L	1	01/05/00 17:16	MM
Barium	0.386	0.002	0.01	mg/L	1	01/05/00 17:16	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 17:16	MM
Chromium	0.0380 J	0.01	0.05	mg/L	1	01/05/00 17:16	MM
Lead	0.0600 J	0.03	0.15	mg/L	1	01/05/00 17:16	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 17:16	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 17:16	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



Mountain States Analytical, Inc.

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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-11A
Client Sample ID: 9912031-14C
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-21**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, F, SO ₄), Water							
Bromide	U	0.4	2	mg/L	20	01/11/94 14:07	NWL
Fluoride	0.914 J	0.2	1	mg/L	20	01/11/94 14:07	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-11B
Client Sample ID: 9912031-14D
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis *oc*
Project ID:
Purchase Order: **Site 810; MW-21**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 12:06	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	0.0700 J	0.02	0.1	mg/L	1	01/05/00 17:04	MM
Barium	0.204	0.002	0.01	mg/L	1	01/05/00 17:04	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 17:04	MM
Chromium	0.0290 J	0.01	0.05	mg/L	1	01/05/00 17:04	MM
Lead	U	0.03	0.15	mg/L	1	01/05/00 17:04	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 17:04	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 17:04	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-10A
Client Sample ID: 9912031-13C
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-22**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, F, SO ₄), Water							
Bromide	U	1	5	mg/L	50	01/11/00 17:14	NWL
Fluoride	1.55 J	0.5	2.5	mg/L	50	01/11/00 17:14	NWL

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-10B
Client Sample ID: 9912031-13D
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-22**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 1367						01/05/00 12:32	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	01/06/00 12:04	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 1376						01/05/00 19:15	CER
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/05/00 17:01	MM
Barium	0.0147	0.002	0.01	mg/L	1	01/05/00 17:01	MM
Cadmium	U	0.003	0.015	mg/L	1	01/05/00 17:01	MM
Chromium	U	0.01	0.05	mg/L	1	01/05/00 17:01	MM
Lead	0.100 J	0.03	0.15	mg/L	1	01/05/00 17:01	MM
Selenium	U	0.08	0.4	mg/L	1	01/05/00 17:01	MM
Silver	U	0.01	0.05	mg/L	1	01/05/00 17:01	MM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-06C
Client Sample ID: 9912031-09E
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; Stripper Effluent

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/05/00 19:46	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/05/00 19:46	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/05/00 19:46	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/05/00 19:46	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/05/00 19:46	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 19:46	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/05/00 19:46	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 19:46	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/05/00 19:46	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/05/00 19:46	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/05/00 19:46	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/05/00 19:46	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/05/00 19:46	KPF
Indene	U	4.7	9.43	µg/L	1	01/05/00 19:46	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/05/00 19:46	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/05/00 19:46	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/05/00 19:46	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/05/00 19:46	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/05/00 19:46	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/05/00 19:46	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	10.9	3.02-156	% Recovery	1	01/05/00 19:46	KPF	
2-Fluorophenol	2.72	1-94.3	% Recovery	1	01/05/00 19:46	KPF	
2-Fluorobiphenyl	86.4	39.1-108	% Recovery	1	01/05/00 19:46	KPF	
Nitrobenzene-d5	78.7	44.7-107	% Recovery	1	01/05/00 19:46	KPF	
Phenol-d6	1.38	1-82.6	% Recovery	1	01/05/00 19:46	KPF	
Terphenyl-d14	115	17.8-142	% Recovery	1	01/05/00 19:46	KPF	

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-07C
Client Sample ID: 9912031-10E
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; Stripper Influent**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/05/00 20:24	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/05/00 20:24	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/05/00 20:24	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/05/00 20:24	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/05/00 20:24	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 20:24	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/05/00 20:24	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 20:24	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/05/00 20:24	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/05/00 20:24	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/05/00 20:24	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/05/00 20:24	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/05/00 20:24	KPF
Indene	U	4.7	9.43	µg/L	1	01/05/00 20:24	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/05/00 20:24	KPF
2-Methylnaphthalene	60.5	5.7	9.43	µg/L	1	01/05/00 20:24	KPF
Naphthalene	108	4.7	9.43	µg/L	1	01/05/00 20:24	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/05/00 20:24	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/05/00 20:24	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/05/00 20:24	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	115	3.02-156		% Recovery	1	01/05/00 20:24	KPF
2-Fluorophenol	46.3	1-94.3		% Recovery	1	01/05/00 20:24	KPF
2-Fluorobiphenyl	83.8	39.1-108		% Recovery	1	01/05/00 20:24	KPF
Nitrobenzene-d5	70.5	44.7-107		% Recovery	1	01/05/00 20:24	KPF
Phenol-d6	35.2	1-82.6		% Recovery	1	01/05/00 20:24	KPF
Terphenyl-d14	115	17.8-142		% Recovery	1	01/05/00 20:24	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355 0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-19C
Client Sample ID: 9912031-25E
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/06/00 15:40	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/06/00 15:40	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/06/00 15:40	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/06/00 15:40	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/06/00 15:40	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 15:40	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/06/00 15:40	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 15:40	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/06/00 15:40	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/06/00 15:40	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/06/00 15:40	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/06/00 15:40	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/06/00 15:40	KPF
Indene	U	4.7	9.43	µg/L	1	01/06/00 15:40	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/06/00 15:40	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/06/00 15:40	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/06/00 15:40	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/06/00 15:40	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/06/00 15:40	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/06/00 15:40	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	103	3.02-156		% Recovery	1	01/06/00 15:40	KPF
2-Fluorophenol	34.6	1-94.3		% Recovery	1	01/06/00 15:40	KPF
2-Fluorobiphenyl	83.2	39.1-108		% Recovery	1	01/06/00 15:40	KPF
Nitrobenzene-d5	67.3	44.7-107		% Recovery	1	01/06/00 15:40	KPF
Phenol-d6	24.9	1-82.6		% Recovery	1	01/06/00 15:40	KPF
Terphenyl-d14	73.9	17.8-142		% Recovery	1	01/06/00 15:40	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-18C
Client Sample ID: 9912031-24E
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-02

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/06/00 15:02	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/06/00 15:02	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/06/00 15:02	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/06/00 15:02	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/06/00 15:02	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 15:02	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/06/00 15:02	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 15:02	KPF
Chrysene	16.4	1.9	9.43	µg/L	1	01/06/00 15:02	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/06/00 15:02	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/06/00 15:02	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/06/00 15:02	KPF
Fluorene	74.0	2.8	9.43	µg/L	1	01/06/00 15:02	KPF
Indene	U	4.7	9.43	µg/L	1	01/06/00 15:02	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/06/00 15:02	KPF
2-Methylnaphthalene	467	57	94.3	µg/L	10	01/07/00 16:14	KPF
Naphthalene	335	47	94.3	µg/L	10	01/07/00 16:14	KPF
Phenanthrene	132	1.9	9.43	µg/L	1	01/06/00 15:02	KPF
Pyrene	9.00 J	1.9	9.43	µg/L	1	01/06/00 15:02	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/06/00 15:02	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	54.1	3.02-156		% Recovery	1	01/06/00 15:02	KPF
2,4,6-Tribromophenol	58.8	3.02-156		% Recovery	10	01/07/00 16:14	KPF
2-Fluorophenol	23.3	1-94.3		% Recovery	10	01/07/00 16:14	KPF
2-Fluorophenol	16.4	1-94.3		% Recovery	1	01/06/00 15:02	KPF
2-Fluorobiphenyl	78.3	39.1-108		% Recovery	1	01/06/00 15:02	KPF
2-Fluorobiphenyl	56.1	39.1-108		% Recovery	10	01/07/00 16:14	KPF
Nitrobenzene-d5	55.0	44.7-107		% Recovery	1	01/06/00 15:02	KPF
Nitrobenzene-d5	53.9	44.7-107		% Recovery	10	01/07/00 16:14	KPF
Phenol-d6	19.8	1-82.6		% Recovery	1	01/06/00 15:02	KPF
Phenol-d6	25.6	1-82.6		% Recovery	10	01/07/00 16:14	KPF
Terphenyl-d14	65.0	17.8-142		% Recovery	1	01/06/00 15:02	KPF
Terphenyl-d14	74.7	17.8-142		% Recovery	10	01/07/00 16:14	KPF

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-08C
Client Sample ID: 9912031-11E
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID: Site 810; MW-05
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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SW-846 8270C: Semi-Volatiles, Water

Acenaphthene	U	3.8	9.43	µg/L	1	01/05/00 21:02	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/05/00 21:02	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/05/00 21:02	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/05/00 21:02	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/05/00 21:02	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 21:02	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/05/00 21:02	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 21:02	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/05/00 21:02	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/05/00 21:02	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/05/00 21:02	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/05/00 21:02	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/05/00 21:02	KPF
Indene	U	4.7	9.43	µg/L	1	01/05/00 21:02	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/05/00 21:02	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/05/00 21:02	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/05/00 21:02	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/05/00 21:02	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/05/00 21:02	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/05/00 21:02	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	100	3.02-156	% Recovery	1	01/05/00 21:02	KPF
2-Fluorophenol	37.6	1-94.3	% Recovery	1	01/05/00 21:02	KPF
2-Fluorobiphenyl	73.5	39.1-108	% Recovery	1	01/05/00 21:02	KPF
Nitrobenzene-d5	66.9	44.7-107	% Recovery	1	01/05/00 21:02	KPF
Phenol-d6	29.0	1-82.6	% Recovery	1	01/05/00 21:02	KPF
Terphenyl-d14	95.8	17.8-142	% Recovery	1	01/05/00 21:02	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355 0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-09C
Client Sample ID: 9912031-12E
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-05 Dup**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/05/00 21:40	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/05/00 21:40	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/05/00 21:40	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/05/00 21:40	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/05/00 21:40	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 21:40	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/05/00 21:40	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 21:40	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/05/00 21:40	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/05/00 21:40	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/05/00 21:40	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/05/00 21:40	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/05/00 21:40	KPF
Indene	U	4.7	9.43	µg/L	1	01/05/00 21:40	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/05/00 21:40	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/05/00 21:40	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/05/00 21:40	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/05/00 21:40	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/05/00 21:40	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/05/00 21:40	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	86.4	3.02-156		% Recovery	1	01/05/00 21:40	KPF
2-Fluorophenol	37.1	1-94.3		% Recovery	1	01/05/00 21:40	KPF
2-Fluorobiphenyl	76.2	39.1-108		% Recovery	1	01/05/00 21:40	KPF
Nitrobenzene-d5	64.6	44.7-107		% Recovery	1	01/05/00 21:40	KPF
Phenol-d6	27.5	1-82.6		% Recovery	1	01/05/00 21:40	KPF
Terphenyl-d14	89.9	17.8-142		% Recovery	1	01/05/00 21:40	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-15C
Client Sample ID: 9912031-18E
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: **Site 810; MW-06**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/06/00 13:07	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/06/00 13:07	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/06/00 13:07	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/06/00 13:07	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/06/00 13:07	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 13:07	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/06/00 13:07	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 13:07	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/06/00 13:07	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/06/00 13:07	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/06/00 13:07	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/06/00 13:07	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/06/00 13:07	KPF
Indene	U	4.7	9.43	µg/L	1	01/06/00 13:07	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/06/00 13:07	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/06/00 13:07	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/06/00 13:07	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/06/00 13:07	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/06/00 13:07	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/06/00 13:07	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	90.3	3.02-156		% Recovery	1	01/06/00 13:07	KPF
2-Fluorophenol	34.6	1-94.3		% Recovery	1	01/06/00 13:07	KPF
2-Fluorobiphenyl	82.9	39.1-108		% Recovery	1	01/06/00 13:07	KPF
Nitrobenzene-d5	72.9	44.7-107		% Recovery	1	01/06/00 13:07	KPF
Phenol-d6	24.6	1-82.6		% Recovery	1	01/06/00 13:07	KPF
Terphenyl-d14	90.0	17.8-142		% Recovery	1	01/06/00 13:07	KPF

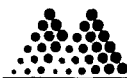
SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355 0.94 01/04/00 10:15 MAM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-16C
Client Sample ID: 9912031-21E
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis *ac*
Project ID:
Purchase Order: Site 810; MW-07

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/06/00 13:46	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/06/00 13:46	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/06/00 13:46	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/06/00 13:46	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/06/00 13:46	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 13:46	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/06/00 13:46	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 13:46	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/06/00 13:46	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/06/00 13:46	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/06/00 13:46	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/06/00 13:46	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/06/00 13:46	KPF
Indene	U	4.7	9.43	µg/L	1	01/06/00 13:46	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/06/00 13:46	KPF
2-Methylnaphthalene	10.6	5.7	9.43	µg/L	1	01/06/00 13:46	KPF
Naphthalene	8.20 J	4.7	9.43	µg/L	1	01/06/00 13:46	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/06/00 13:46	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/06/00 13:46	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/06/00 13:46	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	72.6	3.02-156		% Recovery	1	01/06/00 13:46	KPF
2-Fluorophenol	27.3	1-94.3		% Recovery	1	01/06/00 13:46	KPF
2-Fluorobiphenyl	75.8	39.1-108		% Recovery	1	01/06/00 13:46	KPF
Nitrobenzene-d5	64.4	44.7-107		% Recovery	1	01/06/00 13:46	KPF
Phenol-d6	19.6	1-82.6		% Recovery	1	01/06/00 13:46	KPF
Terphenyl-d14	75.1	17.8-142		% Recovery	1	01/06/00 13:46	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355 0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-17C
Client Sample ID: 9912031-22E
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-07 Dup

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/06/00 14:24	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/06/00 14:24	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/06/00 14:24	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/06/00 14:24	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/06/00 14:24	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 14:24	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/06/00 14:24	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 14:24	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/06/00 14:24	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/06/00 14:24	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/06/00 14:24	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/06/00 14:24	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/06/00 14:24	KPF
Indene	U	4.7	9.43	µg/L	1	01/06/00 14:24	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/06/00 14:24	KPF
2-Methylnaphthalene	9.55	5.7	9.43	µg/L	1	01/06/00 14:24	KPF
Naphthalene	6.50 J	4.7	9.43	µg/L	1	01/06/00 14:24	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/06/00 14:24	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/06/00 14:24	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/06/00 14:24	KPF

Surrogates		Recovery Range					
2,4,6-Tribromophenol	71.9	3.02-156	% Recovery	1	01/06/00 14:24	KPF	
2-Fluorophenol	31.9	1-94.3	% Recovery	1	01/06/00 14:24	KPF	
2-Fluorobiphenyl	85.3	39.1-108	% Recovery	1	01/06/00 14:24	KPF	
Nitrobenzene-d5	60.5	44.7-107	% Recovery	1	01/06/00 14:24	KPF	
Phenol-d6	24.0	1-82.6	% Recovery	1	01/06/00 14:24	KPF	
Terphenyl-d14	78.1	17.8-142	% Recovery	1	01/06/00 14:24	KPF	

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355 0.94 01/04/00 10:15 MAM

U - Not detected above the MDL B - Analyte detected in the associated Method Blank S - Results outside normal recovery limits
J - Analyte detected below the PQL E - Result is outside of quantitation range R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-04C
Client Sample ID: 9912031-07E
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-09

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/05/00 18:30	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/05/00 18:30	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/05/00 18:30	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/05/00 18:30	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/05/00 18:30	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 18:30	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/05/00 18:30	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 18:30	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/05/00 18:30	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/05/00 18:30	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/05/00 18:30	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/05/00 18:30	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/05/00 18:30	KPF
Indene	U	4.7	9.43	µg/L	1	01/05/00 18:30	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/05/00 18:30	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/05/00 18:30	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/05/00 18:30	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/05/00 18:30	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/05/00 18:30	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/05/00 18:30	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	98.4	3.02-156		% Recovery	1	01/05/00 18:30	KPF
2-Fluorophenol	30.1	1-94.3		% Recovery	1	01/05/00 18:30	KPF
2-Fluorobiphenyl	77.3	39.1-108		% Recovery	1	01/05/00 18:30	KPF
Nitrobenzene-d5	68.5	44.7-107		% Recovery	1	01/05/00 18:30	KPF
Phenol-d6	21.6	1-82.6		% Recovery	1	01/05/00 18:30	KPF
Terphenyl-d14	80.8	17.8-142		% Recovery	1	01/05/00 18:30	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-02C
Client Sample ID: 9912031-05E
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis DC
Project ID:
Purchase Order: Site 810; MW-10

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/05/00 17:14	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/05/00 17:14	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/05/00 17:14	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/05/00 17:14	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/05/00 17:14	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 17:14	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/05/00 17:14	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 17:14	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/05/00 17:14	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/05/00 17:14	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/05/00 17:14	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/05/00 17:14	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/05/00 17:14	KPF
Indene	U	4.7	9.43	µg/L	1	01/05/00 17:14	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/05/00 17:14	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/05/00 17:14	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/05/00 17:14	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/05/00 17:14	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/05/00 17:14	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/05/00 17:14	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	36.9	3.02-156		% Recovery	1	01/05/00 17:14	KPF
2-Fluorophenol	8.06	1-94.3		% Recovery	1	01/05/00 17:14	KPF
2-Fluorobiphenyl	69.2	39.1-108		% Recovery	1	01/05/00 17:14	KPF
Nitrobenzene-d5	66.3	44.7-107		% Recovery	1	01/05/00 17:14	KPF
Phenol-d6	5.28	1-82.6		% Recovery	1	01/05/00 17:14	KPF
Terphenyl-d14	97.4	17.8-142		% Recovery	1	01/05/00 17:14	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL
J - Analyte detected below the PQL

B - Analyte detected in the associated Method Blank
E - Result is outside of quantitation range

S - Results outside normal recovery limits
R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
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(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-03C
Client Sample ID: 9912031-06E
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-11

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/05/00 17:52	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/05/00 17:52	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/05/00 17:52	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/05/00 17:52	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/05/00 17:52	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 17:52	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/05/00 17:52	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 17:52	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/05/00 17:52	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/05/00 17:52	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/05/00 17:52	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/05/00 17:52	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/05/00 17:52	KPF
Indene	U	4.7	9.43	µg/L	1	01/05/00 17:52	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/05/00 17:52	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/05/00 17:52	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/05/00 17:52	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/05/00 17:52	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/05/00 17:52	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/05/00 17:52	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	6.66	3.02-156		% Recovery	1	01/05/00 17:52	KPF
2-Fluorophenol	1.48	1-94.3		% Recovery	1	01/05/00 17:52	KPF
2-Fluorobiphenyl	62.3	39.1-108		% Recovery	1	01/05/00 17:52	KPF
Nitrobenzene-d5	60.4	44.7-107		% Recovery	1	01/05/00 17:52	KPF
Phenol-d6	0.464	1-82.6		% Recovery	1	01/05/00 17:52	KPF
Terphenyl-d14	96.8	17.8-142		% Recovery	1	01/05/00 17:52	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-01C
Client Sample ID: 9912031-03E
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-13

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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SW-846 8270C: Semi-Volatiles, Water

Acenaphthene	U	3.8	9.43	µg/L	1	01/05/00 16:36	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/05/00 16:36	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/05/00 16:36	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/05/00 16:36	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/05/00 16:36	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 16:36	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/05/00 16:36	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 16:36	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/05/00 16:36	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/05/00 16:36	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/05/00 16:36	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/05/00 16:36	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/05/00 16:36	KPF
Indene	U	4.7	9.43	µg/L	1	01/05/00 16:36	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/05/00 16:36	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/05/00 16:36	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/05/00 16:36	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/05/00 16:36	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/05/00 16:36	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/05/00 16:36	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	33.6	3.02-156	% Recovery	1	01/05/00 16:36	KPF
2-Fluorophenol	2.09	1-94.3	% Recovery	1	01/05/00 16:36	KPF
2-Fluorobiphenyl	61.2	39.1-108	% Recovery	1	01/05/00 16:36	KPF
Nitrobenzene-d5	55.6	44.7-107	% Recovery	1	01/05/00 16:36	KPF
Phenol-d6	0.835	1-82.6	% Recovery	1	01/05/00 16:36	KPF
Terphenyl-d14	95.1	17.8-142	% Recovery	1	01/05/00 16:36	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355 0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

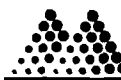
B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
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Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-20C
Client Sample ID: 9912031-26E
Date Collected: 12/30/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-14

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	9.00 J	3.8	9.43	µg/L	1	01/06/00 16:19	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/06/00 16:19	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/06/00 16:19	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/06/00 16:19	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/06/00 16:19	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 16:19	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/06/00 16:19	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 16:19	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/06/00 16:19	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/06/00 16:19	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/06/00 16:19	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/06/00 16:19	KPF
Fluorene	24.2	2.8	9.43	µg/L	1	01/06/00 16:19	KPF
Indene	U	4.7	9.43	µg/L	1	01/06/00 16:19	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/06/00 16:19	KPF
2-Methylnaphthalene	746	57	94.3	µg/L	10	01/07/00 16:52	KPF
Naphthalene	800	47	94.3	µg/L	10	01/07/00 16:52	KPF
Phenanthrene	36.2	1.9	9.43	µg/L	1	01/06/00 16:19	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/06/00 16:19	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/06/00 16:19	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	74.4	3.02-156		% Recovery	1	01/06/00 16:19	KPF
2,4,6-Tribromophenol	68.2	3.02-156		% Recovery	10	01/07/00 16:52	KPF
2-Fluorophenol	29.8	1-94.3		% Recovery	10	01/07/00 16:52	KPF
2-Fluorophenol	31.1	1-94.3		% Recovery	1	01/06/00 16:19	KPF
2-Fluorobiphenyl	87.9	39.1-108		% Recovery	1	01/06/00 16:19	KPF
2-Fluorobiphenyl	65.2	39.1-108		% Recovery	10	01/07/00 16:52	KPF
Nitrobenzene-d5	55.8	44.7-107		% Recovery	1	01/06/00 16:19	KPF
Nitrobenzene-d5	60.5	44.7-107		% Recovery	10	01/07/00 16:52	KPF
Phenol-d6	23.9	1-82.6		% Recovery	1	01/06/00 16:19	KPF
Phenol-d6	22.6	1-82.6		% Recovery	10	01/07/00 16:52	KPF
Terphenyl-d14	61.7	17.8-142		% Recovery	1	01/06/00 16:19	KPF
Terphenyl-d14	55.3	17.8-142		% Recovery	10	01/07/00 16:52	KPF

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



Mountain States Analytical, Inc.

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Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-05C
Client Sample ID: 9912031-08E
Date Collected: 12/28/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-15

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/05/00 19:08	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/05/00 19:08	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/05/00 19:08	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/05/00 19:08	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/05/00 19:08	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 19:08	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/05/00 19:08	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 19:08	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/05/00 19:08	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/05/00 19:08	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/05/00 19:08	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/05/00 19:08	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/05/00 19:08	KPF
Indene	U	4.7	9.43	µg/L	1	01/05/00 19:08	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/05/00 19:08	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/05/00 19:08	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/05/00 19:08	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/05/00 19:08	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/05/00 19:08	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/05/00 19:08	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	89.2	3.02-156		% Recovery	1	01/05/00 19:08	KPF
2-Fluorophenol	31.7	1-94.3		% Recovery	1	01/05/00 19:08	KPF
2-Fluorobiphenyl	71.3	39.1-108		% Recovery	1	01/05/00 19:08	KPF
Nitrobenzene-d5	68.5	44.7-107		% Recovery	1	01/05/00 19:08	KPF
Phenol-d6	21.1	1-82.6		% Recovery	1	01/05/00 19:08	KPF
Terphenyl-d14	77.1	17.8-142		% Recovery	1	01/05/00 19:08	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-13C
Client Sample ID: 9912031-16E
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-18

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/06/00 11:51	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/06/00 11:51	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/06/00 11:51	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/06/00 11:51	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/06/00 11:51	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 11:51	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/06/00 11:51	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 11:51	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/06/00 11:51	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/06/00 11:51	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/06/00 11:51	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/06/00 11:51	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/06/00 11:51	KPF
Indene	U	4.7	9.43	µg/L	1	01/06/00 11:51	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/06/00 11:51	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/06/00 11:51	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/06/00 11:51	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/06/00 11:51	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/06/00 11:51	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/06/00 11:51	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	81.0	3.02-156		% Recovery	1	01/06/00 11:51	KPF
2-Fluorophenol	28.8	1-94.3		% Recovery	1	01/06/00 11:51	KPF
2-Fluorobiphenyl	58.6	39.1-108		% Recovery	1	01/06/00 11:51	KPF
Nitrobenzene-d5	57.7	44.7-107		% Recovery	1	01/06/00 11:51	KPF
Phenol-d6	24.0	1-82.6		% Recovery	1	01/06/00 11:51	KPF
Terphenyl-d14	43.9	17.8-142		% Recovery	1	01/06/00 11:51	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

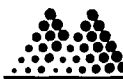
B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-12C
Client Sample ID: 9912031-15E
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID: *oc*
Purchase Order: Site 810; MW-19

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/05/00 23:34	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/05/00 23:34	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/05/00 23:34	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/05/00 23:34	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/05/00 23:34	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 23:34	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/05/00 23:34	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 23:34	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/05/00 23:34	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/05/00 23:34	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/05/00 23:34	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/05/00 23:34	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/05/00 23:34	KPF
Indene	U	4.7	9.43	µg/L	1	01/05/00 23:34	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/05/00 23:34	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/05/00 23:34	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/05/00 23:34	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/05/00 23:34	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/05/00 23:34	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/05/00 23:34	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	86.2	3.02-156		% Recovery	1	01/05/00 23:34	KPF
2-Fluorophenol	29.0	1-94.3		% Recovery	1	01/05/00 23:34	KPF
2-Fluorobiphenyl	67.1	39.1-108		% Recovery	1	01/05/00 23:34	KPF
Nitrobenzene-d5	55.2	44.7-107		% Recovery	1	01/05/00 23:34	KPF
Phenol-d6	27.8	1-82.6		% Recovery	1	01/05/00 23:34	KPF
Terphenyl-d14	93.2	17.8-142		% Recovery	1	01/05/00 23:34	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

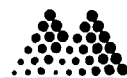
B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-14C
Client Sample ID: 9912031-17E
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-20

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/06/00 12:29	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/06/00 12:29	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/06/00 12:29	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/06/00 12:29	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/06/00 12:29	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 12:29	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/06/00 12:29	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/06/00 12:29	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/06/00 12:29	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/06/00 12:29	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/06/00 12:29	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/06/00 12:29	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/06/00 12:29	KPF
Indene	U	4.7	9.43	µg/L	1	01/06/00 12:29	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/06/00 12:29	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/06/00 12:29	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/06/00 12:29	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/06/00 12:29	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/06/00 12:29	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/06/00 12:29	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	84.7	3.02-156		% Recovery	1	01/06/00 12:29	KPF
2-Fluorophenol	37.1	1-94.3		% Recovery	1	01/06/00 12:29	KPF
2-Fluorobiphenyl	74.2	39.1-108		% Recovery	1	01/06/00 12:29	KPF
Nitrobenzene-d5	58.7	44.7-107		% Recovery	1	01/06/00 12:29	KPF
Phenol-d6	30.9	1-82.6		% Recovery	1	01/06/00 12:29	KPF
Terphenyl-d14	68.3	17.8-142		% Recovery	1	01/06/00 12:29	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

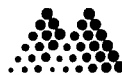
B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-11C
Client Sample ID: 9912031-14E
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-21

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/05/00 22:56	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/05/00 22:56	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/05/00 22:56	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/05/00 22:56	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/05/00 22:56	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 22:56	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/05/00 22:56	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 22:56	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/05/00 22:56	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/05/00 22:56	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/05/00 22:56	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/05/00 22:56	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/05/00 22:56	KPF
Indene	U	4.7	9.43	µg/L	1	01/05/00 22:56	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/05/00 22:56	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/05/00 22:56	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/05/00 22:56	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/05/00 22:56	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/05/00 22:56	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/05/00 22:56	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	78.7	3.02-156		% Recovery	1	01/05/00 22:56	KPF
2-Fluorophenol	31.7	1-94.3		% Recovery	1	01/05/00 22:56	KPF
2-Fluorobiphenyl	58.8	39.1-108		% Recovery	1	01/05/00 22:56	KPF
Nitrobenzene-d5	50.9	44.7-107		% Recovery	1	01/05/00 22:56	KPF
Phenol-d6	28.3	1-82.6		% Recovery	1	01/05/00 22:56	KPF
Terphenyl-d14	71.7	17.8-142		% Recovery	1	01/05/00 22:56	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355 0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Client: Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009
Lab Sample ID: 0001009-10C
Client Sample ID: 9912031-13E
Date Collected: 12/29/99
Date Received: 01/04/00 09:45
Matrix: Water
COC ID:

Project: PAH & Metals Analysis
Project ID:
Purchase Order: Site 810; MW-22

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	01/05/00 22:18	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	01/05/00 22:18	KPF
Anthracene	U	1.9	9.43	µg/L	1	01/05/00 22:18	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	01/05/00 22:18	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	01/05/00 22:18	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 22:18	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	01/05/00 22:18	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	01/05/00 22:18	KPF
Chrysene	U	1.9	9.43	µg/L	1	01/05/00 22:18	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	01/05/00 22:18	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	01/05/00 22:18	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	01/05/00 22:18	KPF
Fluorene	U	2.8	9.43	µg/L	1	01/05/00 22:18	KPF
Indene	U	4.7	9.43	µg/L	1	01/05/00 22:18	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	01/05/00 22:18	KPF
2-Methylnaphthalene	U	5.7	9.43	µg/L	1	01/05/00 22:18	KPF
Naphthalene	U	4.7	9.43	µg/L	1	01/05/00 22:18	KPF
Phenanthrene	U	1.9	9.43	µg/L	1	01/05/00 22:18	KPF
Pyrene	U	1.9	9.43	µg/L	1	01/05/00 22:18	KPF
Quinoline	U	3.8	9.43	µg/L	1	01/05/00 22:18	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	47.3	3.02-156		% Recovery	1	01/05/00 22:18	KPF
2-Fluorophenol	6.86	1-94.3		% Recovery	1	01/05/00 22:18	KPF
2-Fluorobiphenyl	61.8	39.1-108		% Recovery	1	01/05/00 22:18	KPF
Nitrobenzene-d5	53.6	44.7-107		% Recovery	1	01/05/00 22:18	KPF
Phenol-d6	14.3	1-82.6		% Recovery	1	01/05/00 22:18	KPF
Terphenyl-d14	93.4	17.8-142		% Recovery	1	01/05/00 22:18	KPF

SW-846 3510C/EPA 625: Separatory Funnel Liq/Liq Ext., SV, Water

Prep Batch ID: 1355

0.94 01/04/00 10:15 MAM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

EPA 300.0: Anions by I. C. (B, Cl, Fl, SO₄), Water

QC Type: Laboratory Reagent Blank
Sample ID: LRB 1
Run ID: IC 1_000106A

Analysis Date: 01/06/00 10:58
Prep Batch ID: R2756

Units: mg/L
Seq No: 47949

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U					0.1			
Chloride	0.1501 BJ					0.45			
Fluoride	U					0.05			
Sulfate	0.06281					0.35			

QC Type: Laboratory Fortified Blank
Sample ID: LFB
Run ID: IC 1_000106A

Analysis Date: 01/06/00 11:13
Prep Batch ID: R2756

Units: mg/L
Seq No: 47950

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	402.4	U	400	101	90	110			
Fluoride	95.6	U	100	95.6	90	110			
Sulfate	382.8	U	400	95.7	90	110			

QC Type: Laboratory Fortified Blank Duplicate
Sample ID: LFBD
Run ID: IC 1_000106A

Analysis Date: 01/06/00 11:28
Prep Batch ID: R2756

Units: mg/L
Seq No: 47951

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	400	U	400	100	90	110	402.4	0.59	20
Fluoride	96.9	U	100	96.9	90	110	95.6	1.35	20
Sulfate	378.5	U	400	94.6	90	110	382.8	1.14	20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Matrix Spike
Sample ID: 0001009-01AMS
Run ID: IC 1_000106A

Analysis Date: 01/06/00 12:28
Prep Batch ID: R2756

Units: mg/L
Seq No: 47955

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	77.61	2.801	80	93.5	80	120			
Fluoride	18.56	1.822	20	83.7	80	120			

QC Type: Matrix Spike Duplicate
Sample ID: 0001009-01AMSD
Run ID: IC 1_000106A

Analysis Date: 01/06/00 12:43
Prep Batch ID: R2756

Units: mg/L
Seq No: 47956

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	79.54	2.801	80	95.9	80	120	77.61	2.46	20
Fluoride	20.74	1.822	20	94.6	80	120	18.56	11.10	20

QC Type: Laboratory Reagent Blank
Sample ID: LRB 2
Run ID: IC 1_000106A

Analysis Date: 01/06/00 12:59
Prep Batch ID: R2756

Units: mg/L
Seq No: 47957

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U					0.1			
Chloride	0.1615BJ					0.45			
Fluoride	U					0.05			
Sulfate	0.08119J					0.35			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

80

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Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Laboratory Reagent Blank
Sample ID: LRB 3
Run ID: IC 1_000106A

Analysis Date: 01/06/00 15:18
Prep Batch ID: R2756

Units: mg/L
Seq No: 47966

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U					0.1			
Chloride	0.155 BJ					0.45			
Fluoride	U					0.05			
Sulfate	0.07928 J					0.35			

QC Type: Laboratory Reagent Blank
Sample ID: LRB 4
Run ID: IC 1_000106A

Analysis Date: 01/06/00 18:05
Prep Batch ID: R2756

Units: mg/L
Seq No: 47978

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U					0.1			
Chloride	0.1492 BJ					0.45			
Fluoride	U					0.05			
Sulfate	U					0.35			

QC Type: Laboratory Reagent Blank
Sample ID: LRB 5
Run ID: IC 1_000106A

Analysis Date: 01/06/00 20:36
Prep Batch ID: R2756

Units: mg/L
Seq No: 47989

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U					0.1			
Chloride	0.1658 BJ					0.45			
Fluoride	U					0.05			
Sulfate	0.06939					0.35			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Laboratory Reagent Blank
Sample ID: LRB 1
Run ID: IC 1_000111A

Analysis Date: 01/11/94 11:21
Prep Batch ID: R2758

Units: mg/L
Seq No: 48049

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U					0.1			
Fluoride	U					0.05			

QC Type: Laboratory Fortified Blank
Sample ID: LFB
Run ID: IC 1_000111A

Analysis Date: 01/11/94 11:36
Prep Batch ID: R2758

Units: mg/L
Seq No: 48050

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	397.1	U	400	99.3	90	110			
Chloride	181.7B	U	200	90.9	90	110			
Fluoride	98.35	U	100	98.4	90	110			

QC Type: Laboratory Fortified Blank Duplicate
Sample ID: LFBD
Run ID: IC 1_000111A

Analysis Date: 01/11/94 11:51
Prep Batch ID: R2758

Units: mg/L
Seq No: 48051

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	396.2	U	400	99.1	90	110	397.1	0.23	20
Chloride	180B	U	200	90.0	90	110	181.7	0.92	20
Fluoride	98.63	U	100	98.6	90	110	98.35	0.28	20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Matrix Spike
Sample ID: 0001009-09AMS
Run ID: IC 1_000111A

Analysis Date: 01/11/94 12:36
Prep Batch ID: R2758

Units: mg/L
Seq No: 48054

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	78.29	1.207	80	96.4	80	120			
Fluoride	20.59	1.105	20	97.4	80	120			

QC Type: Matrix Spike Duplicate
Sample ID: 0001009-09AMSD
Run ID: IC 1_000111A

Analysis Date: 01/11/94 12:51
Prep Batch ID: R2758

Units: mg/L
Seq No: 48055

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	79.22	1.207	80	97.5	80	120	78.29	1.17	20
Fluoride	20.95	1.105	20	99.2	80	120	20.59	1.72	20

QC Type: Laboratory Reagent Blank
Sample ID: LRB 2
Run ID: IC 1_000111A

Analysis Date: 01/11/94 13:06
Prep Batch ID: R2758

Units: mg/L
Seq No: 48056

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U					0.1			
Fluoride	U					0.05			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Laboratory Reagent Blank
Sample ID: LRB 3
Run ID: IC 1_000111A

Analysis Date: 01/11/00 14:43
Prep Batch ID: R2758

Units: mg/L
Seq No: 48066

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U					0.1			
Chloride	0.1626 BJ					0.45			
Fluoride	U					0.05			

QC Type: Matrix Spike
Sample ID: 0001009-19AMS
Run ID: IC 1_000111A

Analysis Date: 01/11/00 16:28
Prep Batch ID: R2758

Units: mg/L
Seq No: 48073

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	78.35	U	80	97.9	80	120			
Fluoride	21.18	1.036	20	101	80	120			

QC Type: Matrix Spike Duplicate
Sample ID: 0001009-19AMSD
Run ID: IC 1_000111A

Analysis Date: 01/11/00 16:44
Prep Batch ID: R2758

Units: mg/L
Seq No: 48074

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	77.84	U	80	97.3	80	120	78.35	0.66	20
Fluoride	21.04	1.036	20	100	80	120	21.18	0.69	20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Laboratory Reagent Blank
Sample ID: LRB 4
Run ID: IC 1_000111A

Analysis Date: 01/11/00 17:44
Prep Batch ID: R2758

Units: mg/L
Seq No: 48078

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U					0.1			
Chloride	0.1589BJ					0.45			
Fluoride	U					0.05			

QC Type: Laboratory Reagent Blank
Sample ID: LRB 1
Run ID: IC 1_000106B

Analysis Date: 01/06/00 10:58
Prep Batch ID: R2774

Units: mg/L
Seq No: 48350

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	ND					0.1			
Fluoride	ND					0.05			

QC Type: Laboratory Fortified Blank
Sample ID: LFB
Run ID: IC 1_000106B

Analysis Date: 01/06/00 11:13
Prep Batch ID: R2774

Units: mg/L
Seq No: 48351

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	402.4	U	400	101	90	110			
Fluoride	95.6	U	100	95.6	90	110			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

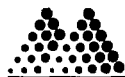
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Laboratory Fortified Blank Duplicate
Sample ID: LFBD
Run ID: IC 1_000106B

Analysis Date: 01/06/00 11:28
Prep Batch ID: R2774

Units: mg/L
Seq No: 48352

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	400	U	400	100	90	110	402.4	0.59	20
Fluoride	96.9	U	100	96.9	90	110	95.6	1.35	20

QC Type: Matrix Spike
Sample ID: 0001009-01AMS
Run ID: IC 1_000106B

Analysis Date: 01/06/00 12:28
Prep Batch ID: R2774

Units: mg/L
Seq No: 48356

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	77.61	2.801	80	93.5	80	120			
Fluoride	18.56	1.822	20	83.7	80	120			

QC Type: Matrix Spike Duplicate
Sample ID: 0001009-01AMSD
Run ID: IC 1_000106B

Analysis Date: 01/06/00 12:43
Prep Batch ID: R2774

Units: mg/L
Seq No: 48357

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	79.54	2.801	80	95.9	80	120	77.61	2.46	20
Fluoride	20.74	1.822	20	94.6	80	120	18.56	11.10	20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Laboratory Reagent Blank
Sample ID: LRB 5
Run ID: IC 1_000106B

Analysis Date: 01/06/00 20:36
Prep Batch ID: R2774

Units: mg/L
Seq No: 48388

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	ND					0.1			
Fluoride	ND					0.05			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Mountain States Analytical, Inc.

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

SW-846 6010B: Metals by ICP, Water

QC Type: Method Blank
Sample ID: PBW-1367
Run ID: TJA61E_000105B

Analysis Date: 01/05/00 16:14
Prep Batch ID: 1367

Units: mg/L
Seq No: 46288

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	-0.00774				-0.02	0.02			
Barium	0				-0.002	0.002			
Cadmium	-0.00121				-0.003	0.003			
Chromium	0.00043				-0.01	0.01			
Lead	-0.00895				-0.03	0.03			
Selenium	0.03364				-0.1	0.1			
Silver	-0.00184				-0.01	0.01			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-1367
Run ID: TJA61E_000105B

Analysis Date: 01/05/00 16:16
Prep Batch ID: 1367

Units: mg/L
Seq No: 46289

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	0.9725		1	97.3	75	125			
Barium	0.2083		0.2	104	75	125			
Cadmium	0.1027		0.1	103	75	125			
Chromium	0.4128		0.4	103	75	125			
Lead	1.039		1	104	75	125			
Selenium	0.9814		1	98.1	75	125			
Silver	0.1001		0.1	100	75	125			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Sample Duplicate
Sample ID: 0001009-01B D
Run ID: TJA61E_000105B

Analysis Date: 01/05/00 16:21
Prep Batch ID: 1367

Units: mg/L
Seq No: 46291

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	20
Barium	0.04499						0.04279	5.01	20
Cadmium	U						U	NC	20
Chromium	U						U	NC	20
Lead	U						U	NC	20
Selenium	U						U	NC	20
Silver	U						U	NC	20

QC Type: Matrix Spike
Sample ID: 0001009-01B MS
Run ID: TJA61E_000105B

Analysis Date: 01/05/00 16:24
Prep Batch ID: 1367

Units: mg/L
Seq No: 46292

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	0.9821	U	1	98.2	75	125			
Barium	0.2504	0.04279	0.2	104	75	125			
Cadmium	0.09674	U	0.1	96.7	75	125			
Chromium	0.4027	U	0.4	101	75	125			
Lead	0.9772	U	1	97.7	75	125			
Selenium	1.024	U	1	102	75	125			
Silver	0.09971	U	0.1	99.7	75	125			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

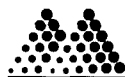
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Mountain States Analytical, Inc.

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Matrix Spike Duplicate
Sample ID: 0001009-01B MSD
Run ID: TJA61E_000105B

Analysis Date: 01/05/00 16:27
Prep Batch ID: 1367

Units: mg/L
Seq No: 46293

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	0.9995	U	1	99.9	75	125	0.9821	1.75	20
Barium	0.253	0.04279	0.2	105	75	125	0.2504	1.04	20
Cadmium	0.09904	U	0.1	99.0	75	125	0.09674	2.35	20
Chromium	0.4091	U	0.4	102	75	125	0.4027	1.58	20
Lead	1.018	U	1	102	75	125	0.9772	4.08	20
Selenium	1.032	U	1	103	75	125	1.024	0.70	20
Silver	0.1001	U	0.1	100	75	125	0.09971	0.38	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0001009-01B A
Run ID: TJA61E_000105B

Analysis Date: 01/05/00 16:30
Prep Batch ID: 1367

Units: mg/L
Seq No: 46294

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.032	U	1	103	75	125			
Barium	0.2506	0.04279	0.2	104	75	125			
Cadmium	0.1009	U	0.1	101	75	125			
Chromium	0.4163	U	0.4	104	75	125			
Lead	1.02	U	1	102	75	125			
Selenium	1.044	U	1	104	75	125			
Silver	0.1062	U	0.1	106	75	125			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Serial Dilution
Sample ID: 0001009-01B L
Run ID: TJA61E_000105B

Analysis Date: 01/05/00 16:32
Prep Batch ID: 1367

Units: mg/L
Seq No: 46295

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	10
Barium	0.04109J						0.04279	4.05	10
Cadmium	U						U	NC	10
Chromium	U						U	NC	10
Lead	U						U	NC	10
Selenium	U						U	NC	10
Silver	U						U	NC	10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

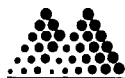
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

SW-846 7470A: Mercury by CVAA, Water

QC Type: Method Blank
Sample ID: PBW-1376
Run ID: FIMS_000106A

Analysis Date: 01/06/00 11:35
Prep Batch ID: 1376

Units: µg/L
Seq No: 46387

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	-0.05199				-0.1	0.1			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-1376
Run ID: FIMS_000106A

Analysis Date: 01/06/00 11:36
Prep Batch ID: 1376

Units: µg/L
Seq No: 46388

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.176		5	104	80	115			

QC Type: Sample Duplicate
Sample ID: 0001009-06B D
Run ID: FIMS_000106A

Analysis Date: 01/06/00 11:41
Prep Batch ID: 1376

Units: µg/L
Seq No: 46391

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	U						U	NC	20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

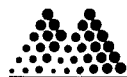
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Matrix Spike
Sample ID: 0001009-06B MS
Run ID: FIMS_000106A

Analysis Date: 01/06/00 11:43
Prep Batch ID: 1376

Units: µg/L
Seq No: 46392

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.591	U	5	91.8	80	120			

QC Type: Matrix Spike Duplicate
Sample ID: 0001009-06B MSD
Run ID: FIMS_000106A

Analysis Date: 01/06/00 11:44
Prep Batch ID: 1376

Units: µg/L
Seq No: 46393

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.629	U	5	92.6	80	120	4.591	0.82	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0001009-06B A
Run ID: FIMS_000106A

Analysis Date: 01/06/00 11:46
Prep Batch ID: R2664

Units: µg/L
Seq No: 46394

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.756	U	5	95.1	85	115			

QC Type: Serial Dilution
Sample ID: 0001009-06B L
Run ID: FIMS_000106A

Analysis Date: 01/06/00 11:47
Prep Batch ID: R2664

Units: µg/L
Seq No: 46395

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	U	U	0.5	0			U	NC	10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Method Blank
Sample ID: PBW-1407
Run ID: FIMS_000110A

Analysis Date: 01/10/00 10:26
Prep Batch ID: 1407

Units: µg/L
Seq No: 47146

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	-0.01211				-0.1	0.1			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-1407
Run ID: FIMS_000110A

Analysis Date: 01/10/00 10:27
Prep Batch ID: 1407

Units: µg/L
Seq No: 47147

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.492		5	89.8	80	115			

QC Type: Sample Duplicate
Sample ID: 0001028-01C D
Run ID: FIMS_000110A

Analysis Date: 01/10/00 10:31
Prep Batch ID: 1407

Units: µg/L
Seq No: 47149

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	U						U	NC	20

QC Type: Matrix Spike
Sample ID: 0001028-01C MS
Run ID: FIMS_000110A

Analysis Date: 01/10/00 10:32
Prep Batch ID: 1407

Units: µg/L
Seq No: 47150

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.676	U	5	93.5	80	120			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Mountain States Analytical, Inc.

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Matrix Spike Duplicate
Sample ID: 0001028-01C MSD
Run ID: FIMS_000110A

Analysis Date: 01/10/00 10:35
Prep Batch ID: 1407

Units: µg/L
Seq No: 47151

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.74	U	5	94.8	80	120	4.676	1.36	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0001028-01C A
Run ID: FIMS_000110A

Analysis Date: 01/10/00 10:37
Prep Batch ID: R2706

Units: µg/L
Seq No: 47152

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.047	U	5	101	85	115			

QC Type: Serial Dilution
Sample ID: 0001028-01C L
Run ID: FIMS_000110A

Analysis Date: 01/10/00 10:39
Prep Batch ID: R2706

Units: µg/L
Seq No: 47153

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	U	U	0.5	0			U	NC	10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

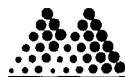
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Mountain States Analytical, Inc.

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

SW-846 8270C: Semi-Volatiles, Water

QC Type: Method Blank
Sample ID: MB-1355
Run ID: HP-5_000105A

Analysis Date: 01/05/00 14:06
Prep Batch ID: 1355

Units: µg/L
Seq No: 46322

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	U					4			
Acenaphthylene	U					4			
Acetophenone	U					4			
2-Acetylaminofluorene	U					4			
Acrylic Acid	U					80			
4-Aminobiphenyl	U					3			
Aniline	U					3			
Anthracene	U					2			
Aramite	U					3			
Benz(a)anthracene	U					2			
Benzal Chloride	U					3			
Benzenethiol	U					20			
Benzidine	U					20			
Benzo(a)pyrene	U					2			
Benzo(b)fluoranthene	U					3			
Benzo(ghi)perylene	U					2			
Benzo(k)fluoranthene	U					3			
Benzoic acid	U					3			
Benzyl alcohol	U					3			
2,2'-Bioxirane	U					3			
beta-BHC	U					2			
bis(2-Chloroethoxy)methane	U					2			
bis(2-Chloroethyl)ether	U					3			
bis(2-Chloroisopropyl)ether	U					3			
bis(2-Ethylhexyl)phthalate	U					3			
4-Bromophenyl-phenyl ether	U					4			
Butylbenzyl phthalate	U					4			
Carbazole	U					2			
4-Chloro-3-methylphenol	U					6			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

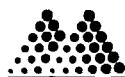
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Mountain States Analytical, Inc.

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

p-Chloroaniline	U	6
Chlorobenzilate	U	30
1-Chloronaphthalene	U	3
2-Chloronaphthalene	U	6
2-Chlorophenol	U	5
4-Chlorophenyl-phenyl ether	U	5
3-Chloropropionitrile	U	1
Chrysene	U	2
4,4'-DDE	U	2
4,4'-DDD	U	2
Diallate (cis)	U	2
Diallate (trans)	U	10
Di-N-butyl phthalate	U	3
Di-N-octyl phthalate	U	3
Dibenz(a,h)acridine	U	2
Dibenz(a,h)anthracene	U	2
Dibenz(a,e)pyrene	U	2
Dibenzofuran	U	4
Diethyl phthalate	U	5
1,2-Dichlorobenzene	U	8
1,3-Dichlorobenzene	U	10
1,4-Dichlorobenzene	U	9
3,3'-Dichlorobenzidine	U	4
2,4-Dichlorophenol	U	5
2,6-Dichlorophenol	U	5
Dimethoate	U	200
Dimethyl phthalate	U	8
p-(Dimethylamino)azobenzene	U	3
7,12-Dimethylbenz(a)anthracene	U	3
3,3'-Dimethylbenzidine	U	9
a,a-Dimethylphenethylamine	U	40
2,4-Dimethylphenol	U	7
4,6-Dinitro-2-methylphenol	U	20
1,3-Dinitrobenzene	U	5
1,4-Dinitrobenzene	U	3
2,4-Dinitrophenol	U	20
Dinoseb	U	5
2,4-Dinitrotoluene	U	2

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Mountain States Analytical, Inc.

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

2,6-Dinitrotoluene	U	3
1,2-Diphenylhydrazine	U	5
Diphenylamine	U	2
Disulfoton	U	4
2-Ethoxyethanol (Cellosolve)	U	1
Ethyl Carbamate	U	1
Ethyl methanesulfonate	U	3
Ethylene Thiourea	U	2
Famphur	U	5
Fluoranthene	U	2
Fluorene	U	3
Hexachlorobenzene	U	4
Hexachlorobutadiene	U	10
Hexachlorocyclopentadiene	U	8
Hexachloroethane	U	10
Hexachlorophene	U	200
Hexachloropropene	U	9
Indene	U	5
Indeno(1,2,3-cd)pyrene	U	2
Isodrin	U	3
Isophorone	U	2
Isosafrole	U	5
Kepone	U	40
Methapyrilene	U	10
Methyl methanesulfonate	U	3
3-Methylcholanthrene	U	4
4,4'-Methylene-bis(2-chloroaniline)	U	3
1-Methylnaphthalene	U	5
2-Methylnaphthalene	U	6
2-Methylphenol (o-Cresol)	U	6
3 and 4- Methylphenol (m+p cresol)	U	5
N-Nitrosodi-N-butylamine	U	4
N-Nitrosodi-N-propylamine	U	2
N-Nitrosodiethylamine	U	6
N-Nitrosodimethylamine	U	2
N-Nitrosodiphenylamine	U	2
N-Nitrosomethylethylamine	U	3
N-Nitrosomorpholine	U	3

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S -Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



Mountain States Analytical, Inc.

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

N-Nitrosopiperidine	U	4
N-Nitrosopyrrolidine	U	3
Naphthalene	U	5
1,4-Naphthoquinone	U	20
1-Naphthylamine	U	3
2-Naphthylamine	U	3
5-Nitro-o-toluidine	U	3
2-Nitroaniline	U	3
3-Nitroaniline	U	2
4-Nitroaniline	U	2
Nitrobenzene	U	3
2-Nitrophenol	U	6
4-Nitrophenol	U	3
2-Nitropropane	U	9
4-Nitroquinoline-1-oxide	U	30
Parathion, Ethyl	U	4
Parathion, Methyl	U	20
Pentachlorobenzene	U	5
Pentachloroethane	U	30
Pentachloronitrobenzene	U	3
Pentachlorophenol	U	6
Phenacetin	U	3
Phenanthrene	U	2
Phenol	U	3
1,4-Phenylenediamine	U	20
Phorate	U	5
Phthalic Acid	U	10
Phthalic anhydride	U	10
2-Picoline	U	3
Pronamide	U	2
Pyrene	U	2
Pyridine	U	3
Quinoline	U	4
Resorcinol	U	9
Safrole	U	5
1,2,4,5-Tetrachlorobenzene	U	6
2,3,4,5 or 2,3,4,6-Tetrachlorophenol	U	7
Tetraethyldithiopyrophosphate	U	6

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

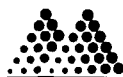
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL



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1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: PAH & Metals Analysis

Project ID:

Report Number: 0001009-1

Date Reported: 01/18/00

Work Order: 0001009

Thionazin	U	4
o-Toluidine	U	4
1,2,4-Trichlorobenzene	U	8
2,4,5-Trichlorophenol	U	7
2,4,6-Trichlorophenol	U	7
o,o,o-Triethylphosphorothioate	U	4
1,3,5-Trinitrobenzene	U	5
Tris(2,3-dibromopropyl)phosphate	U	30
Diallate	U	12

Surrogates

2,4,6-Tribromophenol	184.2	203	90.8	3.02	156
2-Fluorophenol	80.94	205	39.5	1	94.3
2-Fluorobiphenyl	73.16	102	71.7	39.1	108
Nitrobenzene-d5	71.33	100	71.3	44.7	107
Phenol-d6	51.23	200	25.6	1	82.6
Terphenyl-d14	107.3	102	105	17.8	142

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Laboratory Control Spike
Sample ID: LCS-1355
Run ID: HP-5_000105A

Analysis Date: 01/05/00 14:45
Prep Batch ID: 1355

Units: µg/L
Seq No: 46323

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	88.4		100	88.4	43	115			
4-Chloro-3-methylphenol	89.03		100	89.0	53	113			
2-Chlorophenol	75.46		100	75.5	47	107			
1,4-Dichlorobenzene	64.65		100	64.6	19	91			
2,4-Dinitrotoluene	97.98		100	98.0	60	120			
N-Nitrosodi-N-propylamine	76.22		100	76.2	55	115			
4-Nitrophenol	43.31		100	43.3	2	80			
Pentachlorophenol	101.8		100	102	39	123			
Phenol	34.28		100	34.3	3	81			
Pyrene	93.65		100	93.6	60	120			
1,2,4-Trichlorobenzene	67.99		100	68.0	20	98			
Surrogates									
2,4,6-Tribromophenol	215.2		203	106	3.02	156			
2-Fluorophenol	89.77		205	43.8	1	94.3			
2-Fluorobiphenyl	86.47		102	84.8	39.1	108			
Nitrobenzene-d5	79.78		100	79.8	44.7	107			
Phenol-d6	58.55		200	29.3	1	82.6			
Terphenyl-d14	107.7		102	106	17.8	142			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Laboratory Control Spike Duplicate
Sample ID: LCSD-1355
Run ID: HP-5_000105A

Analysis Date: 01/05/00 15:23
Prep Batch ID: 1355

Units: µg/L
Seq No: 46324

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	88.32		100	88.3	43	115	88.4	0.09	31
4-Chloro-3-methylphenol	91.42		100	91.4	53	113	89.03	2.65	42
2-Chlorophenol	75.85		100	75.9	47	107	75.46	0.52	40
1,4-Dichlorobenzene	62.12		100	62.1	19	91	64.65	3.99	28
2,4-Dinitrotoluene	97.7		100	97.7	60	120	97.98	0.28	38
N-Nitrosodi-N-propylamine	77.03		100	77.0	55	115	76.22	1.06	38
4-Nitrophenol	41.19		100	41.2	2	80	43.31	5.03	50
Pentachlorophenol	101.4		100	101	39	123	101.8	0.37	50
Phenol	32.96		100	33.0	3	81	34.28	3.93	42
Pyrene	93.43		100	93.4	60	120	93.65	0.23	31
1,2,4-Trichlorobenzene	65.77		100	65.8	20	98	67.99	3.31	28
Surrogates									
2,4,6-Tribromophenol	212.9		203	105	3.02	156			
2-Fluorophenol	85.87		205	41.9	1	94.3			
2-Fluorobiphenyl	83.86		102	82.2	39.1	108			
Nitrobenzene-d5	78.03		100	78.0	44.7	107			
Phenol-d6	53.86		200	26.9	1	82.6			
Terphenyl-d14	103.4		102	101	17.8	142			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Mountain States Analytical, Inc.

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

QC Type: Method Blank
Sample ID: MB-1381
Run ID: HP-5_000107B

Analysis Date: 01/07/00 17:29
Prep Batch ID: 1381

Units: µg/L
Seq No: 47020

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	U					4			
Acenaphthylene	U					4			
Acetophenone	U					4			
2-Acetylaminofluorene	U					4			
Acrylic Acid	U					80			
4-Aminobiphenyl	U					3			
Aniline	U					3			
Anthracene	U					2			
Aramite	U					3			
Benz(a)anthracene	U					2			
Benzal Chloride	U					3			
Benzenethiol	U					20			
Benzidine	U					20			
Benzo(a)pyrene	U					2			
Benzo(b)fluoranthene	U					3			
Benzo(ghi)perylene	U					2			
Benzo(k)fluoranthene	U					3			
Benzoic acid	U					3			
Benzyl alcohol	U					3			
2,2'-Bioxirane	U					3			
beta-BHC	U					2			
bis(2-Chloroethoxy)methane	U					2			
bis(2-Chloroethyl)ether	U					3			
bis(2-Chloroisopropyl)ether	U					3			
bis(2-Ethylhexyl)phthalate	U					3			
4-Bromophenyl-phenyl ether	U					4			
Butylbenzyl phthalate	U					4			
Carbazole	U					2			
4-Chloro-3-methylphenol	U					6			
p-Chloroaniline	U					6			
Chlorobenzilate	U					30			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

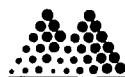
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

1-Chloronaphthalene	U	3
2-Chloronaphthalene	U	6
2-Chlorophenol	U	5
4-Chlorophenyl-phenyl ether	U	5
3-Chloropropionitrile	U	1
Chrysene	U	2
4,4'-DDE	U	2
4,4'-DDD	U	2
Diallate (cis)	U	2
Diallate (trans)	U	10
Di-N-butyl phthalate	U	3
Di-N-octyl phthalate	U	3
Dibenz(a,h)acridine	U	2
Dibenz(a,h)anthracene	U	2
Dibenz(a,e)pyrene	U	2
Dibenzofuran	U	4
Diethyl phthalate	U	5
1,2-Dichlorobenzene	U	8
1,3-Dichlorobenzene	U	10
1,4-Dichlorobenzene	U	9
3,3'-Dichlorobenzidine	U	4
2,4-Dichlorophenol	U	5
2,6-Dichlorophenol	U	5
Dimethoate	U	200
Dimethyl phthalate	U	8
p-(Dimethylamino)azobenzene	U	3
7,12-Dimethylbenz(a)anthracene	U	3
3,3'-Dimethylbenzidine	U	9
a,a-Dimethylphenethylamine	U	40
2,4-Dimethylphenol	U	7
4,6-Dinitro-2-methylphenol	U	20
1,3-Dinitrobenzene	U	5
1,4-Dinitrobenzene	U	3
2,4-Dinitrophenol	U	20
Dinoseb	U	5
2,4-Dinitrotoluene	U	2
2,6-Dinitrotoluene	U	3
1,2-Diphenylhydrazine	U	5

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Diphenylamine	U	2
Disulfoton	U	4
2-Ethoxyethanol (Cellosolve)	U	1
Ethyl Carbamate	U	1
Ethyl methanesulfonate	U	3
Ethylene Thiourea	U	2
Famphur	U	5
Fluoranthene	U	2
Fluorene	U	3
Hexachlorobenzene	U	4
Hexachlorobutadiene	U	10
Hexachlorocyclopentadiene	U	8
Hexachloroethane	U	10
Hexachlorophene	U	200
Hexachloropropene	U	9
Indene	U	5
Indeno(1,2,3-cd)pyrene	U	2
Isodrin	U	3
Isophorone	U	2
Isosafrole	U	5
Kepone	U	40
Methapyrilene	U	10
Methyl methanesulfonate	U	3
3-Methylcholanthrene	U	4
4,4'-Methylene-bis(2-chloroaniline)	U	3
1-Methylnaphthalene	U	5
2-Methylnaphthalene	U	6
2-Methylphenol (o-Cresol)	U	6
3 and 4- Methylphenol (m+p cresol)	U	5
N-Nitrosodi-N-butylamine	U	4
N-Nitrosodi-N-propylamine	U	2
N-Nitrosodiethylamine	U	6
N-Nitrosodimethylamine	U	2
N-Nitrosodiphenylamine	U	2
N-Nitrosomethylethylamine	U	3
N-Nitrosomorpholine	U	3
N-Nitrosopiperidine	U	4
N-Nitrosopyrrolidine	U	3

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

105



Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: PAH & Metals Analysis
Project ID:

Report Number: 0001009-1
Date Reported: 01/18/00
Work Order: 0001009

Naphthalene	U	5
1,4-Naphthoquinone	U	20
1-Naphthylamine	U	3
2-Naphthylamine	U	3
5-Nitro-o-toluidine	U	3
2-Nitroaniline	U	3
3-Nitroaniline	U	2
4-Nitroaniline	U	2
Nitrobenzene	U	3
2-Nitrophenol	U	6
4-Nitrophenol	U	3
2-Nitropropane	U	9
4-Nitroquinoline-1-oxide	U	30
Parathion, Ethyl	U	4
Parathion, Methyl	U	20
Pentachlorobenzene	U	5
Pentachloroethane	U	30
Pentachloronitrobenzene	U	3
Pentachlorophenol	U	6
Phenacetin	U	3
Phenanthrene	U	2
Phenol	U	3
1,4-Phenylenediamine	U	20
Phorate	U	5
Phthalic Acid	U	10
Phthalic anhydride	U	10
2-Picoline	U	3
Pronamide	U	2
Pyrene	U	2
Pyridine	U	3
Quinoline	U	4
Resorcinol	U	9
Safrole	U	5
1,2,4,5-Tetrachlorobenzene	U	6
2,3,4,5 or 2,3,4,6-Tetrachlorophenol	U	7
Tetraethyldithiopyrophosphate	U	6
Thionazin	U	4
o-Toluidine	U	4

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

106

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Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: PAH & Metals Analysis

Project ID:

Report Number: 0001009-1

Date Reported: 01/18/00

Work Order: 0001009

1,2,4-Trichlorobenzene	U	8
2,4,5-Trichlorophenol	U	7
2,4,6-Trichlorophenol	U	7
o,o,o-Triethylphosphorothioate	U	4
1,3,5-Trinitrobenzene	U	5
Tris(2,3-dibromopropyl)phosphate	U	30
Diallate	U	12

Surrogates

2,4,6-Tribromophenol	167.5	203	82.5	3.02	156
2-Fluorophenol	90.54	205	44.2	1	94.3
2-Fluorobiphenyl	85.18	102	83.5	39.1	108
Nitrobenzene-d5	77.03	100	77.0	44.7	107
Phenol-d6	58.97	200	29.5	1	82.6
Terphenyl-d14	110	102	108	17.8	142

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

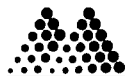
E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

107

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Mountain States Analytical, Inc.

1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: PAH & Metals Analysis

Project ID:

Report Number: 0001009-1

Date Reported: 01/18/00

Work Order: 0001009

QC Type: Laboratory Control Spike

Sample ID: LCS-1381

Run ID: HP-5_000107B

Analysis Date: 01/07/00 18:07

Prep Batch ID: 1381

Units: µg/L

Seq No: 47021

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	80.1		100	80.1	43	115			
4-Chloro-3-methylphenol	87.87		100	87.9	53	113			
2-Chlorophenol	76.2		100	76.2	47	107			
1,4-Dichlorobenzene	61.37		100	61.4	19	91			
2,4-Dinitrotoluene	86.53		100	86.5	60	120			
N-Nitrosodi-N-propylamine	76.79		100	76.8	55	115			
4-Nitrophenol	36.25		100	36.2	2	80			
Pentachlorophenol	65.74		100	65.7	39	123			
Phenol	35.65		100	35.6	3	81			
Pyrene	78.83		100	78.8	60	120			
1,2,4-Trichlorobenzene	63.46		100	63.5	20	98			
Surrogates									
2,4,6-Tribromophenol	200.2		203	98.6	3.02	156			
2-Fluorophenol	92.81		205	45.3	1	94.3			
2-Fluorobiphenyl	87.57		102	85.9	39.1	108			
Nitrobenzene-d5	77.32		100	77.3	44.7	107			
Phenol-d6	61.25		200	30.6	1	82.6			
Terphenyl-d14	94.31		102	92.5	17.8	142			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

108

On Site Technologies, LTD.

612 E. Murray Drive
Farmington, NM 87401
(505) 325-2432

CHAIN-OF-CUSTODY RECORD

Subcontractor:

Mountain States Analytical, Inc.
1645 West 2200 South

TEL: (800) 973-6724
FAX: (801) 972-6278

Salt Lake City, UT 84119

Acct #:

03-Jan-00

Sample ID	Matrix	Collection Date	Bottle Type	E300	Requested Tests		
					SW6010B	SW7470	SW8270C
9912031-03C	Aqueous	2/28/1999 11:30:00 AM	500HDPE	2			
9912031-03D	Aqueous	2/28/1999 11:30:00 AM	500HDPEHNO3			1	
9912031-03E	Aqueous	2/28/1999 11:30:00 AM	1LAMGU				1
9912031-05C	Aqueous	2/28/1999 1:30:00 PM	500HDPE	2			
9912031-05D	Aqueous	2/28/1999 1:30:00 PM	500HDPEHNO3		7	1	
9912031-05E	Aqueous	2/28/1999 1:30:00 PM	1LAMGU				1
9912031-06C	Aqueous	2/28/1999 2:06:00 PM	500HDPE	2			
9912031-06D	Aqueous	2/28/1999 2:06:00 PM	500HDPEHNO3		7	1	
9912031-06E	Aqueous	2/28/1999 2:06:00 PM	1LCHNO3				1
9912031-07C	Aqueous	2/28/1999 2:39:00 PM	500HDPE	2			
9912031-07D	Aqueous	2/28/1999 2:39:00 PM	500HDPEHNO3		7	1	
9912031-07E	Aqueous	2/28/1999 2:39:00 PM	1LAMGU				1
9912031-08C	Aqueous	2/28/1999 4:25:00 PM	500HDPE	2			
9912031-08D	Aqueous	2/28/1999 4:25:00 PM	500HDPEHNO3		7	1	
9912031-08E	Aqueous	2/28/1999 4:25:00 PM	1LAMGU				1
9912031-09C	Aqueous	2/28/1999 4:35:00 PM	500HDPE	2			
9912031-09D	Aqueous	2/28/1999 4:35:00 PM	500HDPEHNO3		7	1	
9912031-09E	Aqueous	2/28/1999 4:35:00 PM	1LAMGU				1

Comments:

Please analyze submitted samples for (A) TOTAL Metals: Cr, Pb, As, Se, Ag, Ba, Cd and Hg by SW6010B. (b) Fluoride and Bromide. (C) PAH by SW8270. Refer to prior MSAI Group 25418.

Date/Time

Date/Time

Relinquished by: *David D. Martin* 1/3/2000 1500
Relinquished by:

Received by: *Sam Dileen MSAI* 01/04/00 0945
Received by:

CHAIN-OF-CUSTODY RECORD

612 E. Murray Drive
Farmington, NM 87401
(505) 325-2432

Subcontractor:

Mountain States Analytical, Inc.
1645 West 2200 South

TEL: (800) 973-6724
FAX: (801) 972-6278

Salt Lake City, UT 84119

Acct #:

03-Jan-00

Sample ID	Matrix	Collection Date	Bottle Type	E300	SW6010B	SW7470	Requested Tests
9912031-10C	Aqueous	12/28/1999 4:55:00 PM	500HDPE	2			
9912031-10D	Aqueous	12/28/1999 4:55:00 PM	500HDPEHNO3		7	1	
9912031-10E	Aqueous	12/28/1999 4:55:00 PM	1LAMGU				1
9912031-11C	Aqueous	12/29/1999 9:40:00 AM	500HDPE	2			
9912031-11D	Aqueous	12/29/1999 9:40:00 AM	500HDPEHNO3		7	1	
9912031-11E	Aqueous	12/29/1999 9:40:00 AM	1LAMGU				1
9912031-12C	Aqueous	12/29/1999 9:40:00 AM	500HDPE	2			
9912031-12D	Aqueous	12/29/1999 9:40:00 AM	500HDPEHNO3		7	1	
9912031-12E	Aqueous	12/29/1999 9:40:00 AM	1LAMGU				1
9912031-13C	Aqueous	2/29/1999 10:40:00 AM	500HDPE	2			
9912031-13D	Aqueous	2/29/1999 10:40:00 AM	500HDPEHNO3		7	1	
9912031-13E	Aqueous	2/29/1999 10:40:00 AM	1LAMGU				1
9912031-14C	Aqueous	2/29/1999 11:20:00 AM	500HDPE	2			
9912031-14D	Aqueous	2/29/1999 11:20:00 AM	500HDPEHNO3		7	1	
9912031-14E	Aqueous	2/29/1999 11:20:00 AM	1LAMGU				1
9912031-15C	Aqueous	2/29/1999 1:40:00 PM	500HDPE	2			
9912031-15D	Aqueous	2/29/1999 1:40:00 PM	500HDPEHNO3		7	1	
9912031-15E	Aqueous	2/29/1999 1:40:00 PM	1LAMGU				1

Comments:

Please analyze submitted samples for (A) TOTAL Metals: Cr, Pb, As, Se, Ag, Ba, Cd and Hg by SW6010B. (b) Fluoride and Bromide. (C) PAH by SW8270. Refer to prior MSAI Group 25418.

Relinquished by:

David D. Walter

1/3/200 1500

Date/Time

Received by:

Sam Allen MSA1

Date/Time

01/01/00 0945

Relinquished by:

Received by:

On Site Technologies, LTD.

612 E. Murray Drive
Farmington, NM 87401
(505) 325-2432

CHAIN-OF-CUSTODY RECORD

Subcontractor:

Mountain States Analytical, Inc.
1645 West 2200 South

TEL: (800) 973-6724
FAX: (801) 972-6278

Salt Lake City, UT 84119

Acct #:

03-Jan-00

Sample ID	Matrix	Collection Date	Bottle Type	E300	Requested Tests		
					SW6010B	SW7470	SW8270C
9912031-16C	Aqueous	12/29/1999 2:50:00 PM	500HDPE	2			
9912031-16D	Aqueous	12/29/1999 2:50:00 PM	500HDPEHNO3		7	1	
9912031-16E	Aqueous	12/29/1999 2:50:00 PM	1LAMGU				1
9912031-17C	Aqueous	12/29/1999 3:50:00 PM	500HDPE	2			
9912031-17D	Aqueous	12/29/1999 3:50:00 PM	500HDPEHNO3		7	1	
9912031-17E	Aqueous	12/29/1999 3:50:00 PM	1LAMGU				1
9912031-18C	Aqueous	12/29/1999 4:45:00 PM	500HDPE	2			
9912031-18D	Aqueous	12/29/1999 4:45:00 PM	500HDPEHNO3		7	1	
9912031-18E	Aqueous	12/29/1999 4:45:00 PM	1LAMGU				1
9912031-21C	Aqueous	12/30/1999 9:10:00 AM	500HDPE	2			
9912031-21D	Aqueous	12/30/1999 9:10:00 AM	500HDPEHNO3		7	1	
9912031-21E	Aqueous	12/30/1999 9:10:00 AM	1LAMGU				1
9912031-22C	Aqueous	12/30/1999 9:10:00 AM	500HDPE	2			
9912031-22D	Aqueous	12/30/1999 9:10:00 AM	500HDPEHNO3		7	1	
9912031-22E	Aqueous	12/30/1999 9:10:00 AM	1LAMGU				1
9912031-24C	Aqueous	12/30/1999 9:50:00 AM	500HDPE	2			
9912031-24D	Aqueous	12/30/1999 9:50:00 AM	500HDPEHNO3		7	1	
9912031-24E	Aqueous	12/30/1999 9:50:00 AM	1LAMGU				1

Comments:

Please analyze submitted samples for (A) TOTAL Metals: Cr, Pb, As, Se, Ag, Ba, Cd and Hg by SW6010B. (b) Fluoride and Bromide. (C) PAH by SW8270. Refer to prior MSAI Group 25418.

Relinquished by: *Daniel D. Martin* 1/2/2000 1500
Relinquished by:

Received by: *Tammy Olsen* MSAI 01/04/2000 0945
Received by:

Date/Time

Date/Time

On Site Technologies, LTD.

612 E. Murray Drive
Farmington, NM 87401
(505) 325-2432

CHAIN-OF-CUSTODY RECORD

Page 4 of 4

Subcontractor:

Mountain States Analytical, Inc.
1645 West 2200 South

TEL: (800) 973-6724
FAX: (801) 972-6278

Salt Lake City, UT 84119

Acct #:

03-Jan-00

Requested Tests

SW7470 SW8270C

Sample ID	Matrix	Collection Date	Bottle Type	E300	SW6010B	SW7470	SW8270C
9912031-25C	Aqueous	2/30/1999 10:40:00 AM	500HDPE	2			
9912031-25D	Aqueous	2/30/1999 10:40:00 AM	500HDPEHNO3		7	1	
9912031-25E	Aqueous	2/30/1999 10:40:00 AM	1LAMGU				1
9912031-26C	Aqueous	2/30/1999 11:25:00 AM	500HDPE	2			
9912031-26D	Aqueous	2/30/1999 11:25:00 AM	500HDPEHNO3		7	1	
9912031-26E	Aqueous	2/30/1999 11:25:00 AM	1LAMGU				1

Comments:

Please analyze submitted samples for (A) TOTAL Metals: Cr, Pb, As, Se, Ag, Ba, Cd and Hg by SW6010B. (b) Fluoride and Bromide. (C) PAH by SW8270. Refer to prior MSAI Group 25418.

Relinquished by:

David D. Martin

Date/Time

1/3/2000 1500

Received by: *Rory Olsen* MSAI

Date/Time

01/04/00 0945

Relinquished by:

Received by:

CHAIN OF CUSTODY RECORD

Date: 12/28/97

Page: 1 of 3

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Purchase Order No.:		Project No.:	
Name: <u>Sam</u>		Dept.:	
Company:			
Address:			
City, State, Zip:			
PROJECT LOCATION: <u>Thraffway Refinery Site 810</u>			
<u>626 Rd 5500 A</u>			
<u>Bloomfield NM 87413</u>			
SAMPLER'S SIGNATURE: <u>[Signature]</u>			
SAMPLE IDENTIFICATION			
DATE	TIME	MATRIX	PRES.
12/20	0900	1120	Hcl
12/20	1045	1120	Hcl
12/20	1130	1120	Hcl
12/20	1200		
12/20	1330		
12/20	1406		
12/20	1439		
12/20	1625		
12/20	1635		
12/20	1655		
12/20	0940		
12/20	0940		
Relinquished by: <u>[Signature]</u> Date/Time <u>12/30/55</u>			
Relinquished by: <u>[Signature]</u> Date/Time <u>12/30/55</u>			
Relinquished by: <u>[Signature]</u> Date/Time <u>12/30/55</u>			
Method of Shipment:			
Authorized by: <u>[Signature]</u> Date <u>12/30/55</u>			
(Client Signature Must Accompany Request)			

Distribution:	White - On Site	Yellow - LAB	Pink - Sampler	Goldenrod - Client
---------------	-----------------	--------------	----------------	--------------------

To Re-order Call 325-9600 or Fax 325-9764 **alphaGraphics**® FORM # 01



CHAIN OF CUSTODY RECORD

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 12/29/30

Page: 2 of 3

Purchase Order No.:		Project No.		Name		Title	
SEND INVOICE TO		Name		Company		Mailing Address	
		Company		Address		City, State, Zip	
		City, State, Zip		Telephone No.		Telefax No.	
PROJECT LOCATION: Thriftway Refinery 626 Rt 5500 Bloomfield NM 87413							
SAMPLER'S SIGNATURE: Ken Sinks <i>[Signature]</i>							
SAMPLE IDENTIFICATION				ANALYSIS REQUESTED			
	DATE	TIME	MATRIX	PRES.	LAB ID		
MW-22	12/29	1040	H2O	✓	117031-13A DE		
MW-21	12/29	1120	✓	✓	140A DE		
MW-19	12/29	1340	✓	✓	150A DE		
MW-18	12/29	1450	✓	✓	160A DE		
MW-20	12/29	1550	✓	✓	170A DE		
MW-06	12/29	1645	✓	✓	180A DE		
Treated Blank	12/30	1830	✓	✓	19A		
Field Blank	12/30	0900	✓	✓	200		
MW-07	12/30	0910	✓	✓	210A DE		
MW-07 Duo	12/30	0910	✓	✓	220A DE		
River	12/30	0930	✓	✓	230		
MW-02	12/30	0950	✓	✓	240A DE		
Relinquished by: <i>[Signature]</i>				Date/Time 12/30/30		Date/Time 12/30/30	
Relinquished by: <i>[Signature]</i>				Date/Time 12/30/30		Date/Time 12/30/30	
Relinquished by: <i>[Signature]</i>				Date/Time 12/30/30		Date/Time 12/30/30	
Method of Shipment:				Rush		24-48 Hours	
				10 Working Days		By Date	
Authorized by: _____				Special Instructions / Remarks:			
(Client Signature Must Accompany Request)				Date _____			

Purchase Order No.:		Project No.		Name: Terry G. Aff...		Title:	
SEND INVOICE TO		Name: Same		Company: BioTech Remediation, Inc.		Mailing Address: 712 E. 20th Street, Suite 400	
		Address:		City, State, Zip: Farmington, NM 87401		Telephone No. 505-327-4965	
		City, State, Zip:		Telefax No.:			
PROJECT LOCATION: Thriftway Ref., 620 Rd 5500 Bloomfield, NM 87413				ANALYSIS REQUESTED			
SAMPLER'S SIGNATURE: Ken Sinks							
SAMPLE IDENTIFICATION				LAB ID			
DATE		TIME		MATRIX		PRES.	
12/30		1040		H2O		25001	
12/30		1125		✓		26001	
ADDITIONAL SAMPLES IN CLOSERS BEST NOT ON CHAIN OF CUSTODY							
THREAT BLANK		1100		✓		27001	
FIELD BLANK		1100		✓		28001	
WASTE BLANK		0959		✓		29001	
Relinquished by: Ken Sinks				Date/Time: 12/30/99		Received by: Alfred Thomas	
Relinquished by: Alfred Thomas				Date/Time: 12/30/99		Received by: X	
Relinquished by:				Date/Time:		Received by:	
Method of Shipment:				Rush		24-48 Hours	
				10 Working Days		By Date	
Authorized by:				Special Instructions / Remarks:			
(Client Signature Must Accompany Request)				Date:			

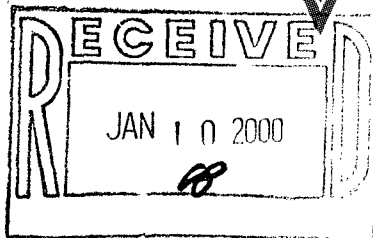
OFF: (505) 325-5667



LAB: (505) 325-1556

December 30, 1999

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604



RE: Thriftway Air Stripper

Order No.: 9912026

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 12/17/1999 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in cursive script, appearing to read "David Cox".

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 30-Dec-99

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Air Stripper
Lab Order: 9912026

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 30-Dec-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9912026	Client Sample ID:	Influent
Lab ID:	9912026-01A	Matrix:	AQUEOUS
Project:	Thriftway Air Stripper	Collection Date:	12/17/1999 8:36:00 AM
		COC Record:	5386

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	220	10		µg/L	10	12/21/1999
Benzene	1500	5		µg/L	10	12/21/1999
Toluene	1700	5		µg/L	10	12/21/1999
Ethylbenzene	820	5		µg/L	10	12/21/1999
m,p-Xylene	3100	10		µg/L	10	12/21/1999
o-Xylene	460	5		µg/L	10	12/21/1999

Qualifiers:

- PQL - Practical Quantitation Limit
- ND - Not Detected at Practical Quantitation Limit
- J - Analyte detected below Practical Quantitation Limit
- 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
- Sur: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 30-Dec-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9912026	Client Sample ID:	Effluent
Lab ID:	9912026-02A	Matrix:	AQUEOUS
Project:	Thriftway Air Stripper	Collection Date:	12/17/1999 8:40:00 AM
		COC Record:	5386

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	11	1		µg/L	1	12/21/1999
Benzene	5.5	0.5		µg/L	1	12/21/1999
Toluene	7.2	0.5		µg/L	1	12/21/1999
Ethylbenzene	3.5	0.5		µg/L	1	12/21/1999
m,p-Xylene	14	1		µg/L	1	12/21/1999
o-Xylene	3	0.5		µg/L	1	12/21/1999

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 30-Dec-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9912026	Client Sample ID:	Travel Blank
Lab ID:	9912026-03A	Matrix:	AQUEOUS
Project:	Thriftway Air Stripper	Collection Date:	12/17/1999 8:49:00 AM
		COC Record:	5386

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	2.5	1		µg/L	1	12/21/1999
Benzene	8	0.5		µg/L	1	12/21/1999
Toluene	11	0.5		µg/L	1	12/21/1999
Ethylbenzene	4.6	0.5		µg/L	1	12/21/1999
m,p-Xylene	17	1		µg/L	1	12/21/1999
o-Xylene	2.6	0.5		µg/L	1	12/21/1999

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 30-Dec-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9912026
Project: Thriftway Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_991221	Test Code: SW8021B	Units: µg/L	Analysis Date 12/21/1999	Prep Date:
Client ID:	9912026	Run ID: GC-1_991221A		SeqNo: 22213	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.1926	0.5			J
Ethylbenzene	.215	0.5			J
m,p-Xylene	.3975	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.1448	0.5			J
Toluene	.2676	0.5			J

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

On Site Technologies, LTD.

CLIENT: BioTech Remediation, Inc.
Work Order: 9912026
Project: Thriftway Air Stripper

Date: 30-Dec-99

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9912026-01AMS		Batch ID: GC-1_991221	Test Code: SW8021B	Units: µg/L	Analysis Date 12/21/1999		Prep Date:				
Client ID:	Influent	9912026	Run ID: GC-1_991221A		SeqNo: 22214						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1940	5	400	1500	110.1%	80	116				
Ethylbenzene	1229	5	400	820.6	102.2%	80	118				
m,p-Xylene	4004	10	800	3093	113.8%	77	116				E
Methyl tert-Butyl Ether	618.2	10	400	217.8	100.1%	62	122				
o-Xylene	862.7	5	400	458.6	101.0%	83	117				
Toluene	2128	5	400	1687	110.4%	80	116				E

Sample ID: 9912026-01AMSD		Batch ID: GC-1_991221	Test Code: SW8021B		Units: µg/L		Analysis Date 12/21/1999				Prep Date:	
Client ID: Influent		9912026	Run ID: GC-1_991221A				SeqNo: 22215					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	1999	5	400	1500	124.7%	80	116	1940	3.0%	7	S	
Ethylbenzene	1261	5	400	820.6	110.1%	80	118	1229	2.5%	7		
m,p-Xylene	4113	10	800	3093	127.5%	77	116	4004	2.7%	7	ES	
Methyl tert-Butyl Ether	644.8	10	400	217.8	106.8%	62	122	618.2	4.2%	7		
o-Xylene	887.8	5	400	458.6	107.3%	83	117	862.7	2.9%	6		
Toluene	2181	5	400	1687	123.5%	80	116	2128	2.4%	6	ES	

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

On Site Technologies, LTD.

Date: 30-Dec-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9912026
Project: Thriftway Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_991221	Test Code: SW8021B	Units: µg/L	Analysis Date 12/21/1999	Prep Date:						
Client ID:	9912026	Run ID:	GC-1_991221A	SeqNo:	22212						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.16	0.5	40	0.1926	104.9%	87	119				
Ethylbenzene	42.31	0.5	40	0.215	105.2%	89	117				
m,p-Xylene	81.01	1	80	0.3975	100.8%	88	114				
Methyl tert-Butyl Ether	42.24	1	40	0	105.6%	69	129				
o-Xylene	42.3	0.5	40	0.1448	105.4%	90	116				
Toluene	42.24	0.5	40	0.2676	104.9%	90	115				

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

On Site Technologies, LTD.

Date: 30-Dec-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9912026

Project: Thriftway Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_9910	Batch ID: GC-1_991221	Test Code: SW8021B	Units: µg/L	Analysis Date 12/21/1999	Prep Date:						
Client ID: 9912026	Run ID: GC-1_991221A			SeqNo: 22209							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.19	0.5	20	0	101.0%	85	115				
Ethylbenzene	21.09	0.5	20	0	105.5%	85	115				
m,p-Xylene	39.89	1	40	0	99.7%	85	115				
Methyl tert-Butyl Ether	20.47	1	20	0	102.3%	85	115				
o-Xylene	21.06	0.5	20	0	105.3%	85	115				
Toluene	20.47	0.5	20	0	102.4%	85	115				
1,4-Difluorobenzene	90.48	0	100	0	90.5%	80	120				
4-Bromochlorobenzene	89.17	0	100	0	89.2%	80	120				
Fluorobenzene	89.51	0	100	0	89.5%	80	120				

Sample ID: CCV2 BTEX_9910		Batch ID: GC-1_991221	Test Code: SW8021B		Units: µg/L		Analysis Date 12/21/1999				Prep Date:		
Client ID:		9912026	Run ID:	GC-1_991221A	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result	PQL										
Benzene		20.09	0.5		20	0	100.5%	85	115				
Ethylbenzene		20.96	0.5		20	0	104.8%	85	115				
m,p-Xylene		39.78	1		40	0	99.4%	85	115				
Methyl tert-Butyl Ether		21.34	1		20	0	106.7%	85	115				
o-Xylene		21.09	0.5		20	0	105.5%	85	115				
Toluene		20.44	0.5		20	0	102.2%	85	115				
1,4-Difluorobenzene		89.86	0		100	0	89.9%	80	120				
4-Bromochlorobenzene		89.56	0		100	0	89.6%	80	120				
Fluorobenzene		89.56	0		100	0	89.6%	80	120				

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

CLIENT: BioTech Remediation, Inc.
 Work Order: 9912026
 Project: Thriftway Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_9910		Batch ID: GC-1_991221		Test Code: SW8021B		Units: µg/L		Analysis Date 12/21/1999		Prep Date:	
Client ID:		9912026		Run ID: GC-1_991221A				SeqNo: 22211			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.02	0.5	20	0	105.1%	85	115				
Ethylbenzene	21.24	0.5	20	0	106.2%	85	115				
m,p-Xylene	40.76	1	40	0	101.9%	85	115				
Methyl tert-Butyl Ether	21.72	1	20	0	108.6%	85	115				
o-Xylene	21.42	0.5	20	0	107.1%	85	115				
Toluene	21.19	0.5	20	0	105.9%	85	115				
1,4-Difluorobenzene	89.99	0	100	0	90.0%	80	120				
4-Bromochlorobenzene	88.33	0	100	0	88.3%	80	120				
Fluorobenzene	89.32	0	100	0	89.3%	80	120				

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

On Site Technologies, LTD.

Date: 30-Dec-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9912026

Project: Thriftway Air Stripper

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
9912021-05A	90.2	89.7	90
9912026-01A	90.3	90.8	87.7
9912026-01AMS	90	91.5	87.8
9912026-01AMSD	92	90.8	89.5
9912026-02A	89.5	89.2	89.3
9912026-03A	90.4	89.6	90
9912027-03A	90.6	89.7	90.1
9912027-04A	91.1	88.4	91
9912027-05A	90.6	88.4	90.5
9912027-06A	90.3	89.4	90.1
9912027-07A	90.4	87.4	89.6
9912027-08A	90.1	89.8	90.1
9912027-09A	90.9	90	89.9
9912028-01A	91	89.2	90.4
9912029-01A	90.8	89.4	89.9
9912029-02A	90.8	89.9	89.9
CCV1 BTEX_99100	90.5	89.2	89.5
CCV2 BTEX_99100	89.9	89.6	89.6
CCV3 BTEX_99100	90	88.3	89.3
LCS WATER	90.1	88.7	89.3
MBI	90.9	89	90.1

Acronym

Surrogate

QC Limits

14FBZ	= 1,4-Difluorobenzene	80-120
4BCBZ	= 4-Bromochlorobenzene	80-120
FLBZ	= Fluorobenzene	80-120

* Surrogate recovery outside acceptance limits

CHAIN OF CUSTODY RECORD

5386

ON SITE

TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 12-17-99

Page 1 of 1

Purchase Order No.: B99-923		Job No. THIRTIETHWAY REMEDIATION	
Name: TERRY GRIFFIN		Title:	
Company: BIOTECH REMEDIATION INC.		Company:	
Address: 710 E. 20TH STREET 400		Mailing Address:	
City, State, Zip: FARMINGTON NM		City, State, Zip:	
Sampling Location: AIR STEPPER		Telephone No.:	
Telefax No.:		ANALYSIS REQUESTED	
RESULTS TO REPORT		Number of Containers	
SAMPLER: M. BEAUPREAU		LAB ID	
INFLUENT		12/17/99 0836 H2O HCL 2	
EFFLUENT		" " " " 2	
TRAVEL SLAKE		" " " " 1	
RELINQUISHED BY: M. Beaupreau		Date/Time: 12/17/99 12:28	
RELINQUISHED BY:		Date/Time:	
RELINQUISHED BY:		Date/Time:	
Method of Shipment:		Special Instructions: Cooler temp. 1°C	
Authorized by: _____		Date: _____	
(Client Signature Must Accompany Request)		Date: _____	
Rush		24-48 Hours	
10 Working Days		Special Instructions: 5150	

OFF: (505) 325-5667



LAB: (505) 325-1556

November 03, 1999

NOV 8 1999


Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

RE: Thriftway Refinery Air Stripper

Order No.: 9911003

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 11/1/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 03-Nov-99

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 9911003

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 03-Nov-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9911003	Client Sample ID:	Influent
Lab ID:	9911003-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	11/1/99 9:10:00 AM
		COC Record:	10336

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	270	20		µg/L	20	11/1/99
Benzene	1800	10		µg/L	20	11/1/99
Toluene	1000	10		µg/L	20	11/1/99
Ethylbenzene	790	10		µg/L	20	11/1/99
m,p-Xylene	2900	20		µg/L	20	11/1/99
o-Xylene	400	10		µg/L	20	11/1/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 03-Nov-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9911003	Client Sample ID:	Effluent
Lab ID:	9911003-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	11/1/99 9:13:00 AM
		COC Record:	10336

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	2.9	1		µg/L	1	11/1/99
Benzene	2.6	0.5		µg/L	1	11/1/99
Toluene	1.9	0.5		µg/L	1	11/1/99
Ethylbenzene	2.1	0.5		µg/L	1	11/1/99
m,p-Xylene	9.1	1		µg/L	1	11/1/99
o-Xylene	1.2	0.5		µg/L	1	11/1/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 03-Nov-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9911003	Client Sample ID:	Travel Blank
Lab ID:	9911003-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	11/1/99 9:15:00 AM
		COC Record:	10336

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	ND	1		µg/L	1	11/1/99
Benzene	2.7	0.5		µg/L	1	11/1/99
Toluene	2.3	0.5		µg/L	1	11/1/99
Ethylbenzene	1.1	0.5		µg/L	1	11/1/99
m,p-Xylene	4.4	1		µg/L	1	11/1/99
o-Xylene	0.7	0.5		µg/L	1	11/1/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

On Site Technologies, LTD.

Date: 03-Nov-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9911003

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_991101	Test Code: SW8021B	Units: µg/L	Analysis Date: 11/1/99	Prep Date:
Client ID: 9911003	Run ID: GC-1_991101A	PQL	SPK value	SeqNo: 20995	
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
Benzene	.1444	0.5		%REC	RPDLimit
Ethylbenzene	.1799	0.5		%RPD	Qual
m,p-Xylene	.562	1			
Methyl tert-Butyl Ether	.4178	1			
o-Xylene	.2039	0.5			
Toluene	.1852	0.5			

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

On Site Technologies, LTD.

Date: 03-Nov-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9911003
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9910045-02CMS		Batch ID: GC-1_991101		Test Code: SW8021B		Units: µg/L		Analysis Date: 11/1/99		Prep Date:		
Client ID:		9911003		Run ID: GC-1_991101A				SeqNo: 20996				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		21320	120	10000	12230	91.0%	80	116				
Ethylbenzene		11100	120	10000	1172	99.3%	80	118				
m,p-Xylene		19530	250	20000	441.3	95.4%	77	116				
Methyl tert-Butyl Ether		53610	250	10000	45420	81.8%	62	122				E
o-Xylene		10300	120	10000	263.5	100.4%	83	117				
Toluene		10920	120	10000	1043	98.8%	80	116				

Sample ID: 9910045-02CMSD		Batch ID: GC-1_991101		Test Code: SW8021B		Units: µg/L		Analysis Date: 11/1/99		Prep Date:	
Client ID:		9911003		Run ID: GC-1_991101A				SeqNo: 20997			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21730	120	10000	12230	95.1%	80	116	21320	1.9%	7	
Ethylbenzene	11150	120	10000	1172	99.8%	80	118	11100	0.4%	7	
m,p-Xylene	19610	250	20000	441.3	95.8%	77	116	19530	0.4%	7	
Methyl tert-Butyl Ether	54620	250	10000	45420	92.0%	62	122	53610	1.9%	7	E
o-Xylene	10390	120	10000	263.5	101.2%	83	117	10300	0.8%	6	
Toluene	10940	120	10000	1043	99.0%	80	116	10920	0.2%	6	

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

On Site Technologies, LTD.

Date: 03-Nov-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9911003

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_991101	Test Code: SW8021B	Units: µg/L	Analysis Date: 11/1/99	Prep Date:
Client ID: 9911003	Run ID: GC-1_991101A	PQL	SPK value	SeqNo: 20994	
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
Benzene	39.09	0.5	40	87	119
Ethylbenzene	41.02	0.5	40	89	117
m,p-Xylene	78.73	1	80	88	114
Methyl tert-Butyl Ether	37.12	1	40	69	129
o-Xylene	41.16	0.5	40	90	116
Toluene	40.27	0.5	40	90	115
				%REC	
				97.4%	
				102.1%	
				97.7%	
				91.8%	
				102.4%	
				100.2%	
				RPD Ref Val	RPDLimit
					Qual

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

On Site Technologies, LTD.

Date: 03-Nov-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9911003

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_9910		Batch ID: GC-1_9911001	Test Code: SW8021B	Units: µg/L		Analysis Date: 11/1/99			Prep Date:			
Client ID: 9911003		Run ID: GC-1_991101A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	20.21		0.5	20	0	101.1%	85	115				
Ethylbenzene	21.38		0.5	20	0	106.9%	85	115				
m,p-Xylene	40.92		1	40	0	102.3%	85	115				
Methyl tert-Butyl Ether	19.36		1	20	0	96.8%	85	115				
o-Xylene	21.32		0.5	20	0	106.6%	85	115				
Toluene	20.8		0.5	20	0	104.0%	85	115				
1,4-Difluorobenzene	88.96		0	100	0	89.0%	80	120				
4-Bromochlorobenzene	91.41		0	100	0	91.4%	80	120				
Fluorobenzene	87.53		0	100	0	87.5%	80	120				

Sample ID: CCV2 BTEX_9910		Batch ID: GC-1_9911001	Test Code: SW8021B	Units: µg/L		Analysis Date: 11/1/99			Prep Date:			
Client ID:	9911003	Run ID:	GC-1_991101A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 20992		%RPD	RPDLimit	Qual
								LowLimit	HighLimit			
Analyte	Result											
Benzene	19.57			0.5	20	0	97.8%	85	115			
Ethylbenzene	20.63			0.5	20	0	103.2%	85	115			
m,p-Xylene	39.46			1	40	0	98.7%	85	115			
Methyl tert-Butyl Ether	19.67			1	20	0	98.3%	85	115			
o-Xylene	20.72			0.5	20	0	103.6%	85	115			
Toluene	20.18			0.5	20	0	100.9%	85	115			
1,4-Difluorobenzene	89.24			0	100	0	89.2%	80	120			
4-Bromochlorobenzene	90.3			0	100	0	90.3%	80	120			
Fluorobenzene	87.29			0	100	0	87.3%	80	120			

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9911003

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_9910		Batch ID: GC-1_991101	Test Code: SW8021B	Units: µg/L	Analysis Date: 11/1/99		Prep Date:				
Client ID:		9911003	Run ID:	GC-1_991101A	SeqNo:	20993					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.39	0.5	20	0	97.0%	85	115				
Ethylbenzene	20.56	0.5	20	0	102.8%	85	115				
m,p-Xylene	39.34	1	40	0	98.3%	85	115				
Methyl tert-Butyl Ether	19.39	1	20	0	96.9%	85	115				
o-Xylene	20.77	0.5	20	0	103.9%	85	115				
Toluene	20.13	0.5	20	0	100.7%	85	115				
1,4-Difluorobenzene	88.54	0	100	0	88.5%	80	120				
4-Bromochlorobenzene	91.68	0	100	0	91.7%	80	120				
Fluorobenzene	87.15	0	100	0	87.1%	80	120				

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

On Site Technologies, LTD.

Date: 03-Nov-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9911003

Project: Thriftway Refinery Air Stripper

Test No: SW8021B

**QC SUMMARY REPORT
SURROGATE RECOVERIES****Aromatic Volatiles by GC/PID**

Sample ID	14FBZ	4BCBZ	FLBZ
9910044-01C	89.5	90.8	88.5
9910044-02C	89.3	90.8	88.7
9910044-03C	89.1	90.2	88
9910044-04A	89.4	91.1	88.4
9910044-05A	89.1	92.3	88.6
9910044-06A	90	91.5	88.6
9910044-08C	87.7	90.3	86.3
9910045-01C	88.2	90.8	86.4
9910045-02C	88.3	91.7	86.9
9910045-02CMS	87.5	90.2	85.8
9910045-02CMSD	87.7	90.6	86.3
9910045-03A	88.7	91.2	87.3
9910045-04A	89.1	90.7	88.3
9910045-05A	89.5	91.2	88.6
9911003-01A	88.2	91	86
9911003-02A	87.5	88.8	86.7
9911003-03A	89.6	91	88
CCV1 BTEX_99100	89	91.4	87.5
CCV2 BTEX_99100	89.2	90.3	87.3
CCV3 BTEX_99100	88.5	91.7	87.1
LCS WATER	88.4	91.7	87
MB1	89.8	90.8	88.5

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-120
4BCBZ	= 4-Bromochlorobenzene	80-120
FLBZ	= Fluorobenzene	80-120

* Surrogate recovery outside acceptance limits

CHAIN OF CUSTODY RECORD

Date: 11-1-99

Page: 1 of 1

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

[illegible]

OFF: (505) 325-5667



LAB: (505) 325-1556

October 13, 1999

OCT 18 1999

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

RE: Thriftway Refinery; Air Stripper

Order No.: 9910007

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 10/04/1999 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to be "David Cox", written over a horizontal line.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 13-Oct-99

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery; Air Stripper
Lab Order: 9910007

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 13-Oct-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	9910007	Client Sample ID:	Travel Blank
Lab ID:	9910007-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Air Stripper	Collection Date:	10/04/1999 8:30:00 AM
		COC Record:	5373

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	ND	1		µg/L	1	10/06/1999
Benzene	ND	0.5		µg/L	1	10/06/1999
Toluene	ND	0.5		µg/L	1	10/06/1999
Ethylbenzene	ND	0.5		µg/L	1	10/06/1999
m,p-Xylene	ND	1		µg/L	1	10/06/1999
o-Xylene	ND	0.5		µg/L	1	10/06/1999

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 13-Oct-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	9910007	Client Sample ID:	Influent
Lab ID:	9910007-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Air Stripper	Collection Date:	10/04/1999 10:07:00 AM
		COC Record:	5373

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	370	20		µg/L	20	10/06/1999
Benzene	2000	10		µg/L	20	10/06/1999
Toluene	1600	10		µg/L	20	10/06/1999
Ethylbenzene	820	10		µg/L	20	10/06/1999
m,p-Xylene	2500	20		µg/L	20	10/06/1999
o-Xylene	460	10		µg/L	20	10/06/1999

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 13-Oct-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	9910007	Client Sample ID:	Effluent
Lab ID:	9910007-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Air Stripper	Collection Date:	10/04/1999 10:02:00 AM
		COC Record:	5373

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	ND	1		µg/L	1	10/06/1999
Benzene	2.8	0.5		µg/L	1	10/06/1999
Toluene	2.5	0.5		µg/L	1	10/06/1999
Ethylbenzene	1.3	0.5		µg/L	1	10/06/1999
m,p-Xylene	4.5	1		µg/L	1	10/06/1999
o-Xylene	1.2	0.5		µg/L	1	10/06/1999

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 13-Oct-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9910007

Project: Thriftway Refinery; Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_991006	Test Code: SW8021B	Units: µg/L	Analysis Date: 10/06/1999	Prep Date:
Client ID:	9910007	Run ID: GC-1_991006A		SeqNo: 20332	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0555	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.1301	0.5			J

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

On Site Technologies, LTD.

Date: 13-Oct-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9910007

Project: Thriftway Refinery; Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9910007-02AMS	Batch ID: GC-1_991006	Test Code: SW8021B	Units: µg/L	Analysis Date 10/06/1999	Prep Date:
Client ID: Influent	Run ID: 9910007	PQL	SPK value	SeqNo: 20333	
Analyte	Result		SPK Ref Val	LowLimit	HighLimit
Benzene	2790	10	800	100.8%	116
Ethylbenzene	1659	10	800	105.0%	118
m,p-Xylene	4054	20	1600	97.8%	116
Methyl tert-Butyl Ether	1170	20	800	99.7%	122
o-Xylene	1288	10	800	103.7%	117
Toluene	2414	10	800	105.2%	116

Sample ID: 9910007-02AMSD	Batch ID: GC-1_991006	Test Code: SW8021B	Units: µg/L	Analysis Date 10/06/1999	Prep Date:
Client ID: Influent	Run ID: 9910007	PQL	SPK value	SeqNo: 20334	
Analyte	Result		SPK Ref Val	LowLimit	HighLimit
Benzene	2720	10	800	92.0%	116
Ethylbenzene	1619	10	800	99.9%	118
m,p-Xylene	3961	20	1600	92.0%	116
Methyl tert-Butyl Ether	1064	20	800	86.5%	122
o-Xylene	1260	10	800	100.2%	117
Toluene	2357	10	800	98.1%	116

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

On Site Technologies, LTD.

Date: 13-Oct-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9910007

Project: Thriftway Refinery; Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_991006	Test Code: SW8021B	Units: µg/L	Analysis Date 10/06/1999	Prep Date:
Client ID: 9910007	Run ID: GC-1_991006A	PQL	SPK value	SeqNo: 20331	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Benzene	38.13	0.5	40	0.0555	95.2%
Ethylbenzene	41.43	0.5	40	0	103.6%
m,p-Xylene	77.3	1	80	0	96.6%
Methyl tert-Butyl Ether	39.48	1	40	0	98.7%
o-Xylene	41.01	0.5	40	0	102.5%
Toluene	40.35	0.5	40	0.1301	100.6%
				LowLimit	HighLimit
				87	119
				89	117
				88	114
				69	129
				90	116
				90	115
				%RPD	RPDLimit
					Qual

Qualifiers:

NID - 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

On Site Technologies, LTD.

Date: 13-Oct-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9910007

Project: Thriftway Refinery; Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_9906		Batch ID: GC-1_991006		Test Code: SW8021B		Units: µg/L		Analysis Date: 10/06/1999		Prep Date:			
Client ID: 9910007		Run ID: GC-1_991006A		PQL		SPK value		SeqNo: 20328					
Analyte	Result			PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.46			0.5	20	0	97.3%	85	115				
Ethylbenzene	21.39			0.5	20	0	107.0%	85	115				
m,p-Xylene	40.06			1	40	0	100.2%	85	115				
Methyl tert-Butyl Ether	20.2			1	20	0	101.0%	85	115				
o-Xylene	21.14			0.5	20	0	105.7%	85	115				
Toluene	20.71			0.5	20	0	103.6%	85	115				
1,4-Difluorobenzene	91.32			0	100	0	91.3%	80	120				
4-Bromochlorobenzene	88.82			0	100	0	88.8%	80	120				
Fluorobenzene	90.33			0	100	0	90.3%	80	120				

Sample ID: CCV2 BTEX_9906		Batch ID: GC-1_991006	Test Code: SW8021B	Units: µg/L		Analysis Date 10/06/1999		Prep Date:						
Client ID:		9910007	Run ID:	GC-1_991006A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result												
Benzene		19.28			0.5	20	0	96.4%	85	115				
Ethylbenzene		21.01			0.5	20	0	105.0%	85	115				
m,p-Xylene		39.3			1	40	0	98.2%	85	115				
Methyl tert-Butyl Ether		20.1			1	20	0	100.5%	85	115				
o-Xylene		20.96			0.5	20	0	104.8%	85	115				
Toluene		20.43			0.5	20	0	102.2%	85	115				
1,4-Difluorobenzene		91.04			0	100	0	91.0%	80	120				
4-Bromochlorobenzene		92.74			0	100	0	92.7%	80	120				
Fluorobenzene		90.62			0	100	0	90.6%	80	120				

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9910007
Project: Thriftway Refinery; Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_9906		Batch ID: GC-1_991006	Test Code: SW8021B		Units: µg/L		Analysis Date 10/06/1999		Prep Date:					
Client ID:		9910007	Run ID:	GC-1_991006A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result												
Benzene		19.68			0.5	20	0	98.4%	85	115				
Ethylbenzene		21.58			0.5	20	0	107.9%	85	115				
m,p-Xylene		40.29			1	40	0	100.7%	85	115				
Methyl tert-Butyl Ether		20.59			1	20	0	102.9%	85	115				
o-Xylene		21.46			0.5	20	0	107.3%	85	115				
Toluene		20.96			0.5	20	0	104.8%	85	115				
1,4-Difluorobenzene		90.96			0	100	0	91.0%	80	120				
4-Bromochlorobenzene		90.59			0	100	0	90.6%	80	120				
Fluorobenzene		90.56			0	100	0	90.6%	80	120				

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

On Site Technologies, LTD.

Date: 13-Oct-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9910007
Project: Thriftway Refinery; Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
9910002-01A	92	90.9	91.3
9910002-03A	91.6	91.5	91.6
9910002-04A	92	91.3	91.5
9910002-05A	91.8	91.2	91.5
9910002-08A	92.2	91.7	91.6
9910002-09A	92.1	91	91.5
9910002-10A	91.7	90.2	91.7
9910002-11A	92.1	90.8	91.3
9910005-01A	91.8	91	91.3
9910005-02A	92	92.9	91.4
9910005-03A	91.9	91.3	91.2
9910006-01A	91.7	90.4	91.2
9910006-02A	91.7	91.1	91.5
9910006-03A	91.6	91.1	91.5
9910007-01A	92.6	90.5	91.9
9910007-02A	90.3	90.8	88
9910007-02AMS	90	91.3	87.2
9910007-02AMSD	90.1	92.2	87.6
9910007-03A	90.9	89.2	91.1
CCV1 BTEX_99061	91.3	88.8	90.3
CCV2 BTEX_99061	91	92.7	90.6
CCV3 BTEX_99061	91	90.6	90.6
LCS WATER	90.4	89.3	89.6
MB1	92	88.8	91.3

Acronym

Surrogate

QC Limits

14FBZ	=	1,4-Difluorobenzene	80-120
4BCBZ	=	4-Bromochlorobenzene	80-120
FLBZ	=	Fluorobenzene	80-120

* Surrogate recovery outside acceptance limits

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

LAB: (505) 325-5667 • FAX: (505) 325-6256

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

OFF: (505) 325-5667



SEP 27 1999

LAB: (505) 325-1556

September 21, 1999

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

RE: Thiftway Refinery; Bloomfield, NM

Order No.: 9909035

Dear Terry Griffin,

On Site Technologies, LTD. received 25 samples on 9/10/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "David Cox", is written over a horizontal line.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 21-Sep-99

CLIENT: BioTech Remediation, Inc.
Project: Thiftway Refinery; Bloomfield, NM
Lab Order: 9909035

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	Travel Blank
Lab ID:	9909035-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/7/99 9:00:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	Field Blank
Lab ID:	9909035-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/7/99 10:30:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-13
Lab ID:	9909035-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/7/99 11:35:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-15
Lab ID:	9909035-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/7/99 2:06:00 PM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-11
Lab ID:	9909035-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/7/99 3:01:00 PM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-10
Lab ID:	9909035-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/7/99 3:35:00 PM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-9
Lab ID:	9909035-07A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/7/99 4:07:00 PM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	18	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	Travel Blank
Lab ID:	9909035-08A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/8/99 9:00:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	Field Blank
Lab ID:	9909035-09A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/8/99 10:20:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-21
Lab ID:	9909035-10A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/8/99 10:51:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	100	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

- PQL - Practical Quantitation Limit
- ND - Not Detected at Practical Quantitation Limit
- J - Analyte detected below Practical Quantitation Limit
- 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
- Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-21 Dup
Lab ID:	9909035-11A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/8/99 10:51:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	98	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-22
Lab ID:	9909035-12A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/8/99 11:28:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	24	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-20
Lab ID:	9909035-13A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/8/99 1:18:00 PM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	20	1		µg/L	1	9/13/99
Benzene	1.1	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-5
Lab ID:	9909035-14A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/8/99 4:11:00 PM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	54	1		µg/L	1	9/13/99
Benzene	12	0.5		µg/L	1	9/13/99
Toluene	0.5	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	Travel Blank
Lab ID:	9909035-15A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/9/99 9:32:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	Field Blank
Lab ID:	9909035-16A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/9/99 9:40:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/13/99
Benzene	ND	0.5		µg/L	1	9/13/99
Toluene	ND	0.5		µg/L	1	9/13/99
Ethylbenzene	ND	0.5		µg/L	1	9/13/99
m,p-Xylene	ND	1		µg/L	1	9/13/99
o-Xylene	ND	0.5		µg/L	1	9/13/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-19
Lab ID:	9909035-17A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/9/99 10:08:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	1.7	1		µg/L	1	9/14/99
Benzene	ND	0.5		µg/L	1	9/14/99
Toluene	ND	0.5		µg/L	1	9/14/99
Ethylbenzene	0.6	0.5		µg/L	1	9/14/99
m,p-Xylene	ND	1		µg/L	1	9/14/99
o-Xylene	ND	0.5		µg/L	1	9/14/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-18
Lab ID:	9909035-18A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/9/99 10:40:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	10	1		µg/L	1	9/14/99
Benzene	12	0.5		µg/L	1	9/14/99
Toluene	ND	0.5		µg/L	1	9/14/99
Ethylbenzene	2.3	0.5		µg/L	1	9/14/99
m,p-Xylene	ND	1		µg/L	1	9/14/99
o-Xylene	ND	0.5		µg/L	1	9/14/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-18 Dup
Lab ID:	9909035-19A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/9/99 10:40:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	10	1		µg/L	1	9/14/99
Benzene	13	0.5		µg/L	1	9/14/99
Toluene	ND	0.5		µg/L	1	9/14/99
Ethylbenzene	2.5	0.5		µg/L	1	9/14/99
m,p-Xylene	ND	1		µg/L	1	9/14/99
o-Xylene	ND	0.5		µg/L	1	9/14/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	Rinse Blank
Lab ID:	9909035-20A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/9/99 10:40:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/14/99
Benzene	ND	0.5		µg/L	1	9/14/99
Toluene	ND	0.5		µg/L	1	9/14/99
Ethylbenzene	ND	0.5		µg/L	1	9/14/99
m,p-Xylene	ND	1		µg/L	1	9/14/99
o-Xylene	ND	0.5		µg/L	1	9/14/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-6
Lab ID:	9909035-21A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/9/99 11:20:00 AM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	64	1		µg/L	1	9/14/99
Benzene	24	0.5		µg/L	1	9/14/99
Toluene	0.8	0.5		µg/L	1	9/14/99
Ethylbenzene	4.3	0.5		µg/L	1	9/14/99
m,p-Xylene	1.9	1		µg/L	1	9/14/99
o-Xylene	ND	0.5		µg/L	1	9/14/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	MW-1
Lab ID:	9909035-22A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/9/99 1:15:00 PM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Benzene	560	2.5		µg/L	5	9/20/99
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	73	1		µg/L	1	9/14/99
Toluene	1	0.5		µg/L	1	9/14/99
Ethylbenzene	21	0.5		µg/L	1	9/14/99
m,p-Xylene	5.7	1		µg/L	1	9/14/99
o-Xylene	1	0.5		µg/L	1	9/14/99

Qualifiers:

- PQL - Practical Quantitation Limit
- ND - Not Detected at Practical Quantitation Limit
- J - Analyte detected below Practical Quantitation Limit
- 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
- Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	Pond
Lab ID:	9909035-23A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/9/99 1:35:00 PM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/14/99
Benzene	ND	0.5		µg/L	1	9/14/99
Toluene	ND	0.5		µg/L	1	9/14/99
Ethylbenzene	ND	0.5		µg/L	1	9/14/99
m,p-Xylene	ND	1		µg/L	1	9/14/99
o-Xylene	ND	0.5		µg/L	1	9/14/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	Stripper Influent
Lab ID:	9909035-24A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/9/99 3:20:00 PM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DM
Toluene	5900	25		µg/L	50	9/20/99
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	360	20		µg/L	20	9/14/99
Benzene	1800	10		µg/L	20	9/14/99
Ethylbenzene	1200	10		µg/L	20	9/14/99
m,p-Xylene	3800	20		µg/L	20	9/14/99
o-Xylene	1200	10		µg/L	20	9/14/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 21-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9909035	Client Sample ID:	Stripper Effluent
Lab ID:	9909035-25A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	9/9/99 3:25:00 PM
		COC Record:	10287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/14/99
Benzene	1.8	0.5		µg/L	1	9/14/99
Toluene	9.6	0.5		µg/L	1	9/14/99
Ethylbenzene	2.6	0.5		µg/L	1	9/14/99
m,p-Xylene	9.2	1		µg/L	1	9/14/99
o-Xylene	2.9	0.5		µg/L	1	9/14/99

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

On Site Technologies, LTD.

Date: 21-Sep-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9909035

Project: Thifway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_990913	Test Code: SW8021B	Units: µg/L	Analysis Date: 9/13/99	Prep Date:
Client ID:	9909035	Run ID: GC-1_990913B		SeqNo: 19481	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0407	0.5			J
Ethylbenzene	.0473	0.5			J
m,p-Xylene	.1049	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0935	0.5			J
Toluene	.1861	0.5			J

Sample ID: MB1	Batch ID: GC-1_990914	Test Code: SW8021B	Units: µg/L	Analysis Date: 9/14/99	Prep Date:
Client ID:	9909035	Run ID: GC-1_990914A		SeqNo: 19507	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0446	0.5			J
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.1364	0.5			J

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9909035

Project: Thifway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_990920	Test Code: SW8021B	Units: µg/L	Analysis Date: 9/20/99	Prep Date:						
Client ID:	9909035	Run ID: GC-1_990920A		SeqNo: 19776							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.1348	0.5									J
Ethylbenzene	.1017	0.5									J
m,p-Xylene	.1836	1									J
Methyl tert-Butyl Ether	ND	1									
o-Xylene	.0895	0.5									J
Toluene	.1756	0.5									J

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

On Site Technologies, LTD.

Date: 21-Sep-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9909035

Project: Thifway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9909015-01AMS		Batch ID: GC-1_990913		Test Code: SW8021B		Units: µg/L		Analysis Date: 9/13/99		Prep Date:	
Client ID:		9909035		Run ID:		GC-1_990913B		SeqNo: 19482			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	195.7	2.5	200	0	97.8%	80	116				
Ethylbenzene	198.8	2.5	200	1.234	98.8%	80	118				
m,p-Xylene	373.3	5	400	0.7925	93.1%	77	116				
Methyl tert-Butyl Ether	208.2	5	200	0	104.1%	62	122				
o-Xylene	200.1	2.5	200	0.962	99.6%	83	117				
Toluene	201.2	2.5	200	3.424	98.9%	80	116				

Sample ID: 9909015-01AMSD		Batch ID: GC-1_990913		Test Code: SW8021B		Units: µg/L		Analysis Date: 9/13/99		Prep Date:	
Client ID:		9909035		Run ID:		GC-1_990913B		SeqNo: 19483			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	192.7	2.5	200	0	96.4%	80	116	195.7	1.5%	7	
Ethylbenzene	196.2	2.5	200	1.234	97.5%	80	118	198.8	1.3%	7	
m,p-Xylene	369	5	400	0.7925	92.1%	77	116	373.3	1.2%	7	
Methyl tert-Butyl Ether	208.7	5	200	0	104.3%	62	122	208.2	0.2%	7	
o-Xylene	198.2	2.5	200	0.962	98.6%	83	117	200.1	1.0%	6	
Toluene	198.6	2.5	200	3.424	97.6%	80	116	201.2	1.3%	6	

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9909035

Project: Thiftway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9909035-24AMS		Batch ID: GC-1_990914		Test Code: SW8021B		Units: µg/L		Analysis Date: 9/14/99		Prep Date:	
Client ID: Stripper Influent		9909035		Run ID: GC-1_990914A				SeqNo: 19508			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2496	10	800	1774	90.2%	80	116				
Ethylbenzene	1971	10	800	1215	94.5%	80	118				
m,p-Xylene	5264	20	1600	3764	93.8%	77	116				
Methyl tert-Butyl Ether	1032	20	800	361.1	83.9%	62	122				
o-Xylene	1955	10	800	1186	96.2%	83	117				
Toluene	6919	10	800	6123	99.5%	80	116				E

Sample ID: 9909035-24AMSD		Batch ID: GC-1_990914	Test Code: SW8021B	Units: µg/L	Analysis Date: 9/14/99			Prep Date:			
Client ID: Stripper Influent	9909035	Run ID: GC-1_990914A				SeqNo: 19509					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2543	10	800	1800	92.9%	80	116	2496	1.9%	7	
Ethylbenzene	2008	10	800	1200	101.0%	80	118	1971	1.9%	7	
m,p-Xylene	5367	20	1600	3800	97.9%	77	116	5264	1.9%	7	
Methyl tert-Butyl Ether	998.5	20	800	360	79.8%	62	122	1032	3.3%	7	
o-Xylene	1986	10	800	1200	98.2%	83	117	1955	1.6%	6	
Toluene	7010	10	800	6100	113.8%	80	116	6919	1.3%	6	E

Sample ID: 9909035-22AMS		Batch ID: GC-1_990920		Test Code: SW8021B		Units: µg/L		Analysis Date: 9/20/99				Prep Date:	
Client ID: MW-1		9909035		Run ID: GC-1_990920A				SeqNo: 19777					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Benzene	945.4	5	400	600.5	86.2%	80	116						
Ethylbenzene	415.9	5	400	20.78	98.8%	80	118						
m,p-Xylene	749	10	800	5.711	92.9%	77	116						
Methyl tert-Butyl Ether	494.3	10	400	73.44	105.2%	62	122						
o-Xylene	397.6	5	400	1.036	99.1%	83	117						
Toluene	400	5	400	1.024	99.8%	80	116						

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9909035

Project: Thifftway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Sample Matrix Spike Duplicate

Sample ID: 9909035-22AMSD		Batch ID: GC-1_990920	Test Code: SW8021B		Units: µg/L		Analysis Date: 9/20/99		Prep Date:		
Client ID: MW-1	9909035	Run ID: 990920A	GC-1_990920A				SeqNo: 19778				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	928.3	5	400	600.5	81.9%	80	116	945.4	1.8%	7	
Ethylbenzene	408.6	5	400	20.78	97.0%	80	118	415.9	1.8%	7	
m,p-Xylene	736.8	10	800	5.711	91.4%	77	116	749	1.6%	7	
Methyl tert-Butyl Ether	498.1	10	400	73.44	106.2%	62	122	494.3	0.8%	7	
o-Xylene	393.2	5	400	1.036	98.1%	83	117	397.6	1.1%	6	
Toluene	393.8	5	400	1.024	98.2%	80	116	400	1.6%	6	

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

On Site Technologies, LTD.

Date: 21-Sep-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9909035

Project: Thifway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER #2		Batch ID: GC-1_990913		Test Code: SW8021B		Units: µg/L		Analysis Date: 9/13/99			Prep Date:	
Client ID:		9909035		Run ID: GC-1_990913B				SeqNo: 19480				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	40.43	0.5	40	0.0407	101.0%	87	119					
Ethylbenzene	41.19	0.5	40	0.0473	102.9%	89	117					
m,p-Xylene	77.65	1	80	0.1049	96.9%	88	114					
Methyl tert-Butyl Ether	40.92	1	40	0	102.3%	69	129					
o-Xylene	41.38	0.5	40	0.0935	103.2%	90	116					
Toluene	40.74	0.5	40	0.1861	101.4%	90	115					

Sample ID: LCS WATER		Batch ID: GC-1_990914	Test Code: SW8021B	Units: µg/L	Analysis Date: 9/14/99				Prep Date:		
Client ID:		9909035	Run ID: GC-1_990914A			SeqNo: 19506					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.27	0.5	40	0.0446	100.6%	87	119				
Ethylbenzene	41.1	0.5	40	0	102.7%	89	117				
m,p-Xylene	77.2	1	80	0	96.5%	88	114				
Methyl tert-Butyl Ether	41.27	1	40	0	103.2%	69	129				
o-Xylene	41.04	0.5	40	0	102.6%	90	116				
Toluene	40.67	0.5	40	0.1364	101.3%	90	115				

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9909035

Project: Thifway Refinery, Bloomfield, NM

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_990920		Test Code: SW8021B		Units: µg/L		Analysis Date: 9/20/99		Prep Date:	
Client ID:		9909035		Run ID:		GC-1_990920A		SeqNo: 19775			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.58	0.5	40	0.1348	101.1%	87	119				
Ethylbenzene	40.67	0.5	40	0.1017	101.4%	89	117				
m,p-Xylene	75.85	1	80	0.1836	94.6%	88	114				
Methyl tert-Butyl Ether	40.49	1	40	0	101.2%	69	129				
o-Xylene	40.31	0.5	40	0.0895	100.5%	90	116				
Toluene	40.45	0.5	40	0.1756	100.7%	90	115				

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

On Site Technologies, LTD.

CLIENT: BioTech Remediation, Inc.

Work Order: 9909035

Project: Thiftway Refinery; Bloomfield, NM

Date: 21-Sep-99

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_9906		Batch ID: GC-1_990913	Test Code: SW8021B	Units: µg/L	Analysis Date: 9/13/99		Prep Date:
Client ID: 9909035		Run ID: GC-1_990913B	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 19477
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Benzene	19.84	0.5	20	0	99.2%	85	115
Ethylbenzene	20.52	0.5	20	0	102.6%	85	115
m,p-Xylene	38.58	1	40	0	96.4%	85	115
Methyl tert-Butyl Ether	20.48	1	20	0	102.4%	85	115
o-Xylene	20.54	0.5	20	0	102.7%	85	115
Toluene	20.18	0.5	20	0	100.9%	85	115
1,4-Difluorobenzene	88.9	0	100	0	88.9%	80	120
4-Bromochlorobenzene	89.81	0	100	0	89.8%	80	120
Fluorobenzene	87.37	0	100	0	87.4%	80	120

Sample ID: CCV2 BTEX_9906		Batch ID: GC-1_990913	Test Code: SW8021B	Units: µg/L	Analysis Date: 9/13/99		Prep Date:
Client ID: 9909035		Run ID: GC-1_990913B	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 19478
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Benzene	20.11	0.5	20	0	100.6%	85	115
Ethylbenzene	20.7	0.5	20	0	103.5%	85	115
m,p-Xylene	38.98	1	40	0	97.4%	85	115
Methyl tert-Butyl Ether	21.23	1	20	0	106.2%	85	115
o-Xylene	20.8	0.5	20	0	104.0%	85	115
Toluene	20.44	0.5	20	0	102.2%	85	115
1,4-Difluorobenzene	89.12	0	100	0	89.1%	80	120
4-Bromochlorobenzene	89.59	0	100	0	89.6%	80	120
Fluorobenzene	87.49	0	100	0	87.5%	80	120

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9909035

Project: Thifway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_9906 Batch ID: GC-1_990913 Test Code: SW8021B Units: µg/L Analysis Date: 9/13/99 Prep Date:
Client ID: 9909035 Run ID: GC-1_990913B SeqNo: 19479

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.77	0.5	40	0	99.4%	85	115				
Ethylbenzene	40.63	0.5	40	0	101.6%	85	115				
m,p-Xylene	76.56	1	80	0	95.7%	85	115				
Methyl tert-Butyl Ether	41.34	1	40	0	103.4%	85	115				
o-Xylene	40.9	0.5	40	0	102.3%	85	115				
Toluene	40.19	0.5	40	0	100.5%	85	115				
1,4-Difluorobenzene	88.63	0	100	0	88.6%	80	120				
4-Bromochlorobenzene	89.96	0	100	0	90.0%	80	120				
Fluorobenzene	86.77	0	100	0	86.8%	80	120				

Sample ID: CCV1 BTEX_9906 Batch ID: GC-1_990914 Test Code: SW8021B Units: µg/L Analysis Date: 9/14/99 Prep Date:
Client ID: 9909035 Run ID: GC-1_990914A SeqNo: 19502

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.11	0.5	20	0	100.6%	85	115				
Ethylbenzene	20.47	0.5	20	0	102.4%	85	115				
m,p-Xylene	38.52	1	40	0	96.3%	85	115				
Methyl tert-Butyl Ether	20.42	1	20	0	102.1%	85	115				
o-Xylene	20.44	0.5	20	0	102.2%	85	115				
Toluene	20.16	0.5	20	0	100.8%	85	115				
1,4-Difluorobenzene	89.02	0	100	0	89.0%	80	120				
4-Bromochlorobenzene	89.72	0	100	0	89.7%	80	120				
Fluorobenzene	87.84	0	100	0	87.8%	80	120				

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9909035

Project: Thifway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_9906		Batch ID: GC-1_990914	Test Code: SW8021B		Units: µg/L		Analysis Date: 9/14/99		Prep Date:		
Client ID:		9909035	Run ID:	GC-1_990914A			SeqNo:	19503			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.54	0.5	20	0	102.7%	85	115				
Ethylbenzene	20.98	0.5	20	0	104.9%	85	115				
m,p-Xylene	39.5	1	40	0	98.7%	85	115				
Methyl tert-Butyl Ether	20.52	1	20	0	102.6%	85	115				
o-Xylene	20.93	0.5	20	0	104.7%	85	115				
Toluene	20.72	0.5	20	0	103.6%	85	115				
1,4-Difluorobenzene	89.01	0	100	0	89.0%	80	120				
4-Bromochlorobenzene	89.95	0	100	0	90.0%	80	120				
Fluorobenzene	87.79	0	100	0	87.8%	80	120				

Sample ID: CCV3 BTEX_9906		Batch ID: GC-1_990914	Test Code: SW8021B	Units: µg/L		Analysis Date: 9/14/99			Prep Date:				
Client ID:		9909035	Run ID:	GC-1_990914A	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result	PQL											
Benzene	39.32	0.5		40	0		98.3%	85		115			
Ethylbenzene	39.87	0.5		40	0		99.7%	85		115			
m,p-Xylene	74.83	1		80	0		93.5%	85		115			
Methyl tert-Butyl Ether	41.42	1		40	0		103.6%	85		115			
o-Xylene	40.13	0.5		40	0		100.3%	85		115			
Toluene	39.66	0.5		40	0		99.1%	85		115			
1,4-Difluorobenzene	88.79	0		100	0		88.8%	80		120			
4-Bromochlorobenzene	89.54	0		100	0		89.5%	80		120			
Fluorobenzene	87	0		100	0		87.0%	80		120			

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9909035

Project: Thifway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV4 BTEX_9906		Batch ID: GC-1_990914		Test Code: SW8021B		Units: µg/L		Analysis Date: 9/14/99		Prep Date:	
Client ID: 9909035		Run ID: 9909035		PQL		GC-1_990914A		SeqNo: 19505			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39	0.5	40	0	97.5%	85	115				
Ethylbenzene	40.06	0.5	40	0	100.1%	85	115				
m,p-Xylene	74.86	1	80	0	93.6%	85	115				
Methyl tert-Butyl Ether	41.34	1	40	0	103.4%	85	115				
o-Xylene	40.41	0.5	40	0	101.0%	85	115				
Toluene	39.73	0.5	40	0	99.3%	85	115				
1,4-Difluorobenzene	88.73	0	100	0	88.7%	80	120				
4-Bromochlorobenzene	88.82	0	100	0	88.8%	80	120				
Fluorobenzene	87.03	0	100	0	87.0%	80	120				

Sample ID: CCV1 BTEX_9906		Batch ID: GC-1_990920		Test Code: SW8021B		Units: µg/L		Analysis Date: 9/20/99		Prep Date:	
Client ID: 9909035		Run ID: 9909035		PQL		GC-1_990920A		SeqNo: 19772			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.41	0.5	20	0	107.1%	85	115				
Ethylbenzene	21.58	0.5	20	0	107.9%	85	115				
m,p-Xylene	40.41	1	40	0	101.0%	85	115				
Methyl tert-Butyl Ether	21.27	1	20	0	106.4%	85	115				
o-Xylene	21.38	0.5	20	0	106.9%	85	115				
Toluene	21.23	0.5	20	0	106.1%	85	115				
1,4-Difluorobenzene	93.75	0	100	0	93.8%	80	120				
4-Bromochlorobenzene	93.41	0	100	0	93.4%	80	120				
Fluorobenzene	92	0	100	0	92.0%	80	120				

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9909035

Project: Thifftway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_9906		Batch ID: GC-1_990920	Test Code: SW8021B	Units: µg/L	Analysis Date: 9/20/99			Prep Date:			
Client ID:		9909035	Run ID:	GC-1_990920A			SeqNo: 19773				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.2	0.5	20	0	101.0%	85	115				
Ethylbenzene	20.39	0.5	20	0	101.9%	85	115				
m,p-Xylene	38.38	1	40	0	95.9%	85	115				
Methyl tert-Butyl Ether	21.36	1	20	0	106.8%	85	115				
o-Xylene	20.42	0.5	20	0	102.1%	85	115				
Toluene	20.2	0.5	20	0	101.0%	85	115				
1,4-Difluorobenzene	93.99	0	100	0	94.0%	80	120				
4-Bromochlorobenzene	88.76	0	100	0	88.8%	80	120				
Fluorobenzene	92.64	0	100	0	92.6%	80	120				

Sample ID: CCV3 BTEX_9906		Batch ID: GC-1_990920	Test Code: SW8021B	Units: µg/L		Analysis Date: 9/20/99		Prep Date:				
Client ID: 9909035		Run ID: GC-1_990920A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	20.04		0.5	20	0	100.2%	85	115				
Ethylbenzene	20.37		0.5	20	0	101.9%	85	115				
m,p-Xylene	38.48		1	40	0	96.2%	85	115				
Methyl tert-Butyl Ether	20.26		1	20	0	101.3%	85	115				
o-Xylene	21.01		0.5	20	0	105.0%	85	115				
Toluene	20.24		0.5	20	0	101.2%	85	115				
1,4-Difluorobenzene	94.52		0	100	0	94.5%	80	120				
4-Bromochlorobenzene	86.54		0	100	0	86.5%	80	120				
Fluorobenzene	92.63		0	100	0	92.6%	80	120				

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

On Site Technologies, LTD.

Date: 21-Sep-99

CLIENT: BioTech Remediation, Inc.
 Work Order: 9909035
 Project: Thiftway Refinery; Bloomfield, N
 Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
9909015-01A	90.7	91.8	90.2					
9909015-01AMS	88.5	89.9	86.8					
9909015-01AMSD	88.4	89.7	86.6					
9909018-02A	89.4	89.5	88.4					
9909023-01A	89.5	89.6	88.4					
9909023-02A	89.5	89.9	88.7					
9909028-01A	87.4	87.8	87.2					
9909029-02A	89.8	89.6	88.5					
9909035-01A	90.1	89.7	88.7					
9909035-02A	89.8	90.3	88.6					
9909035-03A	89.5	89.7	89					
9909035-04A	89.6	90.1	88.9					
9909035-05A	89.7	89.5	88.9					
9909035-06A	89.6	89.2	88.8					
9909035-07A	89.2	89.5	88.4					
9909035-08A	89.5	90	89					
9909035-09A	89.5	89.4	88.8					
9909035-10A	89.6	90	88.2					
9909035-11A	88.9	89.6	88.2					
9909035-12A	89.1	89.2	88.5					
9909035-13A	88.4	89.1	88.1					
9909035-14A	89.3	89.9	87.9					
9909035-15A	89.6	90.1	88.9					
9909035-16A	90.1	89.3	88.9					
9909035-17A	89.8	90.2	88.7					
9909035-18A	85.5	88.4	85.2					
9909035-19A	89.1	91.5	88.6					

Acronym

Surrogate

QC Limits

14FBZ	=	1,4-Difluorobenzene	80-120
4BCBZ	=	4-Bromochlorobenzene	80-120
FLBZ	=	Fluorobenzene	80-120

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 9909035
Project: Thiftway Refinery; Bloomfield, N
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ				
9909035-20A	89.7	89.8	89.3				
9909035-21A	86.6	89.9	85.5				
9909035-22A	91.9	91.7	90.4				
9909035-22AMS	92.4	90.6	90.8				
9909035-22AMSD	92.6	90.6	91.1				
9909035-23A	89.9	90.3	88.7				
9909035-24A	93.4	85.9	92.2				
9909035-24AMS	87.2	91.1	84.9				
9909035-24AMSD	87.4	91	84.9				
9909035-25A	87.7	88.2	88				
9909036-01A	89.8	90.3	88.7				
9909037-01A	90.2	90	88.7				
9909038-01A	89.2	89.7	88.4				
9909041-01A	89.4	90	89				
9909041-02A	90.8	84.8	89.9				
9909041-03A	89.4	90.2	89				
9909041-04A	71.8 *	71.8 *	71.2 *				
9909042-01B	94.5	93.8	93.1				
9909042-02B	94	92.5	92.8				
9909042-03B	93.5	91.3	93.7				
9909042-04B	94.1	92.2	93.5				
9909042-05B	94.2	91.4	93.4				
9909046-01A	94.1	89.5	92.3				
9909047-01A	91.7	81.8	92.6				
9909048-01A	94.7	91.2	93.5				
9909048-02A	95.2	91.3	93.7				
9909048-03A	94.2	92.2	93.5				
9909049-01B	96.1	86.8	94.4				

Acronym

Surrogate

QC Limits

14FBZ = 1,4-Difluorobenzene
 4BCBZ = 4-Bromochlorobenzene
 FLBZ = Fluorobenzene

80-120
 80-120
 80-120

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 9909035
Project: Thiftway Refinery; Bloomfield, N
Test No: SW8021B

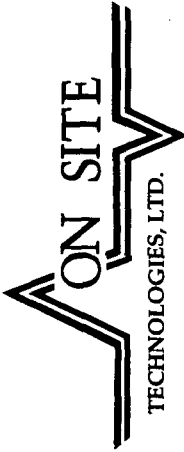
QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
9909054-01A	94.3	87.9	93					
9909054-02A	94.7	88.7	93.8					
9909054-03A	95.1	89.6	94					
9909054-04A	95.3	88.5	94.4					
9909054-05A	94.8	85.8	93.2					
CCV1 BTEX_99061	93.8	93.4	92					
CCV2 BTEX_99061	94	88.8	92.6					
CCV3 BTEX_99061	94.5	86.5	92.6					
CCV4 BTEX_99061	88.7	88.8	87					
LCS WATER	93	93.5	91.4					
LCS WATER #2	88.6	89.8	87					
MB1	94.2	93.1	93					

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-120
4BCBZ	= 4-Bromochlorobenzene	80-120
FLBZ	= Fluorobenzene	80-120

* Surrogate recovery outside acceptance limits



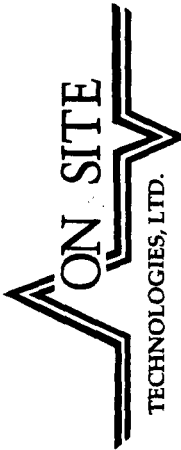
CHAIN OF CUSTODY RECORD

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 9/17/99

Page: 1 of 3

Purchase Order No.: <u>99873</u>		Project No.		Name <u>Terry Griffin</u>		Title	
SEND INVOICE TO		Name <u>Same</u>		Company <u>BioTech Remediation, Inc</u>			
		Address		Mailing Address <u>210 E. 20th St. Suite 400</u>			
		City, State, Zip		City, State, Zip <u>Farmington, NM 87401</u>			
		Telephone No.		Telephone No. <u>505-327-4965</u>		Telefax No.	
PROJECT LOCATION: <u>Therapeutic Partners</u> <u>626 Rd 3500</u> <u>Bloomfield, NM 87417</u>				ANALYSIS REQUESTED			
SAMPLER'S SIGNATURE: <u>Ken Sinks</u>							
SAMPLE IDENTIFICATION				LAB ID			
DATE				TIME			
PRES.				LAB ID			
Travel Blank				9901035-01A			
Field Blank				- 02A			
mw-13				- 03A			
mw-15				- 04A			
mw-11				- 05A			
mw-10				- 06A			
Travel Blank				- 07A			
Field Blank				- 08A			
mw-21				- 09A			
mw-21 Duv				- 10A			
mw-22				- 11A			
Relinquished by: <u>Ken Sinks</u>				Date/Time: <u>9/17/99</u>			
Relinquished by:				Date/Time			
Relinquished by:				Date/Time			
Method of Shipment:				Rush ☐ 24-48 Hours ☐ 10 Working Days ☐ By Date			
Authorized by: <u>Ken Sinks</u>				Date <u>9/10/99</u>			
(Client Signature Must Accompany Request)				Special Instructions / Remarks:			

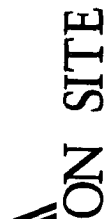


CHAIN OF CUSTODY RECORD

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 9/9/99
Page: 2 of 3

Purchase Order No.: <u>99873</u>		Project No.	
Name <u>Shane</u>		Dept.	
Company		Address	
City, State, Zip		City, State, Zip	
Telephone No.		Telefax No.	
Title		Title	
Company <u>Biotech Remediation</u>		Company <u>Biotech Remediation</u>	
Mailing Address <u>210 E. 200 St. Suite 400</u>		Mailing Address <u>210 E. 200 St. Suite 400</u>	
City, State, Zip <u>Farmington, NM</u>		City, State, Zip <u>Farmington, NM</u>	
Telephone No. <u>505-327-4565</u>		Telefax No.	
REPORT RESULTS TO		ANALYSIS REQUESTED	
Number of Containers		LAB ID	
PROJECT LOCATION: <u>Theritway Retention</u> <u>626 Rd 5500</u> <u>Bloomfield, NM 87413</u>		LAB ID	
SAMPLER'S SIGNATURE: <u>Ken Sinker</u> <u>Ken Sinker</u>		LAB ID	
SAMPLE IDENTIFICATION		LAB ID	
DATE	TIME	MATRIX	PRES.
9/8/99	1318	H ₂ O	✓
9/8/99	1611	✓	✓
9/9/99	0932	✓	✓
9/9/99	0940	✓	✓
9/9/99	1008	✓	✓
9/9/99	1040	✓	✓
9/9/99	1040	✓	✓
9/9/99	1040	✓	✓
9/9/99	1120	✓	✓
9/9/99	1315	✓	✓
9/9/99	1335	✓	✓
9/9/99	1520	✓	✓
Relinquished by: <u>Shane Sinker</u>		Date/Time: <u>9/10/99</u>	
Relinquished by:		Date/Time	
Relinquished by:		Date/Time	
Method of Shipment:		Date/Time	
Authorized by: <u>Ken Sinker</u>		Date: <u>9/10/99</u>	
(Client-Signature Must Accompany Request)		Date/Time	
Special Instructions / Remarks:		Date/Time	
Rush		24-48 Hours	
10 Working Days		By Date	
Distribution: White - On Site		Yellow - LAB	
Pink - Sampler		Goldenrod - Client	

Page: 5 of 3Page: 5 of 3

Authorized by: [Signature] Date 9/10/99
(Client Signature Must Accompany Request)

To Re-order Call 325-9600 or Fax 325-9764 **alphagraphics®** FORM # 01



BioTech REMEDIATION INC.

**1999 ANNUAL GROUNDWATER MONITOR REPORT
THRIFTWAY REFINERY
626 ROAD 5500
BLOOMFIELD, NEW MEXICO**

RECEIVED

MAR 31 2000

**ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION**

prepared for the

NEW MEXICO OIL CONSERVATION DIVISION

**Mr. Will Olsen, Project Manager, Santa Fe Office
and
Mr. Denny Foust, Aztec Office**

Book 3 of 3

March 7, 2000

OFF: (505) 325-5667



LAB: (505) 325-1556

September 09, 1999

SEP 14 1999

A handwritten signature, likely of Terry Griffin, written in dark ink.

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

RE: Thriftway Refinery Air Stripper

Order No.: 9909008

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 9/2/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in cursive script that reads "Heidi Reese".

Heidi Reese

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 09-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9909008	Client Sample ID:	Travel Blank
Lab ID:	9909008-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	9/2/99
		COC Record:	10280

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/2/99
Benzene	ND	0.5		µg/L	1	9/2/99
Toluene	ND	0.5		µg/L	1	9/2/99
Ethylbenzene	ND	0.5		µg/L	1	9/2/99
m,p-Xylene	ND	1		µg/L	1	9/2/99
o-Xylene	ND	0.5		µg/L	1	9/2/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 09-Sep-99

Client: BioTech Remediation, Inc.
Work Order: 9909008
Lab ID: 9909008-02A **Matrix:** AQUEOUS
Project: Thriftway Refinery Air Stripper

Client Sample Info: Thriftway Refinery Air Stripper
Client Sample ID: Air Stripper Influent
Collection Date: 9/2/99 2:25:00 PM
COC Record: 10280

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	350	20		µg/L	20	9/3/99
Benzene	1300	10		µg/L	20	9/3/99
Toluene	2500	10		µg/L	20	9/3/99
Ethylbenzene	720	10		µg/L	20	9/3/99
m,p-Xylene	1600	20		µg/L	20	9/3/99
o-Xylene	480	10		µg/L	20	9/3/99

Qualifiers:
PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 09-Sep-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9909008	Client Sample ID:	Air Stripper Effluent
Lab ID:	9909008-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	9/2/99 2:30:00 PM
		COC Record:	10280

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	9/2/99
Benzene	0.9	0.5		µg/L	1	9/2/99
Toluene	2.6	0.5		µg/L	1	9/2/99
Ethylbenzene	1.1	0.5		µg/L	1	9/2/99
m,p-Xylene	3.7	1		µg/L	1	9/2/99
o-Xylene	1	0.5		µg/L	1	9/2/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 09-Sep-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9909008

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_990902	Test Code: SW8021B	Units: µg/L	Analysis Date 9/2/99	Prep Date:
Client ID:	9909008	Run ID: GC-1_990902B		SeqNo: 19146	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0366	0.5			J
Ethylbenzene	.0702	0.5			J
m,p-Xylene	.1259	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.1153	0.5			J
Toluene	.1935	0.5			J

Sample ID: MB1	Batch ID: GC-1_990903	Test Code: SW8021B	Units: µg/L	Analysis Date 9/3/99	Prep Date:
Client ID:	9909008	Run ID: GC-1_990903A		SeqNo: 19240	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0302	0.5			J
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0586	0.5			J
Toluene	.1135	0.5			J

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

On Site Technologies, LTD.

Date: 09-Sep-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9909008

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9908059-01AMS	Batch ID: GC-1_990902	Test Code: SW8021B	Units: µg/L	Analysis Date 9/2/99	Prep Date:
Client ID: 9909008	Run ID: GC-1_990902B	PQL	SPK value	SeqNo: 19147	
Analyte	Result	PQL	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	4229	50	314.2	97.9%	80 116
Ethylbenzene	4060	50	326.2	93.4%	80 118
m,p-Xylene	8184	100	851.1	91.7%	77 116
Methyl tert-Butyl Ether	4291	100	0	107.3%	62 122
o-Xylene	4245	50	298.7	98.7%	83 117
Toluene	4852	50	914.2	98.4%	80 116

Sample ID: 9908059-01AMSD	Batch ID: GC-1_990902	Test Code: SW8021B	Units: µg/L	Analysis Date 9/2/99	Prep Date:
Client ID: 9909008	Run ID: GC-1_990902B	PQL	SPK value	SeqNo: 19148	
Analyte	Result	PQL	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	4158	50	314.2	96.1%	80 116 4229 1.7% 8
Ethylbenzene	3996	50	326.2	91.7%	80 118 4060 1.6% 9
m,p-Xylene	8057	100	851.1	90.1%	77 116 8184 1.6% 9
Methyl tert-Butyl Ether	4387	100	0	109.7%	62 122 4291 2.2% 7
o-Xylene	4144	50	298.7	96.1%	83 117 4245 2.4% 9
Toluene	4768	50	914.2	96.3%	80 116 4852 1.7% 9

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9909008

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9909008-02AMS		Batch ID: GC-1_990903		Test Code: SW8021B		Units: µg/L		Analysis Date 9/3/99		Prep Date:	
Client ID: Air Stripper Inflow		9909008		Run ID: GC-1_990903A				SeqNo: 19241			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2070	10	800	1300	96.2%	80	116				
Ethylbenzene	1499	10	800	720	97.4%	80	118				
m,p-Xylene	3094	20	1600	1600	93.4%	77	116				
Methyl tert-Butyl Ether	1133	20	800	350	97.9%	62	122				
o-Xylene	1295	10	800	480	101.9%	83	117				
Toluene	3236	10	800	2500	92.0%	80	116				

Sample ID: 9909008-02AMSD		Batch ID: GC-1_990903	Test Code: SW8021B		Units: µg/L		Analysis Date 9/3/99		Prep Date:		
Client ID: Air Stripper Inflow		9909008	Run ID: GC-1_990903A			SeqNo: 19242					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2018	10	800	1300	89.7%	80	116	2070	2.5%	8	
Ethylbenzene	1460	10	800	720	92.5%	80	118	1499	2.6%	9	
m,p-Xylene	3005	20	1600	1600	87.8%	77	116	3094	2.9%	9	
Methyl tert-Butyl Ether	1124	20	800	350	96.7%	62	122	1133	0.8%	7	
o-Xylene	1260	10	800	480	97.5%	83	117	1295	2.7%	9	
Toluene	3147	10	800	2500	80.9%	80	116	3236	2.8%	9	

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

On Site Technologies, LTD.

Date: 09-Sep-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9909008
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_990902	Test Code: SW8021B	Units: µg/L	Analysis Date 9/2/99	Prep Date:
Client ID: 9909008	Run ID: GC-1_990902B	PQL	SPK value	SeqNo: 19145	
Analyte	Result	SPK	SPK Ref Val	LowLimit	HighLimit
Benzene	39.25	0.5	0.0366	87	119
Ethylbenzene	39.39	0.5	0.0702	89	117
m,p-Xylene	74.66	1	0.1259	88	114
Methyl tert-Butyl Ether	40.25	1	0	69	129
o-Xylene	39.7	0.5	0.1153	90	116
Toluene	39.38	0.5	0.1935	90	115

Sample ID: LCS WATER	Batch ID: GC-1_990903	Test Code: SW8021B	Units: µg/L	Analysis Date 9/3/99	Prep Date:
Client ID: 9909008	Run ID: GC-1_990903A	PQL	SPK value	SeqNo: 19239	
Analyte	Result	SPK	SPK Ref Val	LowLimit	HighLimit
Benzene	40.43	0.5	0.0302	87	119
Ethylbenzene	40.66	0.5	0	89	117
m,p-Xylene	76.91	1	0	88	114
Methyl tert-Butyl Ether	41.76	1	0	69	129
o-Xylene	40.84	0.5	0.0586	90	116
Toluene	40.49	0.5	0.1135	90	115

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

On Site Technologies, LTD.

Date: 09-Sep-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9909008

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_9906		Batch ID: GC-1_990902		Test Code: SW8021B		Units: µg/L		Analysis Date 9/2/99		Prep Date:	
Client ID:		9909008		Run ID: GC-1_990902B				SeqNo: 19142			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.29	0.5	20	0	101.4%	85	115				
Ethylbenzene	20.5	0.5	20	0	102.5%	85	115				
m,p-Xylene	38.79	1	40	0	97.0%	85	115				
Methyl tert-Butyl Ether	20.72	1	20	0	103.6%	85	115				
o-Xylene	20.62	0.5	20	0	103.1%	85	115				
Toluene	20.41	0.5	20	0	102.1%	85	115				
1,4-Difluorobenzene	89.46	0	100	0	89.5%	80	120				
4-Bromochlorobenzene	86.94	0	100	0	86.9%	80	120				
Fluorobenzene	87.8	0	100	0	87.8%	80	120				

Sample ID: CCV2 BTEX_9906		Batch ID: GC-1_990902		Test Code: SW8021B		Units: µg/L		Analysis Date 9/2/99		Prep Date:			
Client ID:	9909008	Run ID:	GC-1_990902B	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	19.86			0.5	20	0	99.3%	85	115				
Ethylbenzene	19.97			0.5	20	0	99.8%	85	115				
m,p-Xylene	37.78			1	40	0	94.5%	85	115				
Methyl tert-Butyl Ether	21.38			1	20	0	106.9%	85	115				
o-Xylene	20.2			0.5	20	0	101.0%	85	115				
Toluene	19.9			0.5	20	0	99.5%	85	115				
1,4-Difluorobenzene	89.35			0	100	0	89.4%	80	120				
4-Bromochlorobenzene	87.6			0	100	0	87.6%	80	120				
Fluorobenzene	87.76			0	100	0	87.8%	80	120				

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9909008

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_9906		Batch ID: GC-1_990902		Test Code: SW8021B		Units: µg/L		Analysis Date 9/2/99		Prep Date:	
Client ID: 9909008		Run ID: GC-1_990902B		PQL		SPK value		SeqNo: 19144			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	37.86	0.5	40	0	94.7%	85	115				
Ethylbenzene	37.9	0.5	40	0	94.8%	85	115				
m,p-Xylene	71.82	1	80	0	89.8%	85	115				
Methyl tert-Butyl Ether	40.79	1	40	0	102.0%	85	115				
o-Xylene	38.3	0.5	40	0	95.7%	85	115				
Toluene	38.01	0.5	40	0	95.0%	85	115				
1,4-Difluorobenzene	88.4	0	100	0	88.4%	80	120				
4-Bromochlorobenzene	87.11	0	100	0	87.1%	80	120				
Fluorobenzene	87.42	0	100	0	87.4%	80	120				

Sample ID: CCV1 BTEX_9906		Batch ID: GC-1_990903		Test Code: SW8021B		Units: µg/L		Analysis Date 9/3/99		Prep Date:	
Client ID: 9909008		Run ID: GC-1_990903A		PQL		SPK value		SeqNo: 19236			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.61	0.5	20	0	108.0%	85	115				
Ethylbenzene	21.86	0.5	20	0	109.3%	85	115				
m,p-Xylene	41.23	1	40	0	103.1%	85	115				
Methyl tert-Butyl Ether	21.54	1	20	0	107.7%	85	115				
o-Xylene	21.82	0.5	20	0	109.1%	85	115				
Toluene	21.62	0.5	20	0	108.1%	85	115				
1,4-Difluorobenzene	89.26	0	100	0	89.3%	80	120				
4-Bromochlorobenzene	89.78	0	100	0	89.8%	80	120				
Fluorobenzene	88.08	0	100	0	88.1%	80	120				

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9909008

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_9906		Batch ID: GC-1_990903	Test Code: SW8021B		Units: µg/L		Analysis Date 9/3/99		Prep Date:					
Client ID:		9909008	Run ID:	GC-1_990903A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result												
Benzene		20.42			0.5	20	0	102.1%	85	115				
Ethylbenzene		20.52			0.5	20	0	102.6%	85	115				
m,p-Xylene		38.83			1	40	0	97.1%	85	115				
Methyl tert-Butyl Ether		22.34			1	20	0	111.7%	85	115				
o-Xylene		20.68			0.5	20	0	103.4%	85	115				
Toluene		20.46			0.5	20	0	102.3%	85	115				
1,4-Difluorobenzene		89.27			0	100	0	89.3%	80	120				
4-Bromochlorobenzene		87.44			0	100	0	87.4%	80	120				
Fluorobenzene		87.96			0	100	0	88.0%	80	120				

Sample ID: CCV3 BTEX_9906		Batch ID: GC-1_990903	Test Code: SW8021B	Units: µg/L		Analysis Date 9/3/99		Prep Date:					
Client ID:		Run ID:	GC-1_990903A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	19.52			0.5	20	0	97.6%	85	115				
Ethylbenzene	20.68			0.5	20	0	103.4%	85	115				
m,p-Xylene	39.43			1	40	0	98.6%	85	115				
Methyl tert-Butyl Ether	20.12			1	20	0	100.6%	85	115				
o-Xylene	20.86			0.5	20	0	104.3%	85	115				
Toluene	20.59			0.5	20	0	103.0%	85	115				
1,4-Difluorobenzene	89.34			0	100	0	89.3%	80	120				
4-Bromochlorobenzene	85.28			0	100	0	85.3%	80	120				
Fluorobenzene	87.72			0	100	0	87.7%	80	120				

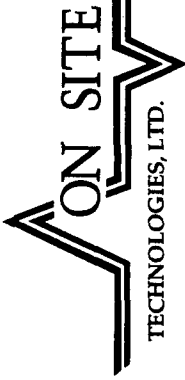
Qualifiers: ND - Not Detected at the Reporting Limit

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



CHAIN OF CUSTODY RECORD

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 9/2/99
Page: 1 of 1

Purchase Order No.: <u>99-360</u>		Project No.	
Name <u>Same</u>		Dept.	
Company <u>Same</u>			
Address <u>626 Rd 5500</u>			
City, State, Zip <u>Bloomfield, NM 87413</u>			
PROJECT LOCATION: <u>Thruway between Air Strippa</u>			
SAMPLER'S SIGNATURE: <u>Ken Smith</u>			
SEND INVOICE TO			
Name <u>Terry Galt</u>		Title	
Company <u>Biotech Remediation Inc</u>			
Mailing Address <u>210 E. 20th Street, Suite 400</u>			
City, State, Zip <u>Farmington, NM 87401</u>			
Telephone No. <u>505-327-4965</u>		Telefax No.	
RESULTS TO REPORT		ANALYSIS REQUESTED	
Number of Containers			
SAMPLE IDENTIFICATION		LAB ID	
DATE	TIME	MATRIX	PRES.
9/2	1425	H ₂ O Hcl	✓
9/2	1430	✓	✓
9/2	1430	✓	✓
Travel Blank		✓	
Air Strippa Influent		✓	
Air Strippa Effluent		✓	
Relinquished by: <u>Ken Smith</u>		Received by: <u>Heidi Rouse</u>	
Date/Time <u>9/2/99</u>		Date/Time <u>9/2/99</u>	
Relinquished by:		Date/Time	
Relinquished by:		Date/Time	
Relinquished by:		Date/Time	
Method of Shipment:		By Date	
Authorized by: <u>Ken Smith</u>		Date <u>9/2/99</u>	
(Client Signature Must Accompany Request)		Special Instructions / Remarks:	

OFF: (505) 325-5667



LAB: (505) 325-1556

August 19, 1999

AUG 25 1999

A handwritten signature, likely of the sender, David Cox, written in dark ink.

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

RE: Thiftway Refinery Air Stripper

Order No.: 9908020

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 08/09/1999 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature of David Cox, written in dark ink.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 19-Aug-99

CLIENT: BioTech Remediation, Inc.
Project: Thiftway Refinery Air Stripper
Lab Order: 9908020

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 19-Aug-99

Client: BioTech Remediation, Inc.

Client Sample Info: Thiftway Refinery Air Stripper

Work Order: 9908020

Client Sample ID: Travel Blank

Lab ID: 9908020-01A Matrix: AQUEOUS

Collection Date: 08/09/1999 2:00:00 PM

Project: Thiftway Refinery Air Stripper

COC Record: 10238

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DC
Methyl tert-Butyl Ether	ND	1		µg/L	1	08/12/1999
Benzene	ND	0.5		µg/L	1	08/12/1999
Toluene	ND	0.5		µg/L	1	08/12/1999
Ethylbenzene	ND	0.5		µg/L	1	08/12/1999
m,p-Xylene	ND	1		µg/L	1	08/12/1999
o-Xylene	ND	0.5		µg/L	1	08/12/1999

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 19-Aug-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thiftway Refinery Air Stripper
Work Order:	9908020	Client Sample ID:	Influent
Lab ID:	9908020-02A	Matrix:	AQUEOUS
Project:	Thiftway Refinery Air Stripper	Collection Date:	08/09/1999 2:45:00 PM
		COC Record:	10238

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	150	100		µg/L	100	08/12/1999
Benzene	840	50		µg/L	100	08/12/1999
Toluene	1800	50		µg/L	100	08/12/1999
Ethylbenzene	670	50		µg/L	100	08/12/1999
m,p-Xylene	1300	100		µg/L	100	08/12/1999
o-Xylene	440	50		µg/L	100	08/12/1999

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 19-Aug-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thiftway Refinery Air Stripper
Work Order:	9908020	Client Sample ID:	Effluent
Lab ID:	9908020-03A	Matrix:	AQUEOUS
Project:	Thiftway Refinery Air Stripper	Collection Date:	08/09/1999 2:50:00 PM
		COC Record:	10238

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	08/12/1999
Benzene	ND	0.5		µg/L	1	08/12/1999
Toluene	1	0.5		µg/L	1	08/12/1999
Ethylbenzene	ND	0.5		µg/L	1	08/12/1999
m,p-Xylene	1.2	1		µg/L	1	08/12/1999
o-Xylene	ND	0.5		µg/L	1	08/12/1999

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 19-Aug-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9908020
Project: Thiftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_990812	Test Code: SW8021B	Units: µg/L	Analysis Date 08/12/1999	Prep Date:						
Client ID:	9908020	Run ID: GC-1_990812B		SeqNo: 18435							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0317	0.5									J
Ethylbenzene	.065	0.5									J
m,p-Xylene	.1147	1									J
Methyl tert-Butyl Ether	ND	1									
o-Xylene	.0633	0.5									J
Toluene	.1269	0.5									J

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

On Site Technologies, LTD.

Date: 19-Aug-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9908020

Project: Thiftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9908020-02AMS		Batch ID: GC-1_990812	Test Code: SW8021B	Units: µg/L	Analysis Date 08/12/1999		Prep Date:
Client ID: Influent	9908020	Run ID: GC-1_990812B	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit SeqNo: 18436
Analyte	Result						
Benzene	4697	50	50	4000	839.7	96.4%	80 116
Ethylbenzene	4479	50	50	4000	672.4	95.2%	80 118
m,p-Xylene	8542	100	100	8000	1299	90.5%	77 116
Methyl tert-Butyl Ether	4464	100	100	4000	151.5	107.8%	62 122
o-Xylene	4316	50	50	4000	435.4	97.0%	83 117
Toluene	5677	50	50	4000	1831	96.2%	80 116

Sample ID: 9908020-02AMSD		Batch ID: GC-1_990812	Test Code: SW8021B	Units: µg/L	Analysis Date 08/12/1999		Prep Date:
Client ID: Influent	9908020	Run ID: GC-1_990812B	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit SeqNo: 18437
Analyte	Result						
Benzene	4633	50	50	4000	839.7	94.8%	80 116
Ethylbenzene	4416	50	50	4000	672.4	93.6%	80 118
m,p-Xylene	8423	100	100	8000	1299	89.0%	77 116
Methyl tert-Butyl Ether	4237	100	100	4000	151.5	102.1%	62 122
o-Xylene	4271	50	50	4000	435.4	95.9%	83 117
Toluene	5593	50	50	4000	1831	94.0%	80 116

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

On Site Technologies, LTD.

Date: 19-Aug-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9908020

Project: Thiftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_990812	Test Code: SW8021B	Units: µg/L	Analysis Date 08/12/1999	Prep Date:
Client ID: 9908020	Run ID: GC-1_990812B	PQL	SPK value	SeqNo: 18434	
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
Benzene	38.99	0.5	40	87	119
Ethylbenzene	38.68	0.5	40	89	117
m,p-Xylene	73.53	1	80	88	114
Methyl tert-Butyl Ether	41.57	1	40	69	129
o-Xylene	39.2	0.5	40	90	116
Toluene	38.89	0.5	40	90	115
				%REC	%RPD
				97.4%	
				96.5%	
				91.8%	
				103.9%	
				97.8%	
				96.9%	
				RPD Ref Val	RPDLimit
					Qual

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

On Site Technologies, LTD.

Date: 19-Aug-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9908020

Project: Thiftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_9906		Batch ID: GC-1_990812		Test Code: SW8021B		Units: µg/L		Analysis Date 08/12/1999		Prep Date:		
Client ID:		9908020		Run ID: GC-1_990812B				SeqNo: 18431				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		20.25	0.5	20	0	101.3%	85	115				
Ethylbenzene		20.17	0.5	20	0	100.9%	85	115				
m,p-Xylene		38.21	1	40	0	95.5%	85	115				
Methyl tert-Butyl Ether		21.03	1	20	0	105.1%	85	115				
o-Xylene		20.33	0.5	20	0	101.6%	85	115				
Toluene		20.17	0.5	20	0	100.9%	85	115				
1,4-Difluorobenzene		89.46	0	100	0	89.5%	80	120				
4-Bromochlorobenzene		89.62	0	100	0	89.6%	80	120				
Fluorobenzene		88.29	0	100	0	88.3%	80	120				

Sample ID: CCV2 BTEX_9906		Batch ID: GC-1_990812		Test Code: SW8021B		Units: µg/L		Analysis Date 08/12/1999		Prep Date:	
Client ID: 9908020		Run ID: GC-1_990812B		PQL		SPK value		SeqNo: 18432			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.5	0.5	20	0	102.5%	85	115				
Ethylbenzene	20.21	0.5	20	0	101.1%	85	115				
m,p-Xylene	38.34	1	40	0	95.9%	85	115				
Methyl tert-Butyl Ether	22.68	1	20	0	113.4%	85	115				
o-Xylene	20.46	0.5	20	0	102.3%	85	115				
Toluene	20.34	0.5	20	0	101.7%	85	115				
1,4-Difluorobenzene	89.5	0	100	0	89.5%	80	120				
4-Bromochlorobenzene	88.61	0	100	0	88.6%	80	120				
Fluorobenzene	88.38	0	100	0	88.4%	80	120				

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9908020

Project: Thifway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_9906	Batch ID: GC-1_990812	Test Code: SW8021B	Units: µg/L	Analysis Date 08/12/1999	Prep Date:
Client ID: 9908020	Run ID: GC-1_990812B	PQL	SPK value	SeqNo: 18433	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Benzene	39.49	0.5	40	0	98.7%
Ethylbenzene	38.81	0.5	40	0	97.0%
m,p-Xylene	73.67	1	80	0	92.1%
Methyl tert-Butyl Ether	42.55	1	40	0	106.4%
o-Xylene	39.41	0.5	40	0	98.5%
Toluene	39.26	0.5	40	0	98.1%
1,4-Difluorobenzene	88.89	0	100	0	88.9%
4-Bromochlorobenzene	89.65	0	100	0	89.7%
Fluorobenzene	87.76	0	100	0	87.8%
				HighLimit	RPD Ref Val
				85	115
				85	115
				85	115
				85	115
				85	115
				85	115
				80	120
				80	120
				80	120

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

On Site Technologies, LTD.

Date: 19-Aug-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9908020
Project: Thiftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
9908011-01A	87.3	84.8	86.5					
9908012-01A	90	89.1	89.2					
9908012-03A	90	89.4	89.5					
9908012-04A	90	89.4	89.5					
9908014-01A	90.4	89.3	89.4					
9908015-01A	87.8	88.9	87.6					
9908015-02A	83.1	84.7	83.3					
9908015-03A	84.2	87.2	83.8					
9908015-04A	90.6	88.7	89.7					
9908016-01A	90.9	88.2	89.5					
9908016-02A	86.9	83.1	88.2					
9908016-04A	90.4	88.7	89.6					
9908020-01A	89.7	88.6	89.3					
9908020-02A	89.3	86.5	88.7					
9908020-02AMS	89	88.6	87.6					
9908020-02AMSD	89	88.6	88.1					
9908020-03A	89.1	87.9	89.3					
CCV1 BTEX_99061	89.4	89.6	88.3					
CCV2 BTEX_99061	89.5	88.6	88.4					
CCV3 BTEX_99061	88.9	89.6	87.8					
LCS WATER	89.6	90.6	88.4					
MB1	89.9	89.3	89.2					

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-120
4BCBZ	= 4-Bromochlorobenzene	80-120
FLBZ	= Fluorobenzene	80-120

* Surrogate recovery outside acceptance limits



CHAIN OF CUSTODY RECORD

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 8/9/99

Page: 1 of 1

Purchase Order No.: <u>99-857</u>		Project No.	
SEND INVOICE TO		Name <u>Same</u>	
Company		Dept.	
Address			
City, State, Zip			
PROJECT LOCATION: <u>Thurston Refinery Air Strippa</u> <u>626 Rd 3500</u> <u>Bloomfield, NM</u>			
SAMPLER'S SIGNATURE: <u>Ken Sinker</u>			
ANALYSIS REQUESTED			
LAB ID			
RESULTS TO			
REPORT			
Containers			
Number of			
SAMPLE IDENTIFICATION			
DATE			
TIME			
MATRIX			
PRES.			
Travel Blank			
Influent			
Effluent			
Relinquished by: <u>Ken Sinker</u>			
Date/Time <u>8/9/99 1600</u>			
Received by: <u>Ken Sinker</u>			
Date/Time			
Relinquished by:			
Date/Time			
Relinquished by:			
Date/Time			
Method of Shipment:			
Rush			
24-48 Hours			
10 Working Days			
By Date			
Special Instructions / Remarks:			
Authorized by: <u>Ken Sinker</u> Date <u>8/9/99</u>			
(Client Signature Must Accompany Request)			

OFF: (505) 325-5667



LAB: (505) 325-1556

July 13, 1999

JUL 16 1999

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

RE: Thriftway Refinery Air Stripper

Order No.: 9907015

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 7/7/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in dark ink, appearing to be "David Cox", written over a horizontal line.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 13-Jul-99

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 9907015

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 13-Jul-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9907015	Client Sample ID:	Travel Blank
Lab ID:	9907015-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	7/7/99 9:00:00 AM
		COC Record:	10217

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DC
Methyl tert-Butyl Ether	ND	1		µg/L	1	7/8/99
Benzene	ND	0.5		µg/L	1	7/8/99
Toluene	ND	0.5		µg/L	1	7/8/99
Ethylbenzene	ND	0.5		µg/L	1	7/8/99
m,p-Xylene	ND	1		µg/L	1	7/8/99
o-Xylene	ND	0.5		µg/L	1	7/8/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 13-Jul-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9907015	Client Sample ID:	Air Stripper Influent
Lab ID:	9907015-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	7/7/99 10:50:00 AM
		COC Record:	10217

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	960	100		µg/L	100	7/8/99
Benzene	2600	50		µg/L	100	7/8/99
Toluene	6700	50		µg/L	100	7/8/99
Ethylbenzene	1000	50		µg/L	100	7/8/99
m,p-Xylene	2300	100		µg/L	100	7/8/99
o-Xylene	930	50		µg/L	100	7/8/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 13-Jul-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9907015	Client Sample ID:	Air Stripper Effluent
Lab ID:	9907015-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	7/7/99 10:45:00 AM
		COC Record:	10217

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DC
Methyl tert-Butyl Ether	14	1		µg/L	1	7/8/99
Benzene	1.9	0.5		µg/L	1	7/8/99
Toluene	5.4	0.5		µg/L	1	7/8/99
Ethylbenzene	0.6	0.5		µg/L	1	7/8/99
m,p-Xylene	2.2	1		µg/L	1	7/8/99
o-Xylene	1.3	0.5		µg/L	1	7/8/99

Qualifiers:

- PQL - Practical Quantitation Limit
- ND - Not Detected at Practical Quantitation Limit
- J - Analyte detected below Practical Quantitation Limit
- 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
- Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 13-Jul-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9907015

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_990708	Test Code: SW8021B	Units: µg/L	Analysis Date: 7/8/99	Prep Date:
Client ID:	9907015	Run ID: GC-1_990708A		SeqNo: 16883	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	.3439	0.5			
m,p-Xylene	ND	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.1803	0.5			J

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

On Site Technologies, LTD.

Date: 13-Jul-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9907015

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9906081-03AMS		Batch ID: GC-1_990708	Test Code: SW8021B	Units: µg/L	Analysis Date 7/8/99		Prep Date:	
Client ID: 9907015		Run ID: GC-1_990708A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result						RPDLimit	RPDLimit
Benzene	434.6	5	400	0	0	108.6%	73	115
Ethylbenzene	431.8	5	400	3.954	3.954	107.0%	74	117
m,p-Xylene	862.2	10	800	0	0	107.8%	76	112
Methyl tert-Butyl Ether	422.2	10	400	0	0	105.6%	62	122
o-Xylene	433.1	5	400	0	0	108.3%	83	112
Toluene	430.2	5	400	2.339	2.339	107.0%	71	120

Sample ID: 9906081-03AMSD		Batch ID: GC-1_990708	Test Code: SW8021B	Units: µg/L	Analysis Date 7/8/99		Prep Date:	
Client ID: 9907015		Run ID: GC-1_990708A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result						RPDLimit	RPDLimit
Benzene	413.4	5	400	0	0	103.4%	73	115
Ethylbenzene	412.7	5	400	3.954	3.954	102.2%	74	117
m,p-Xylene	825.7	10	800	0	0	103.2%	76	112
Methyl tert-Butyl Ether	409.8	10	400	0	0	102.4%	62	122
o-Xylene	415.6	5	400	0	0	103.9%	83	112
Toluene	409.6	5	400	2.339	2.339	101.8%	71	120

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

On Site Technologies, LTD.

Date: 13-Jul-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9907015

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_990708	Test Code: SW8021B	Units: µg/L	Analysis Date 7/8/99	Prep Date:
Client ID: 9907015	Run ID: GC-1_990708A	PQL	SPK value	SeqNo: 16882	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	41.56	0.5	40	0	103.9% 84 110
Ethylbenzene	41.79	0.5	40	0.3439	103.6% 86 113
m,p-Xylene	83.92	1	80	0	104.9% 81 114
Methyl tert-Butyl Ether	40.46	1	40	0	101.2% 69 129
o-Xylene	42.13	0.5	40	0	105.3% 86 112
Toluene	41.28	0.5	40	0.1803	102.8% 85 111

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

On Site Technologies, LTD.

Date: 13-Jul-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9907015

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_9906		Batch ID: GC-1_990708	Test Code: SW8021B		Units: µg/L		Analysis Date 7/8/99		Prep Date:					
Client ID:		9907015	Run ID:	GC-1_990708A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result												
Benzene		21.49			0.5	20	0	107.5%	85	115				
Ethylbenzene		21.9			0.5	20	0	109.5%	85	115				
m,p-Xylene		43.86			1	40	0	109.7%	85	115				
Methyl tert-Butyl Ether		21.04			1	20	0	105.2%	85	115				
o-Xylene		21.95			0.5	20	0	109.8%	85	115				
Toluene		21.54			0.5	20	0	107.7%	85	115				
1,4-Difluorobenzene		89.32			0	100	0	89.3%	80	120				
4-Bromochlorobenzene		90.45			0	100	0	90.4%	80	120				
Fluorobenzene		88.46			0	100	0	88.5%	80	120				

Sample ID: CCV2 BTEX_9906		Batch ID: GC-1_990708	Test Code: SW8021B	Units: µg/L	Analysis Date 7/8/99		Prep Date:				
Client ID:		Run ID:	GC-1_990708A		SeqNo:	16880					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.7	0.5	20	0	108.5%	85	115				
Ethylbenzene	21.73	0.5	20	0	108.7%	85	115				
m,p-Xylene	43.34	1	40	0	108.3%	85	115				
Methyl tert-Butyl Ether	21.2	1	20	0	106.0%	85	115				
o-Xylene	22.05	0.5	20	0	110.3%	85	115				
Toluene	21.56	0.5	20	0	107.8%	85	115				
1,4-Difluorobenzene	88.98	0	100	0	89.0%	80	120				
1-Bromochlorobenzene	90.63	0	100	0	90.6%	80	120				
Fluorobenzene	88.29	0	100	0	88.3%	80	120				

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9907015

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_9906		Batch ID: GC-1_990708	Test Code: SW8021B	Units: µg/L		Analysis Date 7/8/99		Prep Date:			
Client ID:		9907015	Run ID:	GC-1_990708A		SeqNo: 16881					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	43.59	0.5	40	0	109.0%	85	115				
Ethylbenzene	43.57	0.5	40	0	108.9%	85	115				
m,p-Xylene	87.2	1	80	0	109.0%	85	115				
Methyl tert-Butyl Ether	43.44	1	40	0	108.6%	85	115				
o-Xylene	43.86	0.5	40	0	109.7%	85	115				
Toluene	43.19	0.5	40	0	108.0%	85	115				
1,4-Difluorobenzene	89.76	0	100	0	89.8%	80	120				
4-Bromochlorobenzene	90.48	0	100	0	90.5%	80	120				
Fluorobenzene	89.1	0	100	0	89.1%	80	120				

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

On Site Technologies, LTD.

Date: 13-Jul-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9907015
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
9906081-01A	89.4	90.4	89.2					
9906081-02A	89.4	91.5	89					
9906081-03A	89.6	90.7	88.9					
9906081-03AMS	89.3	89.9	88.8					
9906081-03AMSD	89.2	90.9	88					
9906081-04A	89.9	90.6	89.1					
9906081-05A	88.6	90.2	88.6					
9906081-06A	89.6	91.3	88.8					
9906081-07A	89.3	91.4	88.8					
9906081-12A	89.4	89.9	88.5					
9906081-16A	89.6	91.5	88.9					
9907015-01A	89.5	90.2	88.8					
9907015-02A	89.1	90.4	88.4					
9907015-03A	88.9	89.6	88.1					
CCV1 BTEX_99061	89.3	90.4	88.4					
CCV2 BTEX_99061	89	90.6	88.3					
CCV3 BTEX_99061	89.8	90.5	89.1					
LCS WATER	88.5	90.4	88					
MB1	89.4	89.9	88.5					

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-120
4BCBZ	= 4-Bromochlorobenzene	80-120
FLBZ	= Fluorobenzene	80-120

* Surrogate recovery outside acceptance limits

CHAIN OF CUSTODY RECORD

Date: 7/1/97

Page: 1 of 1

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

[illegible]

OFF: (505) 325-5667



LAB: (505) 325-1556

June 17, 1999

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

JUN 22 1999

A handwritten signature, likely of the sender, David Cox, written in dark ink.

RE: Thriftway Refinery; Bloomfield, NM

Order No.: 9906015

Dear Terry Griffin,

On Site Technologies, LTD. received 27 samples on 6/4/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature of David Cox, written in dark ink.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 17-Jun-99

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery; Bloomfield, NM
Lab Order: 9906015

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

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ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	Travel Blank
Lab ID:	9906015-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 10:00:00 AM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	6/15/99
Benzene	ND	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	ND	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-13
Lab ID:	9906015-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 10:55:00 AM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	6/15/99
Benzene	ND	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	ND	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	Firewater Pond
Lab ID:	9906015-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 11:12:00 AM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	4.6	1		µg/L	1	6/15/99
Benzene	ND	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	ND	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-11
Lab ID:	9906015-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 11:42:00 AM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	6/15/99
Benzene	ND	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	ND	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

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ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-10
Lab ID:	9906015-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 12:15:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	6/15/99
Benzene	ND	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	ND	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	Field Blank
Lab ID:	9906015-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 12:25:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	6/15/99
Benzene	ND	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	ND	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	Rinse Water
Lab ID:	9906015-07A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 12:26:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	6/15/99
Benzene	ND	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	ND	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

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ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-9
Lab ID:	9906015-08A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 12:52:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	4	1		µg/L	1	6/15/99
Benzene	ND	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	ND	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	Stripper Influent
Lab ID:	9906015-09A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 1:55:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	200	100		µg/L	100	6/15/99
Benzene	1200	50		µg/L	100	6/15/99
Toluene	1800	50		µg/L	100	6/15/99
Ethylbenzene	900	50		µg/L	100	6/15/99
m,p-Xylene	2400	100		µg/L	100	6/15/99
o-Xylene	790	50		µg/L	100	6/15/99

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	Stripper Effluent
Lab ID:	9906015-10A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 2:05:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	21	1		µg/L	1	6/15/99
Benzene	2.3	0.5		µg/L	1	6/15/99
Toluene	3.8	0.5		µg/L	1	6/15/99
Ethylbenzene	2.3	0.5		µg/L	1	6/15/99
m,p-Xylene	7.2	1		µg/L	1	6/15/99
o-Xylene	3.2	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr: - Surrogate

1 of 1

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-21
Lab ID:	9906015-11A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 2:40:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	120	1		µg/L	1	6/15/99
Benzene	2.6	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	0.6	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-22
Lab ID:	9906015-12A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 3:07:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	29	1		µg/L	1	6/15/99
Benzene	ND	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	ND	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-20
Lab ID:	9906015-13A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 3:33:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	86	1		µg/L	1	6/15/99
Benzene	5.8	0.5		µg/L	1	6/15/99
Toluene	4.7	0.5		µg/L	1	6/15/99
Ethylbenzene	3.7	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-5
Lab ID:	9906015-14A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 4:03:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	56	1		µg/L	1	6/15/99
Benzene	12	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	0.8	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-5 Duplicate
Lab ID:	9906015-15A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 4:03:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	57	1		µg/L	1	6/15/99
Benzene	13	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	0.7	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-15
Lab ID:	9906015-16A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/2/99 5:07:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	6/15/99
Benzene	ND	0.5		µg/L	1	6/15/99
Toluene	ND	0.5		µg/L	1	6/15/99
Ethylbenzene	ND	0.5		µg/L	1	6/15/99
m,p-Xylene	ND	1		µg/L	1	6/15/99
o-Xylene	ND	0.5		µg/L	1	6/15/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	Travel Blank
Lab ID:	9906015-17A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/3/99 9:30:00 AM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	6/16/99
Benzene	ND	0.5		µg/L	1	6/16/99
Toluene	ND	0.5		µg/L	1	6/16/99
Ethylbenzene	ND	0.5		µg/L	1	6/16/99
m,p-Xylene	ND	1		µg/L	1	6/16/99
o-Xylene	ND	0.5		µg/L	1	6/16/99

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-16
Lab ID:	9906015-18A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/3/99 10:29:00 AM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	6/16/99
Benzene	ND	0.5		µg/L	1	6/16/99
Toluene	ND	0.5		µg/L	1	6/16/99
Ethylbenzene	ND	0.5		µg/L	1	6/16/99
m,p-Xylene	ND	1		µg/L	1	6/16/99
o-Xylene	ND	0.5		µg/L	1	6/16/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	Field Blank
Lab ID:	9906015-19A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/3/99 10:34:00 AM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	6/16/99
Benzene	ND	0.5		µg/L	1	6/16/99
Toluene	ND	0.5		µg/L	1	6/16/99
Ethylbenzene	ND	0.5		µg/L	1	6/16/99
m,p-Xylene	ND	1		µg/L	1	6/16/99
o-Xylene	ND	0.5		µg/L	1	6/16/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-1
Lab ID:	9906015-20A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/3/99 11:25:00 AM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	78	1		µg/L	1	6/16/99
Benzene	29	0.5		µg/L	1	6/16/99
Toluene	ND	0.5		µg/L	1	6/16/99
Ethylbenzene	1.1	0.5		µg/L	1	6/16/99
m,p-Xylene	ND	1		µg/L	1	6/16/99
o-Xylene	ND	0.5		µg/L	1	6/16/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-1 Duplicate
Lab ID:	9906015-21A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/3/99 11:25:00 AM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	80	1		µg/L	1	6/16/99
Benzene	27	0.5		µg/L	1	6/16/99
Toluene	ND	0.5		µg/L	1	6/16/99
Ethylbenzene	1	0.5		µg/L	1	6/16/99
m,p-Xylene	ND	1		µg/L	1	6/16/99
o-Xylene	ND	0.5		µg/L	1	6/16/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-19
Lab ID:	9906015-22A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/3/99 11:55:00 AM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	45	1		µg/L	1	6/16/99
Benzene	7.6	0.5		µg/L	1	6/16/99
Toluene	0.9	0.5		µg/L	1	6/16/99
Ethylbenzene	35	0.5		µg/L	1	6/16/99
m,p-Xylene	15	1		µg/L	1	6/16/99
o-Xylene	1.2	0.5		µg/L	1	6/16/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-6
Lab ID:	9906015-23A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/3/99 1:59:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	47	1		µg/L	1	6/16/99
Benzene	29	0.5		µg/L	1	6/16/99
Toluene	0.5	0.5		µg/L	1	6/16/99
Ethylbenzene	2.9	0.5		µg/L	1	6/16/99
m,p-Xylene	1.2	1		µg/L	1	6/16/99
o-Xylene	ND	0.5		µg/L	1	6/16/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	RW-26
Lab ID:	9906015-24A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/3/99 2:59:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	520	100		µg/L	100	6/16/99
Benzene	2500	50		µg/L	100	6/16/99
Toluene	470	50		µg/L	100	6/16/99
Ethylbenzene	190	50		µg/L	100	6/16/99
m,p-Xylene	1200	100		µg/L	100	6/16/99
o-Xylene	150	50		µg/L	100	6/16/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-2
Lab ID:	9906015-25A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/3/99 2:27:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	160	20		µg/L	20	6/16/99
Benzene	2000	10		µg/L	20	6/16/99
Toluene	31	10		µg/L	20	6/16/99
Ethylbenzene	650	10		µg/L	20	6/16/99
m,p-Xylene	840	20		µg/L	20	6/16/99
o-Xylene	230	10		µg/L	20	6/16/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	Rinse Water
Lab ID:	9906015-26A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/3/99 3:07:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	ND	1		µg/L	1	6/16/99
Benzene	ND	0.5		µg/L	1	6/16/99
Toluene	ND	0.5		µg/L	1	6/16/99
Ethylbenzene	ND	0.5		µg/L	1	6/16/99
m,p-Xylene	ND	1		µg/L	1	6/16/99
o-Xylene	ND	0.5		µg/L	1	6/16/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 17-Jun-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9906015	Client Sample ID:	MW-18
Lab ID:	9906015-27A	Matrix:	AQUEOUS
Project:	Thriftway Refinery; Bloomfield, NM	Collection Date:	6/3/99 4:07:00 PM
		COC Record:	5369

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	80	1		µg/L	1	6/16/99
Benzene	36	0.5		µg/L	1	6/16/99
Toluene	0.9	0.5		µg/L	1	6/16/99
Ethylbenzene	4.2	0.5		µg/L	1	6/16/99
m,p-Xylene	1.2	1		µg/L	1	6/16/99
o-Xylene	ND	0.5		µg/L	1	6/16/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

On Site Technologies, LTD.

Date: 17-Jun-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9906015

Project: Thriftway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_990615	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/15/99	Prep Date:
Client ID:	9906015	Run ID: GC-1_990615A		SeqNo: 15979	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	.1801	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0595	0.5			J
Toluene	.1008	0.5			J

Sample ID: MB1	Batch ID: GC-1_990616	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/16/99	Prep Date:
Client ID:	9906015	Run ID: GC-1_990616A		SeqNo: 16005	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0555	0.5			J
Toluene	.1036	0.5			J

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

On Site Technologies, LTD.

CLIENT: BioTech Remediation, Inc.

Work Order: 9906015

Project: Thriftway Refinery; Bloomfield, NM

Date: 17-Jun-99

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9906004-05AMS	Batch ID: GC-1_990615	Test Code: SW8021B	Units: µg/L	Analysis Date 6/15/99	Prep Date:						
Client ID:	9906015	Run ID: GC-1_990615A		SeqNo: 15980							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	5776	25	2000	3902	93.7%	73	115				
Ethylbenzene	2327	25	2000	225.3	105.1%	74	117				
m,p-Xylene	6069	50	4000	2097	99.3%	76	112				
Methyl tert-Butyl Ether	2091	50	2000	54.6	101.8%	62	122				
o-Xylene	2580	25	2000	472.6	105.4%	83	112				
Toluene	8301	25	2000	6415	94.3%	71	120				

Sample ID: 9906004-05AMSD		Batch ID: GC-1_990615		Test Code: SW8021B		Units: µg/L		Analysis Date 6/15/99		Prep Date:	
Client ID:		9906015		Run ID:		GC-1_990615A		SeqNo: 15981			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	5710	25	2000	3900	90.5%	73	115	5776	1.2%	8	
Ethylbenzene	2304	25	2000	220	104.2%	74	117	2327	1.0%	9	
m,p-Xylene	6014	50	4000	2100	97.8%	76	112	6069	0.9%	9	
Methyl tert-Butyl Ether	2109	50	2000	54	102.8%	62	122	2091	0.9%	7	
o-Xylene	2568	25	2000	470	104.9%	83	112	2580	0.5%	9	
Toluene	8208	25	2000	6400	90.4%	71	120	8301	1.1%	9	

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9906015

Project: Thriftway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9906015-24AMS		Batch ID: GC-1_990616		Test Code: SW8021B		Units: µg/L		Analysis Date 6/16/99		Prep Date:		
Client ID: RW-26		9906015		Run ID: GC-1_990616A				SeqNo: 16006				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		6491	50	4000	2480	100.3%	73	115				
Ethylbenzene		4512	50	4000	189.1	108.1%	74	117				
m,p-Xylene		9582	100	8000	1256	104.1%	76	112				
Methyl tert-Butyl Ether		4626	100	4000	522.1	102.6%	62	122				
o-Xylene		4506	50	4000	147.5	109.0%	83	112				
Toluene		4681	50	4000	473	105.2%	71	120				

Sample ID: 9906015-24AMSD		Batch ID: GC-1_990616	Test Code: SW8021B	Units: µg/L	Analysis Date 6/16/99		Prep Date:				
Client ID: RW-26		9906015	Run ID: GC-1_990616A		SeqNo: 16007						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	6302	50	4000	2480	95.6%	73	115	6491	2.9%	8	
Ethylbenzene	4388	50	4000	189.1	105.0%	74	117	4512	2.8%	9	
m,p-Xylene	9316	100	8000	1256	100.8%	76	112	9582	2.8%	9	
Methyl tert-Butyl Ether	4536	100	4000	522.1	100.4%	62	122	4626	2.0%	7	
o-Xylene	4389	50	4000	147.5	106.0%	83	112	4506	2.6%	9	
Toluene	4542	50	4000	473	101.7%	71	120	4681	3.0%	9	

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

On Site Technologies, LTD.

Date: 17-Jun-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9906015

Project: Thriftway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_990615	Test Code: SW8021B	Units: µg/L	Analysis Date 6/15/99	Prep Date:						
Client ID:	9906015	Run ID: GC-1_990615A		SeqNo: 15978							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.1	0.5	40	0	100.2%	84	110				
Ethylbenzene	42.52	0.5	40	0	106.3%	86	113				
m,p-Xylene	82.81	1	80	0.1801	103.3%	81	114				
Methyl tert-Butyl Ether	41.05	1	40	0	102.6%	69	129				
o-Xylene	42.93	0.5	40	0.0595	107.2%	86	112				
Toluene	41.54	0.5	40	0.1008	103.6%	85	111				

Sample ID: LCS WATER		Batch ID: GC-1_990616	Test Code: SW8021B	Units: µg/L	Analysis Date 6/16/99		Prep Date:				
Client ID:		9906015	Run ID: GC-1_990616A		SeqNo: 16004						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.35	0.5	40	0	98.4%	84	110				
Ethylbenzene	42.58	0.5	40	0	106.5%	86	113				
m,p-Xylene	82.73	1	80	0	103.4%	81	114				
Methyl tert-Butyl Ether	39.42	1	40	0	98.5%	69	129				
o-Xylene	42.84	0.5	40	0.0555	107.0%	86	112				
Toluene	41.4	0.5	40	0.1036	103.2%	85	111				

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

On Site Technologies, LTD.

Date: 17-Jun-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9906015

Project: Thriftway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_9902		Batch ID: GC-1_990615	Test Code: SW8021B	Units: µg/L	Analysis Date 6/15/99		Prep Date:	
Client ID: 9906015		Run ID: GC-1_990615A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Benzene	21.19	0.5	20	0	106.0%	85	115	
Ethylbenzene	22.45	0.5	20	0	112.3%	85	115	
m,p-Xylene	43.77	1	40	0	109.4%	85	115	
Methyl tert-Butyl Ether	20.95	1	20	0	104.8%	85	115	
o-Xylene	22.47	0.5	20	0	112.3%	85	115	
Toluene	21.79	0.5	20	0	109.0%	85	115	
1,4-Difluorobenzene	94.44	0	100	0	94.4%	86	100	
4-Bromochlorobenzene	95.44	0	100	0	95.4%	90	104	
Fluorobenzene	96.26	0	100	0	96.3%	89	101	

Sample ID: CCV2 BTEX_9902		Batch ID: GC-1_990615	Test Code: SW8021B	Units: µg/L	Analysis Date 6/15/99		Prep Date:	
Client ID: 9906015		Run ID: GC-1_990615A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Benzene	20.8	0.5	20	0	104.0%	85	115	
Ethylbenzene	21.82	0.5	20	0	109.1%	85	115	
m,p-Xylene	42.43	1	40	0	106.1%	85	115	
Methyl tert-Butyl Ether	21.46	1	20	0	107.3%	85	115	
o-Xylene	21.98	0.5	20	0	109.9%	85	115	
Toluene	21.24	0.5	20	0	106.2%	85	115	
1,4-Difluorobenzene	94.22	0	100	0	94.2%	86	100	
4-Bromochlorobenzene	96.46	0	100	0	96.5%	90	104	
Fluorobenzene	95.88	0	100	0	95.9%	89	101	

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9906015

Project: Thriftway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_9902		Batch ID: GC-1_990615	Test Code: SW8021B	Units: µg/L		Analysis Date 6/15/99		Prep Date:	
Client ID: 9906015		Run ID: GC-1_990615A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 15977
Analyte	Result							RPD Ref Val	%RPD RPDLimit Qual
Benzene	41.04		0.5	40	0	102.6%	85	115	
Ethylbenzene	43.35		0.5	40	0	108.4%	85	115	
m,p-Xylene	84.01		1	80	0	105.0%	85	115	
Methyl tert-Butyl Ether	42.47		1	40	0	106.2%	85	115	
o-Xylene	43.7		0.5	40	0	109.2%	85	115	
Toluene	42.44		0.5	40	0	106.1%	85	115	
1,4-Difluorobenzene	93.96		0	100	0	94.0%	86	100	
4-Bromochlorobenzene	95.86		0	100	0	95.9%	90	104	
Fluorobenzene	95.36		0	100	0	95.4%	89	101	

Sample ID: CCV1 BTEX_9902		Batch ID: GC-1_990616	Test Code: SW8021B	Units: µg/L		Analysis Date 6/16/99		Prep Date:	
Client ID: 9906015		Run ID: GC-1_990616A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 16001
Analyte	Result							RPD Ref Val	%RPD RPDLimit Qual
Benzene	20.67		0.5	20	0	103.3%	85	115	
Ethylbenzene	22.1		0.5	20	0	110.5%	85	115	
m,p-Xylene	43.18		1	40	0	107.9%	85	115	
Methyl tert-Butyl Ether	20.92		1	20	0	104.6%	85	115	
o-Xylene	22.22		0.5	20	0	111.1%	85	115	
Toluene	21.55		0.5	20	0	107.7%	85	115	
1,4-Difluorobenzene	93.71		0	100	0	93.7%	86	100	
4-Bromochlorobenzene	94.73		0	100	0	94.7%	90	104	
Fluorobenzene	95.93		0	100	0	95.9%	89	101	

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9906015

Project: Thriftway Refinery; Bloomfield, NM

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_9902		Batch ID: GC-1_990616		Test Code: SW8021B		Units: µg/L		Analysis Date 6/16/99		Prep Date:													
Client ID: 9906015		Run ID: GC-1_990616A		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual	
Analyte		Result																					
Benzene		20.87		0.5		20		0		104.4%		85		115									
Ethylbenzene		22.19		0.5		20		0		110.9%		85		115									
m,p-Xylene		43.09		1		40		0		107.7%		85		115									
Methyl tert-Butyl Ether		21.5		1		20		0		107.5%		85		115									
o-Xylene		22.33		0.5		20		0		111.7%		85		115									
Toluene		21.68		0.5		20		0		108.4%		85		115									
1,4-Difluorobenzene		94.8		0		100		0		94.8%		86		100									
4-Bromochlorobenzene		94.21		0		100		0		94.2%		90		104									
Fluorobenzene		97.65		0		100		0		97.7%		89		101									

Sample ID: CCV3 BTEX_9902		Batch ID: GC-1_990616		Test Code: SW8021B		Units: µg/L		Analysis Date 6/16/99		Prep Date:													
Client ID: 9906015		Run ID: GC-1_990616A		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual	
Analyte		Result																					
Benzene		40.95		0.5		40		0		102.4%		85		115									
Ethylbenzene		43.87		0.5		40		0		109.7%		85		115									
m,p-Xylene		84.87		1		80		0		106.1%		85		115									
Methyl tert-Butyl Ether		42.23		1		40		0		105.6%		85		115									
o-Xylene		44.17		0.5		40		0		110.4%		85		115									
Toluene		42.89		0.5		40		0		107.2%		85		115									
1,4-Difluorobenzene		93.9		0		100		0		93.9%		86		100									
4-Bromochlorobenzene		94.74		0		100		0		94.7%		90		104									
Fluorobenzene		96.97		0		100		0		97.0%		89		101									

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

On Site Technologies, LTD.

Date: 17-Jun-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9906015
Project: Thriftway Refinery; Bloomfield, N
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
9906004-02A	90.2	96	93.1					
9906004-03A	91.8	96.4	93.6					
9906004-05A	90.3	95.9	92.8					
9906004-05AMS	89.5	95.8	92.3					
9906004-05AMSD	90.2	96.8	93.7					
9906015-01A	94.4	95.7	96.6					
9906015-02A	94.5	96.7	97.1					
9906015-03A	94.8	96.1	97					
9906015-04A	94.8	96.3	97					
9906015-05A	94.4	96.4	96.9					
9906015-06A	94.5	96.2	97					
9906015-07A	95.4	96.9	97.5					
9906015-08A	94.2	96.7	96.6					
9906015-09A	94	95.7	96.4					
9906015-10A	94.2	96.6	97.9					
9906015-11A	94.4	96.8	96.5					
9906015-12A	93.8	96.6	96.8					
9906015-13A	91.6	95.2	93.7					
9906015-14A	93.6	98	96.1					
9906015-15A	93.7	96.9	95.7					
9906015-16A	94.4	96.4	96.9					
9906015-17A	94.9	94.1	98.6					
9906015-18A	94.9	94.6	98.6					
9906015-19A	95.2	94.3	98.9					
9906015-20A	95.1	96.4	98.2					
9906015-21A	95.1	95.7	98.6					
9906015-22A	94.5	93.9	98					

Acronym

Surrogate

QC Limits

14FBZ	= 1,4-Difluorobenzene	86-100
4BCBZ	= 4-Bromochlorobenzene	90-104
FLBZ	= Fluorobenzene	89-101

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 9906015
Project: Thriftway Refinery; Bloomfield, N
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
9906015-23A	93.7	95.6	96.6					
9906015-24A	94.6	93.8	97.4					
9906015-24AMS	93.6	95.3	96.5					
9906015-24AMSD	93.6	95.6	96.5					
9906015-25A	91	94.9	94.2					
9906015-26A	95.1	94.8	98.8					
9906015-27A	95.3	94.3	96.5					
9906018-01A	94.6	95.1	98.7					
9906019-01A	95.5	95.2	98.2					
9906021-01A	94.9	95.4	98.5					
9906021-02A	95.8	94.9	98.6					
9906021-03A	95.4	95.3	98.6					
9906022-01A	89.9	91.7	95.6					
9906023-01A	89	87.1 *	91.5					
9906049-01A	95.5	94.9	98.8					
CCV1 BTEX_99020	93.7	94.7	95.9					
CCV2 BTEX_99020	94.8	94.2	97.6					
CCV3 BTEX_99020	93.9	94.7	97					
LCS WATER	93.8	95	96.8					
MBI	94.9	94.4	96.8					

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	86-100
4BCBZ	= 4-Bromochlorobenzene	90-104
FLBZ	= Fluorobenzene	89-101

* Surrogate recovery outside acceptance limits

CHAIN OF CUSTODY RECORD

3369

ON SITE

TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 6/2/99

Page 1 of 3

Purchase Order No.: 99-809		Job No.	
Name: Same		Title	
Company: Same		Company: BioTech Remediation, Inc	
Address:		Mailing Address: 710 E. 20th St, Suite 400	
City, State, Zip		City, State, Zip: Farmington, NM 87401	
Telephone No.		Telephone No. 505-327-4965	
Telefax No.		Telefax No. 505-564-3609	
SEND INVOICE TO		ANALYSIS REQUESTED	
REPORT RESULTS TO		Containers	
Number of		LAB ID	
DATE		DATE	
TIME		TIME	
MATRIX		PRES.	
SAMPLE IDENTIFICATION		DATE	
Travel Blank		6/2 1000 1120 gm	
MW-13		1055	
Free water Pond		1112	
MW-11		1142	
MW-10		1215	
Field Blank		1225	
Rinse Water		1226	
MW-9		1252	
STRIPPED influent		1355	
STRIPPED Effluent		1405	
MW-21		1440	
MW-22		1507	
Relinquished by: [Signature]		Date/Time 6/4/99 0850	
Relinquished by:		Date/Time	
Relinquished by:		Date/Time	
Method of Shipment:		10 Working Days	
Authorized by: [Signature]		Date 6/4/99	
Special Instructions:		24-48 Hours	
Rush		Goldenrod - Client	

Purchase Order No.: 99-809		Job No.	
Name: Sam		Title:	
Company: Sam		Company: BioTech Remediation, Inc	
Address:		Mailing Address: 210 E. 20th Street, Suite 400	
City, State, Zip:		City, State, Zip: Farmington, NM 87401	
Telephone No.:		Telephone No.:	
505-327-4965		505-564-3604	

SEND INVOICE TO				RESULTS TO			
Name: Terry Gaffin				Title:			
Company: BioTech Remediation, Inc				Company: BioTech Remediation, Inc			
Mailing Address: 210 E. 20th Street, Suite 400				Mailing Address: 210 E. 20th Street, Suite 400			
City, State, Zip: Farmington, NM 87401				City, State, Zip: Farmington, NM 87401			
Telephone No.:				Telephone No.:			
505-327-4965				505-564-3604			

Sampling Location: Thriftway Refinery				ANALYSIS REQUESTED			
626 Rd 5500							
Blomfield, NM							
Sampler: Ken Sinski							

SAMPLE IDENTIFICATION	SAMPLE DATE		TIME	MATRIX	PRES.	Number of Containers	LAB ID
	DATE	TIME					
MW-20	6/2	1537	1120	H2O	H2O	2	9106015-13A
MW-5	6/2	1603	1603	H2O	H2O	2	14A
MW-5 Duplicate	6/2	1603	1603	H2O	H2O	2	15A
MW-15	6/2	1707	1707	H2O	H2O	2	16A
Travel Blank	6/3	0930	1100	H2O	H2O	1	17A
MW-16		1029				2	18A
Field Blank		1034				2	19A
MW-1		1125				2	20A
MW-1 Duplicate		1125				2	21A
MW-19		1155				2	22A
MW-6		1354				2	23A
RW-26		1454				2	24A

Relinquished by: Ken Sinski	Date/Time: 6/4/99 0852	Received by: Michael R...	Date/Time: 6/4/99 0852
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:
Method of Shipment:		Rush	
Authorized by: Ken Sinski	Date: 6/4/99	24-48 Hours	10 Working Days
		Special Instructions:	

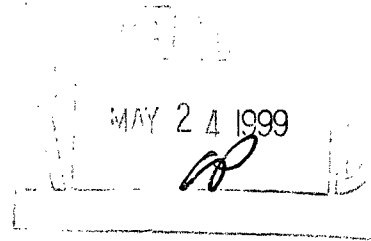
OFF: (505) 325-5667



LAB: (505) 325-1556

May 18, 1999

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604



RE: Thriftway Refinery Air Stripper

Order No.: 9905016

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 5/4/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature, likely "David Cox", is written in a cursive style.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 18-May-99

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 9905016

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 18-May-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9905016	Client Sample ID:	Travel Blank
Lab ID:	9905016-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	5/4/99 11:40:00 AM
		COC Record:	10136

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DC
Methyl tert-Butyl Ether	ND	1		µg/L	1	5/14/99
Benzene	ND	0.5		µg/L	1	5/14/99
Toluene	ND	0.5		µg/L	1	5/14/99
Ethylbenzene	ND	0.5		µg/L	1	5/14/99
m,p-Xylene	ND	1		µg/L	1	5/14/99
o-Xylene	ND	0.5		µg/L	1	5/14/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 18-May-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9905016	Client Sample ID:	Stripper Influent
Lab ID:	9905016-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	5/4/99 12:35:00 PM
		COC Record:	10136

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	190	20		µg/L	20	5/17/99
Benzene	1200	10		µg/L	20	5/17/99
Toluene	2700	10		µg/L	20	5/17/99
Ethylbenzene	860	10		µg/L	20	5/17/99
m,p-Xylene	2000	20		µg/L	20	5/17/99
o-Xylene	720	10		µg/L	20	5/17/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 18-May-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9905016	Client Sample ID:	Stripper Effluent
Lab ID:	9905016-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	5/4/99 12:40:00 PM
		COC Record:	10136

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	16	1		µg/L	1	5/14/99
Benzene	0.7	0.5		µg/L	1	5/14/99
Toluene	3.6	0.5		µg/L	1	5/14/99
Ethylbenzene	1	0.5		µg/L	1	5/14/99
m,p-Xylene	2.8	1		µg/L	1	5/14/99
o-Xylene	1.2	0.5		µg/L	1	5/14/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 18-May-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9905016

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_990514	Test Code: SW8021B	Units: µg/L	Analysis Date 5/14/99	Prep Date:
Client ID:	9905016	Run ID:	GC-1_990514A	SeqNo: 14530	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0339	0.5			J
Ethylbenzene	ND	0.5			
m,p-Xylene	.1102	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0451	0.5			J
Toluene	.0711	0.5			J

Sample ID: MB1	Batch ID: GC-1_990517	Test Code: SW8021B	Units: µg/L	Analysis Date 5/17/99	Prep Date:
Client ID:	9905016	Run ID:	GC-1_990517A	SeqNo: 14569	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.067	0.5			J

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

On Site Technologies, LTD.

Date: 18-May-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9905016

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9905016-02AMS	Batch ID: GC-1_990514	Test Code: SW8021B	Units: µg/L	Analysis Date 5/14/99	Prep Date:						
Client ID: Stripper Influent	9905016	Run ID: GC-1_990514A		SeqNo: 14531							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1687	50	400	1202	121.3%	73	115				S
Ethylbenzene	1254	50	400	821.6	108.0%	74	117				CONFIRMED
m,p-Xylene	2975	100	800	1974	125.2%	76	112				S
Methyl tert-Butyl Ether	586.2	100	400	177.1	102.3%	62	122				5/16/99
o-Xylene	1122	50	400	684.5	109.3%	83	112				ES
Toluene	3302	50	400	2786	128.8%	71	120				5/19/99

Concentration
5/10/99
5/19/99

Sample ID: 9905016-02AMSD		Batch ID: GC-1_990514	Test Code: SW8021B	Units: µg/L	Analysis Date 5/14/99		Prep Date:				
Client ID: Stripper Influent		9905016	Run ID: GC-1_990514A		SeqNo: 14532						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1646	50	400	1202	111.1%	73	115	1687	2.5%	8	
Ethylbenzene	1219	50	400	821.6	99.3%	74	117	1254	2.8%	9	
m,p-Xylene	2882	100	800	1974	113.6%	76	112	2975	3.2%	9	S
Methyl tert-Butyl Ether	587.3	100	400	177.1	102.5%	62	122	586.2	0.2%	7	
o-Xylene	1092	50	400	684.5	101.9%	83	112	1122	2.7%	9	
Toluene	3210	50	400	2786	105.9%	71	120	3302	2.8%	9	E

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9905016

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9905008-01DMS Batch ID: GC-1_990517 Test Code: SW8021B Units: µg/L Analysis Date 5/17/99 Prep Date:
Client ID: 9905016 Run ID: GC-1_990517A SeqNo: 14570

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	557.3	5	400	131.2	106.5%	73	115				
Ethylbenzene	439.9	5	400	11.65	107.1%	74	117				
m,p-Xylene	909.5	10	800	63.2	105.8%	76	112				
Methyl tert-Butyl Ether	458.1	10	400	41.74	104.1%	62	122				
o-Xylene	452.2	5	400	19.7	108.1%	83	112				
Toluene	628.5	5	400	214	103.6%	71	120				

Sample ID: 9905008-01DMSD Batch ID: GC-1_990517 Test Code: SW8021B Units: µg/L Analysis Date 5/17/99 Prep Date:
Client ID: 9905016 Run ID: GC-1_990517A SeqNo: 14572

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	542.9	5	400	131.2	102.9%	73	115	557.3	2.6%	8	
Ethylbenzene	427.8	5	400	11.65	104.0%	74	117	439.9	2.8%	9	
m,p-Xylene	883.6	10	800	63.2	102.5%	76	112	909.5	2.9%	9	
Methyl tert-Butyl Ether	455.7	10	400	41.74	103.5%	62	122	458.1	0.5%	7	
o-Xylene	441.3	5	400	19.7	105.4%	83	112	452.2	2.4%	9	
Toluene	611	5	400	214	99.3%	71	120	628.5	2.8%	9	

Sample ID: 9905016-02AMS Batch ID: GC-1_990517 Test Code: SW8021B Units: µg/L Analysis Date 5/17/99 Prep Date:
Client ID: Stripper Influent 9905016 Run ID: GC-1_990517A SeqNo: 14571

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2095	10	800	1215	109.9%	73	115				
Ethylbenzene	1702	10	800	862	105.1%	74	117				
m,p-Xylene	3708	20	1600	1980	108.0%	76	112				
Methyl tert-Butyl Ether	1060	20	800	188.5	109.0%	62	122				
o-Xylene	1565	10	800	723.4	105.2%	83	112				
Toluene	3544	10	800	2674	108.8%	71	120				

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9905016

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike Duplicate

Sample ID: 9905016-02AMSD		Batch ID: GC-1_990517	Test Code: SW8021B	Units: µg/L	Analysis Date 5/17/99	Prep Date:					
Client ID: Stripper Influent	9905016	Run ID: 990517A	GC-1_990517A		SeqNo: 14573						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2057	10	800	1215	105.2%	73	115	2095	1.8%	8	
Ethylbenzene	1674	10	800	862	101.5%	74	117	1702	1.7%	9	
m,p-Xylene	3644	20	1600	1980	104.0%	76	112	3708	1.8%	9	
Methyl tert-Butyl Ether	1056	20	800	188.5	108.5%	62	122	1060	0.4%	7	
o-Xylene	1545	10	800	723.4	102.8%	83	112	1565	1.3%	9	
Toluene	3476	10	800	2674	100.3%	71	120	3544	1.9%	9	

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

On Site Technologies, LTD.

Date: 18-May-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9905016
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_990514	Test Code: SW8021B	Units: µg/L	Analysis Date 5/14/99	Prep Date:						
Client ID:	9905016	Run ID: GC-1_990514A		SeqNo: 14529							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	44.26	0.5	40	0.0339	110.6%	84	110				S
Ethylbenzene	42.87	0.5	40	0	107.2%	86	113				
m,p-Xylene	86.02	1	80	0.1102	107.4%	81	114				
Methyl tert-Butyl Ether	40.07	1	40	0	100.2%	69	129				
o-Xylene	42.54	0.5	40	0.0451	106.2%	86	112				
Toluene	42.92	0.5	40	0.0711	107.1%	85	111				

211570
 5/10/99
 4/25
 5/19/99

Sample ID: LCS WATER		Batch ID: GC-1_990517	Test Code: SW8021B	Units: µg/L	Analysis Date 5/17/99		Prep Date:				
Client ID:		9905016	Run ID: GC-1_990517A		SeqNo: 14568						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.95	0.5	40	0	107.4%	84	110				
Ethylbenzene	41.76	0.5	40	0	104.4%	86	113				
m,p-Xylene	82.33	1	80	0	102.9%	81	114				
Methyl tert-Butyl Ether	42.86	1	40	0	107.2%	69	129				
o-Xylene	41.88	0.5	40	0	104.7%	86	112				
Toluene	41.89	0.5	40	0.067	104.6%	85	111				

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

On Site Technologies, LTD.

Date: 18-May-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9905016

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_9902		Batch ID: GC-1_990514	Test Code: SW8021B	Units: µg/L	Analysis Date 5/14/99		Prep Date:				
Client ID: 9905016		Run ID: GC-1_990514A	SeqNo: 14526								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.88	0.5	20	0	114.4%	85	115				
Ethylbenzene	22.18	0.5	20	0	110.9%	85	115				
m,p-Xylene	44.04	1	40	0	110.1%	85	115				
Methyl tert-Butyl Ether	20.92	1	20	0	104.6%	85	115				
o-Xylene	21.87	0.5	20	0	109.3%	85	115				
Toluene	22.01	0.5	20	0	110.1%	85	115				
1,4-Difluorobenzene	96.68	0	100	0	96.7%	84	100				
4-Bromochlorobenzene	105.2	0	100	0	105.3%	87	105				S
Fluorobenzene	100.6	0	100	0	100.6%	87	99				S

Sample ID: CCV2 BTEX_9902		Batch ID: GC-1_990514	Test Code: SW8021B	Units: µg/L		Analysis Date 5/14/99		Prep Date:			
Client ID: 9905016		Run ID: GC-1_990514A				SeqNo: 14527					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.89	0.5	20	0	109.4%	85	115				
Ethylbenzene	21.17	0.5	20	0	105.8%	85	115				
m,p-Xylene	41.59	1	40	0	104.0%	85	115				
Methyl tert-Butyl Ether	20.2	1	20	0	101.0%	85	115				
o-Xylene	21.2	0.5	20	0	106.0%	85	115				
Toluene	21.32	0.5	20	0	106.6%	85	115				
1,4-Difluorobenzene	95.02	0	100	0	95.0%	84	100				
4-Bromochlorobenzene	99.18	0	100	0	99.2%	87	105				
Fluorobenzene	98.61	0	100	0	98.6%	87	99				

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9905016

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_9902	Batch ID: GC-1_990514	Test Code: SW8021B	Units: µg/L	Analysis Date 5/14/99	Prep Date:						
Client ID:	9905016	Run ID: GC-1_990514A		SeqNo: 14528							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	43.56	0.5	40	0	108.9%	85	115				
Ethylbenzene	41.82	0.5	40	0	104.5%	85	115				
m,p-Xylene	83.12	1	80	0	103.9%	85	115				
Methyl tert-Butyl Ether	42.33	1	40	0	105.8%	85	115				
o-Xylene	41.82	0.5	40	0	104.5%	85	115				
Toluene	42.54	0.5	40	0	106.3%	85	115				
1,4-Difluorobenzene	94.34	0	100	0	94.3%	84	100				
4-Bromochlorobenzene	97.22	0	100	0	97.2%	87	105				
Fluorobenzene	97.76	0	100	0	97.8%	87	99				

Sample ID: CCV1 BTEX_9902	Batch ID: GC-1_990517	Test Code: SW8021B	Units: µg/L	Analysis Date 5/17/99	Prep Date:						
Client ID:	9905016	Run ID: GC-1_990517A		SeqNo: 14564							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	21.28	0.5	20	0	106.4%	85	115				
Ethylbenzene	20.78	0.5	20	0	103.9%	85	115				
m,p-Xylene	40.9	1	40	0	102.2%	85	115				
Methyl tert-Butyl Ether	21.43	1	20	0	107.1%	85	115				
o-Xylene	20.83	0.5	20	0	104.2%	85	115				
Toluene	20.77	0.5	20	0	103.8%	85	115				
1,4-Difluorobenzene	94.28	0	100	0	94.3%	84	100				
4-Bromochlorobenzene	97.34	0	100	0	97.3%	87	105				
Fluorobenzene	97.13	0	100	0	97.1%	87	99				

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9905016
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_9902		Batch ID: GC-1_990517		Test Code: SW8021B		Units: µg/L		Analysis Date 5/17/99		Prep Date:	
Client ID: 9905016		Run ID: GC-1_990517A		PQL		SPK value		SeqNo: 14565			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.41	0.5	20	0	107.1%	85	115				
Ethylbenzene	20.66	0.5	20	0	103.3%	85	115				
m,p-Xylene	40.27	1	40	0	100.7%	85	115				
Methyl tert-Butyl Ether	20.47	1	20	0	102.4%	85	115				
o-Xylene	20.67	0.5	20	0	103.4%	85	115				
Toluene	20.77	0.5	20	0	103.9%	85	115				
1,4-Difluorobenzene	94.57	0	100	0	94.6%	84	100				
4-Bromochlorobenzene	95.02	0	100	0	95.0%	87	105				
Fluorobenzene	97.08	0	100	0	97.1%	87	99				

Sample ID: CCV3 BTEX_9902		Batch ID: GC-1_990517		Test Code: SW8021B		Units: µg/L		Analysis Date 5/17/99		Prep Date:	
Client ID: 9905016		Run ID: GC-1_990517A		PQL		SPK value		SeqNo: 14566			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.21	0.5	40	0	105.5%	85	115				
Ethylbenzene	40.73	0.5	40	0	101.8%	85	115				
m,p-Xylene	79.71	1	80	0	99.6%	85	115				
Methyl tert-Butyl Ether	44.61	1	40	0	111.5%	85	115				
o-Xylene	41.2	0.5	40	0	103.0%	85	115				
Toluene	41.24	0.5	40	0	103.1%	85	115				
1,4-Difluorobenzene	92.43	0	100	0	92.4%	84	100				
4-Bromochlorobenzene	99.71	0	100	0	99.7%	87	105				
Fluorobenzene	92.7	0	100	0	92.7%	87	99				

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9905016

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV4 BTEX_9902	Batch ID: GC-1_990517	Test Code: SW8021B	Units: µg/L	Analysis Date 5/17/99	Prep Date:
Client ID: 9905016	Run ID: GC-1_990517A	PQL	SPK value	SeqNo: 14567	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Benzene	41.37	0.5	40	0	103.4%
Ethylbenzene	40.39	0.5	40	0	101.0%
m,p-Xylene	79.19	1	80	0	99.0%
Methyl tert-Butyl Ether	39.19	1	40	0	98.0%
o-Xylene	40.39	0.5	40	0	101.0%
Toluene	40.54	0.5	40	0	101.4%
1,4-Difluorobenzene	92.89	0	100	0	92.9%
4-Bromochlorobenzene	99.5	0	100	0	99.5%
Fluorobenzene	92.64	0	100	0	92.6%
				HighLimit	RPD Ref Val
				85	115
				85	115
				85	115
				85	115
				85	115
				85	115
				84	100
				87	105
				87	99

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

On Site Technologies, LTD.

Date: 18-May-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9905016

Project: Thriftway Refinery Air Stripper

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
9905007-01D	94.9	97.8	99.3 *					
9905007-02A	95.3	104	101 *					
9905008-01D	94	96.9	97.6					
9905008-01DMS	92.7	98.3	95.9					
9905008-01DMSD	92.5	98	96					
9905009-01D	88.3	91	93.2					
9905010-01D	92.2	94.5	98.4					
9905011-01D	93	94.6	98.2					
9905016-01A	95.5	102	100 *					
9905016-02A	95.1	97.9	96.5					
9905016-02AMS	94.7	98.4	96.4					
9905016-02AMSD	94.6	98.5	96.2					
9905016-03A	95	98.6	99					
9905017-01D	94.6	98.3	99.5 *					
9905017-02A	94.5	99.3	98.4					
9905018-01D	93	95.2	98.2					
9905019-01D	88.3	91.1	93.5					
9905020-01D	90.1	92	93.7					
9905027-01A	92.5	97.7	96.4					
9905027-02A	94	99.6	97.7					
9905027-03A	90.7	95.7	95.6					
9905027-04A	91	96.4	94.6					
9905027-05A	95.5	98.6	99.3 *					
9905027-06A	85.5	85.2	101					
9905035-01D	92.7	93.3	96.6					
9905035-02A	93.2	97.8	94.1					
9905036-01D	92.4	93.2	95.9					

Acronym

Surrogate

QC Limits

14FBZ	= 1,4-Difluorobenzene	84-100
14FBZ	= 1,4-Difluorobenzene	76-122
4BCBZ	= 4-Bromochlorobenzene	87-105
4BCBZ	= 4-Bromochlorobenzene	55-146
FLBZ	= Fluorobenzene	87-99
FLBZ	= Fluorobenzene	86-113

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 9905016
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
9905037-01D	91.1	96.9	92.9					
9905056-01A	90.4	94.8	94					
CCV1 BTEX_99020	94.3	97.3	97.1					
CCV2 BTEX_99020	94.6	95	97.1					
CCV3 BTEX_99020	92.4	99.7	92.7					
CCV4 BTEX_99020	92.9	99.5	92.6					
LCS WATER	94	97.7	96.7					
MBI	95.6	97.1	98					

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	84-100
14FBZ	= 1,4-Difluorobenzene	76-122
4BCBZ	= 4-Bromochlorobenzene	87-105
4BCBZ	= 4-Bromochlorobenzene	55-146
FLBZ	= Fluorobenzene	87-99
FLBZ	= Fluorobenzene	86-113

* Surrogate recovery outside acceptance limits

CHAIN OF CUSTODY RECORD

Date: 5/9/97

Page: 1 of 1

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

[illegible]

OFF: (505) 325-5667



LAB: (505) 325-1556

April 23, 1999

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

APR 28 1999

A handwritten signature, possibly "J. Cox", written in dark ink.

RE: Thriftway Refinery

Order No.: 9904024

Dear Terry Griffin,

On Site Technologies, LTD. received 26 samples on 4/14/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature of David Cox, written in dark ink.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 23-Apr-99

CLIENT: BioTech Remediation, Inc.

Project: Thriftway Refinery

Lab Order: 9904024

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	Travel Blank
Lab ID:	9904024-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/12/99 9:00:00 AM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:

- PQL - Practical Quantitation Limit
- ND - Not Detected at Practical Quantitation Limit
- J - Analyte detected below Practical Quantitation Limit
- 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
- Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-13
Lab ID:	9904024-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/12/99 11:20:00 AM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	Field Blank
Lab ID:	9904024-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/12/99 11:27:00 AM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-10
Lab ID:	9904024-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/12/99 11:50:00 AM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-11
Lab ID:	9904024-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/12/99 12:50:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-9
Lab ID:	9904024-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/12/99 1:30:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	3	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-15
Lab ID:	9904024-07A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/12/99 2:30:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

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ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-5
Lab ID:	9904024-08A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/12/99 4:05:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	43	1		µg/L	1	4/20/99
Benzene	6.7	0.5		µg/L	1	4/20/99
Toluene	ND	0.5		µg/L	1	4/20/99
Ethylbenzene	0.5	0.5		µg/L	1	4/20/99
m,p-Xylene	ND	1		µg/L	1	4/20/99
o-Xylene	ND	0.5		µg/L	1	4/20/99

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

1 of 1

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ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-20
Lab ID:	9904024-11A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/12/99 5:50:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	80	1		µg/L	1	4/20/99
Benzene	7.8	0.5		µg/L	1	4/20/99
Toluene	ND	0.5		µg/L	1	4/20/99
Ethylbenzene	2.4	0.5		µg/L	1	4/20/99
m,p-Xylene	1.4	1		µg/L	1	4/20/99
o-Xylene	0.5	0.5		µg/L	1	4/20/99

Qualifiers:

- PQL - Practical Quantitation Limit
- ND - Not Detected at Practical Quantitation Limit
- J - Analyte detected below Practical Quantitation Limit
- 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
- Surr: - Surrogate

1 of 1

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ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	Travel Blank
Lab ID:	9904024-12A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/13/99 9:00:00 AM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	Stripper Effluent
Lab ID:	9904024-13A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/13/99 9:40:00 AM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	34	1		µg/L	1	4/18/99
Benzene	50	0.5		µg/L	1	4/20/99
Toluene	130	0.5		µg/L	1	4/20/99
Ethylbenzene	14	0.5		µg/L	1	4/20/99
m,p-Xylene	51	1		µg/L	1	4/20/99
o-Xylene	30	0.5		µg/L	1	4/20/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

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ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	Stripper Influent
Lab ID:	9904024-14A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/13/99 9:50:00 AM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	200		µg/L	200	4/20/99
Benzene	6400	100		µg/L	200	4/20/99
Toluene	16000	100		µg/L	200	4/20/99
Ethylbenzene	1600	100		µg/L	200	4/20/99
m,p-Xylene	4800	200		µg/L	200	4/20/99
o-Xylene	2000	100		µg/L	200	4/20/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	Pond
Lab ID:	9904024-15A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/13/99 10:40:00 AM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	5	1		µg/L	1	4/16/99
Benzene	ND	0.5		µg/L	1	4/16/99
Toluene	ND	0.5		µg/L	1	4/16/99
Ethylbenzene	0.6	0.5		µg/L	1	4/16/99
m,p-Xylene	ND	1		µg/L	1	4/16/99
o-Xylene	ND	0.5		µg/L	1	4/16/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-6
Lab ID:	9904024-16A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/13/99 3:27:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	4.4	1		µg/L	1	4/18/99
Benzene	5.6	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

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OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client: BioTech Remediation, Inc.
Work Order: 9904024
Lab ID: 9904024-17A **Matrix:** AQUEOUS
Project: Thriftway Refinery

Client Sample Info: Thriftway Refinery
Client Sample ID: Rinse Blank
Collection Date: 4/13/99 3:50:00 PM
COC Record: 5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:
PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

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OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-21
Lab ID:	9904024-10A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/12/99 5:20:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	92	5		µg/L	5	4/20/99
Benzene	ND	0.5		µg/L	1	4/20/99
Toluene	ND	0.5		µg/L	1	4/20/99
Ethylbenzene	ND	0.5		µg/L	1	4/20/99
m,p-Xylene	ND	1		µg/L	1	4/20/99
o-Xylene	ND	0.5		µg/L	1	4/20/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-22
Lab ID:	9904024-09A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/12/99 4:55:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	27	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:

- PQL - Practical Quantitation Limit
- ND - Not Detected at Practical Quantitation Limit
- J - Analyte detected below Practical Quantitation Limit
- 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
- Surr: - Surrogate

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P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	Field Blank
Lab ID:	9904024-18A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/13/99 3:58:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr - Surrogate

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P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-3
Lab ID:	9904024-19A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/13/99 4:42:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	180	1		µg/L	1	4/16/99
Benzene	170	0.5		µg/L	1	4/16/99
Toluene	1.4	0.5		µg/L	1	4/16/99
Ethylbenzene	23	0.5		µg/L	1	4/16/99
m,p-Xylene	2.6	1		µg/L	1	4/16/99
o-Xylene	1.6	0.5		µg/L	1	4/16/99

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-19
Lab ID:	9904024-20A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/13/99 5:07:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	36	1		µg/L	1	4/20/99
Benzene	0.7	0.5		µg/L	1	4/20/99
Toluene	ND	0.5		µg/L	1	4/20/99
Ethylbenzene	1.7	0.5		µg/L	1	4/20/99
m,p-Xylene	ND	1		µg/L	1	4/20/99
o-Xylene	ND	0.5		µg/L	1	4/20/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-18
Lab ID:	9904024-21A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/13/99 5:32:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	35	1		µg/L	1	4/20/99
Benzene	27	0.5		µg/L	1	4/20/99
Toluene	0.6	0.5		µg/L	1	4/20/99
Ethylbenzene	3.1	0.5		µg/L	1	4/20/99
m,p-Xylene	ND	1		µg/L	1	4/20/99
o-Xylene	ND	0.5		µg/L	1	4/20/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	Travel Blank
Lab ID:	9904024-22A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/14/99 9:20:00 AM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
B - Analyte detected in the associated Method Blank

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R - RPD outside accepted recovery limits
E - Value above quantitation range
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	Field Blank
Lab ID:	9904024-23A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/14/99 10:00:00 AM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-1
Lab ID:	9904024-24A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/14/99 10:30:00 AM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	140	1		µg/L	1	4/20/99
Benzene	190	0.5		µg/L	1	4/20/99
Toluene	0.8	0.5		µg/L	1	4/20/99
Ethylbenzene	5.3	0.5		µg/L	1	4/20/99
m,p-Xylene	3	1		µg/L	1	4/20/99
o-Xylene	1.4	0.5		µg/L	1	4/20/99

Qualifiers:

- PQL - Practical Quantitation Limit
- ND - Not Detected at Practical Quantitation Limit
- J - Analyte detected below Practical Quantitation Limit
- 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
- Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	MW-7
Lab ID:	9904024-25A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/14/99 11:15:00 AM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	260	5		µg/L	5	4/20/99
Benzene	30	2.5		µg/L	5	4/20/99
Toluene	6.8	2.5		µg/L	5	4/20/99
Ethylbenzene	24	2.5		µg/L	5	4/20/99
m,p-Xylene	150	5		µg/L	5	4/20/99
o-Xylene	12	2.5		µg/L	5	4/20/99

Qualifiers:

- PQL - Practical Quantitation Limit
- ND - Not Detected at Practical Quantitation Limit
- J - Analyte detected below Practical Quantitation Limit
- 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
- Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 23-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9904024	Client Sample ID:	Rinse Blank
Lab ID:	9904024-26A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/12/99 4:20:00 PM
		COC Record:	5329-5331

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/18/99
Benzene	ND	0.5		µg/L	1	4/18/99
Toluene	ND	0.5		µg/L	1	4/18/99
Ethylbenzene	ND	0.5		µg/L	1	4/18/99
m,p-Xylene	ND	1		µg/L	1	4/18/99
o-Xylene	ND	0.5		µg/L	1	4/18/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 23-Apr-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9904024

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_990416	Test Code: SW8021B	Units: µg/L	Analysis Date 4/16/99	Prep Date:
Client ID:	9904024	Run ID:	GC-1_990416A	SeqNo: 13448	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0385	0.5			J
Ethylbenzene	ND	0.5			
m,p-Xylene	.1227	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.1009	0.5			J

Sample ID: MB1	Batch ID: GC-1_990418	Test Code: SW8021B	Units: µg/L	Analysis Date 4/18/99	Prep Date:
Client ID:	9904024	Run ID:	GC-1_990418A	SeqNo: 13419	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.1184	0.5			J
Ethylbenzene	ND	0.5			
m,p-Xylene	.1921	1			J
Methyl tert-Butyl Ether	.2047	1			J
o-Xylene	.0701	0.5			J
Toluene	.2341	0.5			J

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9904024
Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_990420	Test Code: SW8021B	Units: µg/L	Analysis Date 4/20/99	Prep Date:						
Client ID:	9904024	Run ID: GC-1_990420A		SeqNo: 13515							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.144	0.5									J
Ethylbenzene	.1297	0.5									J
m,p-Xylene	ND	1									
Methyl tert-Butyl Ether	.4999	1									J
o-Xylene	.1439	0.5									J
Toluene	.1335	0.5									J

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

On Site Technologies, LTD.

Date: 23-Apr-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9904024
Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9904025-05AMS		Batch ID: GC-1_990416		Test Code: SW8021B		Units: µg/L		Analysis Date 4/16/99		Prep Date:		
Client ID:		9904024		Run ID: GC-1_990416A				SeqNo: 13449				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		268.7	2.5	200	66.09	101.3%	73	115				
Ethylbenzene		217.6	2.5	200	6.43	105.6%	74	117				
m,p-Xylene		415.4	5	400	11.6	101.0%	76	112				
Methyl tert-Butyl Ether		216.5	5	200	1.304	107.6%	62	122				
o-Xylene		210	2.5	200	0.3085	104.9%	83	112				
Toluene		209.6	2.5	200	2.383	103.6%	71	120				

Sample ID: 9904025-05AMSD		Batch ID: GC-1_990416		Test Code: SW8021B		Units: µg/L		Analysis Date 4/16/99		Prep Date:		
Client ID:		9904024		Run ID:		GC-1_990416A		SeqNo: 13450				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		267.3	2.5	200	66.09	100.6%	73	115	268.7	0.5%	8	
Ethylbenzene		216.1	2.5	200	6.43	104.8%	74	117	217.6	0.7%	9	
m,p-Xylene		413.7	5	400	11.6	100.5%	76	112	415.4	0.4%	9	
Methyl tert-Butyl Ether		208.2	5	200	1.304	103.4%	62	122	216.5	3.9%	7	
o-Xylene		208.3	2.5	200	0.3085	104.0%	83	112	210	0.8%	9	
Toluene		209	2.5	200	2.383	103.3%	71	120	209.6	0.3%	9	

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9904024
Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9904024-14AMS		Batch ID: GC-1_990418		Test Code: SW8021B		Units: µg/L		Analysis Date 4/18/99		Prep Date:	
Client ID: Stripper Influent		9904024		Run ID: GC-1_990418A				SeqNo: 13422			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	15020	100	8000	6478	106.8%	73	115				
Ethylbenzene	10090	100	8000	1580	106.3%	74	117				
m,p-Xylene	21240	200	16000	5098	100.9%	76	112				
Methyl tert-Butyl Ether	8425	200	8000	305.8	101.5%	62	122				
o-Xylene	10460	100	8000	2057	105.0%	83	112				
Toluene	23890	100	8000	15580	103.8%	71	120				

Sample ID: 9904024-14AMSD		Batch ID: GC-1_990418		Test Code: SW8021B		Units: µg/L		Analysis Date 4/18/99		Prep Date:	
Client ID: Stripper Influent		9904024		Run ID: GC-1_990418A				SeqNo: 13423			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	14720	100	8000	6478	103.0%	73	115	15020	2.1%	8	
Ethylbenzene	9892	100	8000	1580	103.9%	74	117	10090	2.0%	9	
m,p-Xylene	20800	200	16000	5098	98.1%	76	112	21240	2.1%	9	
Methyl tert-Butyl Ether	8572	200	8000	305.8	103.3%	62	122	8425	1.7%	7	
o-Xylene	10340	100	8000	2057	103.5%	83	112	10460	1.2%	9	
Toluene	23410	100	8000	15580	97.8%	71	120	23890	2.0%	9	

Sample ID: 9904025-04AMS		Batch ID: GC-1_990420		Test Code: SW8021B		Units: µg/L		Analysis Date 4/20/99		Prep Date:	
Client ID:		9904024		Run ID: GC-1_990420A				SeqNo: 13516			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	641.8	2.5	200	440	100.9%	73	115				
Ethylbenzene	241.8	2.5	200	40	100.9%	74	117				
m,p-Xylene	540	5	400	160	95.0%	76	112				
Methyl tert-Butyl Ether	213.8	5	200	0	106.9%	62	122				
o-Xylene	264.5	2.5	200	86	89.3%	83	112				
Toluene	209.2	2.5	200	4.4	102.4%	71	120				

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9904024
Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike Duplicate

Sample ID: 9904025-04AMSD		Batch ID: GC-1_990420		Test Code: SW8021B		Units: µg/L		Analysis Date 4/20/99		Prep Date:	
Client ID: 9904024		Run ID: GC-1_990420A		SeqNo: 13517							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	657	2.5	200	440	108.5%	73	115	641.8	2.3%	8	
Ethylbenzene	247	2.5	200	40	103.5%	74	117	241.8	2.1%	9	
m,p-Xylene	553.5	5	400	160	98.4%	76	112	540	2.5%	9	
Methyl tert-Butyl Ether	213.9	5	200	0	106.9%	62	122	213.8	0.1%	7	
o-Xylene	266.7	2.5	200	86	90.4%	83	112	264.5	0.8%	9	
Toluene	214.6	2.5	200	4.4	105.1%	71	120	209.2	2.5%	9	

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

On Site Technologies, LTD.

Date: 23-Apr-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9904024

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_990416		Test Code: SW8021B		Units: µg/L		Analysis Date 4/16/99		Prep Date:	
Client ID:		9904024		Run ID:		GC-1_990416A		SeqNo: 13447			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.64	0.5	40	0.0385	106.5%	84	110				
Ethylbenzene	43.6	0.5	40	0	109.0%	86	113				
m,p-Xylene	83.08	1	80	0.1227	103.7%	81	114				
Methyl tert-Butyl Ether	40.43	1	40	0	101.1%	69	129				
o-Xylene	42.75	0.5	40	0	106.9%	86	112				
Toluene	42.48	0.5	40	0.1009	105.9%	85	111				

Sample ID: LCS WATER	Batch ID: GC-1_990418	Test Code: SW8021B	Units: µg/L	Analysis Date 4/18/99	Prep Date:						
Client ID:	9904024	Run ID: GC-1_990418A		SeqNo: 13417							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	43.28	0.5	40	0.1184	107.9%	84	110				
Ethylbenzene	42.89	0.5	40	0	107.2%	86	113				
m,p-Xylene	81.84	1	80	0.1921	102.1%	81	114				
Methyl tert-Butyl Ether	42.26	1	40	0.2047	105.1%	69	129				
o-Xylene	42.11	0.5	40	0.0701	105.1%	86	112				
Toluene	42.42	0.5	40	0.2341	105.5%	85	111				

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9904024
Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS2 WATER		Batch ID: GC-1_990418		Test Code: SW8021B		Units: µg/L		Analysis Date 4/18/99		Prep Date:	
Client ID:		9904024		Run ID:		GC-1_990418A		SeqNo:		13418	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	43.91	0.5	40	0.1184	109.5%	84	110				
Ethylbenzene	42.17	0.5	40	0	105.4%	86	113				
m,p-Xylene	80.11	1	80	0.1921	99.9%	81	114				
Methyl tert-Butyl Ether	43.19	1	40	0.2047	107.5%	69	129				
o-Xylene	41.7	0.5	40	0.0701	104.1%	86	112				
Toluene	42.99	0.5	40	0.2341	106.9%	85	111				

Sample ID: LCS WATER		Batch ID: GC-1_990420		Test Code: SW8021B		Units: µg/L		Analysis Date 4/20/99		Prep Date:	
Client ID:		9904024		Run ID:		GC-1_990420A		SeqNo:		13514	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	43.07	0.5	40	0.144	107.3%	84	110				
Ethylbenzene	42.55	0.5	40	0.1297	106.0%	86	113				
m,p-Xylene	83.55	1	80	0	104.4%	81	114				
Methyl tert-Butyl Ether	42.42	1	40	0.4999	104.8%	69	129				
o-Xylene	42.46	0.5	40	0.1439	105.8%	86	112				
Toluene	41.98	0.5	40	0.1335	104.6%	85	111				

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

On Site Technologies, LTD.

CLIENT: BioTech Remediation, Inc.
Work Order: 9904024
Project: Thriftway Refinery

Date: 23-Apr-99

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_9902		Batch ID: GC-1_990416	Test Code: SW8021B	Units: µg/L		Analysis Date 4/16/99				Prep Date:			
Client ID:	9904024	Run ID:	GC-1_990416A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 13444	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	21.78			0.5	20	0	108.9%	85	115				
Ethylbenzene	22.14			0.5	20	0	110.7%	85	115				
m,p-Xylene	42.3			1	40	0	105.7%	85	115				
Methyl tert-Butyl Ether	20.51			1	20	0	102.5%	85	115				
o-Xylene	21.81			0.5	20	0	109.1%	85	115				
Toluene	21.59			0.5	20	0	108.0%	85	115				
1,4-Difluorobenzene	94.27			0	100	0	94.3%	84	100				
4-Bromochlorobenzene	97.71			0	100	0	97.7%	87	105				
Fluorobenzene	96.28			0	100	0	96.3%	87	99				

Sample ID: CCV2 BTEX_9902		Batch ID: GC-1_990416		Test Code: SW8021B		Units: µg/L		Analysis Date 4/16/99		Prep Date:		
Client ID:	9904024	Run ID:	GC-1_990416A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 13445	RPDLimit	Qual
Analyte	Result											
Benzene	20.99			0.5	20	0	105.0%	85	115			
Ethylbenzene	21.48			0.5	20	0	107.4%	85	115			
m,p-Xylene	40.81			1	40	0	102.0%	85	115			
Methyl tert-Butyl Ether	21.4			1	20	0	107.0%	85	115			
o-Xylene	21.25			0.5	20	0	106.3%	85	115			
Toluene	21.03			0.5	20	0	105.1%	85	115			
1,4-Difluorobenzene	93.92			0	100	0	93.9%	84	100			
4-Bromochlorobenzene	96.65			0	100	0	96.6%	87	105			
Fluorobenzene	96.32			0	100	0	96.3%	87	99			

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9904024

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_9902	Batch ID: GC-1_990416	Test Code: SW8021B	Units: µg/L	Analysis Date 4/16/99	Prep Date:
Client ID: 9904024	Run ID: GC-1_990416A			SeqNo: 13446	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.42	0.5	40	0	103.5%	85	115				
Ethylbenzene	42.34	0.5	40	0	105.9%	85	115				
m,p-Xylene	80.56	1	80	0	100.7%	85	115				
Methyl tert-Butyl Ether	41.52	1	40	0	103.8%	85	115				
o-Xylene	41.9	0.5	40	0	104.7%	85	115				
Toluene	41.46	0.5	40	0	103.7%	85	115				
1,4-Difluorobenzene	93.87	0	100	0	93.9%	84	100				
4-Bromochlorobenzene	97.35	0	100	0	97.4%	87	105				
Fluorobenzene	95.54	0	100	0	95.5%	87	99				

Sample ID: CCV1 BTEX_9902	Batch ID: GC-1_990418	Test Code: SW8021B	Units: µg/L	Analysis Date 4/18/99	Prep Date:
Client ID: 9904024	Run ID: GC-1_990418A			SeqNo: 13413	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.76	0.5	20	0	113.8%	85	115				
Ethylbenzene	22.68	0.5	20	0	113.4%	85	115				
m,p-Xylene	43.41	1	40	0	108.5%	85	115				
Methyl tert-Butyl Ether	22.23	1	20	0	111.2%	85	115				
o-Xylene	22.23	0.5	20	0	111.1%	85	115				
Toluene	22.3	0.5	20	0	111.5%	85	115				
1,4-Difluorobenzene	94.2	0	100	0	94.2%	84	100				
4-Bromochlorobenzene	99.07	0	100	0	99.1%	87	105				
Fluorobenzene	96.29	0	100	0	96.3%	87	99				

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9904024

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_9902		Batch ID: GC-1_990418		Test Code: SW8021B		Units: µg/L		Analysis Date 4/18/99		Prep Date:	
Client ID:		9904024		Run ID: GC-1_990418A				SeqNo: 13414			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	24.4	0.5	20	0	122.0%	85	115				S ✓
Ethylbenzene	23.15	0.5	20	0	115.8%	85	115				S ✓
m,p-Xylene	44.38	1	40	0	111.0%	85	115				S ✓
Methyl tert-Butyl Ether	22.2	1	20	0	111.0%	85	115				S ✓
o-Xylene	22.77	0.5	20	0	113.8%	85	115				S ✓
Toluene	25.29	0.5	20	0	126.5%	85	115				S ✓
1,4-Difluorobenzene	94.4	0	100	0	94.4%	84	100				
4-Bromochlorobenzene	98.33	0	100	0	98.3%	87	105				
Fluorobenzene	96.08	0	100	0	96.1%	87	99				

Sample ID: CCV3 BTEX_9902		Batch ID: GC-1_990418		Test Code: SW8021B		Units: µg/L		Analysis Date 4/18/99		Prep Date:	
Client ID:		9904024		Run ID:		GC-1_990418A		SeqNo: 13415			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	43.65	0.5	40	0	109.1%	85	115				
Ethylbenzene	43.66	0.5	40	0	109.1%	85	115				
m,p-Xylene	82.89	1	80	0	103.6%	85	115				
Methyl tert-Butyl Ether	43.4	1	40	0	108.5%	85	115				
o-Xylene	42.89	0.5	40	0	107.2%	85	115				
Toluene	43.35	0.5	40	0	108.4%	85	115				
1,4-Difluorobenzene	93.87	0	100	0	93.9%	84	100				
4-Bromochlorobenzene	94.81	0	100	0	94.8%	87	105				
Fluorobenzene	95.69	0	100	0	95.7%	87	99				

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

CLIENT: BioTech Remediation, Inc.

Work Order: 9904024

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV4 BTEX_9902		Batch ID: GC-1_990418		Test Code: SW8021B		Units: µg/L		Analysis Date 4/18/99		Prep Date:	
Client ID: 9904024		Run ID: GC-1_990418A		PQL		SPK value		SeqNo: 13416			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	44.39	0.5	40	0	111.0%	85	115				
Ethylbenzene	44.23	0.5	40	0	110.6%	85	115				
m,p-Xylene	84.46	1	80	0	105.6%	85	115				
Methyl tert-Butyl Ether	42.09	1	40	0	105.2%	85	115				
o-Xylene	43.52	0.5	40	0	108.8%	85	115				
Toluene	44.38	0.5	40	0	111.0%	85	115				
1,4-Difluorobenzene	94.33	0	100	0	94.3%	84	100				
4-Bromochlorobenzene	100.5	0	100	0	100.5%	87	105				
Fluorobenzene	95.54	0	100	0	95.5%	87	99				

Sample ID: CCV1 BTEX_9902		Batch ID: GC-1_990420		Test Code: SW8021B		Units: µg/L		Analysis Date 4/20/99		Prep Date:	
Client ID: 9904024		Run ID: GC-1_990420A		PQL		SPK value		SeqNo: 13511			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.91	0.5	20	0	109.6%	85	115				
Ethylbenzene	21.8	0.5	20	0	109.0%	85	115				
m,p-Xylene	42.61	1	40	0	106.5%	85	115				
Methyl tert-Butyl Ether	21.83	1	20	0	109.2%	85	115				
o-Xylene	21.72	0.5	20	0	108.6%	85	115				
Toluene	22.28	0.5	20	0	111.4%	85	115				
1,4-Difluorobenzene	92.18	0	100	0	92.2%	84	100				
4-Bromochlorobenzene	99.86	0	100	0	99.9%	87	105				
Fluorobenzene	93.43	0	100	0	93.4%	87	99				

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9904024
Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_9902		Batch ID: GC-1_990420		Test Code: SW8021B		Units: µg/L		Analysis Date 4/20/99		Prep Date:	
Client ID: 9904024		Run ID: GC-1_990420A		PQL		SPK value		SeqNo: 13512			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.99	0.5	20	0	109.9%	85	115				
Ethylbenzene	21.21	0.5	20	0	106.0%	85	115				
m,p-Xylene	41.19	1	40	0	103.0%	85	115				
Methyl tert-Butyl Ether	21.32	1	20	0	106.6%	85	115				
o-Xylene	21.7	0.5	20	0	108.5%	85	115				
Toluene	22.18	0.5	20	0	110.9%	85	115				
1,4-Difluorobenzene	92.71	0	100	0	92.7%	84	100				
4-Bromochlorobenzene	101.6	0	100	0	101.7%	87	105				
Fluorobenzene	93.06	0	100	0	93.1%	87	99				

Sample ID: CCV3 BTEX_9902		Batch ID: GC-1_990420		Test Code: SW8021B		Units: µg/L		Analysis Date 4/20/99		Prep Date:	
Client ID: 9904024		Run ID: GC-1_990420A		PQL		SPK value		SeqNo: 13513			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	43.02	0.5	40	0	107.6%	85	115				
Ethylbenzene	42.4	0.5	40	0	106.0%	85	115				
m,p-Xylene	82.39	1	80	0	103.0%	85	115				
Methyl tert-Butyl Ether	41.71	1	40	0	104.3%	85	115				
o-Xylene	42.33	0.5	40	0	105.8%	85	115				
Toluene	42.59	0.5	40	0	106.5%	85	115				
1,4-Difluorobenzene	91.28	0	100	0	91.3%	84	100				
4-Bromochlorobenzene	101.2	0	100	0	101.2%	87	105				
Fluorobenzene	92.22	0	100	0	92.2%	87	99				

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

On Site Technologies, LTD.

Date: 23-Apr-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9904024

Project: Thriftway Refinery

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
9904013-01A	85.4	91.4	85.9 *					
9904014-01A	95.3	98.6	97					
9904014-02A	90.8	104	92					
9904014-03A	92.1	96.4	95					
9904014-04A	90.6	101	92					
9904024-01A	94.8	99.3	97.6					
9904024-02A	94.9	99.7	97.6					
9904024-03A	95	98.6	97.3					
9904024-04A	94.6	99.1	97.6					
9904024-05A	95.2	98.2	97.6					
9904024-06A	93.8	98.6	97.1					
9904024-07A	93.9	99.3	97					
9904024-08A	91.5	99	92.8					
9904024-09A	93.8	99.4	96.5					
9904024-10A	93	99	94					
9904024-11A	88.8	96.6	89.8					
9904024-12A	94.9	99.8	97.7					
9904024-13A	94.6	95	93.6					
9904024-14A	93.1	100	93.7					
9904024-14AMS	93.1	99.8	94.6					
9904024-14AMSD	93.4	99.8	95.2					
9904024-15A	94.2	98.9	97.5					
9904024-16A	95	101	97.5					
9904024-17A	94.9	100	97					
9904024-18A	94.4	99.7	97.6					
9904024-19A	90.5	103	93.2					
9904024-20A	90.5	98.7	94					

Acronym

Surrogate

QC Limits

14FBZ

= 1,4-Difluorobenzene

84-100

4BCBZ

= 4-Bromochlorobenzene

87-105

FLBZ

= Fluorobenzene

87-99

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 9904024
Project: Thriftway Refinery
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
9904024-21A	93	100	93.6					
9904024-22A	94.8	99.8	97.8					
9904024-23A	95.2	100	97.9					
9904024-24A	91.7	102	92.6					
9904024-25A	91	98.8	94.8					
9904024-26A	94.9	100	97.7					
9904025-01A	95.2	97.4	98					
9904025-02A	91.2	101	91.8					
9904025-04A	88.5	99	89.4					
9904025-04AMS	87.6	105	89.3					
9904025-04AMSD	88.1	99.2	90					
9904025-05A	89.2	96.8	90.8					
9904025-05AMS	92.3	98.4	94.6					
9904025-05AMSD	92.4	97.4	94.6					
9904025-06A	92.8	97.2	95.3					
9904025-07A	91.9	95.6	94.8					
9904025-08A	93.1	98.8	95.8					
9904026-01A	94.5	96.9	97.3					
9904026-02A	93.6	97	96.5					
9904026-03A	92.2	99.2	94.2					
9904026-04A	86.9	94.1	91.9					
9904026-05A	88.5	95.4	92.9					
CCV1 BTEX_99020	92.2	99.9	93.4					
CCV2 BTEX_99020	92.7	102	93					
CCV3 BTEX_99020	91.3	101	92.2					
CCV4 BTEX_99020	94.3	100	95.5					
LCS WATER	92.3	98.6	93.5					
LCS2 WATER	94.7	96.4	96.4					

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	84-100
4BCBZ	= 4-Bromochlorobenzene	87-105
FLBZ	= Fluorobenzene	87-99

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 9904024
Project: Thriftway Refinery
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
MB1	90.7	98.2	92.3					

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	84-100
4BCBZ	= 4-Bromochlorobenzene	87-105
FLBZ	= Fluorobenzene	87-99

* Surrogate recovery outside acceptance limits

CHAIN OF CUSTODY RECORD

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ON SITE

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4/17/99

Date:

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

TECHNOLOGIES, LTD.

Purchase Order No.: 99-773		Job No.		Name: Terry Griffin		Title	
SEND INVOICE TO		Company: Same		Company: BioTech Remediation, Inc.			
Address		Dept.		Mailing Address: 710 E. 20th St., Suite 400			
City, State, Zip				City, State, Zip: Farmington, NM 87401			
Sampling Location: Thruway Refinery 626 Rd 5500 Bloomfield, NM 87403				Telephone No.: 505-327-4965		Telefax No.	
Sampler: Ken Sinks				ANALYSIS REQUESTED			
REPORT RESULTS TO		Number of Containers					
SAMPLE IDENTIFICATION		SAMPLE DATE		TIME		LAB ID	
Travel Blank		4/12		0900		1420	
mw-13		4/12		1120		-	
Field Blank		4/12		1127		-	
mw-10		4/12		0150		-	
mw-11		4/12		1250		-	
mw-09		4/12		1330		-	
mw-15		4/12		1430		-	
mw-05		4/12		1600		-	
mw-22		4/12		1655		-	
mw-21		4/12		1720		-	
mw-20		4/12		1750		-	
Travel Blank		4/13		0900		-	
Relinquished by: Ken Sinks		Date/Time		4/14/99		Received by: JAC	
Relinquished by:		Date/Time				Date/Time	
Relinquished by:		Date/Time				Date/Time	
Method of Shipment:		Rush		24-48 Hours		10 Working Days	
Authorized by: Ken Sinks		Date		4/17/99		Special Instructions:	

ON SITE

TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Purchase Order No.: 99-773		Job No.	
Name: Same		Dept.	
Company:			
Address:			
City, State, Zip			
Sampling Location: Thruway Refinery 626 Rd 5500 Bloomfield, NM 87413			
Sampler: Ken Sinks			
SAMPLE IDENTIFICATION			
SAMPLE		PRES.	
DATE	TIME		
4/13	0940	120	
4/13	0950	✓	
4/13	1040	✓	
4/13	1527	✓	
4/13	1550	✓	
4/13	1553	✓	
4/13	1642	✓	
4/13	1707	✓	
4/13	1737	✓	
4/14	0910	✓	
4/14	1000	✓	
4/14	1030	✓	
RELINQUISHED BY: Ken Sinks			
Date/Time		4/14/99 1555	
RELINQUISHED BY:			
Date/Time			
RELINQUISHED BY:			
Date/Time			
Method of Shipment:			
Authorized by: Ken Sinks		Date: 4/14/99	
(Client Signature Must Accompany Request)			

Distribution:	White – On Site	Yellow – LAB	Pink – Sampler	Goldenrod – Client
---------------	-----------------	--------------	----------------	--------------------

33

ON SITE

Date: _____

56/51/75

Page

3 of 3

6557 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

TECHNOLOGIES, LTD.

[illegible]

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

OFF: (505) 325-5667



LAB: (505) 325-1556

April 07, 1999

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

*Orig. not submitted
in report.*

APR 13 1999

RE: Thriftway Refinery Air Stripper

Order No.: 9903058

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 3/26/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 07-Apr-99

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 9903058

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 07-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9903058	Client Sample ID:	Travel Blank
Lab ID:	9903058-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	3/26/99 8:00:00 AM
		COC Record:	10096

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	4/2/99
Benzene	ND	0.5		µg/L	1	4/2/99
Toluene	ND	0.5		µg/L	1	4/2/99
Ethylbenzene	ND	0.5		µg/L	1	4/2/99
m,p-Xylene	ND	1		µg/L	1	4/2/99
o-Xylene	ND	0.5		µg/L	1	4/2/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 07-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9903058	Client Sample ID:	Stripper Effluent
Lab ID:	9903058-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	3/26/99 10:52:00 AM
		COC Record:	10096

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	14	1		µg/L	1	4/2/99
Benzene	2.1	0.5		µg/L	1	4/2/99
Toluene	1.1	0.5		µg/L	1	4/2/99
Ethylbenzene	0.6	0.5		µg/L	1	4/2/99
m,p-Xylene	4.7	1		µg/L	1	4/2/99
o-Xylene	1.9	0.5		µg/L	1	4/2/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 07-Apr-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9903058	Client Sample ID:	Stripper Influent
Lab ID:	9903058-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	3/26/99 10:50:00 AM
		COC Record:	10096

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	140	10		µg/L	10	4/2/99
Benzene	980	5		µg/L	10	4/2/99
Toluene	430	5		µg/L	10	4/2/99
Ethylbenzene	710	5		µg/L	10	4/2/99
m,p-Xylene	1500	10		µg/L	10	4/2/99
o-Xylene	400	5		µg/L	10	4/2/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 07-Apr-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9903058

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT
Method Blank

Sample ID: MB1	Batch ID: GC-1_990402	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/2/99	Prep Date:						
Client ID:	9903058	Run ID: GC-1_990402A		SeqNo: 12953							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									J
Ethylbenzene	.0627	0.5									
m,p-Xylene	ND	1									
Methyl tert-Butyl Ether	ND	1									
o-Xylene	ND	0.5									
Toluene	.1341	0.5									J

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

On Site Technologies, LTD.

Date: 07-Apr-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9903058
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9903056-05AMS	Batch ID: GC-1_990402	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/2/99	Prep Date:
Client ID: 9903058	Run ID: GC-1_990402A	PQL	SPK value	SeqNo: 12954	
Analyte	Result	PQL	SPK Ref Val	LowLimit	HighLimit
Benzene	406.5	2.5	196.1	73	115
Ethylbenzene	212.2	2.5	0.738	74	117
m,p-Xylene	410.7	5	5.634	76	112
Methyl tert-Butyl Ether	226.8	5	3.076	62	122
o-Xylene	211.5	2.5	1.218	83	112
Toluene	221.2	2.5	11.69	71	120

Sample ID: 9903056-05AMSD	Batch ID: GC-1_990402	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/2/99	Prep Date:
Client ID: 9903058	Run ID: GC-1_990402A	PQL	SPK value	SeqNo: 12955	
Analyte	Result	PQL	SPK Ref Val	LowLimit	HighLimit
Benzene	402.9	2.5	196.1	73	115
Ethylbenzene	210.4	2.5	0.738	74	117
m,p-Xylene	407.2	5	5.634	76	112
Methyl tert-Butyl Ether	222.3	5	3.076	62	122
o-Xylene	209	2.5	1.218	83	112
Toluene	219.2	2.5	11.69	71	120

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

On Site Technologies, LTD.

Date: 07-Apr-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9903058

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_990402	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/2/99		Prep Date:				
Client ID:		9903058	Run ID: GC-1_990402A		SeqNo: 12952						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	43.06	0.5	40	0	107.7%	84	110				
Ethylbenzene	42.89	0.5	40	0.0627	107.1%	86	113				
m,p-Xylene	82.69	1	80	0	103.4%	81	114				
Methyl tert-Butyl Ether	43.12	1	40	0	107.8%	69	129				
o-Xylene	42.65	0.5	40	0	106.6%	86	112				
Toluene	42.49	0.5	40	0.1341	105.9%	85	111				

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

On Site Technologies, LTD.

Date: 07-Apr-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9903058

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_9902		Batch ID: GC-1_990402	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/2/99		Prep Date:				
Client ID: 9903058		Run ID: GC-1_990402A			SeqNo: 12948						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.21	0.5	20	0	111.0%	85	115				
Ethylbenzene	22.09	0.5	20	0	110.5%	85	115				
m,p-Xylene	42.71	1	40	0	106.8%	85	115				
Methyl tert-Butyl Ether	22.55	1	20	0	112.7%	85	115				
o-Xylene	21.87	0.5	20	0	109.4%	85	115				
Toluene	21.91	0.5	20	0	109.5%	85	115				
1,4-Difluorobenzene	93.74	0	100	0	93.7%	84	100				
4-Bromochlorobenzene	97.89	0	100	0	97.9%	87	105				
Fluorobenzene	95.15	0	100	0	95.2%	87	99				

Sample ID: CCV2 BTEX_9902		Batch ID: GC-1_990402	Test Code: SW8021B		Units: µg/L		Analysis Date: 4/2/99		Prep Date:		
Client ID: 9903058		Run ID: GC-1_990402A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte	Result										
Benzene	22.82		0.5	20	0	114.1%	85	115			
Ethylbenzene	22.65		0.5	20	0	113.2%	85	115			
m,p-Xylene	43.87		1	40	0	109.7%	85	115			
Methyl tert-Butyl Ether	22.6		1	20	0	113.0%	85	115			
o-Xylene	22.46		0.5	20	0	112.3%	85	115			
Toluene	22.34		0.5	20	0	111.7%	85	115			
1,4-Difluorobenzene	93.5		0	100	0	93.5%	84	100			
4-Bromochlorobenzene	98.63		0	100	0	98.6%	87	105			
Fluorobenzene	94.22		0	100	0	94.2%	87	99			

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9903058
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_9902		Batch ID: GC-1_990402	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/2/99		Prep Date:				
Client ID: 9903058		Run ID: GC-1_990402A			SeqNo: 12950						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.34	0.5	20	0	111.7%	85	115				
Ethylbenzene	22.09	0.5	20	0	110.4%	85	115				
m,p-Xylene	42.67	1	40	0	106.7%	85	115				
Methyl tert-Butyl Ether	22.14	1	20	0	110.7%	85	115				
o-Xylene	21.84	0.5	20	0	109.2%	85	115				
Toluene	21.87	0.5	20	0	109.4%	85	115				
1,4-Difluorobenzene	93.3	0	100	0	93.3%	84	100				
4-Bromochlorobenzene	98.72	0	100	0	98.7%	87	105				
Fluorobenzene	93.98	0	100	0	94.0%	87	99				

Sample ID: CCV4 BTEX_9902		Batch ID: GC-1_990402	Test Code: SW8021B		Units: µg/L		Analysis Date: 4/2/99		Prep Date:			
Client ID: 9903058		Run ID: GC-1_990402A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	42.96		0.5	40	0	107.4%	85	115				
Ethylbenzene	42.1		0.5	40	0	105.2%	85	115				
m,p-Xylene	80.8		1	80	0	101.0%	85	115				
Methyl tert-Butyl Ether	42.44		1	40	0	106.1%	85	115				
o-Xylene	41.89		0.5	40	0	104.7%	85	115				
Toluene	41.96		0.5	40	0	104.9%	85	115				
1,4-Difluorobenzene	92.55		0	100	0	92.6%	84	100				
4-Bromochlorobenzene	97.78		0	100	0	97.8%	87	105				
Fluorobenzene	93.63		0	100	0	93.6%	87	99				

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

On Site Technologies, LTD.

Date: 07-Apr-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9903058

Project: Thriftway Refinery Air Stripper

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
9903043-01A	92.7	99.2	93.7					
9903056-05A	93.2	97.6	94.1					
9903056-05AMS	92.2	99	93.2					
9903056-05AMSD	92.3	98.9	93					
9903056-08A	93.6	97.5	95.2					
9903056-13A	94.6	97.9	94.9					
9903056-17A	92.5	98.7	94.4					
9903056-19A	93.7	98.4	94.9					
9903056-20A	93.2	98.6	95.2					
9903056-21A	94.5	98.1	96.1					
9903056-25A	94.2	98.3	94.8					
9903058-01A	93.8	98.8	94.9					
9903058-02A	92.5	96.8	93.2					
9903058-03A	91.6	98.5	92					
9903064-01A	94	98.4	95.1					
9903064-02A	93.4	98.6	94.9					
9903064-03A	93.5	99	94.8					
9903064-04A	94	97.8	95.1					
9903064-05A	93.4	98.7	94.8					
CCV1 BTEX_99020	93.7	97.9	95.2					
CCV2 BTEX_99020	93.5	98.6	94.2					
CCV3 BTEX_99020	93.3	98.7	94					
CCV4 BTEX_99020	92.6	97.8	93.6					
LCS WATER	93.2	98.4	94.8					
MB1	94.4	97.2	95.9					

Acronym

14FBZ

4BCBZ

FLBZ

Surrogate

= 1,4-Difluorobenzene

= 4-Bromochlorobenzene

= Fluorobenzene

QC Limits

84-100

87-105

87-99

* Surrogate recovery outside acceptance limits

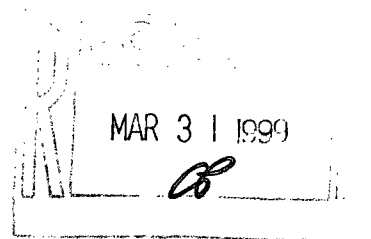
OFF: (505) 325-5667



LAB: (505) 325-1556

March 29, 1999

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604



RE: Thriftway Refinery Air Stripper

Order No.: 9903049

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 3/19/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in dark ink, appearing to read "David Cox".

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 29-Mar-99

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 9903049

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 29-Mar-99

Client: BioTech Remediation, Inc.
Work Order: 9903049
Lab ID: 9903049-01A **Matrix:** AQUEOUS
Project: Thriftway Refinery Air Stripper

Client Sample Info: Thriftway Refinery Air Stripper
Client Sample ID: Travel Blank
Collection Date: 3/19/99
COC Record: 10085

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	3/24/99
Benzene	ND	0.5		µg/L	1	3/24/99
Toluene	ND	0.5		µg/L	1	3/24/99
Ethylbenzene	ND	0.5		µg/L	1	3/24/99
m,p-Xylene	ND	1		µg/L	1	3/24/99
o-Xylene	ND	0.5		µg/L	1	3/24/99

Qualifiers:
PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 29-Mar-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	9903049	Client Sample ID:	Air Stripprr Effluent
Lab ID:	9903049-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	3/19/99 8:58:00 AM
		COC Record:	10085

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	4.8	1		µg/L	1	3/24/99
Benzene	1.6	0.5		µg/L	1	3/24/99
Toluene	1.4	0.5		µg/L	1	3/24/99
Ethylbenzene	1.4	0.5		µg/L	1	3/24/99
m,p-Xylene	3.7	1		µg/L	1	3/24/99
o-Xylene	1.7	0.5		µg/L	1	3/24/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 29-Mar-99

Client: BioTech Remediation, Inc.

Client Sample Info: Thriftway Refinery Air Stripper

Work Order: 9903049

Client Sample ID: Air Stripper Influent

Lab ID: 9903049-03A **Matrix:** AQUEOUS

Collection Date: 3/19/99 8:59:00 AM

Project: Thriftway Refinery Air Stripper

COC Record: 10085

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	170	10		µg/L	10	3/24/99
Benzene	1100	5		µg/L	10	3/24/99
Toluene	460	5		µg/L	10	3/24/99
Ethylbenzene	750	5		µg/L	10	3/24/99
m,p-Xylene	1400	10		µg/L	10	3/24/99
o-Xylene	360	5		µg/L	10	3/24/99

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 29-Mar-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9903049
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT
Method Blank

Sample ID: MB1	Batch ID: GC-1_990324	Test Code: SW8021B	Units: µg/L	Analysis Date: 3/24/99	Prep Date:						
Client ID:	9903049	Run ID: GC-1_990324A		SeqNo: 12685							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									J
Ethylbenzene	.0641	0.5									J
m,p-Xylene	.2318	1									
Methyl tert-Butyl Ether	ND	1									J
o-Xylene	.0888	0.5									J
Toluene	.129	0.5									J

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

On Site Technologies, LTD.

Date: 29-Mar-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9903049
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9903049-03AMS		Batch ID: GC-1_990324		Test Code: SW8021B		Units: µg/L		Analysis Date: 3/24/99		Prep Date:	
Client ID: Air Stripper Influe		9903049		Run ID:		GC-1_990324A		SeqNo: 12686			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1442	5	400	1100	85.6%	73	115				
Ethylbenzene	1116	5	400	750	91.4%	74	117				
m,p-Xylene	2128	10	800	1400	91.0%	76	112				
Methyl tert-Butyl Ether	569.6	10	400	140	107.4%	62	122				
o-Xylene	754.9	5	400	360	98.7%	83	112				
Toluene	845.9	5	400	460	96.5%	71	120				

Sample ID: 9903049-03AMSD		Batch ID: GC-1_990324		Test Code: SW8021B		Units: µg/L		Analysis Date: 3/24/99		Prep Date:	
Client ID: Air Stripper Influe		9903049		Run ID:		GC-1_990324A		SeqNo: 12687			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1481	5	400	1100	95.2%	73	115	1442	2.6%	8	
Ethylbenzene	1143	5	400	750	98.4%	74	117	1116	2.5%	9	
m,p-Xylene	2163	10	800	1400	95.3%	76	112	2128	1.6%	9	
Methyl tert-Butyl Ether	566.1	10	400	140	106.5%	62	122	569.6	0.6%	7	
o-Xylene	757.8	5	400	360	99.4%	83	112	754.9	0.4%	9	
Toluene	868.4	5	400	460	102.1%	71	120	845.9	2.6%	9	

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

On Site Technologies, LTD.

Date: 29-Mar-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9903049

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_990324	Test Code: SW8021B	Units: µg/L	Analysis Date: 3/24/99		Prep Date:				
Client ID:	9903049	Run ID:	GC-1_990324A		SeqNo:	12684					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.47	0.5	40	0	106.2%	84	110				
Ethylbenzene	42.08	0.5	40	0.0641	105.0%	86	113				
m,p-Xylene	81.45	1	80	0.2318	101.5%	81	114				
Methyl tert-Butyl Ether	41.62	1	40	0	104.1%	69	129				
o-Xylene	42.02	0.5	40	0.0888	104.8%	86	112				
Toluene	41.59	0.5	40	0.129	103.6%	85	111				

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

On Site Technologies, LTD.

Date: 29-Mar-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9903049
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0606/07		Batch ID: GC-1_990324		Test Code: SW8021B		Units: µg/L		Analysis Date: 3/24/99			Prep Date:	
Client ID:		9903049		Run ID: GC-1_990324A				SeqNo: 12682				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	22.26	0.5	20	0	111.3%	85	115					
Ethylbenzene	22.15	0.5	20	0	110.8%	85	115					
m,p-Xylene	43.07	1	40	0	107.7%	85	115					
Methyl tert-Butyl Ether	21.63	1	20	0	108.2%	85	115					
o-Xylene	22.33	0.5	20	0	111.7%	85	115					
Toluene	22.04	0.5	20	0	110.2%	85	115					
1,4-Difluorobenzene	94.39	0	100	0	94.4%	84	100					
4-Bromochlorobenzene	96.42	0	100	0	96.4%	87	105					
Fluorobenzene	96.39	0	100	0	96.4%	87	99					

Sample ID: CCV2 QC0606/07		Batch ID: GC-1_990324		Test Code: SW8021B		Units: µg/L		Analysis Date: 3/24/99			Prep Date:	
Client ID:		9903049		Run ID:		GC-1_990324A		SeqNo: 12683				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	43.82	0.5	40	0	109.5%	85	115					
Ethylbenzene	43.38	0.5	40	0	108.5%	85	115					
m,p-Xylene	83.95	1	80	0	104.9%	85	115					
Methyl tert-Butyl Ether	41.56	1	40	0	103.9%	85	115					
o-Xylene	43.32	0.5	40	0	108.3%	85	115					
Toluene	43.04	0.5	40	0	107.6%	85	115					
1,4-Difluorobenzene	93.73	0	100	0	93.7%	84	100					
4-Bromochlorobenzene	95.79	0	100	0	95.8%	87	105					
Fluorobenzene	95.41	0	100	0	95.4%	87	99					

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

On Site Technologies, LTD.

Date: 29-Mar-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9903049

Project: Thriftway Refinery Air Stripper

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ				
9903039-01A	94.2	95.4	96.7				
9903039-02A	91.6	92.1	94.2				
9903039-03A	94.6	95	96.2				
9903040-01A	94.5	95.6	96.3				
9903043-01A	92.2	96	94.6				
9903049-01A	94.8	94.8	97.2				
9903049-02A	94.5	94.7	96				
9903049-03A	96.7	94.2	96.1				
9903049-03AMS	96.9	95.4	96.5				
9903049-03AMSD	97.5	96.3	97				
CCV1 QC0606/07	94.4	96.4	96.4				
CCV2 QC0606/07	93.7	95.8	95.4				
LCS WATER	93.9	96.3	95.8				
MB1	94.7	96.2	96.8				

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	84-100
4BCBZ	= 4-Bromochlorobenzene	87-105
FLBZ	= Fluorobenzene	87-99

* Surrogate recovery outside acceptance limits

CHAIN OF CUSTODY RECORD

Date: 3/19/99

Page: 1 of 1

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

[illegible]

OFF: (505) 325-5667



LAB: (505) 325-1556

March 29, 1999

MAR 31 1999

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

RE: Thriftway Refinery Air Stripper

Order No.: 9903039

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 3/12/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "David Cox", written over a horizontal line.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 29-Mar-99

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 9903039

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 29-Mar-99

Client: BioTech Remediation, Inc.
Work Order: 9903039
Lab ID: 9903039-01A **Matrix:** AQUEOUS
Project: Thriftway Refinery Air Stripper

Client Sample Info: Thriftway Refinery Air Stripper
Client Sample ID: Travel Blank
Collection Date: 3/12/99 7:50:00 AM
COC Record: 10081

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	3/24/99
Benzene	ND	0.5		µg/L	1	3/24/99
Toluene	ND	0.5		µg/L	1	3/24/99
Ethylbenzene	ND	0.5		µg/L	1	3/24/99
m,p-Xylene	ND	1		µg/L	1	3/24/99
o-Xylene	ND	0.5		µg/L	1	3/24/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 29-Mar-99

Client: BioTech Remediation, Inc.

Client Sample Info: Thriftway Refinery Air Stripper

Work Order: 9903039

Client Sample ID: Stripper Effluent

Lab ID: 9903039-02A Matrix: AQUEOUS

Collection Date: 3/12/99 9:15:00 AM

Project: Thriftway Refinery Air Stripper

COC Record: 10081

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	5.7	1		µg/L	1	3/24/99
Benzene	1	0.5		µg/L	1	3/24/99
Toluene	1.9	0.5		µg/L	1	3/24/99
Ethylbenzene	1.5	0.5		µg/L	1	3/24/99
m,p-Xylene	5.1	1		µg/L	1	3/24/99
o-Xylene	1.9	0.5		µg/L	1	3/24/99

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 29-Mar-99

Client: BioTech Remediation, Inc.
Work Order: 9903039
Lab ID: 9903039-03A **Matrix:** AQUEOUS
Project: Thriftway Refinery Air Stripper

Client Sample Info: Thriftway Refinery Air Stripper
Client Sample ID: Stripper Influent
Collection Date: 3/12/99 9:18:00 AM
COC Record: 10081

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	140	10		µg/L	10	3/24/99
Benzene	370	5		µg/L	10	3/24/99
Toluene	370	5		µg/L	10	3/24/99
Ethylbenzene	440	5		µg/L	10	3/24/99
m,p-Xylene	1200	10		µg/L	10	3/24/99
o-Xylene	320	5		µg/L	10	3/24/99

Qualifiers:
PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 29-Mar-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9903039
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT
Method Blank

Sample ID: MB1	Batch ID: GC-1_990324	Test Code: SW8021B	Units: µg/L	Analysis Date: 3/24/99	Prep Date:						
Client ID:	9903039	Run ID:	GC-1_990324A	SeqNo: 12685							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									J
Ethylbenzene	.0641	0.5									J
m,p-Xylene	.2318	1									J
Methyl tert-Butyl Ether	ND	1									J
o-Xylene	.0888	0.5									J
Toluene	.129	0.5									J

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

On Site Technologies, LTD.

Date: 29-Mar-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9903039
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9903049-03AMS		Batch ID: GC-1_990324	Test Code: SW8021B	Units: µg/L	Analysis Date: 3/24/99		Prep Date:	
Client ID: 9903039		Run ID: GC-1_990324A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	1442	5	400	1100		85.6%	73	115
Ethylbenzene	1116	5	400	750		91.4%	74	117
m,p-Xylene	2128	10	800	1400		91.0%	76	112
Methyl tert-Butyl Ether	569.6	10	400	140		107.4%	62	122
o-Xylene	754.9	5	400	360		98.7%	83	112
Toluene	845.9	5	400	460		96.5%	71	120

Sample ID: 9903049-03AMSD		Batch ID: GC-1_990324	Test Code: SW8021B	Units: µg/L	Analysis Date: 3/24/99		Prep Date:	
Client ID: 9903039		Run ID: GC-1_990324A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	1481	5	400	1100		95.2%	73	115
Ethylbenzene	1143	5	400	750		98.4%	74	117
m,p-Xylene	2163	10	800	1400		95.3%	76	112
Methyl tert-Butyl Ether	566.1	10	400	140		106.5%	62	122
o-Xylene	757.8	5	400	360		99.4%	83	112
Toluene	868.4	5	400	460		102.1%	71	120

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

On Site Technologies, LTD.

Date: 29-Mar-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9903039
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_990324	Test Code: SW8021B	Units: µg/L	Analysis Date: 3/24/99	Prep Date:
Client ID: 9903039	Run ID: GC-1_990324A	PQL	SPK value	SeqNo: 12684	
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
Benzene	42.47	0.5	40	84	110
Ethylbenzene	42.08	0.5	40	86	113
m,p-Xylene	81.45	1	80	81	114
Methyl tert-Butyl Ether	41.62	1	40	69	129
o-Xylene	42.02	0.5	40	86	112
Toluene	41.59	0.5	40	85	111
				%REC	%RPD
				106.2%	
				105.0%	
				101.5%	
				104.1%	
				104.8%	
				103.6%	
				RPD Ref Val	RPDLimit
					Qual

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

On Site Technologies, LTD.

Date: 29-Mar-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9903039

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0606/07		Batch ID: GC-1_990324		Test Code: SW8021B		Units: µg/L		Analysis Date: 3/24/99		Prep Date:	
Client ID:		9903039		Run ID: GC-1_990324A				SeqNo: 12682			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.26	0.5	20	0	111.3%	85	115				
Ethylbenzene	22.15	0.5	20	0	110.8%	85	115				
m,p-Xylene	43.07	1	40	0	107.7%	85	115				
Methyl tert-Butyl Ether	21.63	1	20	0	108.2%	85	115				
o-Xylene	22.33	0.5	20	0	111.7%	85	115				
Toluene	22.04	0.5	20	0	110.2%	85	115				
1,4-Difluorobenzene	94.39	0	100	0	94.4%	84	100				
4-Bromochlorobenzene	96.42	0	100	0	96.4%	87	105				
Fluorobenzene	96.39	0	100	0	96.4%	87	99				

Sample ID: CCV2 QC0606/07		Batch ID: GC-1_990324		Test Code: SW8021B		Units: µg/L		Analysis Date: 3/24/99		Prep Date:	
Client ID:		9903039		Run ID: GC-1_990324A				SeqNo: 12683			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	43.82	0.5	40	0	109.5%	85	115				
Ethylbenzene	43.38	0.5	40	0	108.5%	85	115				
m,p-Xylene	83.95	1	80	0	104.9%	85	115				
Methyl tert-Butyl Ether	41.56	1	40	0	103.9%	85	115				
o-Xylene	43.32	0.5	40	0	108.3%	85	115				
Toluene	43.04	0.5	40	0	107.6%	85	115				
1,4-Difluorobenzene	93.73	0	100	0	93.7%	84	100				
4-Bromochlorobenzene	95.79	0	100	0	95.8%	87	105				
Fluorobenzene	95.41	0	100	0	95.4%	87	99				

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

On Site Technologies, LTD.

Date: 29-Mar-99

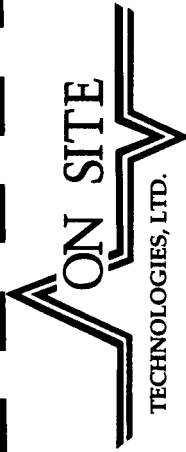
CLIENT: BioTech Remediation, Inc.
Work Order: 9903039
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

**QC SUMMARY REPORT
SURROGATE RECOVERIES****Aromatic Volatiles by GC/PID**

Sample ID	14FBZ	4BCBZ	FLBZ				
9903039-01A	94.2	95.4	96.7				
9903039-02A	91.6	92.1	94.2				
9903039-03A	94.6	95	96.2				
9903040-01A	94.5	95.6	96.3				
9903043-01A	92.2	96	94.6				
9903049-01A	94.8	94.8	97.2				
9903049-02A	94.5	94.7	96				
9903049-03A	96.7	94.2	96.1				
9903049-03AMS	96.9	95.4	96.5				
9903049-03AMSD	97.5	96.3	97				
CCV1 QC0606/07	94.4	96.4	96.4				
CCV2 QC0606/07	93.7	95.8	95.4				
LCS WATER	93.9	96.3	95.8				
MB1	94.7	96.2	96.8				

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	84-100
4BCBZ	= 4-Bromochlorobenzene	87-105
FLBZ	= Fluorobenzene	87-99

* Surrogate recovery outside acceptance limits



612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 5/12/97

Page: 1 of 1

[illegible]

OFF: (505) 325-5667



LAB: (505) 325-1556

March 12, 1999

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604

18 1999
or

RE: Thriftway Refinery

Order No.: 9903024

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 3/5/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
BTEX (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 12-Mar-99

CLIENT: BioTech Remediation, Inc.

Project: Thriftway Refinery

Lab Order: 9903024

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 12-Mar-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9903024	Client Sample ID:	Influent
Lab ID:	9903024-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	3/5/99 9:21:00 AM
		COC Record:	5346

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	120	10		µg/L	10	3/9/99
Benzene	760	5		µg/L	10	3/9/99
Toluene	280	5		µg/L	10	3/9/99
Ethylbenzene	530	5		µg/L	10	3/9/99
m,p-Xylene	760	10		µg/L	10	3/9/99
o-Xylene	240	5		µg/L	10	3/9/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 12-Mar-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9903024	Client Sample ID:	Effluent
Lab ID:	9903024-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	3/5/99 9:21:00 AM
		COC Record:	5346

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	13	1		µg/L	1	3/9/99
Benzene	2	0.5		µg/L	1	3/9/99
Toluene	1.3	0.5		µg/L	1	3/9/99
Ethylbenzene	1.9	0.5		µg/L	1	3/9/99
m,p-Xylene	4	1		µg/L	1	3/9/99
o-Xylene	1.5	0.5		µg/L	1	3/9/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

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

Surf: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 12-Mar-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	9903024	Client Sample ID:	Travel Blank
Lab ID:	9903024-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	3/5/99 9:21:00 AM
		COC Record:	5346

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	ND	1		µg/L	1	3/9/99
Benzene	ND	0.5		µg/L	1	3/9/99
Toluene	ND	0.5		µg/L	1	3/9/99
Ethylbenzene	ND	0.5		µg/L	1	3/9/99
m,p-Xylene	ND	1		µg/L	1	3/9/99
o-Xylene	ND	0.5		µg/L	1	3/9/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 12-Mar-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9903024

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_990309	Test Code: SW8021B	Units: µg/L	Analysis Date 3/9/99	Prep Date:
Client ID:	9903024	Run ID: GC-1_990309A		SeqNo: 11935	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0322	0.5			J
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.0696	0.5			J

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

On Site Technologies, LTD.

Date: 12-Mar-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9903024
Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9902095-01AMS		Batch ID: GC-1_990309		Test Code: SW8021B		Units: µg/L		Analysis Date 3/9/99		Prep Date:	
Client ID:		9903024		Run ID:		GC-1_990309A		SeqNo: 11936			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2150	10	800	1400	93.8%	73	115				
Ethylbenzene	1203	10	800	440	95.4%	74	117				
m,p-Xylene	6651	20	1600	5100	97.0%	76	112				
Methyl tert-Butyl Ether	799.4	20	800	10	98.7%	62	122				
o-Xylene	1710	10	800	940	96.3%	83	112				
Toluene	1292	10	800	520	96.5%	71	120				

Sample ID: 9902095-01AMSD		Batch ID: GC-1_990309		Test Code: SW8021B		Units: µg/L		Analysis Date 3/9/99		Prep Date:	
Client ID:		9903024		Run ID:		GC-1_990309A		SeqNo: 11937			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2194	10	800	1400	99.2%	73	115	2150	2.0%	8	
Ethylbenzene	1226	10	800	440	98.3%	74	117	1203	1.9%	9	
m,p-Xylene	6782	20	1600	5100	105.2%	76	112	6651	2.0%	9	
Methyl tert-Butyl Ether	798.8	20	800	10	98.6%	62	122	799.4	0.1%	7	
o-Xylene	1737	10	800	940	99.7%	83	112	1710	1.6%	9	
Toluene	1317	10	800	520	99.6%	71	120	1292	1.9%	9	

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

On Site Technologies, LTD.

Date: 12-Mar-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9903024

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_990309	Test Code: SW8021B	Units: µg/L	Analysis Date 3/9/99		Prep Date:				
Client ID:		9903024	Run ID:	GC-1_990309A	SeqNo:	11934					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.9	0.5	40	0.0322	107.2%	84	110				
Ethylbenzene	42.86	0.5	40	0	107.1%	86	113				
m,p-Xylene	83.6	1	80	0	104.5%	81	114				
Methyl tert-Butyl Ether	40.07	1	40	0	100.2%	69	129				
o-Xylene	42.74	0.5	40	0	106.8%	86	112				
Toluene	42.3	0.5	40	0.0696	105.6%	85	111				

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

On Site Technologies, LTD.

Date: 12-Mar-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9903024

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0606/07		Batch ID: GC-1_990309		Test Code: SW8021B		Units: µg/L		Analysis Date 3/9/99		Prep Date:		
Client ID:		9903024		Run ID: GC-1_990309A				SeqNo: 11931				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		22.02	0.5	20	0	110.1%	85	115				
Ethylbenzene		22	0.5	20	0	110.0%	85	115				
m,p-Xylene		42.87	1	40	0	107.2%	85	115				
Methyl tert-Butyl Ether		20.45	1	20	0	102.2%	85	115				
o-Xylene		21.92	0.5	20	0	109.6%	85	115				
Toluene		21.63	0.5	20	0	108.2%	85	115				
1,4-Difluorobenzene		93.81	0	100	0	93.8%	84	100				
4-Bromochlorobenzene		97.39	0	100	0	97.4%	87	105				
Fluorobenzene		95.24	0	100	0	95.2%	87	99				

Sample ID: CCV2 QC0606/07		Batch ID: GC-1_990309		Test Code: SW8021B		Units: µg/L		Analysis Date 3/9/99		Prep Date:	
Client ID:		9903024		Run ID: GC-1_990309A				SeqNo: 11932			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.61	0.5	20	0	108.1%	85	115				
Ethylbenzene	21.46	0.5	20	0	107.3%	85	115				
m,p-Xylene	41.72	1	40	0	104.3%	85	115				
Methyl tert-Butyl Ether	20.46	1	20	0	102.3%	85	115				
o-Xylene	21.54	0.5	20	0	107.7%	85	115				
Toluene	21.25	0.5	20	0	106.2%	85	115				
1,4-Difluorobenzene	93.76	0	100	0	93.8%	84	100				
4-Bromochlorobenzene	95.93	0	100	0	95.9%	87	105				
Fluorobenzene	95.2	0	100	0	95.2%	87	99				

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

CLIENT: BioTech Remediation, Inc.
Work Order: 9903024
Project: Thriftway Refinery

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: CCV3 QC0606/07	Batch ID: GC-1_990309	Test Code: SW8021B	Units: µg/L	Analysis Date 3/9/99	Prep Date:						
Client ID:	Run ID:	GC-1_990309A		SeqNo: 11933							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.29	0.5	40	0	103.2%	85	115				
Ethylbenzene	41.08	0.5	40	0	102.7%	85	115				
m,p-Xylene	80.13	1	80	0	100.2%	85	115				
Methyl tert-Butyl Ether	40.9	1	40	0	102.3%	85	115				
o-Xylene	41.55	0.5	40	0	103.9%	85	115				
Toluene	40.78	0.5	40	0	101.9%	85	115				
1,4-Difluorobenzene	93.31	0	100	0	93.3%	84	100				
4-Bromochlorobenzene	95.03	0	100	0	95.0%	87	105				
Fluorobenzene	94.73	0	100	0	94.7%	87	99				

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

On Site Technologies, LTD.

Date: 12-Mar-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9903024

Project: Thriftway Refinery

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

BTEX

Sample ID	14FBZ	4BCBZ	FLBZ
9902089-02A	91.7	95.6	94.3
9902095-01A	88.3	93.4	91
9902095-01AMS	88.5	94.1	91.3
9902095-01AMSD	88.1	93.4	91.3
9902095-02A	93.9	97.4	96
9903012-01A	94.5	97.5	96.2
9903012-02A	94.3	98.1	96
9903012-03A	94.1	98.2	96.1
9903012-04A	94	98.2	96.1
9903012-05A	92.8	96.6	95
9903014-01A	94.2	96.9	96
9903024-01A	92.5	96.5	93.1
9903024-02A	93	96.6	95.7
9903024-03A	93.8	96.9	96.2
9903025-01A	94.1	95.8	95.5
9903025-02A	94.1	96.4	95.6
9903025-03A	93.9	97.2	95.8
9903025-04A	94.3	96.8	95.6
9903025-05A	94.1	97.2	95.6
CCV1 QC0606/07	93.8	97.4	95.2
CCV2 QC0606/07	93.8	95.9	95.2
CCV3 QC0606/07	93.3	95	94.7
LCS WATER	93.3	97.9	94.9
MBI	93.9	96.5	96

Acronym

14FBZ

4BCBZ

FLBZ

Surrogate

= 1,4-Difluorobenzene

= 4-Bromochlorobenzene

= Fluorobenzene

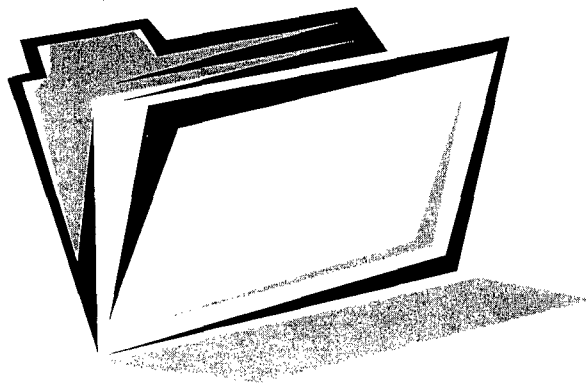
QC Limits

84-100

87-105

87-99

* Surrogate recovery outside acceptance limits



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IN THIS FILE CANNOT BE
IMPROVED DUE TO CONDITION
OF ORIGINALS**



657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

TECHNOLOGIES, LTD.

Distribution:	White – On Site	Yellow – LAB	Pink – Sampler	Goldenrod – Client

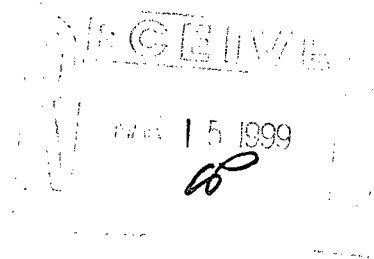
OFF: (505) 325-5667



LAB: (505) 325-1556

March 10, 1999

Terry Griffin
BioTech Remediation, Inc.
710 E. 20th, Suite 400
Farmington, NM 87401
TEL: (505) 327-4965
FAX (505) 564-3604



RE: Thriftway Refinery Air Stripper

Order No.: 9903006

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 3/2/99 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
BTEX (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature, likely of David Cox, is written in cursive.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 10-Mar-99

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 9903006

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 10-Mar-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Air Stripper
Work Order:	9903006	Client Sample ID:	Influent
Lab ID:	9903006-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	3/2/99 8:31:00 AM
		COC Record:	5345

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX		SW8021B			Analyst: HR	
Methyl tert-Butyl Ether	100	10		µg/L	10	3/8/99
Benzene	650	5		µg/L	10	3/8/99
Toluene	250	5		µg/L	10	3/8/99
Ethylbenzene	470	5		µg/L	10	3/8/99
m,p-Xylene	700	10		µg/L	10	3/8/99
o-Xylene	190	5		µg/L	10	3/8/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

1 of 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 10-Mar-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Air Stripper
Work Order:	9903006	Client Sample ID:	Effluent
Lab ID:	9903006-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	3/2/99 8:31:00 AM
		COC Record:	5345

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX		SW8021B		Analyst: HR		
Methyl tert-Butyl Ether	12	1		µg/L	1	3/8/99
Benzene	2.2	0.5		µg/L	1	3/8/99
Toluene	1.5	0.5		µg/L	1	3/8/99
Ethylbenzene	1.9	0.5		µg/L	1	3/8/99
m,p-Xylene	4.6	1		µg/L	1	3/8/99
o-Xylene	1.4	0.5		µg/L	1	3/8/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 10-Mar-99

Client:	BioTech Remediation, Inc.	Client Sample Info:	Air Stripper
Work Order:	9903006	Client Sample ID:	Travel Blank
Lab ID:	9903006-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	3/2/99 8:31:00 AM
		COC Record:	5345

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
BTEX		SW8021B				Analyst: HR
Methyl tert-Butyl Ether	ND	1		µg/L	1	3/8/99
Benzene	ND	0.5		µg/L	1	3/8/99
Toluene	ND	0.5		µg/L	1	3/8/99
Ethylbenzene	ND	0.5		µg/L	1	3/8/99
m,p-Xylene	ND	1		µg/L	1	3/8/99
o-Xylene	ND	0.5		µg/L	1	3/8/99

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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
Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

1 of 1

On Site Technologies, LTD.

Date: 10-Mar-99

CLIENT: BioTech Remediation, Inc.

Work Order: 9903006

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_990308	Test Code: SW8021B	Units: µg/L	Analysis Date 3/8/99	Prep Date:
Client ID:	9903006	Run ID: GC-1_990308A		SeqNo: 11839	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0298	0.5			J
Toluene	.0703	0.5			J

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

On Site Technologies, LTD.

Date: 10-Mar-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9903006
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 9902089-02AMS	Batch ID: GC-1_990308	Test Code: SW8021B	Units: µg/L	Analysis Date 3/8/99	Prep Date:
Client ID: 9903006	Run ID: GC-1_990308A	PQL	SPK value	SeqNo: 11840	
Analyte	Result	PQL	SPK Ref Val	LowLimit	HighLimit
Benzene	201.2	2.5	0.399	73	115
Ethylbenzene	205.8	2.5	7.29	74	117
m,p-Xylene	422	5	37.21	76	112
Methyl tert-Butyl Ether	201.9	5	0	62	122
o-Xylene	206.4	2.5	6.91	83	112
Toluene	361.2	2.5	168.1	71	120

Sample ID: 9902089-02AMSD	Batch ID: GC-1_990308	Test Code: SW8021B	Units: µg/L	Analysis Date 3/8/99	Prep Date:
Client ID: 9903006	Run ID: GC-1_990308A	PQL	SPK value	SeqNo: 11841	
Analyte	Result	PQL	SPK Ref Val	LowLimit	HighLimit
Benzene	206.4	2.5	0.399	73	115
Ethylbenzene	211.1	2.5	7.29	74	117
m,p-Xylene	432	5	37.21	76	112
Methyl tert-Butyl Ether	203.1	5	0	62	122
o-Xylene	210.8	2.5	6.91	83	112
Toluene	370	2.5	168.1	71	120

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

On Site Technologies, LTD.

Date: 10-Mar-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9903006
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_9903008		Test Code: SW8021B		Units: µg/L		Analysis Date 3/8/99		Prep Date:	
Client ID:		9903006		Run ID:		GC-1_990308A		SeqNo: 11838			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.31	0.5	40	0	105.8%	84	110				
Ethylbenzene	42.1	0.5	40	0	105.3%	86	113				
m,p-Xylene	82.11	1	80	0	102.6%	81	114				
Methyl tert-Butyl Ether	40.3	1	40	0	100.7%	69	129				
o-Xylene	42.03	0.5	40	0.0298	105.0%	86	112				
Toluene	41.6	0.5	40	0.0703	103.8%	85	111				

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

On Site Technologies, LTD.

Date: 10-Mar-99

CLIENT: BioTech Remediation, Inc.
Work Order: 9903006
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 QC0606/07		Batch ID: GC-1_990308		Test Code: SW8021B		Units: µg/L		Analysis Date 3/8/99		Prep Date:	
Client ID:		9903006		Run ID: GC-1_990308A				SeqNo: 11835			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.99	0.5	20	0	105.0%	85	115				
Ethylbenzene	20.95	0.5	20	0	104.8%	85	115				
m,p-Xylene	40.81	1	40	0	102.0%	85	115				
Methyl tert-Butyl Ether	20.4	1	20	0	102.0%	85	115				
o-Xylene	20.95	0.5	20	0	104.8%	85	115				
Toluene	20.6	0.5	20	0	103.0%	85	115				
1,4-Difluorobenzene	93.85	0	100	0	93.8%	84	100				
4-Bromochlorobenzene	96.37	0	100	0	96.4%	87	105				
Fluorobenzene	96.13	0	100	0	96.1%	87	99				

Sample ID: CCV2 QC0606/07		Batch ID: GC-1_990308		Test Code: SW8021B		Units: µg/L		Analysis Date 3/8/99		Prep Date:		
Client ID:		9903006		Run ID:		GC-1_990308A		SeqNo: 11836				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		21.28	0.5	20	0	106.4%	85	115				
Ethylbenzene		21.1	0.5	20	0	105.5%	85	115				
m,p-Xylene		40.9	1	40	0	102.3%	85	115				
Methyl tert-Butyl Ether		20.43	1	20	0	102.2%	85	115				
o-Xylene		21.06	0.5	20	0	105.3%	85	115				
Toluene		20.86	0.5	20	0	104.3%	85	115				
1,4-Difluorobenzene		93.79	0	100	0	93.8%	84	100				
4-Bromochlorobenzene		96.38	0	100	0	96.4%	87	105				
Fluorobenzene		95.75	0	100	0	95.8%	87	99				

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: BioTech Remediation, Inc.
Work Order: 9903006
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: CCV3 QC0606/07		Batch ID: GC-1_990308		Test Code: SW8021B		Units: µg/L		Analysis Date 3/8/99		Prep Date:	
Client ID: 9903006		Run ID: GC-1_990308A		PQL		SPK value		SeqNo: 11837			
Analyte	Result	PQL		SPK Ref Val		%REC		LowLimit	HighLimit	RPD Ref Val	RPDLimit
Benzene	40.6	0.5		0		101.5%		85	115		
Ethylbenzene	40.11	0.5		0		100.3%		85	115		
m,p-Xylene	78.34	1		0		97.9%		85	115		
Methyl tert-Butyl Ether	40.67	1		0		101.7%		85	115		
o-Xylene	40.58	0.5		0		101.4%		85	115		
Toluene	39.95	0.5		0		99.9%		85	115		
1,4-Difluorobenzene	93.52	0		0		93.5%		84	100		
4-Bromochlorobenzene	94.65	0		0		94.7%		87	105		
Fluorobenzene	95.46	0		0		95.5%		87	99		

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 10-Mar-99

CLIENT: BioTech Remediation, Inc.
 Work Order: 9903006
 Project: Thriftway Refinery Air Stripper
 Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

BTEX

Sample ID	14FBZ	4BCBZ	FLBZ				
9902089-01A	94.3	96.5	96.4				
9902089-02AMS	93.2	96.5	95.2				
9902089-02AMSD	92.7	96.4	95.4				
9902096-01A	94.4	96	96.4				
9902096-02A	94.2	96.4	96.5				
9902096-03A	94	96.4	96.6				
9902096-05A	94.5	95.8	96.3				
9903001-02A	94	95.5	96.7				
9903002-01A	89.9	93.1	93.5				
9903003-01A	93.7	96.1	96				
9903004-01A	89.8	94.5	92.1				
9903006-01A	92.5	95.9	94				
9903006-02A	92.6	93.9	95.1				
9903006-03A	94.4	95.7	96.4				
9903008-01A	89.3	90.7	96.6				
9903009-01A	94.4	95.9	96.9				
9903009-02A	94.2	96.3	96.4				
9903010-01A	92.5	97.3	94.5				
9903013-01A	93.6	94.8	95.6				
CCV1 QC0606/07	93.8	96.4	96.1				
CCV2 QC0606/07	93.8	96.4	95.8				
CCV3 QC0606/07	93.5	94.6	95.4				
LCS WATER	93.4	96.4	95.4				
MBI	94.2	96.3	96.6				

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	84-100
4BCBZ	= 4-Bromochlorobenzene	87-105
FLBZ	= Fluorobenzene	87-99

* Surrogate recovery outside acceptance limits

