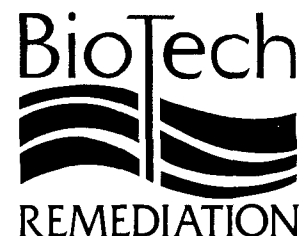


GW - 55

MONITORING REPORTS

DATE:

2000



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

February 7, 2001

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MAR 27 2001
Environmental Bureau
Oil Conservation Division

State of New Mexico
Oil Conservation Division
Mr. Wayne Price
Hydrologist
2040 S. Pacheco
Santa Fe, New Mexico 87505

RECEIVED
MAR 27 2001
Environmental Bureau
Oil Conservation Division

Re: 2000 Annual Groundwater Monitor Report Thriftway Refinery located at
626 Road 5500 in Bloomfield, New Mexico

Dear Mr. Price:

Enclosed is the 2000 Annual Monitoring Report for the 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 2000.

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\2000 Annual Monitoring Report

BioTECH REMEDIATION INC.

710 East 20th Street, Suite 400 • Farmington, NM 87401 • (505) 632-3365 • Fax (505) 632-9850

**2000 ANNUAL GROUNDWATER MONITOR REPORT
THRIFTWAY REFINERY
626 ROAD 5500
BLOOMFIELD, NEW MEXICO**

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Environmental Bureau
Oil Conservation Division

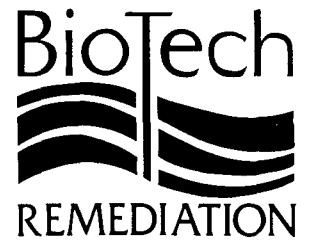
prepared for the

**NEW MEXICO OIL CONSERVATION DIVISION
Mr. Wayne Price, Project Manager, Santa Fe Office
and
Mr. Denny Foust, Aztec Office**

1 of 2

February 7, 2001

2000 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. Wayne Price, 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

February 7, 2001

Prepared by:

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

Ken Sinks,
Project Scientist

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- Air Stripper Influent and Effluent Laboratory Analysis Reports, QA/QC Data, and Chain of Custody Records

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 2000 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 2000.

2.0 ANNUAL MONITORING AND SAMPLING ACTIVITIES

BioTech personnel completed the monitoring and sampling requirements for the four quarterly monitoring events in 2000. 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, depths 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. 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. 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. Samples were collected annually and laboratory-analyzed for TDS, Metals, major Cations and Anions, and PAHs. 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, PAHs 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 6A-6D) 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 2000, 2900 gallons of product was recovered from the groundwater system. Currently, collected product is being stored in two 500-barrel (BBL) above ground storage tanks, which are located within a concrete berm and pad area. The current total recovered to date is 8942.81 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, and 07 have all been essentially the same since the new stripper has been operating. MW-18 now shows a depression of up to 3 feet over past history since the new air stripper has been on line. 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 2001 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	TOC elev	A/O	O/W	Product	Prod Elev	Water Ele	dj WL Ele	Accum Pro	Deg. C	pH	DO mg/l	Seimen/m	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
8" rec well MW-01	09/23/98	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/96	5449.08	15.68	15.68	0.00	5433.40	5433.40	5433.40	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	5449.08	15.62	15.62	0.00	5433.46	5433.46	5433.46	1.66	NM	NM	1.90	4.73	NM	NM	NM	NM	NM	NM
	03/19/97	5449.08	15.65	15.65	0.00	5433.43	5433.43	5433.43	1.66	NM	NM	NM	4.70	NM	NM	NM	NM	NM	NM
	06/18/97	5449.08	15.37	15.37	0.00	5433.71	5433.71	5433.71	1.66	NM	NM	0.18	4.67	NM	NM	NM	NM	NM	NM
	09/24/97	5449.08	15.08	15.08	0.00	5434.00	5434.00	5434.00	1.66	NM	NM	0.06	4.59	NM	NM	NM	NM	NM	NM
	12/23/97	5449.08	15.08	15.08	0.00	5434.00	5434.00	5434.00	1.66	NM	NM	0.11	4.63	NM	NM	NM	NM	NM	NM
	04/08/98	5449.08	14.72	14.72	0.00	5434.36	5434.36	5434.36	1.66	NM	NM	0.22	4.99	NM	NM	NM	NM	NM	NM
	06/24/98	5449.08	14.97	14.97	0.00	5434.11	5434.11	5434.11	1.66	NM	7.35	0.18	4.53	NM	NM	NM	NM	NM	NM
	09/23/98	5449.08	15.52	15.52	0.00	5433.56	5433.56	5433.56	1.66	16.6	7.10	0.28	4.99	NM	NM	NM	NM	NM	NM
	12/30/98	5449.08	15.00	15.00	0.00	5434.08	5434.08	5434.08	1.66	15.0	7.10	0.42	4.46	NM	NM	NM	NM	NM	NM
	04/14/99	5449.08	14.75	14.75	0.00	5434.33	5434.33	5434.33	1.66	15.0	7.00	0.20	4.30	NM	NM	NM	NM	NM	NM
	06/03/99	5449.08	14.39	14.39	0.00	5434.69	5434.69	5434.69	1.66	15.5	7.20	0.20	4.30	NM	NM	NM	NM	NM	NM
	09/09/99	5449.08	14.37	14.37	0.00	5434.71	5434.71	5434.71	1.66	NM	7.60	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/99	5449.08	14.23	14.23	0.00	5434.85	5434.85	5434.85	1.66	NM	7.00	NM	NM	NM	NM	NM	NM	3.50	NM
	04/05/00	5449.08	13.80	13.80	0.00	5435.28	5435.28	5435.28	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/08/00	5449.08	13.72	13.72	0.00	5435.36	5435.36	5435.36	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5449.08	14.47	14.47	0.00	5434.61	5434.61	5434.61	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5449.08	14.44	14.44	0.00	5434.64	5434.64	5434.64	1.66	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-02	10/09/96	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	12.54	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
	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	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	5442.65	11.74	11.78	0.04	5430.91	5430.87	5430.90	0.45	15.0	7.35	0.15	3.48	NM	NM	NM	NM	NM	NM
	09/23/98	5442.65	12.04	12.04	0.00	5430.61	5430.61	5430.61	0.45	16.8	7.00	0.15	3.32	NM	NM	NM	NM	NM	NM
	12/30/98	5442.65	11.60	11.61	0.01	5431.05	5431.04	5431.05	0.45	16.8	7.00	0.15	3.32	NM	NM	NM	NM	NM	NM
	04/14/99	5442.65	11.59	11.60	0.01	5431.06	5431.05	5431.06	0.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/03/99	5442.65	11.54	11.54	0.00	5431.11	5431.11	5431.11	0.45	NM	7.60	NM	3.00	NM	NM	NM	NM	NM	NM
	09/09/99	5442.65	11.31	11.32	0.01	5431.34	5431.33	5431.34	0.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/99	5442.65	11.40	11.40	0.00	5431.25	5431.25	5431.25	0.45	NM	7.00	NM	NM	NM	NM	NM	NM	4.75	NM
	04/05/00	5442.65	11.32	11.32	0.00	5431.33	5431.33	5431.33	0.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/16/00	5442.65	12.14	12.14	0.00	5430.51	5430.51	5430.51	0.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5442.65	11.40	11.40	0.00	5431.25	5431.25	5431.25	0.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5442.65	11.60	11.60	0.00	5431.05	5431.05	5431.05	0.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-03	10/09/96	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
	12/31/96	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	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	5.15	5.18	0.03	5426.28	5426.25	5426.27	0.02	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	5431.43	4.30	4.30	0.00	5427.13	5427.13	5427.13	0.02	NM	7.16	0.09	6.08	NM	NM	NM	NM	NM	NM
	09/22/98	5431.43	NM	NM	NM	NM	NM	NM	0.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/98	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

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	TOC elev	A/O	Q/W	Product	Prod Elev	ater Ele	dj WL Ele	Accum Pro	Deg. C	pH	DO mg/l	Seimen/m	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
MW-04	04/13/99	5431.43	5.08	5.08	0.00	5426.35	5426.35	5426.35	0.02	12.1	7.10	0.37	4.63	2.37	NM	NM	NM	NM	NM
	06/03/99	5431.43	NM	NM	NM	NM	NM	NM	0.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/05/00	5431.43	5.16	5.16	0.00	5426.27	5426.27	5426.27	0.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/08/00	5431.43	5.29	5.29	0.00	5426.14	5426.14	5426.14	0.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5431.43	5.16	5.20	0.04	5426.23	5426.23	5426.23	0.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5431.43	5.42	5.71	0.29	5426.01	5425.72	5425.92	0.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	5430.12	5.18	5.18	0.00	5424.94	5424.94	5424.94	0.00	NM	NM	2.70	4.27	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	4.45	NM	NM	NM	NM	NM	NM
	06/17/97	5430.12	4.08	4.08	0.00	5426.04	5426.04	5426.04	0.00	NM	NM	0.08	5.15	NM	NM	NM	NM	NM	NM
	09/24/97	5430.12	4.19	4.19	0.00	5425.93	5425.93	5425.93	0.00	NM	NM	0.19	4.17	NM	NM	NM	NM	NM	NM
	12/22/97	5430.12	4.31	4.31	0.00	5425.81	5425.81	5425.81	0.00	NM	NM	0.13	3.26	NM	NM	NM	NM	NM	NM
	04/29/98																		
WELL DESTROYED																			
WELL LOCATED IT WILL BE SAMPLED THE NEXT QUARTERLY SAMPLING EVENT IN JUNE 2000																			
MW-05	04/17/00																		
	06/08/00	5430.12	5.04	5.04	0.00	5425.08	5425.08	5425.08	0.00	15.7	NM	0.09	NM	NM	NM	NM	NM	4.50	NM
	09/05/00	5430.12	5.40	5.40	0.00	5424.72	5424.72	5424.72	0.00	20.6	NM	0.25	NM	NM	NM	NM	NM	4.75	NM
	12/06/00	5430.12	5.31	5.31	0.00	5424.81	5424.81	5424.81	0.00	20.6	NM	0.25	NM	NM	NM	NM	NM		NM
	10/09/96	5428.97	5.55	5.55	0.00	5423.42	5423.42	5423.42	0.00	NM	NM	NM	3.26	NM	NM	NM	NM		NM
	12/31/96	5428.97	5.19	5.19	0.00	5423.78	5423.78	5423.78	0.00	NM	NM	1.90	3.26	NM	NM	NM	NM		NM
	03/19/97	5428.97	4.63	4.63	0.00	5424.34	5424.34	5424.34	0.00	NM	NM	0.30	3.26	NM	NM	NM	NM		NM
	06/17/97	5428.97	4.41	4.41	0.00	5424.56	5424.56	5424.56	0.00	NM	NM	0.09	3.26	NM	NM	NM	NM		NM
	09/24/97	5428.97	3.77	3.77	0.00	5425.20	5425.20	5425.20	0.00	NM	NM	0.06	3.26	NM	NM	NM	NM		NM
	12/19/97	5428.97	4.37	4.37	0.00	5424.60	5424.60	5424.60	0.00	NM	NM	0.07	3.26	NM	NM	NM	NM		NM
	04/27/98	5428.97	4.47	4.47	0.00	5424.50	5424.50	5424.50	0.00	NM	NM	0.09	3.26	NM	NM	NM	NM		NM
	06/24/98	5428.97	4.78	4.78	0.00	5424.19	5424.19	5424.19	0.00	NM	8.56	0.09	3.26	NM	NM	NM	NM		NM
MW-06	09/24/98	5428.97	5.22	5.22	0.00	5423.75	5423.75	5423.75	0.00	19.9	8.00	0.09	3.26	NM	NM	NM	NM		NM
	12/29/98	5428.97	4.11	4.11	0.00	5424.86	5424.86	5424.86	0.00	13.4	8.10	0.12	3.26	NM	NM	NM	NM		NM
	04/12/99	5428.97	4.19	4.19	0.00	5424.78	5424.78	5424.78	0.00	12.9	8.20	0.10	5.63	2.83	NM	NM	NM		NM
	06/02/99	5428.97	4.45	4.45	0.00	5424.52	5424.52	5424.52	0.00	13.6	8.20	0.13	1.00	NM	NM	NM	NM		NM
	09/08/99	5428.97	4.52	4.52	0.00	5424.45	5424.45	5424.45	0.00	13.5	7.60	NM	NM	NM	NM	NM	NM		NM
	12/29/99	5428.97	4.82	4.82	0.00	5424.15	5424.15	5424.15	0.00	14.5	8.00	0.27	NM	NM	NM	NM	NM	3.50	NM
	04/03/00	5428.97	4.48	4.48	0.00	5424.49	5424.49	5424.49	0.00	11.4	NM	0.40	NM	NM	NM	NM	NM	5.25	NM
	06/08/00	5428.97	4.82	4.82	0.00	5424.15	5424.15	5424.15	0.00	14.5	8.60	0.08	1.40	NM	NM	NM	NM	6.00	NM
	09/05/00	5428.97	5.30	5.30	0.00	5423.67	5423.67	5423.67	0.00	17.3	NM	0.17	NM	NM	NM	NM	NM	4.25	NM
	12/06/00	5428.97	5.10	5.10	0.00	5423.87	5423.87	5423.87	0.00	17.3	NM	0.17	NM	NM	NM	NM	NM	5.00	NM
	10/09/96	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	4.23	NM	NM	NM	NM	NM	NM
MW-06	03/19/97	5430.70	3.65	3.65	0.00	5427.05	5427.05	5427.05	0.00	NM	NM	NM	4.07	NM	NM	NM	NM	NM	NM
	06/17/97	5430.70	3.62	3.62	0.00	5427.08	5427.08	5427.08	0.00	NM	NM	1.71	4.25	NM	NM	NM	NM	NM	NM
	09/24/97	5430.70	4.58	4.58	0.00	5426.12	5426.12	5426.12	0.00	NM	NM	0.21	4.10	NM	NM	NM	NM	NM	NM
	12/19/97	5430.70	4.23	4.23	0.00	5426.47	5426.47	5426.47	0.00	NM	NM	NM	4.10	NM	NM	NM	NM	NM	NM
	04/27/98	5430.70	1.14	1.14	0.00	5429.56	5429.56	5429.56	0.00	NM	NM	0.14	3.87	NM	NM	NM	NM	NM	NM
	06/24/98	5430.70	4.53	4.53	0.00	5426.17	5426.17	5426.17	0.00	NM	7.60	0.12	3.99	NM	NM	NM	NM	NM	NM
	09/22/98	5430.70	4.55	4.55	0.00	5426.15	5426.15	5426.15	0.00	18.8	7.30	0.19	3.84	NM	NM	NM	NM	NM	NM
	12/30/98	5430.70	3.72	3.72	0.00	5426.98	5426.98	5426.98	0.00	13.5	7.60	0.62	3.65	NM	NM	NM	NM	NM	NM
	04/13/99	5430.70	4.67	4.67	0.00	5426.03	5426.03	5426.03	0.00	12.6	7.60	0.35	3.60	1.81	NM	NM	NM	NM	NM
	06/03/99	5430.70	4.92	4.92	0.00	5425.78	5425.78	5425.78	0.00	13.9	7.80	0.12	3.30	NM	NM	NM	NM	NM	NM
	09/09/99	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

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	TOC elev	A/O	OW	Product	Prod Elev	ater Elev	dj WL Ele	Accum Pro	Deg. C	pH	DO mg/l	Seimen/m	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
MW-07	12/29/99	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
	04/03/00	5430.70	4.69	4.69	0.00	5426.01	5426.01	5426.01	0.00	12.3	NM	1.04	NM	NM	NM	NM	NM	4.50	NM
	06/08/00	5430.70	5.18	5.18	0.00	5425.52	5425.52	5425.52	0.00	15.1	7.60	0.21	3.60	NM	NM	NM	NM	4.50	NM
	09/05/00	5430.70	5.26	5.26	0.00	5425.44	5425.44	5425.44	0.00	20.1	NM	0.25	NM	NM	NM	NM	NM	3.50	NM
	12/06/00	5430.70	5.20	5.20	0.00	5425.50	5425.50	5425.50	0.00	20.1	NM	0.25	NM	NM	NM	NM	NM	6.50	NM
	10/07/96	5434.34	8.29	8.50	0.21	5426.05	5425.84	5425.99	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	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	5434.34	7.65	7.65	0.00	5426.80	5426.80	5426.80	0.27	NM	7.51	0.14	4.77	NM	NM	NM	NM	NM	NM
	06/24/98	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
	09/23/98	5434.34	7.52	7.53	0.01	5426.82	5426.81	5426.82	0.27	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/98	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
MW-08	04/14/99	5434.34	7.98	7.98	0.00	5426.36	5426.36	5426.36	0.28	NM	7.40	NM	5.22	2.63	NM	NM	NM	NM	NM
	06/03/99	5434.34	8.05	8.07	0.02	5426.29	5426.27	5426.28	0.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/09/99	5434.34	8.03	8.08	0.05	5426.31	5426.26	5426.30	0.30	NM	NM	NM	NM	NM	NM	NM	NM	2.50	NM
	12/30/99	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	5.00	NM
	04/05/00	5434.34	7.71	7.71	0.00	5426.63	5426.63	5426.63	0.30	NM	NM	NM	NM	NM	NM	NM	NM	5.00	NM
	06/08/00	5435.28	8.06	8.06	0.00	5427.22	5427.22	5427.22	0.30	15.0	7.50	0.09	5.50	NM	NM	NM	NM	NM	NM
	09/07/00	5435.28	8.99	8.99	0.00	5426.29	5426.29	5426.29	0.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5435.28	9.11	9.11	0.00	5426.17	5426.17	5426.17	0.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	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	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	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	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
	12/22/97	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	5432.09	3.27	3.27	0.00	5428.82	5428.82	5428.82	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/23/98	5432.09	DRY	DRY	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-09	09/22/98	5432.09	DRY	DRY	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/29/98	5432.09	3.75	3.75	0.00	5431.44	5431.44	5431.44	0.00	11.9	7.60	4.45	7.84	NM	NM	NM	NM	NM	NM
	04/17/00	5433.04	4.11	4.11	0.00	5428.93	5428.93	5428.93	0.00	12.8	7.40	0.07	5.00	NM	NM	NM	NM	6.00	NM
	06/08/00	5433.04	4.22	4.22	0.00	5428.82	5428.82	5428.82	0.00	NM	NM	NM	NM	NM	NM	NM	NM	2.00	NM
	09/06/00	5433.04	4.17	4.17	0.00	5428.87	5428.87	5428.87	0.00	NM	NM	NM	NM	NM	NM	NM	NM	4.50	NM
	12/07/00	5433.04	4.25	4.25	0.00	5430.94	5430.94	5430.94	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/08/96	5435.19	4.25	4.25	0.00	5430.94	5430.94	5430.94	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	5435.19	4.10	4.10	0.00	5431.09	5431.09	5431.09	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/18/97	5435.19	4.17	4.17	0.00	5431.02	5431.02	5431.02	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/16/97	5435.19	4.27	4.27	0.00	5430.92	5430.92	5430.92	0.00	NM	NM	1.85	7.45	NM	NM	NM	NM	NM	NM
	09/25/97	5435.19	3.68	3.68	0.00	5431.51	5431.51	5431.51	0.00	NM	NM	2.02	8.49	NM	NM	NM	NM	NM	NM
	12/22/97	5435.19	4.05	4.05	0.00	5431.14	5431.14	5431.14	0.00	NM	NM	1.00	7.15	NM	NM	NM	NM	NM	NM
	04/28/98	5435.19	4.28	4.28	0.00	5430.91	5430.91	5430.91	0.00	NM	NM	0.88	7.45	NM	NM	NM	NM	NM	NM
	06/23/98	5435.19	4.53	4.53	0.00	5430.66	5430.66	5430.66	0.00	NM	7.60	0.19	7.32	NM	NM	NM	NM	NM	NM
	09/22/98	5435.19	4.55	4.55	0.00	5430.64	5430.64	5430.64	0.00	17.1	7.40	0.18	7.15	NM	NM	NM	NM	NM	NM
	12/29/98	5435.19	3.75	3.75	0.00	5431.44	5431.44	5431.44	0.00	11.9	7.60	4.45	7.84	NM	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	TOC elev	A/O	OW	Product	Prod Elev	ater Ele	dj WL Ele	Accum Pro	Deg. C	pH	DO mg/l	Seimen/m	TDS	ORP	NTU"s	% Salinity	Purged	DEPTH
MW-10	04/12/99	5435.19	3.94	3.94	0.00	5431.25	5431.25	5431.25	0.00	10.8	7.70	0.20	7.37	3.36	NM	NM	NM	NM	NM
	06/02/99	5435.19	4.05	4.05	0.00	5431.14	5431.14	5431.14	0.00	13.1	7.80	0.30	6.60	NM	NM	NM	NM	NM	NM
	09/07/99	5435.19	4.10	4.10	0.00	5431.09	5431.09	5431.09	0.00	16.6	7.20	0.37	4.67	2.34	NM	NM	NM	NM	NM
	12/28/99	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
	04/04/00	5435.19	3.70	3.70	0.00	5431.49	5431.49	5431.49	0.00	10.7	NM	3.08	NM	NM	NM	NM	NM	3.75	NM
	06/08/00	5436.69	5.56	5.56	0.00	5431.13	5431.13	5431.13	0.00	13.2	7.60	0.16	7.40	NM	NM	NM	NM	3.50	NM
	09/05/00	5436.69	5.42	5.42	0.00	5431.27	5431.27	5431.27	0.00	17.5	NM	0.28	NM	NM	NM	NM	NM	2.00	NM
	12/07/00	5436.69	5.31	5.31	0.00	5431.38	5431.38	5431.38	0.00	17.5	NM	0.28	NM	NM	NM	NM	NM	5.00	NM
	10/08/96	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	5436.56	4.01	4.01	0.00	5432.55	5432.55	5432.55	0.00	NM	NM	3.90	7.48	NM	NM	NM	NM	NM	NM
	03/18/97	5436.56	4.09	4.09	0.00	5432.47	5432.47	5432.47	0.00	NM	NM	NM	7.46	NM	NM	NM	NM	NM	NM
	06/16/97	5436.56	4.10	4.10	0.00	5432.46	5432.46	5432.46	0.00	NM	NM	0.69	7.45	NM	NM	NM	NM	NM	NM
	09/25/97	5436.56	3.81	3.81	0.00	5432.75	5432.75	5432.75	0.00	NM	NM	11.15	7.41	NM	NM	NM	NM	NM	NM
	12/22/97	5436.56	3.98	3.98	0.00	5432.58	5432.58	5432.58	0.00	NM	NM	0.61	7.17	NM	NM	NM	NM	NM	NM
	04/28/98	5436.56	4.24	4.24	0.00	5432.32	5432.32	5432.32	0.00	NM	NM	0.22	7.34	NM	NM	NM	NM	NM	NM
	06/23/98	5436.56	4.49	4.49	0.00	5432.07	5432.07	5432.07	0.00	NM	7.48	0.16	7.24	NM	NM	NM	NM	NM	NM
MW-11	09/22/98	5436.56	4.54	4.54	0.00	5432.02	5432.02	5432.02	0.00	17.4	7.40	0.16	7.15	NM	NM	NM	NM	NM	NM
	12/29/98	5436.56	3.84	3.84	0.00	5432.72	5432.72	5432.72	0.00	13.2	7.50	0.40	7.44	NM	NM	NM	NM	NM	NM
	04/12/99	5436.56	3.90	3.90	0.00	5432.66	5432.66	5432.66	0.00	11.0	7.40	0.60	7.06	3.50	NM	NM	NM	NM	NM
	06/02/99	5436.56	3.98	3.98	0.00	5432.58	5432.58	5432.58	0.00	12.3	7.60	0.30	6.60	NM	NM	NM	NM	NM	NM
	09/07/99	5436.56	3.90	3.90	0.00	5432.66	5432.66	5432.66	0.00	16.9	7.20	0.26	6.61	3.31	NM	NM	NM	NM	NM
	12/28/99	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	3.75	NM
	04/03/00	5436.56	3.54	3.54	0.00	5433.02	5433.02	5433.02	0.00	10.4	NM	1.16	NM	NM	NM	NM	NM	2.50	NM
	06/08/00	5437.78	5.07	5.07	0.00	5432.71	5432.71	5432.71	0.00	13.3	7.70	0.11	7.30	NM	NM	NM	NM	5.50	NM
	09/05/00	5437.78	5.10	5.10	0.00	5432.68	5432.68	5432.68	0.00	19.1	NM	0.27	NM	NM	NM	NM	NM	2.00	NM
	12/07/00	5437.78	4.72	4.72	0.00	5433.06	5433.06	5433.06	0.00	19.1	NM	0.27	NM	NM	NM	NM	NM	3.00	NM
	10/08/96	5438.65	5.27	5.27	0.00	5433.38	5433.38	5433.38	0.00	NM	NM	NM	6.97	NM	NM	NM	NM	NM	NM
	12/31/96	5438.65	5.02	5.02	0.00	5433.63	5433.63	5433.63	0.00	NM	NM	NM	6.87	NM	NM	NM	NM	NM	NM
	03/18/97	5438.65	5.01	5.01	0.00	5433.64	5433.64	5433.64	0.00	NM	NM	NM	6.90	NM	NM	NM	NM	NM	NM
	06/16/97	5438.65	5.05	5.05	0.00	5433.60	5433.60	5433.60	0.00	NM	NM	NM	6.89	NM	NM	NM	NM	NM	NM
	09/25/97	5438.65	4.96	4.96	0.00	5433.69	5433.69	5433.69	0.00	NM	NM	NM	6.90	NM	NM	NM	NM	NM	NM
	12/22/97	5438.65	4.91	4.91	0.00	5433.74	5433.74	5433.74	0.00	NM	NM	0.26	6.90	NM	NM	NM	NM	NM	NM
MW-12	04/28/98	5438.65	4.97	4.97	0.00	5433.68	5433.68	5433.68	0.00	NM	NM	0.26	6.90	NM	NM	NM	NM	NM	NM
	06/23/98	5438.65	5.23	5.23	0.00	5433.42	5433.42	5433.42	0.00	16.0	7.40	0.18	6.76	NM	NM	NM	NM	NM	NM
	09/22/98	5438.65	5.37	5.37	0.00	5433.28	5433.28	5433.28	0.00	12.7	7.50	0.31	6.70	NM	NM	NM	NM	NM	NM
	12/29/98	5438.65	4.83	4.83	0.00	5433.82	5433.82	5433.82	0.00	11.3	7.70	0.17	6.68	3.35	NM	NM	NM	NM	NM
	04/12/99	5438.65	4.82	4.82	0.00	5433.83	5433.83	5433.83	0.00	12.5	7.20	0.32	6.10	NM	NM	NM	NM	NM	NM
	06/02/99	5438.65	4.82	4.82	0.00	5433.82	5433.82	5433.82	0.00	16.0	7.30	0.32	6.32	3.16	NM	NM	NM	NM	NM
	09/07/99	5438.65	4.99	4.99	0.00	5433.66	5433.66	5433.66	0.00	NM	7.30	NM	NM	NM	NM	NM	NM	5.00	NM
	12/28/99	5438.65	4.42	4.42	0.00	5434.23	5434.23	5434.23	0.00	11.3	NM	0.13	NM	NM	NM	NM	NM	5.25	NM
	04/03/00	5438.65	4.65	4.65	0.00	5434.00	5434.00	5434.00	0.00	13.3	7.70	0.18	6.50	NM	NM	NM	NM	4.50	NM
	06/08/00	5439.67	5.18	5.18	0.00	5434.49	5434.49	5434.49	0.00	16.1	NM	0.22	NM	NM	NM	NM	NM	2.00	NM
	09/06/00	5439.67	5.82	5.82	0.00	5433.85	5433.85	5433.85	0.00	16.1	NM	0.22	NM	NM	NM	NM	NM	3.00	NM
	12/07/00	5439.67	5.43	5.43	0.00	5434.24	5434.24	5434.24	0.00	16.1	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/96	5446.09	14.15	15.62	1.47	5431.94	5430.47	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	14.14	15.39	1.25	5431.95	5430.70	5431.58	29.56	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	TOC elev	A/O	OW	Product	Prod Elev	ater Elev	dj WL Ele	Accum Pro	Deg. C	pH	DO mg/l	Solimen/m	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
MW-13	06/18/97	5446.09	14.23	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
	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	5446.09	13.89	14.21	0.32	5432.20	5431.88	5432.10	31.77	NM	7.01	NM	7.06	NM	NM	NM	NM	NM	NM
	09/23/98	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	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	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	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	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	5446.09	13.49	13.77	0.28	5432.60	5432.32	5432.52	32.25	NM	NM	NM	NM	NM	NM	NM	NM	0.00	NM
	04/05/00	5446.09	13.23	13.59	0.36	5432.86	5432.50	5432.75	32.29	NM	NM	NM	NM	NM	NM	NM	NM	1.50	NM
	06/07/00	5446.09	13.22	13.49	0.27	5432.87	5432.60	5432.79	32.29	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5446.09	13.73	13.90	0.17	5432.36	5432.19	5432.31	32.31	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/08/00	5446.09	13.72	13.77	0.05	5432.37	5432.32	5432.36	32.32	NM	NM	NM	NM	NM	NM	NM	NM	5	NM
	10/08/96	5452.12	18.11	18.11	0.00	5434.01	5434.01	5434.01	0.00	NM	NM	5.20	6.14	NM	NM	NM	NM	NM	NM
	12/30/96	5452.12	18.04	18.04	0.00	5434.08	5434.08	5434.08	0.00	NM	NM	5.20	6.14	NM	NM	NM	NM	NM	NM
	03/18/97	5452.12	17.98	17.98	0.00	5434.14	5434.14	5434.14	0.00	NM	NM	5.20	6.26	NM	NM	NM	NM	NM	NM
	06/16/97	5452.12	17.93	17.93	0.00	5434.19	5434.19	5434.19	0.00	NM	NM	0.19	6.35	NM	NM	NM	NM	NM	NM
MW-14	09/23/97	5452.12	17.81	17.81	0.00	5434.31	5434.31	5434.31	0.00	NM	NM	0.28	6.26	NM	NM	NM	NM	NM	NM
	12/19/97	5452.12	17.48	17.48	0.00	5434.64	5434.64	5434.64	0.00	NM	NM	0.09	6.25	NM	NM	NM	NM	NM	NM
	04/24/98	5452.12	17.22	17.22	0.00	5434.90	5434.90	5434.90	0.00	NM	NM	0.24	6.26	NM	NM	NM	NM	NM	NM
	06/23/98	5452.12	17.48	17.48	0.00	5434.64	5434.64	5434.64	0.00	NM	7.27	0.19	6.26	NM	NM	NM	NM	NM	NM
	09/24/98	5452.12	17.92	17.92	0.00	5434.20	5434.20	5434.20	0.00	15.9	7.10	0.28	6.32	NM	NM	NM	NM	NM	NM
	12/29/98	5452.12	17.52	17.52	0.00	5434.60	5434.60	5434.60	0.00	15.7	6.90	0.22	6.30	NM	NM	NM	NM	NM	NM
	04/12/99	5452.12	17.24	17.24	0.00	5434.88	5434.88	5434.88	0.00	15.1	7.00	0.25	6.17	3.04	NM	NM	NM	NM	NM
	06/02/99	5452.12	17.11	17.11	0.00	5435.01	5435.01	5435.01	0.00	15.5	7.10	0.22	6.00	NM	NM	NM	NM	NM	NM
	09/07/99	5452.12	17.12	17.12	0.00	5435.00	5435.00	5435.00	0.00	15.4	7.10	0.30	6.12	3.06	NM	NM	NM	NM	NM
	12/28/99	5452.12	16.83	16.83	0.00	5435.29	5435.29	5435.29	0.00	15.3	7.20	NM	NM	NM	NM	NM	NM	5.00	NM
	04/03/00	5452.12	16.51	16.51	0.00	5435.61	5435.61	5435.61	0.00	15.3	NM	0.49	NM	NM	NM	NM	NM	5.50	NM
	06/08/00	5452.12	16.56	16.56	0.00	5435.56	5435.56	5435.56	0.00	15.6	7.40	0.45	3.15	NM	NM	NM	NM	6.00	NM
	09/05/00	5452.12	17.10	17.10	0.00	5435.02	5435.02	5435.02	0.00	16.0	NM	0.50	NM	NM	NM	NM	NM	3.50	NM
	12/07/00	5452.12	16.93	16.93	0.00	5435.19	5435.19	5435.19	0.00	16.0	NM	0.50	NM	NM	NM	NM	NM	5.50	NM
	10/07/96	5446.93	13.05	13.05	0.00	5433.88	5433.88	5433.88	3.10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96	5446.93	12.97	12.97	0.00	5433.96	5433.96	5433.96	3.10	NM	NM	1.60	6.07	NM	NM	NM	NM	NM	NM
	03/17/97	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
	12/18/97	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	5446.93	12.24	12.24	0.00	5434.69	5434.69	5434.69	3.59	NM	NM	0.07	5.62	NM	NM	NM	NM	NM	NM
	06/24/98	5446.93	12.37	12.37	0.00	5434.56	5434.56	5434.56	3.59	NM	7.25	0.08	7.95	NM	NM	NM	NM	NM	NM
	09/23/98	5446.93	12.78	12.78	0.00	5434.15	5434.15	5434.15	3.59	16.5	6.90	0.12	5.20	NM	NM	NM	NM	NM	NM
	12/30/98	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	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	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	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	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	5.25	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	TOC elev	A/O	OW	Product	Prod Elev	Water Elev	dj WL Elev	Accum Pro	Deg. C	pH	DO mg/l	Seimen/m	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
MW-15	04/05/00	5446.93	11.61	11.61	0.00	5435.32	5435.32	5435.32	3.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/08/00	5446.93	12.52	12.52	0.00	5434.41	5434.41	5434.41	3.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5446.93	11.96	11.96	0.00	5434.97	5434.97	5434.97	3.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5446.93	11.90	11.90	0.00	5435.03	5435.03	5435.03	3.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/08/96	5449.51	13.86	13.86	0.00	5435.65	5435.65	5435.65	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96	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
	03/18/97	5449.51	13.49	13.49	0.00	5436.02	5436.02	5436.02	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/17/97	5449.51	13.28	13.28	0.00	5436.23	5436.23	5436.23	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/26/97	5449.51	12.67	12.67	0.00	5436.84	5436.84	5436.84	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/22/97	5449.51	12.98	12.98	0.00	5436.53	5436.53	5436.53	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/24/98	5449.51	12.73	12.73	0.00	5436.78	5436.78	5436.78	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/23/98	5449.51	12.94	12.94	0.00	5436.57	5436.57	5436.57	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/98	5449.51	13.34	13.34	0.00	5436.17	5436.17	5436.17	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/28/98	5449.51	12.83	12.83	0.00	5436.68	5436.68	5436.68	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/12/99	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
MW-16	06/02/99	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	5449.51	12.41	12.41	0.00	5437.10	5437.10	5437.10	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/28/99	5449.51	12.30	12.30	0.00	5437.21	5437.21	5437.21	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/04/00	TOP OF WELL DESTROYED, NEEDS RESURVEYING																	
	06/08/00	5449.28	11.81	11.81	0.00	5437.47	5437.47	5437.47	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/06/00	5449.28	12.18	12.18	0.00	5437.10	5437.10	5437.10	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/08/00	5449.28	12.13	12.13	0.00	5437.15	5437.15	5437.15	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/08/96	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	5442.63	9.07	9.07	0.00	5433.56	5433.56	5433.56	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	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	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	8.91	8.91	0.00	5433.72	5433.72	5433.72	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	5442.63	8.97	8.97	0.00	5433.66	5433.66	5433.66	0.00	NM	NM	NM	NM	NM	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
MW-17	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	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
	06/02/99	5442.63	8.58	8.58	0.00	5434.05	5434.05	5434.05	0.00	NM	NM	NM	NM	NM	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
	04/05/00	5442.63	8.34	8.34	0.00	5434.29	5434.29	5434.29	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/08/00	5442.63	7.38	7.38	0.00	5435.25	5435.25	5435.25	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5442.63	8.55	8.55	0.00	5434.08	5434.08	5434.08	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5442.63	8.33	8.33	0.00	5434.30	5434.30	5434.30	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	5.99	0.49	5430.07	5429.58	5429.92	6.36	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/24/98	5435.57	5.60	6.51	0.91	5429.97	5429.06	5429.70	7.62	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	TOC elev	A/O	OW	Product	Prod Elev	Water Elev	dj WL Elev	Accum Pro	Deg. C	pH	DO mg/l	Salinen/m	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
MW-18	09/23/98	5435.57	5.74	6.68	0.94	5429.83	5428.89	5429.55	8.62	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/28/98	5435.57	5.39	5.71	0.32	5430.18	5429.86	5430.08	8.78	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	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	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	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	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
	04/05/00	5435.57	5.36	5.40	0.04	5430.21	5430.17	5430.20	11.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/16/00	5435.57	5.45	5.79	0.34	5430.12	5429.78	5430.02	11.74	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5435.57	5.68	6.00	0.32	5429.89	5429.57	5429.79	11.83	NM	NM	NM	NM	NM	NM	NM	NM	5.00	NM
	12/08/00	5435.57	5.73	5.80	0.07	5429.84	5429.77	5429.82	11.83	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/09/06	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	5429.10	4.06	4.06	0.00	5425.04	5425.04	5425.04	0.00	NM	NM	2.50	4.82	NM	NM	NM	NM	NM	NM
	03/19/97	5429.10	3.26	3.26	0.00	5425.84	5425.84	5425.84	0.00	NM	NM	2.03	4.67	NM	NM	NM	NM	NM	NM
	06/18/97	5429.10	3.00	3.00	0.00	5426.10	5426.10	5426.10	0.00	NM	NM	0.76	3.33	NM	NM	NM	NM	NM	NM
	09/24/97	5429.10	2.50	2.50	0.00	5426.60	5426.60	5426.60	0.00	NM	NM	NM	2.31	NM	NM	NM	NM	NM	NM
	12/23/97	5429.10	3.29	3.29	0.00	5425.81	5425.81	5425.81	0.00	NM	NM	NM	0.15	NM	NM	NM	NM	NM	NM
	04/28/98	5429.10	3.42	3.42	0.00	5425.68	5425.68	5425.68	0.00	NM	NM	0.15	4.45	NM	NM	NM	NM	NM	NM
	06/24/98	5429.10	3.72	3.72	0.00	5425.38	5425.38	5425.38	0.00	NM	NM	0.10	4.57	NM	NM	NM	NM	NM	NM
MW-19	09/23/98	5429.10	3.94	3.94	0.00	5425.16	5425.16	5425.16	0.00	17.7	7.10	0.15	4.44	NM	NM	NM	NM	NM	NM
	12/29/98	5429.10	3.19	3.19	0.00	5425.91	5425.91	5425.91	0.00	11.9	7.70	0.20	3.26	NM	NM	NM	NM	NM	NM
	04/13/99	5429.10	3.68	3.68	0.00	5425.42	5425.42	5425.42	0.00	11.7	7.60	0.09	4.68	2.32	NM	NM	NM	NM	NM
	06/03/99	5429.10	3.97	3.97	0.00	5425.13	5425.13	5425.13	0.00	13.5	7.90	0.10	4.20	NM	NM	NM	NM	NM	NM
	09/09/99	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	5429.10	4.39	4.39	0.00	5424.71	5424.71	5424.71	0.00	13.2	7.10	0.41	NM	NM	NM	NM	NM	3.15	NM
	04/05/00	5429.10	4.08	4.08	0.00	5425.02	5425.02	5425.02	0.00	NM	NM	NM	NM	NM	NM	NM	NM	3.00	NM
	06/08/00	5429.10	4.24	4.24	0.00	5424.86	5424.86	5424.86	0.00	13.8	7.90	0.10	3.70	NM	NM	NM	NM	2.25	NM
	09/06/00	5429.10	4.60	4.60	0.00	5424.50	5424.50	5424.50	0.00	18.7	NM	0.16	NM	NM	NM	NM	NM	2.00	NM
	12/06/00	5429.10	7.30	7.30	0.00	5421.80	5421.80	5421.80	0.00	18.7	NM	0.16	NM	NM	NM	NM	NM	4.00	NM
	10/09/96	5428.69	3.70	3.70	0.00	5424.99	5424.99	5424.99	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96	5428.69	3.77	3.77	0.00	5424.92	5424.92	5424.92	0.00	NM	NM	3.90	6.45	NM	NM	NM	NM	NM	NM
	03/19/97	5428.69	3.32	3.32	0.00	5425.37	5425.37	5425.37	0.00	NM	NM	NM	6.30	NM	NM	NM	NM	NM	NM
	06/17/97	5428.69	3.12	3.12	0.00	5425.57	5425.57	5425.57	0.00	NM	NM	0.81	4.57	NM	NM	NM	NM	NM	NM
	09/26/97	5428.69	2.36	2.36	0.00	5426.33	5426.33	5426.33	0.00	NM	NM	0.15	1.71	NM	NM	NM	NM	NM	NM
	12/23/97	5428.69	2.91	2.91	0.00	5425.78	5425.78	5425.78	0.00	NM	NM	0.07	6.24	NM	NM	NM	NM	NM	NM
	04/28/98	5428.69	2.99	2.99	0.00	5425.70	5425.70	5425.70	0.00	NM	NM	0.19	6.21	NM	NM	NM	NM	NM	NM
	06/23/98	5428.69	3.38	3.38	0.00	5425.31	5425.31	5425.31	0.00	NM	NM	0.19	5.91	NM	NM	NM	NM	NM	NM
	09/22/98	5428.69	3.57	3.57	0.00	5425.12	5425.12	5425.12	0.00	18.1	7.80	0.15	7.40	NM	NM	NM	NM	NM	NM
	12/29/98	5428.69	3.19	3.19	0.00	5425.50	5425.50	5425.50	0.00	9.7	8.00	0.10	3.25	NM	NM	NM	NM	NM	NM
MW-20	04/13/99	5428.69	3.08	3.08	0.00	5425.61	5425.61	5425.61	0.00	12.1	7.60	0.10	4.57	2.31	NM	NM	NM	NM	NM
	06/03/99	5428.69	3.24	3.24	0.00	5425.45	5425.45	5425.45	0.00	NM	NM	NM	3.60	NM	NM	NM	NM	NM	NM
	09/09/99	5428.69	3.01	3.01	0.00	5425.68	5425.68	5425.68	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/29/99	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
	04/04/00	5428.69	2.57	2.57	0.00	5426.12	5426.12	5426.12	0.00	10.0	NM	0.65	NM	NM	NM	NM	NM	5.00	NM
	06/08/00	5428.69	3.60	3.60	0.00	5425.09	5425.09	5425.09	0.00	13.3	7.70	0.17	5.70	NM	NM	NM	NM	3.50	NM
	09/06/00	5428.69	3.89	3.89	0.00	5424.80	5424.80	5424.80	0.00	19.6	NM	0.20	NM	NM	NM	NM	NM	1.00	NM
	12/06/00	5428.69	3.92	3.92	0.00	5424.77	5424.77	5424.77	0.00	19.6	NM	0.20	NM	NM	NM	NM	NM	3.00	NM
	10/08/96	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

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	TOC elev	A/O	OW	Product	Prod Elev	ater Ele	dj WL Ele	Accum Pro	Deg. C	pH	DO mg/l	Seimen/m	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
MW-21	12/31/96	5430.36	5.74	5.74	0.00	5424.62	5424.62	5424.62	0.00	NM	NM	0.90	5.33	NM	NM	NM	NM	NM	NM
	03/18/97	5430.36	5.39	5.39	0.00	5424.97	5424.97	5424.97	0.00	NM	NM	NM	6.26	NM	NM	NM	NM	NM	NM
	06/16/97	5430.36	5.21	5.21	0.00	5425.15	5425.15	5425.15	0.00	NM	NM	0.26	5.73	NM	NM	NM	NM	NM	NM
	09/24/97	5430.36	4.41	4.41	0.00	5425.95	5425.95	5425.95	0.00	NM	NM	0.27	3.50	NM	NM	NM	NM	NM	NM
	12/22/97	5430.36	4.90	4.90	0.00	5425.46	5425.46	5425.46	0.00	NM	NM	0.22	6.52	NM	NM	NM	NM	NM	NM
	04/27/98	5430.36	5.02	5.02	0.00	5425.34	5425.34	5425.34	0.00	NM	NM	0.31	6.54	NM	NM	NM	NM	NM	NM
	06/23/98	5430.36	5.35	5.35	0.00	5425.01	5425.01	5425.01	0.00	NM	7.18	0.08	6.54	NM	NM	NM	NM	NM	NM
	09/22/98	5430.36	5.67	5.67	0.00	5424.69	5424.69	5424.69	0.00	17.3	7.00	0.15	5.64	NM	NM	NM	NM	NM	NM
	12/28/98	5430.36	5.02	5.02	0.00	5425.34	5425.34	5425.34	0.00	8.4	7.00	0.10	5.29	NM	NM	NM	NM	NM	NM
	04/12/99	5430.36	5.02	5.02	0.00	5425.34	5425.34	5425.34	0.00	11.0	7.30	0.03	7.74	3.90	NM	NM	NM	NM	NM
	06/02/99	5430.36	5.19	5.19	0.00	5425.17	5425.17	5425.17	0.00	NM	7.30	NM	3.00	NM	NM	NM	NM	NM	NM
	09/08/99	5430.36	4.90	4.90	0.00	5425.46	5425.46	5425.46	0.00	NM	7.10	NM	1.85	0.92	NM	NM	NM	NM	NM
	12/29/99	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
	04/04/00	5430.36	4.49	4.49	0.00	5425.87	5425.87	5425.87	0.00	9.0	NM	0.29	NM	NM	NM	NM	NM	5.00	NM
	06/08/00	5430.45	5.53	5.53	0.00	5424.92	5424.92	5424.92	0.00	12.9	7.40	0.12	5.70	NM	NM	NM	NM	4.50	NM
	09/06/00	5430.45	5.87	5.87	0.00	5424.58	5424.58	5424.58	0.00	18.1	NM	0.12	NM	NM	NM	NM	NM	1.00	NM
	12/08/00	5430.45	5.88	5.88	0.00	5424.57	5424.57	5424.57	0.00	18.1	NM	0.12	NM	NM	NM	NM	NM	2.50	NM
	12/31/96	5428.62	3.56	3.56	0.00	5425.06	5425.06	5425.06	0.00	NM	NM	1.20	5.07	NM	NM	NM	NM	NM	NM
	03/18/97	5428.62	2.76	2.76	0.00	5425.86	5425.86	5425.86	0.00	NM	NM	NM	6.27	NM	NM	NM	NM	NM	NM
	06/17/97	5428.62	2.93	2.93	0.00	5425.69	5425.69	5425.69	0.00	NM	NM	0.23	7.50	NM	NM	NM	NM	NM	NM
	09/25/97	5428.62	3.03	3.03	0.00	5425.59	5425.59	5425.59	0.00	NM	NM	0.09	6.05	NM	NM	NM	NM	NM	NM
	12/22/97	5428.62	3.07	3.07	0.00	5425.55	5425.55	5425.55	0.00	NM	NM	0.40	4.96	NM	NM	NM	NM	NM	NM
	04/27/98	5428.62	3.16	3.16	0.00	5425.46	5425.46	5425.46	0.00	NM	NM	0.07	5.40	NM	NM	NM	NM	NM	NM
	06/23/98	5428.62	3.72	3.72	0.00	5424.90	5424.90	5424.90	0.00	NM	7.06	0.15	4.79	NM	NM	NM	NM	NM	NM
	09/24/98	5428.62	3.81	3.81	0.00	5424.81	5424.81	5424.81	0.00	20.0	7.10	0.31	4.43	NM	NM	NM	NM	NM	NM
	12/28/98	5428.62	2.86	2.86	0.00	5425.96	5425.96	5425.96	0.00	8.1	7.00	0.25	7.19	NM	NM	NM	NM	NM	NM
	04/12/99	5428.62	2.90	2.90	0.00	5425.72	5425.72	5425.72	0.00	11.0	7.10	0.25	7.04	3.55	NM	NM	NM	NM	NM
	06/02/99	5428.62	3.24	3.24	0.00	5425.38	5425.38	5425.38	0.00	14.0	7.10	0.09	5.10	3.38	NM	NM	NM	NM	NM
	09/08/99	5428.62	3.18	3.18	0.00	5425.44	5425.44	5425.44	0.00	19.7	6.70	0.24	6.76	3.38	NM	NM	NM	3.75	NM
	12/29/99	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	5.00	NM
	04/04/00	5428.62	2.61	2.61	0.00	5426.01	5426.01	5426.01	0.00	9.6	NM	0.08	NM	NM	NM	NM	NM	3.00	NM
	06/08/00	5428.62	3.27	3.27	0.00	5425.35	5425.35	5425.35	0.00	17.5	7.30	0.07	9.10	NM	NM	NM	NM	1.00	NM
	09/06/00	5428.62	3.60	3.60	0.00	5425.02	5425.02	5425.02	0.00	21.3	NM	0.28	NM	NM	NM	NM	NM	3.00	NM
	12/08/00	5428.62	3.43	3.43	0.00	5425.19	5425.19	5425.19	0.00	21.3	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/08/96	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
MW-22	12/31/96	5430.75	4.64	4.64	0.00	5426.11	5426.11	5426.11	0.00	NM	NM	1.80	6.66	NM	NM	NM	NM	NM	NM
	03/18/97	5430.75	3.88	3.88	0.00	5426.87	5426.87	5426.87	0.00	NM	NM	NM	6.49	NM	NM	NM	NM	NM	NM
	06/16/97	5430.75	4.15	4.15	0.00	5426.60	5426.60	5426.60	0.00	NM	NM	0.21	7.25	NM	NM	NM	NM	NM	NM
	09/26/97	5430.75	4.36	4.36	0.00	5426.39	5426.39	5426.39	0.00	NM	NM	0.32	7.97	NM	NM	NM	NM	NM	NM
	12/22/97	5430.75	4.25	4.25	0.00	5426.50	5426.50	5426.50	0.00	NM	NM	1.27	8.69	NM	NM	NM	NM	NM	NM
	04/27/98	5430.75	4.31	4.31	0.00	5426.44	5426.44	5426.44	0.00	NM	NM	1.54	8.91	NM	NM	NM	NM	NM	NM
	06/23/98	5430.75	4.97	4.97	0.00	5425.78	5425.78	5425.78	0.00	NM	7.26	0.27	9.06	NM	NM	NM	NM	NM	NM
	09/24/98	5430.75	5.03	5.03	0.00	5425.72	5425.72	5425.72	0.00	19.4	7.10	0.11	8.46	NM	NM	NM	NM	NM	NM
	12/28/98	5430.75	3.83	3.83	0.00	5426.92	5426.92	5426.92	0.00	8.1	7.60	0.84	9.16	NM	NM	NM	NM	NM	NM
	04/12/99	5430.75	4.31	4.31	0.00	5426.44	5426.44	5426.44	0.00	10.2	7.30	0.22	10.55	5.30	NM	NM	NM	NM	NM
	06/02/99	5430.75	4.53	4.53	0.00	5426.22	5426.22	5426.22	0.00	13.4	6.90	0.20	6.90	NM	NM	NM	NM	NM	NM
	09/08/99	5430.75	4.28	4.28	0.00	5426.47	5426.47	5426.47	0.00	18.7	7.20	0.33	12.63	6.31	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	TOC elev	A/O	OW	Product	Prod Elev	Water Ele	dj WL Ele	Accum Pro	Deg. C	pH	DO mg/l	Semen/m	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
MW-23	12/29/99	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
	04/04/00	5430.75	3.61	3.61	0.00	5427.14	5427.14	5427.14	0.00	9.3	NM	0.39	NM	NM	NM	NM	NM	5.00	NM
	06/08/00	5430.75	3.96	3.96	0.00	5426.79	5426.79	5426.79	0.00	13.7	7.70	0.08	NM	NM	NM	NM	NM	2.75	NM
	09/06/00	5430.75	4.50	4.50	0.00	5426.25	5426.25	5426.25	0.00	18.9	NM	0.15	NM	NM	NM	NM	NM	2.00	NM
	12/08/00	5430.75	4.52	4.52	0.00	5426.23	5426.23	5426.23	0.00	18.9	NM	0.15	NM	NM	NM	NM	NM	2.50	NM
	10/07/96	5448.32	DRY	DRY	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	5448.32	DRY	DRY	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	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
	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
MW-24	04/27/98	5448.32	NM	DRY	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	5448.32	DRY	DRY	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/04/99	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
	05/14/00	5448.32	DRY	DRY	NM	NM	NM	NM	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/16/00	5449.34	DRY	DRY	DRY	DRY	DRY	DRY	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5449.34	DRY	DRY	DRY	DRY	DRY	DRY	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5449.34	DRY	DRY	DRY	DRY	DRY	DRY	0.89	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	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-25	03/19/97	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
	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	5447.53	DRY	DRY	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/04/99	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	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	05/14/00	5447.53	13.40	13.40	0.00	5434.13	5434.13	5434.13	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-26	06/16/00	5449.23	15.09	15.09	0.00	5434.14	5434.14	5434.14	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5449.23	15.73	15.73	0.00	5433.50	5433.50	5433.50	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5449.23	15.73	15.73	0.00	5433.50	5433.50	5433.50	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/96	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	5447.62	DRY	DRY	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	5447.62	DRY	DRY	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97	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
	12/18/97	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

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	TOC elev	A/O	OW	Product	Prod Elev	ater Ele	of WL Ele	Accum Pro	Deg. C	pH	DO mg/l	Seimen/m	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
MW-26	12/31/98	5447.62	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	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	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
	05/14/00	5447.62	14.18	14.18	0.00	5433.44	5433.44	5433.44	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/16/00	5448.74	15.15	15.15	0.00	5433.59	5433.59	5433.59	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5448.74	15.07	15.07	0.00	5433.67	5433.67	5433.67	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5448.74	15.11	15.11	0.00	5433.63	5433.63	5433.63	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/96	5447.26	WELL COVERED	WELL COVERED															
	12/31/96	5447.26	WELL COVERED	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
MW-27	12/31/96	5448.04	DRY	DRY	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	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
	12/18/97	5448.04	NM	NM	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/29/98	5448.04	NM	NM	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/25/98	5448.04	NM	NM	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/98	5448.04	DRY	DRY	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/98	5448.04	DRY	DRY	NM	NM	NM	NM	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	05/14/00	5448.04	14.02	14.02	0.00	5434.02	5434.02	5434.02	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-28	06/16/00	5449.01	DRY	DRY	DRY	DRY	DRY	DRY	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5449.01	DRY	DRY	DRY	DRY	DRY	DRY	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5449.01	DRY	DRY	DRY	DRY	DRY	DRY	8.44	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/96	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	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	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
	12/18/97	5448.06	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/28/98	5448.06	14.74	14.74	0.00	5433.32	5433.32	5433.32	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-29	06/24/98	5448.06	14.87	14.87	0.00	5433.19	5433.19	5433.19	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/24/98	5448.06	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/98	5448.06	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	5448.06	14.76	14.76	0.00	5433.30	5433.30	5433.30	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/04/99	5448.06	14.55	14.55	0.00	5433.51	5433.51	5433.51	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/16/00	5449.07	15.02	15.02	0.55	5434.05	5433.50	5433.89	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5449.07	15.53	15.92	0.39	5433.54	5433.15	5433.42	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5449.07	15.53	15.76	0.23	5433.54	5433.31	5433.47	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/96	5446.90	14.59	14.82	0.23	5432.31	5432.08	5432.24	7.10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/96	5446.90	14.65	14.78	0.13	5432.25	5432.12	5432.21	7.11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
QMRTABLE 1	03/17/97	5446.90	14.61	14.69	0.08	5432.29	5432.21	5432.27	7.11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97	5446.90	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	5446.90	14.36	14.40	0.04	5432.54	5432.50	5432.53	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/18/97	5446.90	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	5446.90	NM	NM	NM	NM	NM	NM	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/24/98	5446.90	14.09	14.09	0.00	5432.81	5432.81	5432.81	7.14	NM	NM	0.20	5.73	NM	NM	NM	NM	NM	NM
	09/24/98	5446.90	NM	NM	NM	NM	NM	NM	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	TOC elev	A/O	OW	Product	Prod Elev	ater Ele	dj WL Ele	Accum Pro	Deg. C	pH	DO mg/l	Seimen/m	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
POND POND RW-24	12/31/98	5446.90	NM	NM	NM	NM	NM	NM	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	5446.90	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	5446.90	13.84	13.84	0.00	5433.06	5433.06	5433.06	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/16/00	5447.94	14.38	14.38	0.00	5433.56	5433.56	5433.56	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5447.94	14.87	14.87	0.00	5433.07	5433.07	5433.07	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5447.94	14.91	14.91	0.00	5433.03	5433.03	5433.03	7.14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/02/99		NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/09/99	NM	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/96	5445.72	13.87	15.34	1.47	5431.85	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
	03/17/97	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	104.75	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/29/97	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	104.99	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/22/98	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
RW-25	09/23/98	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	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	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	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
	09/09/99	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
	04/05/00	5445.72	13.11	13.11	0.00	5432.61	5432.61	5432.61	105.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/16/00	5447.73	14.99	14.99	0.00	5432.74	5432.74	5432.74	105.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5447.73	15.46	15.46	0.00	5432.27	5432.27	5432.27	105.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5447.73	15.49	15.49	0.00	5432.24	5432.24	5432.24	105.28	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/07/96	5446.67	14.84	15.01	0.17	5431.83	5431.66	5431.78	49.26	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96	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
	03/17/97	5446.67	14.77	15.02	0.25	5431.90	5431.65	5431.83	14.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/18/97	5446.67	14.50	15.29	0.79	5432.17	5431.38	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
RW-26	04/29/98	5446.67	13.25	13.25	0.00	5433.42	5433.42	5433.42	49.69	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/22/98	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
	09/23/98	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	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	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	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	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
	04/05/00	5446.67	13.74	13.75	0.01	5432.93	5432.92	5432.93	49.93	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/16/00	5448.68	15.69	15.69	0.00	5432.99	5432.99	5432.99	49.93	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5448.68	16.17	16.17	0.00	5432.51	5432.51	5432.51	49.93	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5448.68	16.16	16.16	0.00	5432.52	5432.52	5432.52	49.93	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96	5443.98	12.97	13.70	0.73	5431.01	5430.28	5430.79	0.70	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

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	TOC elev	A/O	OW	Product	Prod Elev	Water Elev	dj WL Ele	Accum Pro	Deg. C	pH	DO mg/l	Sediment/m	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
T-17-1	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
	06/22/98	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
	09/24/98	5443.98	NM	NM	NM	NM	NM	NM	2.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/31/98	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	5443.98	11.50	11.50	0.00	5432.48	5432.48	5432.48	2.53	NM	6.90	NM	3.80	NM	NM	NM	NM	NM	NM
	06/03/99	5443.98	11.29	11.29	0.00	5432.69	5432.69	5432.69	2.53	NM	6.90	NM	3.80	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
	04/05/00	5443.98	10.93	10.93	0.00	5433.05	5433.05	5433.05	2.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/08/00	NM	NM	NM	NM	NM	NM	NM	2.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	NM	13.73	14.33	0.60				3.09	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00		13.78	14.38	0.60				3.09	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/10/96	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
	12/30/96	5452.41	DRY	DRY	NM	NM	NM	NM	6.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	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
	09/29/97	5452.41	NM	NM	NM	NM	NM	NM	6.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
T-17-2	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	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	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
	06/16/00	5452.41	16.68	16.68	0.00	5435.73	5435.73	5435.73	6.41	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5452.41	17.25	17.25	0.00	5435.16	5435.16	5435.16	6.41	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/11/00	5452.41	17.20	17.20	0.00	5435.21	5435.21	5435.21	6.41	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	10/10/96	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
	12/30/96	5453.51	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	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
T-17-3	04/29/98	5453.51	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/16/00	5453.51	WELL DESTROYED																
	10/10/96	5450.98	19.85	19.90	0.05	5431.13	5431.08	5431.12	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	12/30/96	5450.98	17.16	17.16	0.00	5433.82	5433.82	5433.82	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	03/19/97	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
	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	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	5450.98	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	04/14/99	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
	06/03/99	5450.98	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
			16.10	16.10	0.00	5434.88	5434.88	5434.88	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

TABLE 1
THRIFTWAY REFINERY
SUMMARY OF GROUNDWATER MONITOR DATA

Well #	Date	TOC elev	A/O	OW	Product	Prod Elev	Water Ele	dj WL Ele	Accum Pro	Deg. C	pH	DO mg/l	Seimen/m	TDS	ORP	NTU's	% Salinity	Purged	DEPTH
UST	09/09/99	5450.98	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	06/16/00	5450.98	NM	NM	NM	NM	NM	NM	0.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	09/07/00	5452.41	Well is covered need relocating.																
	04/21/95	GALLONS RECOVERED THIS QUARTER																	
	06/16/95	GALLONS RECOVERED THIS QUARTER																	
	08/25/95	GALLONS RECOVERED THIS QUARTER																	
	11/12/95	GALLONS RECOVERED THIS QUARTER																	
	03/05/96	GALLONS RECOVERED THIS QUARTER																	
UST	06/04/96	GALLONS RECOVERED THIS QUARTER																	
	10/10/96	GALLONS RECOVERED THIS QUARTER																	
	12/30/96	NO GALLONS RECOVERED THIS QUARTER																	
	03/19/97	NO GALLONS RECOVERED THIS QUARTER																	
	06/18/97	NO GALLONS RECOVERED THIS QUARTER																	
	07/09/97	NO GALLONS RECOVERED THIS QUARTER																	
	10/01/97	GALLONS RECOVERED THIS QUARTER																	
	12/18/97	NO GALLONS RECOVERED THIS QUARTER																	
	04/29/98	GALLONS RECOVERED THIS QUARTER																	
	06/25/98	GALLONS RECOVERED THIS QUARTER																	
	09/24/98	NO GALLONS RECOVERED THIS QUARTER																	
	12/31/98	NO GALLONS RECOVERED THIS QUARTER																	
	04/12/99	NO GALLONS RECOVERED THIS QUARTER																	
	06/03/99	GALLONS RECOVERED THIS QUARTER																	
	09/09/99	NO GALLONS RECOVERED THIS QUARTER																	
	12/30/99	NO GALLONS RECOVERED THIS QUARTER																	
	04/05/00	GALLONS RECOVERED THIS QUARTER																	
	06/08/00	GALLONS RECOVERED THIS QUARTER																	
	09/07/00	GALLONS RECOVERED THIS QUARTER																	
	12/12/00	GALLONS RECOVERED THIS QUARTER																	
	01/17/01	GALLONS RECOVERED THIS QUARTER																	

NOTE: NM SIGNIFIES NOT MEASURED
TOTAL PRODUCT RECOVERED TO 9174.35 GALLONS

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
EFFLUENT	06/22/94		SYSTEM SHUT DOWN			
	09/20/94	ND	9.3	0.9	ND	0.7
	01/20/95	NS	NS	NS	NS	NS
	04/12/95	7.5	97.5	363.0	278.0	2638.0
	11/12/95	3.2	33.9	12.3	8.9	48.1
	03/05/96	7.0	50.0	21.2	7.1	43.4
	06/04/96	3.5	2.4	0.7	0.9	3.8
	07/18/96	7.4	62.6	43.7	13.1	88.9
	10/09/96	1.2	3.7	ND	1.4	4.4
	12/31/96		SYSTEM SHUT DOWN			
	03/20/97		AIR STRIPPER MODIFIED			
	03/24/97	NM	3.4	1.9	0.9	2.7
	03/28/97	NM	18.7	10.5	5.3	16.0
	04/02/97	NM	5.4	2.6	1.4	4.8
	04/03/97	NM	ND	ND	ND	ND
	04/04/97	NM	ND	ND	ND	0.1
	04/10/97	NM	0.5	0.3	0.2	1.2
	04/18/97	4.8	4.0	0.4	0.4	1.2
	05/30/97		LARGER BLOWER INSTALLED			
	06/09/97	NM	ND	ND	0.5	0.5
	06/27/97	NM	ND	0.2	0.2	0.4
	07/25/97	NM	ND	ND	ND	ND
	07/31/97	NM	ND	ND	ND	ND
	09/03/97	NM	0.8	0.5	1.1	6.2
	12/22/97	NM	122.6	97.2	44.5	131.9
EFFLUENT	02/09/98	5.9	77.5	115.5	47.1	134.1
	02/19/98	10.0	110.0	110.0	46.0	171.0
	02/20/98	5.6	83.0	96.0	46.0	209.0
	02/23/98	13.0	200.0	160.0	81.0	289.0
	03/03/98	30.0	220.0	140.0	84.0	243.0
	03/04/98	22.0	200.0	140.0	80.0	247.0
	03/05/98	17.0	130.0	94.0	56.0	176.0
	03/05/98		SYSTEM SHUT DOWN FOR CLEANING			
	04/24/98	54.0	310.0	410.0	230.0	970.0
	04/28/98	42.0	770.0	350.0	280.0	580.0
	04/28/98		SYSTEM SHUT DOWN FOR TRAY REPAIRS			
	06/11/98		117.0			
	06/12/98		270.0			
	06/15/98		200.0			
	06/17/98		NEW STRIPPER INSTALLATION			
	06/24/98		NEW STRIPPER INSTALLATION			
	09/24/98	6.2	2.6	1.6	ND	2.7
	10/21/98	ND	2.6	1.6	ND	2.7

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	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	04/03/00	20.0	6.2	1.8	2.6	11.4
	EFFLUENT	04/17/00	22.0	19.0	4.2	9.0	40.3
	EFFLUENT	05/08/00	460.0	3100.0	3200.0	660.0	2840.0
	EFFLUENT	05/08/00	System shut down for cleaning oil found in outlet				
	EFFLUENT	05/22/00	39.0	26.0	19.0	6.4	32.0
	EFFLUENT	05/22/00	System shut down for cleaning found broken baffels.				
	EFFLUENT	05/26/00	System shut down for repairs.				
	EFFLUENT	05/31/00	4.1	1.7	ND	1.2	2.8
	EFFLUENT	06/05/00	10.0	3.0	2.1	0.7	4.4
	EFFLUENT	06/29/00	2.9	1.5	1.8	ND	3.4
	EFFLUENT	08/03/00	16.0	0.8	0.6	ND	1.6
	EFFLUENT	09/14/00	ND	ND	ND	ND	1.7
	EFFLUENT	10/09/00	22.0	0.7	ND	ND	1.5
	EFFLUENT	11/08/00	12.0	6.1	1.9	4.1	17.5
	EFFLUENT	12/07/00	31.0	ND	ND	ND	1.5
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

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	10/09/96	13.2	3116.0	1332.2	504.2	1588.0
	12/31/96	SYSTEM SHUT DOWN				
	03/24/97	NM	2110.0	1011.0	47.0	1279.0
	03/28/97	NM	1827.0	850.0	40.6	1146.0
	04/02/97	NM	1436.0	650.0	361.0	1279.0
	07/31/97	NM	4641.0	4939.0	1128.0	4708.0
	09/24/97	NM	1600.0	923.0	660.0	1529.0
	12/22/97	NM	2078.0	1610.0	729.0	2053.0
	02/09/98	37.0	1761.0	2542.0	963.0	461.0
	06/23/98	SYSTEM SHUT DOWN				
	12/31/98	440.0	1200.0	860.0	760.0	1800.0
	02/16/99	40.0	120.0	270.0	230.0	1000.0
	03/02/99	100.0	650.0	250.0	470.0	890.0
	03/05/99	120.0	760.0	280.0	530.0	1000.0
	03/12/99	140.0	370.0	370.0	440.0	1520.0
	03/19/99	170.0	1100.0	460.0	750.0	1760.0
	03/26/99	140.0	980.0	430.0	710.0	1900.0
	04/13/99	ND	6400.0	16000.0	1600.0	6800.0
	05/04/99	190.0	1200.0	2700.0	860.0	2720.0
	06/02/99	200.0	1200.0	1800.0	900.0	3190.0
	07/07/99	960.0	2600.0	6700.0	1000.0	3230.0
	08/09/99	150.0	840.0	1800.0	670.0	1740.0
	09/02/99	350.0	1300.0	2500.0	720.0	2080.0
	09/09/99	360.0	1800.0	5900.0	1200.0	5000.0
	10/04/99	370.0	2000.0	1600.0	820.0	2960.0
	11/01/99	270.0	1800.0	1000.0	790.0	3300.0
	12/17/99	220.0	1500.0	1700.0	820.0	3560.0
	12/28/99	230.0	1500.0	1300.0	800.0	3400.0
	02/08/00	190.0	1800.0	540.0	640.0	2230.0
	04/03/00	250.0	1900.0	410.0	660.0	2530.0
	04/17/00	230.0	2100.0	440.0	660.0	2440.0
	05/22/00	220.0	2400.0	1800.0	600.0	2460.0
	05/31/00	100.0	1200.0	500.0	530.0	1180.0
	06/05/00	260.0	2400.0	2400.0	680.0	2640.0
	06/29/00	190.0	2200.0	2300.0	760.0	2980.0
	08/03/00	ND	1600.0	740.0	610.0	1870.0
	09/14/00	140.0	1100.0	290.0	530.0	1460.0
	10/09/00	210.0	1600.0	280.0	610.0	2220.0
	11/08/00	180.0	840.0	170.0	520.0	1790.0
	12/07/00	1400.0	1700.0	890.0	560.0	2220.0
MW-01	03/05/96	FREE PRODUCT FOUND IN WELL				
	05/31/96	FREE PRODUCT FOUND IN WELL				
	10/07/96	244.6	255.1	10.9	36.5	192.8

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	12/31/96	219.6	164.0	5.3	9.8	176.6
	03/19/97	NM	45.6	1.3	5.1	39.8
	06/18/97	NM	26.7	0.7	3.8	39.7
	09/24/97	NM	134.9	5.9	15.8	94.7
	12/23/97	NM	58.7	1.6	4.9	94.7
	04/28/98	79.0	58.0	2.8	4.9	21.1
	06/24/98	59.0	14.0	ND	1.4	1.8
	09/23/98	71.0	15.0	ND	1.8	ND
	12/30/98	120.0	120.0	1.4	7.5	25.0
	04/14/99	140.0	190.0	0.8	5.3	4.4
	06/03/99	78.0	29.0	ND	1.1	ND
	09/09/99	73.0	560.0	1.0	21.0	6.7
	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	03/05/96	664.0	3120.0	53.5	484.0	519.8
	10/09/96	FREE PRODUCT FOUND IN WELL				
	12/31/96	FREE PRODUCT FOUND IN WELL				
	03/19/97	FREE PRODUCT FOUND IN WELL				
	06/17/97	FREE PRODUCT FOUND IN WELL				
	09/24/97	FREE PRODUCT FOUND IN WELL				
	12/23/97	FREE PRODUCT FOUND IN WELL				
	04/28/98	FREE PRODUCT FOUND IN WELL				
	06/22/98	FREE PRODUCT FOUND IN WELL				
	09/23/98	150.0	2000.0	40.0	610.0	1120.0
	12/30/98	Product	Product	Product	Product	Product
	04/14/99	Product	Product	Product	Product	Product
	06/03/99	160.0	2000.0	31.0	650.0	1070.0
	09/09/99	Product	Product	Product	Product	Product
	12/30/99	110.0	1900.0	5.6	620.0	670.0
MW-2 DUP	09/23/98	160.0	2000.0	42.0	630.0	1280.0
MW-03	03/05/96	298.0	117.0	5.9	28.2	16.9
	06/04/96	NOT SAMPLED				
	10/09/96	224.7	41.7	4.0	5.8	4.3
	12/31/96	NS	NS	NS	NS	NS
	03/19/97	NS	NS	NS	NS	NS
	06/17/97	NS	NS	NS	NS	NS
	09/24/97	FREE PRODUCT FOUND IN WELL				
	12/23/97	FREE PRODUCT FOUND IN WELL				
	04/28/98	FREE PRODUCT FOUND IN WELL				
	06/24/98	200.0	120.0	ND	8.2	ND
	09/22/98	NS	NS	NS	NS	NS
	12/30/98	NS	NS	NS	NS	NS
	04/13/99	180.0	170.0	1.4	23.0	4.2

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	06/03/99	NS	NS	NS	NS	NS
MW-04	03/05/96	31.5	50.0	5.6	ND	8.3
	06/04/96	35.0	1.0	3.3	3.3	7.0
	10/09/96	33.0	0.9	2.1	2.2	1.2
	12/31/96	27.0	3.5	1.4	1.7	1.6
	03/19/97	NM	21.7	0.5	2.6	2.3
	06/17/97	NM	8.4	1.6	2.2	1.4
	09/24/97	NM	3.7	3.0	5.1	2.0
	12/22/97	NM	3.8	3.1	3.0	1.3
	04/28/98	WELL BURIED BY AZTEC WELL SERVICE				
	06/05/00	20.0	9.4	ND	2.7	ND
	09/05/00	20.0	22.0	ND	3.6	0.6
	12/06/00	36.0	9.3	ND	ND	ND
MW-05	03/05/96	52.9	2.0	0.4	0.6	1.2
	06/04/96	47.2	0.3	ND	0.2	ND
	10/09/96	48.6	0.6	ND	ND	ND
	12/31/96	47.9	4.8	ND	0.2	1.1
	03/19/97	NM	5.8	ND	0.4	0.2
	06/17/97	NM	6.7	0.3	0.5	0.2
	09/24/97	NM	9.6	9.6	9.6	9.6
	12/19/97	NM	8.6	0.3	0.4	ND
	04/27/98	56.0	9.2	ND	ND	ND
	06/24/98	56.0	10.0	ND	0.6	ND
	09/21/98	56.0	11.0	ND	ND	ND
	12/29/98	52.0	12.0	ND	0.7	ND
	04/12/99	43.0	6.7	ND	0.5	ND
	06/02/99	56.0	12.0	ND	0.8	ND
	09/08/99	54.0	12.0	0.5	ND	ND
	12/29/99	49.0	10.0	ND	0.6	ND
	04/03/00	51.0	11.0	ND	0.6	ND
	06/05/00	46.0	9.4	ND	ND	ND
	09/05/00	59.0	11.0	ND	0.6	ND
	12/06/00	44.0	8.4	ND	ND	ND
MW-05 DUP	06/02/99	57.0	13.0	ND	0.7	ND
	12/29/99	49.0	10.0	ND	0.6	ND
	06/07/00	35.0	6.5	ND	ND	ND
MW-06	03/05/96	0.9	0.2	ND	ND	ND
	06/04/96	8.3	1.0	2.5	0.2	0.8
	10/09/96	33.5	1.9	3.7	3.2	1.3
	12/31/96	0.9	0.3	5.4	0.9	1.1
	03/19/97	NM	0.6	0.8	0.8	4.0
	06/17/97	NM	19.1	3.3	2.4	0.3
	09/24/97	NM	20.3	6.2	4.5	1.9

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	12/23/97	NM	ND	ND	ND	ND
	04/27/98	3.7	6.3	0.6	ND	ND
	06/24/98	36.0	20.0	4.8	3.3	ND
	09/22/98	47.0	8.5	1.8	4.5	3.6
	12/30/98	2.8	ND	ND	ND	ND
	04/13/99	4.4	5.6	ND	ND	ND
	06/03/99	47.0	29.0	0.5	2.9	1.2
	09/09/99	64.0	24.0	0.8	4.3	1.9
	12/29/99	1.3	ND	ND	ND	ND
	04/03/00	1.6	ND	ND	ND	ND
	06/06/00	33.0	7.6	ND	1.9	ND
	09/05/00	59.0	10.0	ND	2.7	1.9
	12/06/00	1.8	ND	ND	ND	ND
MW-07	03/05/96	FREE PRODUCT FOUND IN WELL				
	05/31/96	FREE PRODUCT FOUND IN WELL				
	10/09/96	FREE PRODUCT FOUND IN WELL				
	12/31/96	FREE PRODUCT FOUND IN WELL				
	03/19/97	NOT SAMPLED				
	06/17/97	NOT SAMPLED				
	09/24/97	NOT SAMPLED				
	12/23/97	NOT SAMPLED				
	04/28/98	NOT SAMPLED				
	06/24/98	190.0	240.0	1.1	444.0	97.4
	09/24/98	Sheen	Sheen	Sheen	Sheen	Sheen
	12/30/98	Sheen	Sheen	Sheen	Sheen	Sheen
	04/14/99	260.0	30.0	6.8	24.0	162.0
	06/03/99	Product	Product	Product	Product	Product
	09/09/99	Product	Product	Product	Product	Product
	12/30/99	300.0	9.3	ND	16.0	101.7
	04/05/00	320.0	10.0	ND	7.2	44.9
	06/06/00	310.0	4.7	ND	7.9	28.0
	12/06/00	NOT SAMPLED				
MW-07 DUP	12/30/99	300.0	13.0	ND	22.0	162.0
MW-08	03/05/96		DRY			
	06/03/96	SILTED IN TO 3.8 FEET BELOW GRADE				
	10/09/96	SILTED IN TO 3.8 FEET BELOW GRADE				
	12/31/96	35.8	ND	ND	ND	ND
	03/18/97	NM	NM	NM	NM	NM
	06/16/97	SILTED IN TO 3.6 FEET BELOW GRADE				
	09/25/97	NM	ND	ND	ND	ND
	12/22/97	NM	1.2	ND	ND	ND
	04/28/98	42.0	3.6	0.6	0.6	ND
	06/23/98		DRY			

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	09/22/98		DRY			
	12/29/98	SILTED IN TO 1.5 FEET BELOW GRADE				
	06/06/00	190.0	1.3	ND	ND	ND
	09/06/00	250.0	1.1	ND	ND	ND
	12/07/00	240.0	1.9	ND	ND	ND
MW-09	03/05/96	16.8	0.8	0.3	1.1	1.3
	06/03/96	15.8	0.4	ND	ND	ND
	10/09/96	16.5	ND	ND	ND	ND
	12/31/96	7.2	ND	ND	ND	ND
	03/18/97	NM	ND	ND	ND	0.3
	06/16/97	NM	ND	ND	ND	ND
	09/25/97	NM	ND	ND	ND	ND
	12/22/97	NM	ND	ND	ND	ND
	04/28/98	ND	ND	ND	ND	ND
	06/23/98	11.0	ND	ND	ND	ND
	09/22/98	19.0	ND	ND	ND	ND
	12/29/98	3.8	ND	ND	ND	ND
	04/12/99	3.0	ND	ND	ND	ND
	06/02/99	4.0	ND	ND	ND	ND
	09/07/99	18.0	ND	ND	ND	ND
	12/28/99	14.0	ND	ND	ND	ND
	04/04/00	5.3	ND	ND	ND	ND
	06/06/00	5.6	ND	ND	ND	ND
	09/05/00	9.0	ND	ND	ND	ND
	12/07/00	ND	ND	ND	ND	ND
MW-09 DUP	06/07/00	6.9	ND	ND	ND	ND
MW-10	03/05/96	ND	1.0	ND	0.9	0.4
	06/03/96	ND	ND	ND	ND	ND
	10/09/96	ND	ND	ND	ND	ND
	12/31/96	ND	ND	ND	ND	ND
	03/18/97	NM	ND	ND	ND	ND
	06/16/97	NM	ND	ND	ND	ND
	09/25/97	NM	ND	ND	ND	ND
	12/22/97	NM	ND	ND	ND	ND
	04/28/98	ND	ND	ND	ND	ND
	06/23/98	ND	ND	ND	ND	ND
	09/22/98	ND	ND	ND	ND	ND
	12/29/98	ND	ND	ND	ND	ND
	04/12/99	ND	ND	ND	ND	ND
	06/02/99	ND	ND	ND	ND	ND
	09/07/99	ND	ND	ND	ND	ND
	12/28/99	ND	ND	ND	ND	ND
	04/03/00	ND	ND	ND	ND	ND

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	06/06/00	ND	ND	ND	ND	ND
	09/05/00	ND	ND	ND	ND	ND
	12/07/00	ND	ND	ND	ND	ND
MW-11	03/05/96	ND	ND	ND	ND	0.3
	06/03/96	ND	ND	ND	ND	ND
	10/09/96	ND	ND	ND	ND	ND
	12/31/96	ND	ND	ND	ND	ND
	03/18/97	NM	ND	ND	ND	ND
	06/16/97	NM	ND	ND	ND	ND
	09/25/97	NM	ND	ND	ND	ND
	12/22/97	NM	ND	ND	ND	ND
	04/28/98	ND	ND	ND	ND	ND
	06/23/98	ND	ND	ND	ND	ND
	09/22/98	ND	ND	ND	ND	ND
	12/29/98	ND	ND	ND	ND	ND
	04/12/99	ND	ND	ND	ND	ND
	06/02/99	ND	ND	ND	ND	ND
	09/07/99	ND	ND	ND	ND	ND
	12/28/99	ND	ND	ND	ND	ND
	04/03/00	ND	ND	ND	ND	ND
	06/06/00	ND	ND	ND	ND	ND
	09/06/00	ND	ND	ND	ND	ND
	12/07/00	ND	ND	ND	ND	ND
MW-12	03/05/96	FREE PRODUCT FOUND IN WELL				
	05/31/96	FREE PRODUCT FOUND IN WELL				
	10/09/96	FREE PRODUCT FOUND IN WELL				
	12/31/96	FREE PRODUCT FOUND IN WELL				
	03/18/97	FREE PRODUCT FOUND IN WELL				
	06/18/97	FREE PRODUCT FOUND IN WELL				
	09/25/97	FREE PRODUCT FOUND IN WELL				
	12/22/97	FREE PRODUCT FOUND IN WELL				
	04/28/98	FREE PRODUCT FOUND IN WELL				
	06/24/98	FREE PRODUCT FOUND IN WELL				
	09/23/98	Product	Product	Product	Product	Product
	12/30/98	Product	Product	Product	Product	Product
	04/12/99	Product	Product	Product	Product	Product
	06/02/99	Product	Product	Product	Product	Product
	04/05/00	180.0	9.9	0.6	50.0	114.5
	12/08/00	150.0	20.0	1.0	35.0	72.4
MW-13	03/05/96	ND	ND	ND	ND	0.5
	06/04/96	ND	ND	ND	ND	ND
	10/09/96	ND	ND	ND	ND	ND
	12/30/96	ND	ND	ND	ND	ND

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	03/18/97	NM	ND	ND	ND	ND
	06/16/97	NM	ND	ND	ND	ND
	09/23/97	NM	ND	ND	ND	ND
	12/19/97	NM	ND	ND	ND	ND
	04/24/98	ND	ND	ND	ND	ND
	06/23/98	ND	ND	ND	ND	ND
	09/21/98	ND	ND	ND	ND	ND
	12/29/98	ND	ND	ND	ND	ND
	04/12/99	ND	ND	ND	ND	ND
	06/02/99	ND	ND	ND	ND	ND
	09/07/99	ND	ND	ND	ND	ND
	12/28/99	ND	ND	ND	ND	ND
	04/03/00	ND	ND	ND	ND	ND
	06/05/00	ND	ND	ND	ND	ND
	09/05/00	ND	ND	ND	ND	ND
	12/07/00	ND	ND	ND	ND	ND
MW-14	03/05/96	FREE PRODUCT FOUND IN WELL				
	05/31/96	FREE PRODUCT FOUND IN WELL				
	10/09/96	103.7	7698.8	361.7	2107.7	2917.8
	12/30/96	94.8	6673.5	179.4	857.3	940.5
	03/19/97	NOT SAMPLED				
	06/18/97	NOT SAMPLED				
	09/23/97	NOT SAMPLED				
	12/19/97	NOT SAMPLED				
	04/28/98	69.0	2900.0	800.0	1100.0	1940.0
	06/24/98	89.0	2000.0	150.0	1100.0	360.0
	09/23/98	87.0	950.0	91.0	780.0	256.0
	12/30/98	Product	Product	Product	Product	Product
	04/12/99	Product	Product	Product	Product	Product
	06/02/99	Product	Product	Product	Product	Product
	09/09/99	Product	Product	Product	Product	Product
	12/30/99	85.0	780.0	470.0	1600.0	1660.0
MW-15	03/05/96	ND	1.6	0.4	3.8	3.5
	06/03/96	ND	ND	ND	ND	ND
	10/09/96	ND	ND	ND	ND	ND
	12/30/96	ND	ND	ND	ND	ND
	03/18/97	NM	ND	ND	ND	ND
	06/17/97	NM	ND	ND	ND	ND
	09/26/97	NM	ND	ND	ND	ND
	12/22/97	NM	ND	ND	ND	ND
	04/24/98	ND	ND	ND	ND	ND
	06/23/98	ND	ND	ND	ND	ND
	09/21/98	ND	ND	ND	ND	ND

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	12/28/98	ND	ND	ND	ND	ND
	04/12/99	ND	ND	ND	ND	ND
	06/02/99	ND	ND	ND	ND	ND
	09/07/99	ND	ND	ND	ND	ND
	12/28/99	ND	ND	ND	ND	ND
	04/04/00	ND	ND	ND	ND	ND
	06/07/00	ND	ND	ND	ND	ND
	09/06/00	ND	ND	ND	ND	ND
	12/08/00	ND	ND	ND	ND	ND
MW-16	03/05/96	ND	ND	ND	ND	ND
	06/04/96	NOT SAMPLED				
	10/09/96	ND	ND	ND	ND	ND
	12/30/96	ND	ND	ND	ND	ND
	03/19/97	NOT SAMPLED				
	06/18/97	NOT SAMPLED				
	09/23/97	NOT SAMPLED				
	12/19/97	NOT SAMPLED				
	06/24/98	ND	ND	ND	ND	ND
	09/23/98	NS	NS	NS	NS	NS
	12/30/98	ND	ND	ND	ND	ND
	04/12/99	NS	NS	NS	NS	NS
	06/03/99	ND	ND	ND	ND	ND
	09/09/99	NS	NS	NS	NS	NS
	12/30/99	NS	NS	NS	NS	NS
MW-16 DUP	12/30/98	ND	ND	ND	ND	ND
MW-17	03/05/96	FREE PRODUCT FOUND IN WELL				
	06/04/96	FREE PRODUCT FOUND IN WELL				
	10/09/96	FREE PRODUCT FOUND IN WELL				
	12/30/96	FREE PRODUCT FOUND IN WELL				
	03/18/97	FREE PRODUCT FOUND IN WELL				
	06/18/97	FREE PRODUCT FOUND IN WELL				
	09/23/97	FREE PRODUCT FOUND IN WELL				
	12/22/97	FREE PRODUCT FOUND IN WELL				
	04/28/98	FREE PRODUCT FOUND IN WELL				
	06/23/98	FREE PRODUCT FOUND IN WELL				
	09/23/98	FREE PRODUCT FOUND IN WELL				
	12/29/98	Product	Product	Product	Product	Product
	04/12/99	Product	Product	Product	Product	Product
	06/03/99	Product	Product	Product	Product	Product
	09/09/99	Product	Product	Product	Product	Product
	12/30/99	Product	Product	Product	Product	Product
	04/05/00	Product	Product	Product	Product	Product
	06/16/00	Product	Product	Product	Product	Product

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
MW-18	03/05/96	53.0	6.8	2.4	1.8	14.1
	06/04/96	36.8	136.4	2.5	6.6	4.7
	10/09/96	31.9	60.1	1.1	1.5	0.7
	12/31/96	43.1	176.0	1.9	1.3	0.7
	03/19/97	NM	150.9	2.4	0.6	2.1
	06/18/97	NM	34.0	2.1	1.2	0.2
	09/24/97	NM	33.2	2.3	3.4	1.4
	12/23/97	NM	63.8	1.2	4.2	0.8
	04/28/98	56.0	68.0	3.9	6.8	2.2
	06/24/98	60.0	150.0	0.8	13.0	2.1
	09/22/98	74.0	76.0	3.6	12.0	2.5
	12/29/98	56.0	31.0	1.2	5.1	1.0
	04/13/99	35.0	27.0	0.6	3.1	ND
	06/03/99	80.0	36.0	0.9	4.2	1.2
	09/09/99	10.0	12.0	ND	2.3	ND
	12/29/99	42.0	30.0	0.5	2.6	ND
	04/05/00	41.0	68.0	0.7	4.2	1.2
	06/07/00	69.0	62.0	ND	6.7	ND
	09/06/00	18.0	12.0	0.6	0.5	ND
	12/06/00	16.0	4.0	ND	ND	ND
MW-18 DUP	09/09/99	10.0	13.0	ND	2.5	ND
MW-19	03/05/96	80.6	6.1	2.8	24.9	55.3
	06/04/96	80.5	15.3	2.8	92.9	150.5
	10/09/96	11.1	1.4	3.0	39.5	58.0
	12/30/96	65.7	17.9	3.5	43.0	62.5
	03/19/97	NM	24.6	4.1	164.1	352.2
	06/17/97	NM	8.1	2.4	96.7	160.5
	09/26/97	NM	0.8	1.8	11.7	11.0
	12/23/97	NM	36.9	3.8	244.0	357.4
	04/28/98	98.0	44.0	3.4	190.0	280.8
	06/23/98	130.0	60.0	7.0	280.0	341.9
	09/22/98	46.0	13.0	2.2	31.0	4.0
	12/29/98	37.0	14.0	ND	43.0	23.0
	04/13/99	36.0	0.7	ND	1.7	ND
	06/03/99	45.0	7.6	0.9	35.0	16.2
	09/09/99	1.7	ND	ND	0.6	ND
	12/29/99	170.0	39.0	0.5	110.0	55.0
	04/04/00	ND	ND	ND	1.2	1.7
	06/06/00	200.0	50.0	ND	83.0	24.0
	09/06/00	74.0	1.1	ND	1.8	ND
	12/06/00	110.0	4.4	ND	10.0	6.3
MW-20	03/05/96	133.4	3.6	16.8	3.3	21.8
	06/03/96	106.3	11.4	3.8	0.8	1.4

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	10/09/96	73.3	2.5	11.5	7.5	4.4
	12/31/96	53.3	2.7	14.3	9.5	5.7
	03/18/97	NM	2.3	2.2	4.4	3.2
	06/16/97	NM	1.4	4.4	4.0	4.2
	09/24/97	NM	1.7	4.5	3.8	2.4
	12/22/97	NM	4.5	6.7	9.3	6.8
	04/27/98	83.0	6.8	9.4	18.0	20.1
	06/23/98	91.0	4.8	7.5	7.0	3.6
	09/22/98	60.0	2.6	ND	5.8	ND
	12/28/98	71.0	4.0	ND	1.7	ND
	04/12/99	80.0	7.8	ND	2.4	1.9
	06/02/99	86.0	5.8	4.7	3.7	ND
	09/08/99	20.0	1.1	ND	ND	ND
	12/29/99	95.0	5.7	ND	2.5	ND
	04/04/00	12.0	ND	ND	ND	ND
	06/07/00	120.0	1.7	ND	1.9	1.1
	09/06/00	59.0	2.6	ND	16.0	7.6
	12/08/00	120.0	0.7	ND	ND	ND
DUPLICATE	12/08/00	110.0	0.6	ND	ND	ND
MW-21	03/05/96	82.0	6.0	2.0	29.3	6.1
	06/03/96	82.1	0.4	0.3	1.1	0.9
	10/09/96	46.0	0.7	ND	0.5	0.3
	12/31/96	51.3	ND	ND	0.5	0.2
	03/18/97	NM	0.3	ND	0.4	ND
	06/17/97	NM	ND	ND	0.2	ND
	09/25/97	NM	ND	0.4	0.9	0.4
	12/22/97	NM	1.3	1.5	2.4	0.8
	04/27/98	49.0	2.1	1.4	ND	ND
	06/23/98	80.0	ND	ND	1.8	0.5
	09/21/98	91.0	ND	ND	ND	ND
	12/28/98	81.0	ND	ND	1.1	ND
	04/12/99	92.0	ND	ND	ND	ND
	06/02/99	120.0	2.6	ND	0.6	ND
	09/08/99	100.0	ND	ND	ND	ND
	12/29/99	64.0	ND	ND	ND	ND
	04/04/00	44.0	ND	ND	ND	ND
	06/06/00	37.0	ND	ND	ND	ND
	09/06/00	36.0	ND	ND	ND	ND
	12/08/00	32.0	ND	ND	ND	ND
MW-21 DUP	09/08/99	98.0	ND	ND	ND	ND
	04/04/00	45.0	ND	ND	ND	ND
MW-22	03/05/96	36.7	ND	ND	0.2	0.4
	06/03/96	25.3	ND	ND	ND	0.4

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-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
	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-22	04/04/00	10.0	ND	ND	ND	ND
	MW-22	06/06/00	4.9	ND	ND	ND	ND
	MW-22	09/06/00	5.3	ND	ND	ND	ND
	MW-22	12/08/00	6.4	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-23	05/14/00	NS	NS	NS	NS	NS
	MW-23	12/07/00	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

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	12/30/98	NS	NS	NS	NS	NS
	04/12/99	NS	NS	NS	NS	NS
	06/02/99	NS	NS	NS	NS	NS
	09/09/99	NS	NS	NS	NS	NS
	04/04/00	NS	NS	NS	NS	NS
	12/07/00	NS	NS	NS	NS	NS
MW-25	03/05/96	DRY	DRY	DRY	DRY	DRY
	06/04/96	NS	NS	NS	NS	NS
	10/09/96	1.0	39.9	11.3	7.4	14.3
	12/31/96	NS	NS	NS	NS	NS
	03/18/97	NS	NS	NS	NS	NS
	06/18/97	NS	NS	NS	NS	NS
	09/25/97	NS	NS	NS	NS	NS
	12/19/97	NS	NS	NS	NS	NS
	06/25/98	3.2	32.0	58.0	8.5	91.0
	09/22/98	NS	NS	NS	NS	NS
	12/30/98	NS	NS	NS	NS	NS
	04/12/99	NS	NS	NS	NS	NS
	06/02/99	NS	NS	NS	NS	NS
	04/04/00	NS	NS	NS	NS	NS
	12/07/00	NS	NS	NS	NS	NS
MW-29	09/24/98	NS	NS	NS	NS	NS
	12/31/98	NS	NS	NS	NS	NS
	04/14/99	NS	NS	NS	NS	NS
	06/02/99	NS	NS	NS	NS	NS
	12/07/00	NS	NS	NS	NS	NS
POND	04/13/99	5.0	ND	ND	0.6	ND
	06/02/99	4.6	ND	ND	ND	ND
	09/09/99	ND	ND	ND	ND	ND
	12/28/99	5.7	2.1	2.5	3.5	12.1
	12/07/00	NS	NS	NS	NS	NS
RW-26	06/03/99	520.0	2500.0	470.0	190.0	1350.0
RW-26	12/07/00	NS	NS	NS	NS	NS
T-17-3	06/25/98	670.0	3300.0	150.0	220.0	510.0
	09/22/98	NS	NS	NS	NS	NS
	12/30/98	NS	NS	NS	NS	NS
	04/12/99	NS	NS	NS	NS	NS
	06/02/99	NS	NS	NS	NS	NS
	12/07/00	NS	NS	NS	NS	NS

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

Well #	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes

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)

[illegible]

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.	Location	Date	Calcium	Potassium	Magnesium	Sodium	HCO ₃ as CaCO ₃	Bicarbonate	Carbonate	Hydroxide	TOTAL Alkalinity	Chloride	Conductivity @ 25° C	TOTAL Hardness	pH	Sulfate	Dried at 180° C	Calculated TDS
EFFLUENT	EFFLUENT	12/22/97	274	6.60	31.6	732	278	<1	NS	<1	278	648.0	4,470	814	7.57	1,401	3,416	3,371
	EFFLUENT	12/31/98	220	8.60	48.0	815	730	ND	NS	NS	730	110.0	3,800	NS	7.98	1,600	3,500	NS
	EFFLUENT	12/28/99	320	8.50	45.0	815	130	ND	ND	ND	130	680.0	4,870	NS	7.97	1,500	3,620	3,490
	EFFLUENT	04/03/00	270	6.00	48.0	830	640	ND	ND	ND	640	320.0	4,420	880	8.79	1,530	3,370	3,400
INFLUENT	EFFLUENT	06/05/00	750	8.70	47.0	810	ND	ND	ND	ND	ND	3,810.0	7,300	2,070	3.03	1,420	5,060	6,880
	EFFLUENT	09/13/00	160	8.80	42.0	700	680	ND	ND	ND	680	200.0	2,600	590	7.89	1,320	2,980	2,840
	EFFLUENT	12/07/00	240	6.30	48.0	880	680	ND	ND	ND	680	300.0	3,240	787	8.04	1,460	3,400	3,350
	INFLUENT	12/22/97	272	6.60	31.2	728	86	<1	NS	<1	86	766.0	4,530	808	5.47	1,414	3,410	3,304
MW-01	INFLUENT	12/31/98	240	8.70	47.0	790	800	ND	NS	NS	800	110.0	3,700	NS	7.14	1,600	3,600	NS
	INFLUENT	12/28/99	310	8.50	45.0	775	890	ND	ND	ND	890	160.0	4,380	NS	7.19	1,520	3,480	3,700
	INFLUENT	04/03/00	320	6.00	49.0	810	930	ND	ND	ND	930	170.0	4,360	1,000	7.27	1,500	3,430	3,470
	INFLUENT	06/05/00	320	8.80	46.0	810	970	ND	ND	ND	970	160.0	4,400	1,000	7.26	1,500	3,440	3,430
MW-02	INFLUENT	09/13/00	320	8.45	43.0	780	1000	ND	ND	ND	1,000	170.0	3,100	980	7.18	1,320	3,370	3,260
	INFLUENT	12/07/00	310	6.10	48.0	790	960	ND	ND	ND	960	200.0	3,080	981	7.20	1,460	3,500	3,390
	MW-01	03/19/97	482	5.50	44.0	646	336	<1	NS	<1	336	47.6	4,470	1,385	7.05	2,518	4,166	4,079
	MW-01	12/23/97	458	5.20	34.0	645	289	<1	NS	<1	284	47.2	4,290	1,284	7.06	2,495	4,024	3,973
MW-04	MW-01	12/30/98	370	5.60	52.0	64	290	ND	ND	NS	290	32.0	4,050	NS	7.16	2,250	3,640	3,670
	MW-01	12/30/99	460	5.60	47.0	578	290	ND	ND	ND	290	130.0	3,300	NS	7.21	33	2,290	2,050
	MW-02	12/30/99	46	4.80	14.0	800	1700	ND	ND	<1	863	196.0	4,250	578	7.31	1,332	3,276	3,484
	MW-04	03/19/97	199	8.60	19.6	866	863	<1	NS	<1	367	116.0	3,270	367	7.29	875	2,458	2,687
MW-05	MW-04	12/22/97	96	6.70	31.0	648	914	<1	NS	<1	367	116.0	3,270	367	7.29	875	2,458	2,687
	MW-04	12/30/98	Well destroyed															
	MW-04	06/07/00	NS	NS	NS	NS	NS	NS	NS	NS	NS	120.0	NS	NS	NS	NS	NS	NS
	MW-04	12/06/00	180	6.50	23.0	660	880	ND	ND	ND	880	150.0	2,700	539	7.26	1,160	2,870	2,710
MW-05 DUP	MW-05	03/19/97	44	7.50	10.6	1,282	864	2.66	<1	<1	867	478.0	5,610	153	8.33	1,518	4,022	4,204
	MW-05	12/19/97	37	7.00	7.2	1,325	868	<1	NS	<1	868	385.0	5,690	123	8.39	1,798	4,132	4,428
	MW-05	12/29/98	120	11.00	34.0	1,600	750	ND	NS	NS	750	240.0	6,400	NS	7.83	2,700	5,500	NS
	MW-05	12/29/99	160	10.50	30.0	1,110	740	ND	ND	ND	740	140.0	5,100	NS	7.79	1,970	3,990	4,170
MW-06	MW-05	06/07/00	NS	NS	NS	NS	NS	NS	NS	NS	NS	120.0	NS	NS	NS	NS	NS	NS
	MW-05	12/06/00	40	5.60	14.0	1,180	820	ND	ND	ND	820	200.0	3,940	157	8.02	1,730	3,680	3,670
	MW-05 DUP	12/29/99	160	10.20	31.0	1,100	730	ND	ND	ND	730	140.0	5,090	NS	7.74	2,000	3,980	4,170
	MW-06	03/19/97	192	9.20	25.0	793	691	<1	NS	<1	691	100.5	4,010	582	7.79	1,495	3,142	3,306
MW-07	MW-06	12/23/97	106	7.50	15.5	762	772	<1	NS	<1	762	94.4	3,730	329	7.69	1,314	2,744	3,071
	MW-06	12/29/98	88	8.40	27.0	740	760	ND	NS	NS	760	94.0	3,200	NS	7.60	1,000	2,800	NS
	MW-06	12/29/99	140	9.20	26.0	784	800	ND	NS	NS	800	100.0	3,670	NS	7.63	1,160	2,740	3,020
	MW-06	06/07/00	NS	NS	NS	NS	NS	NS	NS	NS	NS	73.0	NS	NS	NS	NS	NS	NS
MW-07 DUP	MW-06	12/06/00	170	6.70	27.0	730	850	ND	NS	NS	850	76.0	2,660	540	7.56	1,270	2,890	2,790
	MW-07	12/30/99	290	11.40	36.0	990	510	ND	ND	ND	510	52.0	5,090	NS	7.31	2,480	4,250	4,370
	MW-07 DUP	12/30/99	290	10.80	36.0	980	510	ND	ND	ND	510	42.0	5,060	NS	7.25	2,440	4,200	4,300
	MW-08	12/22/97	INSUFFICIENT SAMPLE FOR THESE TESTS															
MW-08	MW-08	12/29/98	WELL SILENT IN															
	MW-08	06/07/00	NS	NS	NS	NS	NS	NS	NS	NS	NS	68.0	NS	NS	NS	NS	NS	NS
	MW-08	12/07/00	400	7.20	54.0	740	580	ND	ND	ND	580	98.0	3,190	1,220	7.15	2,170	3,950	3,820
	MW-09	03/18/97	395	9.40	42.4	1,528	330	<1	NS	<1	330	89.5	7,020	1,161	7.62	3,761	6,164	6,155
MW-09	MW-09	12/22/97	326	6.40	28.4	1,510	365	<1	NS	<1	365	65.1	7,040	931	7.71	3,936	6,398	6,237
	MW-09	12/29/98	320	7.80	66.0	1,700	370	ND	NS	NS	370	54.0	6,200	NS	7.51	4,100	6,600	NS

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.	Location	Date	Calcium	Potassium	Magnesium	Sodium	HCO ₃ as CaCO ₃		Hydroxide	Alkalinity	Chloride	Conductivity @ 25° C		Dried at 180° C		Calculated TDS
							Bicarbonate	Carbonate				Specific Conductance	Hardness	pH	Sulfate	
MW-10	MW-09	12/28/99	380	7.80	54.0	1,430	400	ND	ND	400	53.0	6,860	NS	7.42	3,740	6,050
	MW-09	06/07/00	NS	NS	NS	NS	NS	NS	NS	NS	46.0	NS	NS	NS	NS	NS
	MW-09	12/07/00	360	5.20	62.0	1,400	340	ND	ND	340	56.0	4,660	1,160	7.67	3,860	6,090
	MW-10	03/18/97	365	10.60	36.6	1,522	313	<1	<1	313	52.4	7,190	1,062	7.40	3,868	6,062
	MW-10	12/22/97	318	6.30	19.5	1,455	326	<1	<1	326	50.6	6,740	874	7.45	3,747	5,970
MW-11	MW-10	12/29/98	290	8.20	50.0	1,600	320	ND	NS	320	54.0	6,300	NS	7.39	3,900	6,200
	MW-10	12/28/99	370	9.10	46.0	1,360	310	ND	ND	310	56.0	6,600	NS	7.29	3,640	5,840
	MW-10	06/07/00	NS	NS	NS	NS	NS	NS	NS	NS	72.0	NS	NS	NS	NS	NS
	MW-10	12/07/00	340	5.20	56.0	1,240	300	ND	ND	300	98.0	4,580	1,070	7.50	3,660	5,690
	MW-11	03/18/97	421	15.00	36.4	1,315	244	<1	<1	244	29.4	6,670	1,201	7.41	3,875	5,900
MW-12 MW-13	MW-11	12/22/97	420	11.00	19.5	1,290	241	<1	<1	241	17.8	6,470	1,129	7.41	3,902	6,018
	MW-11	12/29/98	350	14.00	42.0	1,300	230	ND	NS	230	20.0	5,600	NS	7.30	3,600	5,600
	MW-11	06/07/00	NS	NS	NS	NS	NS	NS	NS	NS	26.0	NS	NS	NS	NS	NS
	MW-11	12/07/00	390	8.20	34.0	1,080	230	ND	ND	230	38.0	4,370	1,120	7.43	3,400	5,290
	MW-12	12/08/00	380	5.70	78.0	1,480	1,140	ND	ND	1,140	360.0	6,100	1,260	6.59	3,380	6,280
MW-14 MW-15	MW-13	03/18/97	432	11.40	41.8	1,126	288	<1	<1	288	119.0	6,210	1,251	7.28	3,378	5,488
	MW-13	12/19/97	416	7.90	31.0	1,155	300	<1	<1	300	125.0	5,980	1,166	7.28	3,437	5,456
	MW-13	12/29/98	360	9.60	56.0	1,200	270	ND	NS	270	110.0	5,500	NS	7.20	3,200	5,200
	MW-13	12/28/99	450	10.30	59.0	1,160	260	ND	ND	260	78.0	5,950	NS	7.02	3,500	5,520
	MW-13	06/07/00	NS	NS	NS	NS	NS	NS	NS	NS	93.0	NS	NS	NS	NS	NS
MW-18	MW-13	12/07/00	420	7.20	59.0	1,140	530	ND	ND	530	69.0	4,080	1,290	6.74	3,460	5,540
	MW-14	12/30/99	440	6.80	51.0	808	530	ND	ND	530	29.0	5,020	NS	6.92	2,610	4,400
	MW-15	03/18/97	381	8.80	36.8	776	200	<1	<1	200	48.1	4,610	1,103	7.60	2,568	4,066
	MW-15	12/22/97	375	6.80	21.4	825	204	<1	<1	204	78.5	4,640	1,025	7.62	2,696	4,258
	MW-15	12/29/98	390	8.60	44.0	840	180	ND	NS	180	140.0	4,800	NS	7.38	2,600	4,200
MW-19	MW-15	12/28/99	440	6.00	64.0	1,300	220	ND	ND	220	130.0	6,630	NS	7.39	3,740	6,010
	MW-15	06/07/00	NS	NS	NS	NS	NS	NS	NS	NS	160.0	NS	NS	NS	NS	NS
	MW-15	12/08/00	410	4.20	59.0	1,220	220	ND	ND	220	200.0	4,510	1,270	7.33	3,530	5,840
	MW-18	03/19/97	198	9.10	25.8	882	757	<1	<1	757	91.3	4,470	601	7.28	1,720	3,532
	MW-18	12/23/97	93	4.90	10.6	565	597	<1	<1	597	65.0	2,830	276	7.59	928	2,008
MW-20	MW-18	12/29/98	76	4.60	14.0	430	500	ND	NS	500	73.0	2,100	NS	7.40	620	1,700
	MW-18	12/29/99	140	9.10	26.0	734	920	ND	ND	920	82.0	3,630	NS	7.03	1,080	2,700
	MW-18	06/07/00	NS	NS	NS	NS	NS	NS	NS	NS	110.0	NS	NS	NS	NS	NS
	MW-18	12/06/00	55	6.10	12.0	620	710	ND	ND	710	97.0	1,920	186	7.53	500	1,650
	MW-19	03/19/97	196	6.00	45.8	1,335	995	<1	<1	995	273.0	6,060	678	7.63	2,390	4,850
MW-20	MW-19	12/23/97	118	4.60	30.6	1,215	1,228	<1	<1	1,228	264.0	5,560	421	7.41	1,880	4,238
	MW-19	12/29/98	82	3.40	24.0	470	540	ND	NS	540	66.0	2,200	NS	7.68	680	1,800
	MW-19	12/29/99	260	9.20	59.0	960	1,130	ND	ND	1,130	130.0	4,950	NS	7.48	1,760	3,880
	MW-19	06/07/00	NS	NS	NS	NS	NS	NS	NS	NS	230.0	NS	NS	NS	NS	NS
	MW-19	12/06/00	420	7.80	96.0	1,180	840	ND	ND	840	170.0	3,930	1,430	7.32	3,060	5,480
MW-20	MW-20	03/18/97	464	8.10	52.4	969	836	<1	<1	836	115.0	5,590	1,374	7.00	2,649	4,892
	MW-20	12/22/97	500	6.30	42.6	1,060	756	<1	<1	756	222.0	5,860	1,424	7.02	2,796	5,218
	MW-20	12/29/98	370	8.10	66.0	970	670	ND	NS	670	150.0	4,900	NS	6.98	2,500	4,700
	MW-20	12/29/99	530	10.40	79.0	1,180	900	ND	ND	900	210.0	6,650	NS	7.07	3,150	5,870
	MW-20	06/07/00	NS	NS	NS	NS	NS	NS	NS	NS	130.0	NS	NS	NS	NS	NS

TABLE 4
SUMMARY OF LABORATORY ANALYSIS
POLYCYCLIC AROMATIC HYDROCARBONS
THRIFTWAY REFINERY, BLOOMFIELD, NEW MEXICO
(concentrations in ug/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	10/06/97	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	ND	ND	ND	NA
EFFLUENT	12/31/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
EFFLUENT	12/28/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
EFFLUENT	04/03/00	U	U	U	U	U	U	U	U	U	U	U	U	U	6.90J	12.1	2.40J	U	NA
EFFLUENT	06/05/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
EFFLUENT	09/14/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
EFFLUENT	12/07/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	NA
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	ND	ND	ND	NA
INFLUENT	12/28/99	U	U	U	U	U	U	U	U	U	U	U	U	U	60.5	108	U	U	U
INFLUENT	04/03/00	U	U	U	U	U	U	U	U	U	U	U	U	U	61.9	87.4	3.60J	U	NA
INFLUENT	06/05/00	U	U	U	U	U	U	U	U	U	U	U	U	U	46.8	79.5	2.00J	U	NA
INFLUENT	09/14/00	U	U	U	U	U	U	U	U	U	U	U	U	U	285	96.1	39.2	U	NA
INFLUENT	12/07/00	U	U	U	U	U	U	U	U	U	U	U	U	U	56.2	76.2	U	U	U
INFLUENT	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	ND	ND	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	12/30/99	U	U	U	U	U	U	U	U	U	U	U	U	U	467	335	132	9.00J	U
MW-04	03/19/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
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-04	12/06/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
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	12/06/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-05 DUP	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	U	U	U	U	U
MW-06	12/12/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-07	12/30/99	U	U	U	U	U	U	U	U	U	U	U	U	U	10.6	8.20J	U	U	U
MW-07 DUP	12/30/99	U	U	U	U	U	U	U	U	U	U	U	U	U	9.55	6.50J	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-08	12/07/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-09	03/19/97	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-09	12/07/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-10	03/19/97	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-10	12/07/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-11	03/19/97	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-11	12/07/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-12	12/06/00	U	U	U	U	U	U	U	U	U	U	U	U	U	685	178	123	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

TABLE 4

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

Location	Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Fluoranthene	Fluorene	Indene (1,2,3-cd) pyrene	2-Methyl naphthalene	Naphthalene	Phenanthrene	Pyrene	Quinoline
MW-13	12/19/97	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	NA
MW-13	12/28/99	U	U	U	U	U	U	U	U	U	U	24.2	U	746	800	36.2	U	U
MW-13	12/07/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-14	12/30/99	9.00J	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-15	03/18/97	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	NA
MW-15	12/28/99	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-15	12/08/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-15	12/08/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-18	03/19/97	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	NA
MW-18	12/29/98	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
MW-18	12/06/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-18	12/06/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-19	03/19/97	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	NA
MW-19	12/29/98	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
MW-19	12/06/00	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	NA
MW-20	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-20	12/28/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-20	12/29/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-20	12/06/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-21	04/03/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-21	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-21	12/28/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-21	12/29/98	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-21	12/29/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-21	12/12/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-22	04/03/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-22	12/22/97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-22	12/28/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
MW-22	12/29/98	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-22	12/29/99	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MW-22	12/08/00	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

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

ND - Not detectable
NA - Not analyzed
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

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	1.430	NA	ND	0.0630	ND	ND	ND	0.02	ND
EFFLUENT	12/28/99	1.30J	0.987J	U	U	0.0549	U	U	U	U	U
EFFLUENT	04/03/00	1.96J	1.050	U	U	0.0517	U	U	0.0380J	U	0.00450J
EFFLUENT	06/05/00	U	2.11J	U	U	0.0523	U	U	U	U	U
EFFLUENT	09/13/00	U	0.682	U	U	0.0835	U	U	U	U	U
EFFLUENT	12/07/00	U	1.520	U	U	0.0524	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
INFLUENT	04/03/00	U	1.220	U	U	0.0522	U	U	U	0.0310J	U
INFLUENT	06/05/00	U	1.20J	U	U	0.1920	U	U	0.0800J	U	U
INFLUENT	09/13/00	U	0.825	U	U	0.0910	U	U	U	U	U
INFLUENT	12/07/00	U	1.370	U	U	0.0535	U	U	U	U	U
MW-01	03/19/97	0.2	ND	ND	ND	0.0900	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	1.530	NA	ND	0.2230	ND	0.013	0.019	ND	ND
MW-01	12/30/99	U	1.040	U	U	0.3640	U	0.0200J	U	U	U
MW-02	12/30/99	1.55J	0.793J	1.140J	U	0.3030	U	0.0260J	U	U	U
MW-04	03/19/97	0.4	ND	ND	ND	0.4900	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-04	12/12/00	U	1.570	U	0.032 J	0.1410	U	U	U	U	U
MW-05	03/19/97	0.5	ND	ND	ND	0.2000	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	1.650	NA	0.06	1.3900	ND	0.037	0.069	ND	ND
MW-05	12/29/99	1.78J	1.140	0.140J	U	0.1290	U	0.0100J	U	U	U
MW-05	12/06/00	U	1.720	U	U	0.0410	U	0.0100J	U	U	U
MW-05 DUP	12/29/99	1.21J	1.100	U	U	0.5220	U	0.0100J	U	U	U

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(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-06	03/19/97	0.6	ND	ND	ND	0.0500	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	1.500	NA	ND	0.1060	ND	ND	ND	ND	ND
MW-06	12/29/99	1.28J	0.990J	U	U	0.1600	U	U	U	U	U
MW-06	12/06/00	U	1.580	U	0.0206	U	U	U	U	U	U
MW-07	12/30/99	U	0.963J	0.210J	0.268	2.3900	U	0.104	0.110J	U	U
MW-07 DUP	12/30/99	U	1.040	U	0.166	4.5500	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-08	12/07/00	U	1.500	U	0.11	0.0727	U	.010 J	U	U	U
MW-09	03/18/97	0.2	ND	ND	ND	0.0900	ND	ND	ND	ND	ND
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	1.590	NA	ND	0.4100	ND	0.028	0.027	ND	ND
MW-09	12/28/99	1.14J	1.080	U	U	0.1860	U	0.0140J	U	U	U
MW-09	12/07/00	U	1.870	U	U	.014 J	U	U	U	U	U
MW-10	03/18/97	0.3	ND	ND	ND	0.3200	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	1.630	NA	0.02	0.6320	ND	0.022	0.016	ND	ND
MW-10	12/28/99	U	1.260	U	U	0.3660	U	U	U	U	U
MW-10	12/07/00	U	1.780	U	U	0.0832	U	U	U	U	U
MW-11	03/18/97	ND	ND	ND	ND	1.1500	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	1.410	NA	0.06	0.8130	ND	0.023	0.025	ND	ND
MW-11	12/28/99	U	1.000	U	U	0.1920	U	U	U	U	U
MW-11	12/07/00	U	1.600	U	.023 J	0.1710	U	.017 J	U	U	U
MW-12	12/08/00	U	2.690	U	U	0.1690	U	.024 J	U	U	U
MW-13	03/18/97	0.4	ND	ND	ND	0.4300	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	1.670	NA	ND	0.1750	ND	0.014	0.016	ND	0.003

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MW-13	12/28/99	2.80J	1.82J	U	U	0.0428	U	U	U	U	U
MW-13	12/07/00	U	1.960	U	U	0.0173	U	U	U	U	U
MW-14	12/30/99	U	1.180	0.160J	U	0.3910	U	0.0310J	0.0350J	U	U
MW-15	03/18/97	0.3	ND	ND	ND	0.0800	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	NA	NA	NA	NA
MW-15	12/29/98	3.53	1.600	NA	0.02	0.7180	ND	0.032	0.032	ND	ND
MW-15	12/28/99	1.91J	1.180	U	U	0.3270	U	0.0170J	U	U	U
MW-15	12/08/00	U	1.950	U	U	0.1690	U	U	U	U	U
MW-18	03/19/97	0.3	ND	0.003	ND	0.1400	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	1.290	NA	0.07	1.0700	ND	0.052	0.043	ND	ND
MW-18	12/29/99	U	0.798J	0.657	0.101	0.7030	U	0.0450J	0.0870J	U	U
MW-18	12/06/00	U	1.390	U	0.108	0.2680	U	U	.035 J	U	U
MW-19	03/19/97	0.5	ND	ND	ND	0.3100	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	1.490	NA	0.04	0.5970	ND	0.026	0.032	ND	0.003
MW-19	12/29/99	1.63J	0.883J	U	U	0.1310	U	U	U	U	U
MW-19	12/06/00	U	1.580	U	U	0.0601	U	U	U	U	U
MW-20	03/18/97	0.6	ND	ND	ND	0.3500	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	1.440	NA	0.04	0.3820	ND	0.028	0.047	ND	ND
MW-20	12/29/99	U	1.060	0.110J	0.0370J	0.3860	U	0.0380J	0.0600J	U	U
MW-20	12/08/00	U	1.740	U	U	0.0500	U	U	U	U	U
MW-21	03/18/97	0.4	ND	ND	ND	0.1900	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	1.330	NA	0.08	0.1650	ND	0.019	0.023	ND	ND
MW-21	12/29/99	U	0.914J	U	0.0700J	0.2040	U	0.0290J	U	U	U
MW-21	12/08/00	U	1.570	U	U	0.0101	U	U	U	U	U
MW-22	03/18/97	0.4	ND	ND	ND	0.2200	ND	ND	ND	ND	ND

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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-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	1.280	NA	ND	0.0480	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
MW-22	12/08/00	.94 J	1.520	U	U	0.0178	U	U	0.521	U	U

ND - Not detectable

NA - NOT ANALYZED

NS - NOT SAMPLED

U - Not detectable above the MDL

J - Analyte detected below the PQL

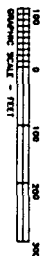
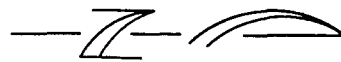
B - Analyte detected in the associated Method Blank

E - Result is outside of quantification range

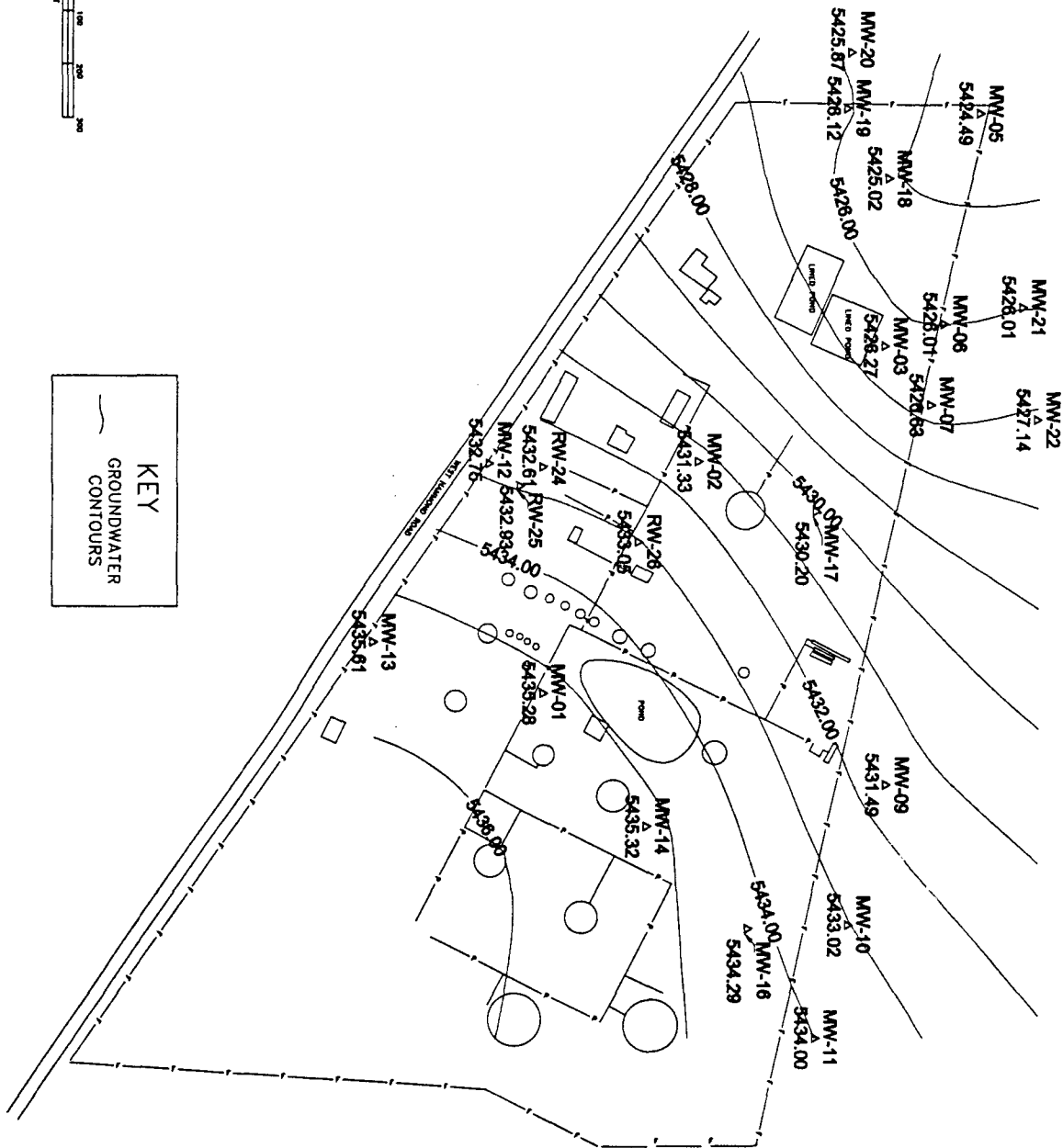
S - Results outside normal recovery limits

R - RPD outside normal precision limits

Figures



KEY
— GROUNDWATER
CONTOURS



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810/0463000W

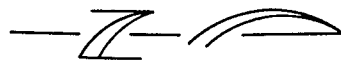
DRAWN BY: K. SINKS

FIGURE 1A
WATER LEVEL
CONTOUR MAP

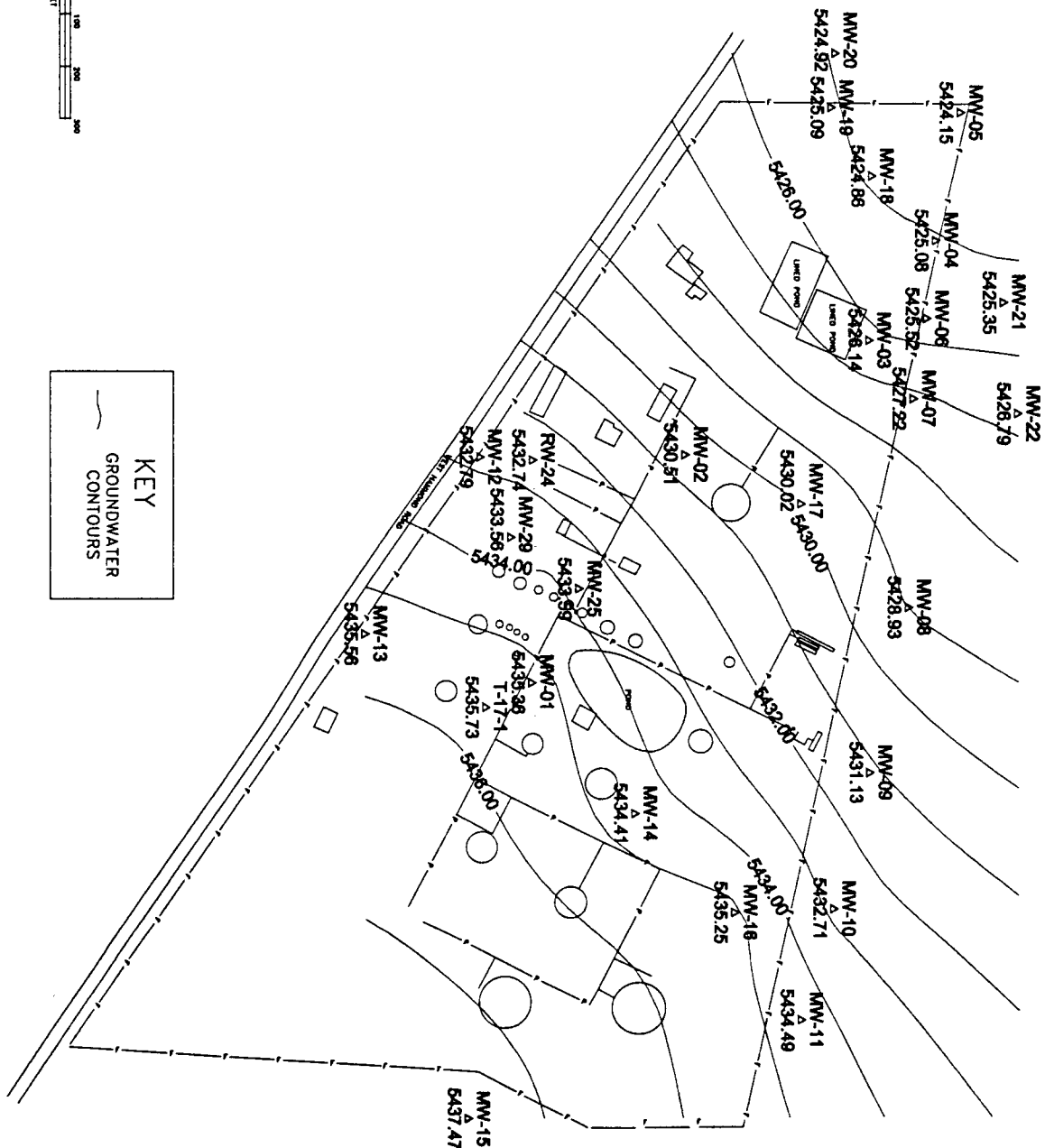
APRIL 3, 2000



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
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KEY
GROUNDWATER
CONTOURS



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\060800M

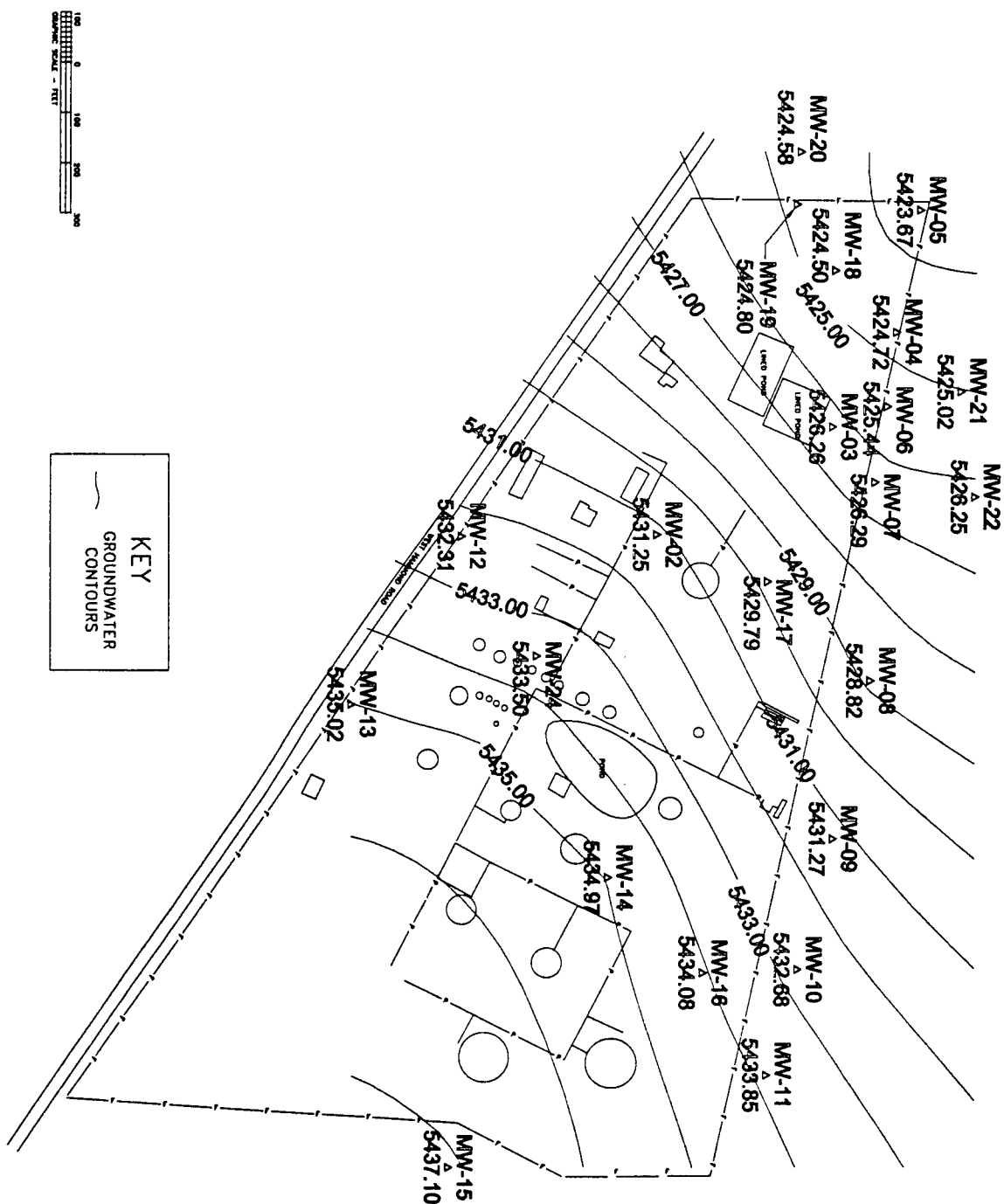
DRAWN BY: K. SINKS

FIGURE 1B
WATER LEVEL
CONTOUR MAP

JUNE 8, 2000



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FARMINGTON, NEW MEXICO 87401
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THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810/000700W

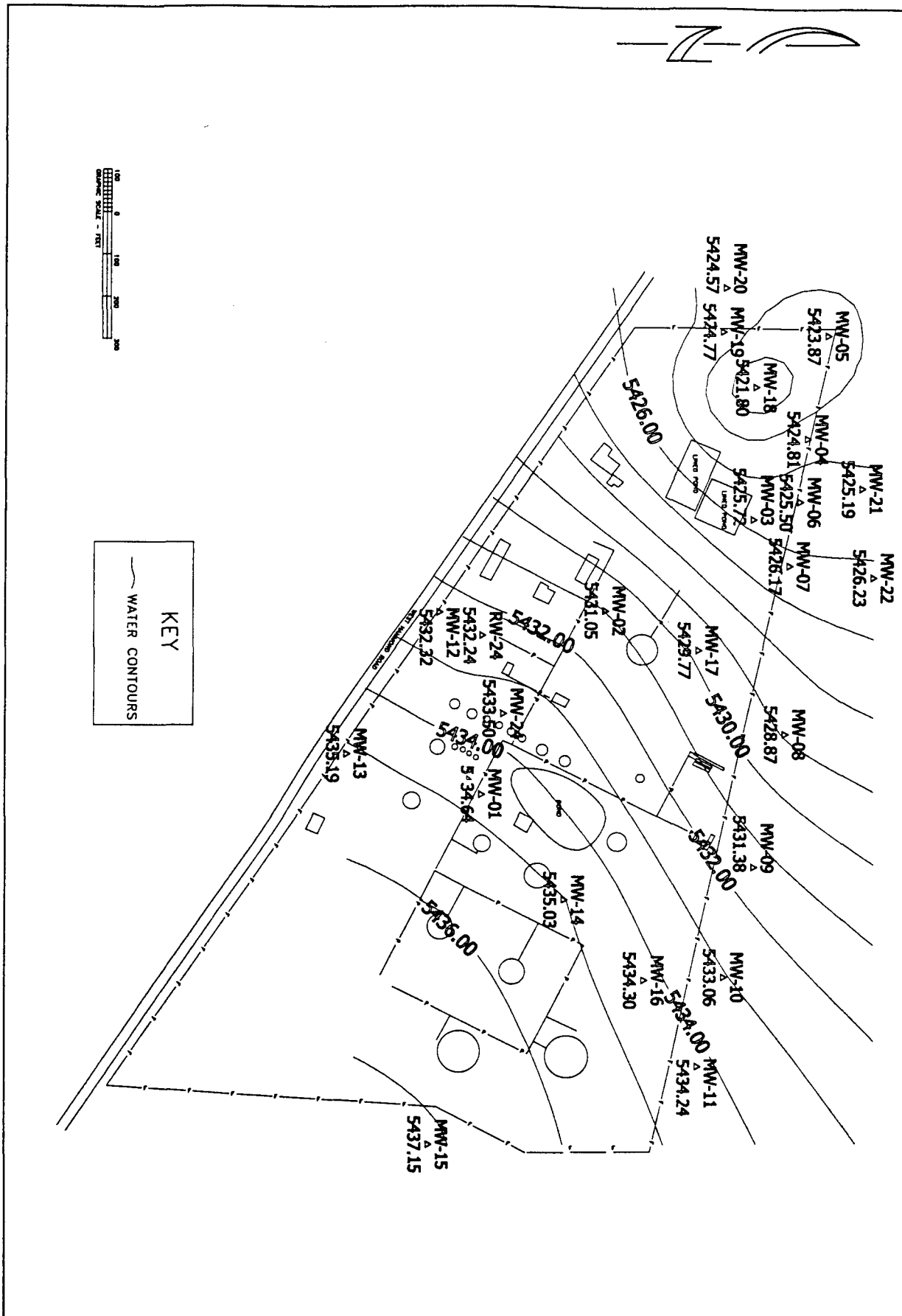
DRAWN BY: K. SINKS

FIGURE 1C
WATER LEVEL
CONTOUR MAP

SEPTEMBER 7, 2000



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4963
FAX 505-564-3804



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810/121100W

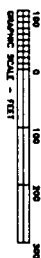
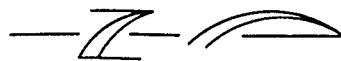
DRAWN BY: K. SINKS

FIGURE 1D
WATER LEVEL CONTOUR
MAP

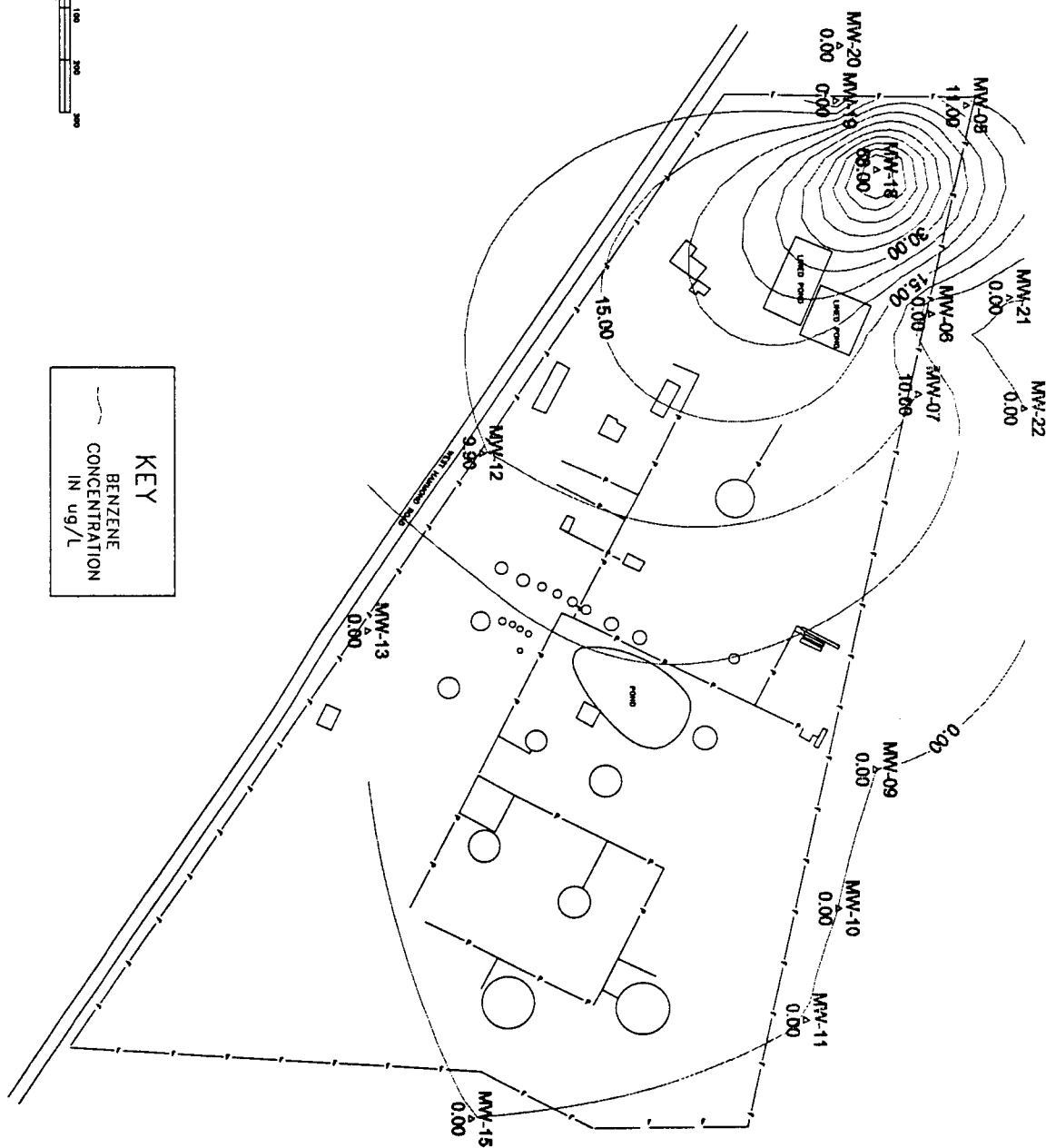
DECEMBER 11, 2000

BioTech
REMEDICATION

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KEY
BENZENE
CONCENTRATION
IN ug/L



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810/04030082

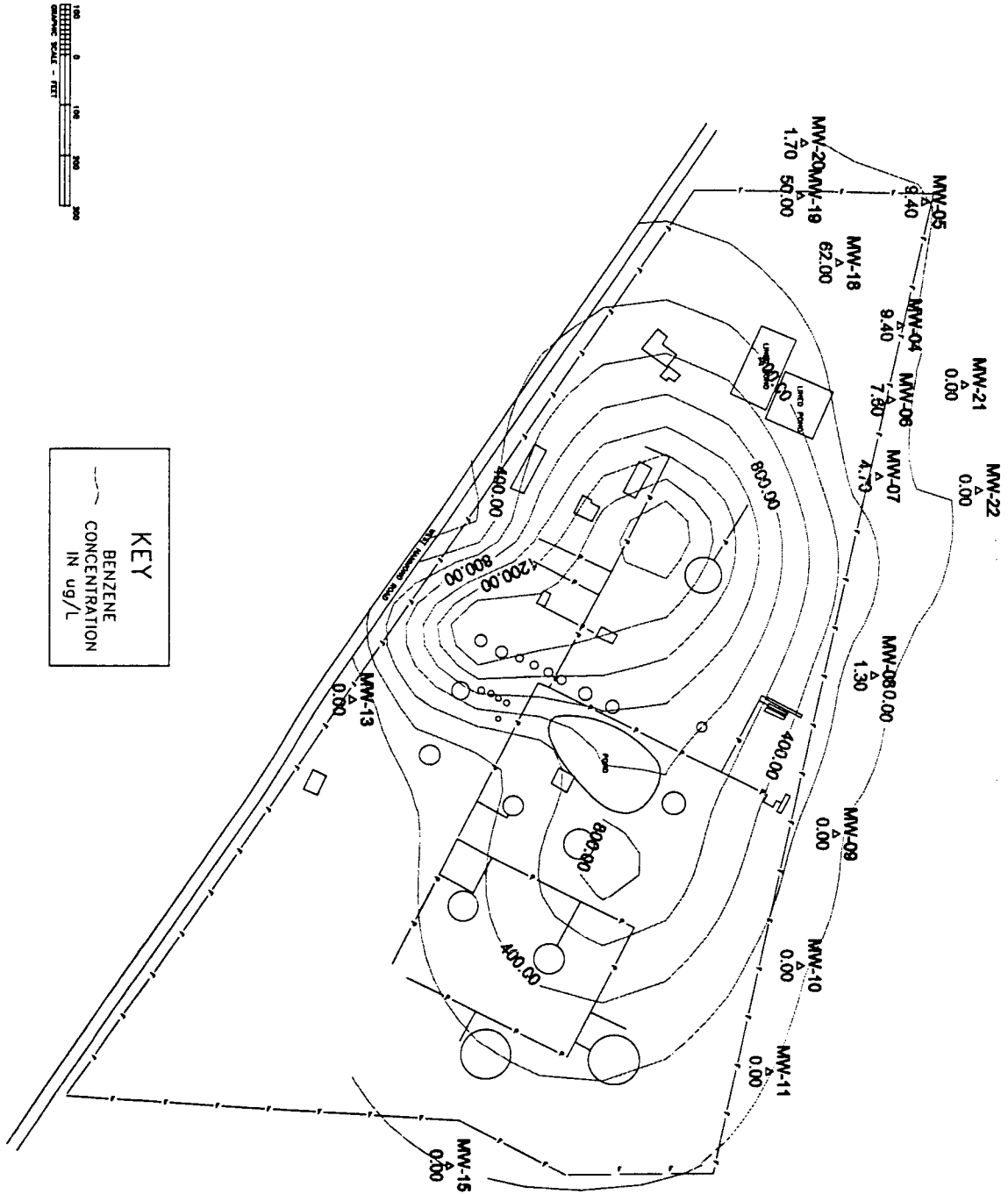
DRAWN BY: K. SINKS

FIGURE 2A BENZENE
CONCENTRATION MAP

APRIL 3, 2000



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PHONE 505-327-4865
FAX 505-584-3604



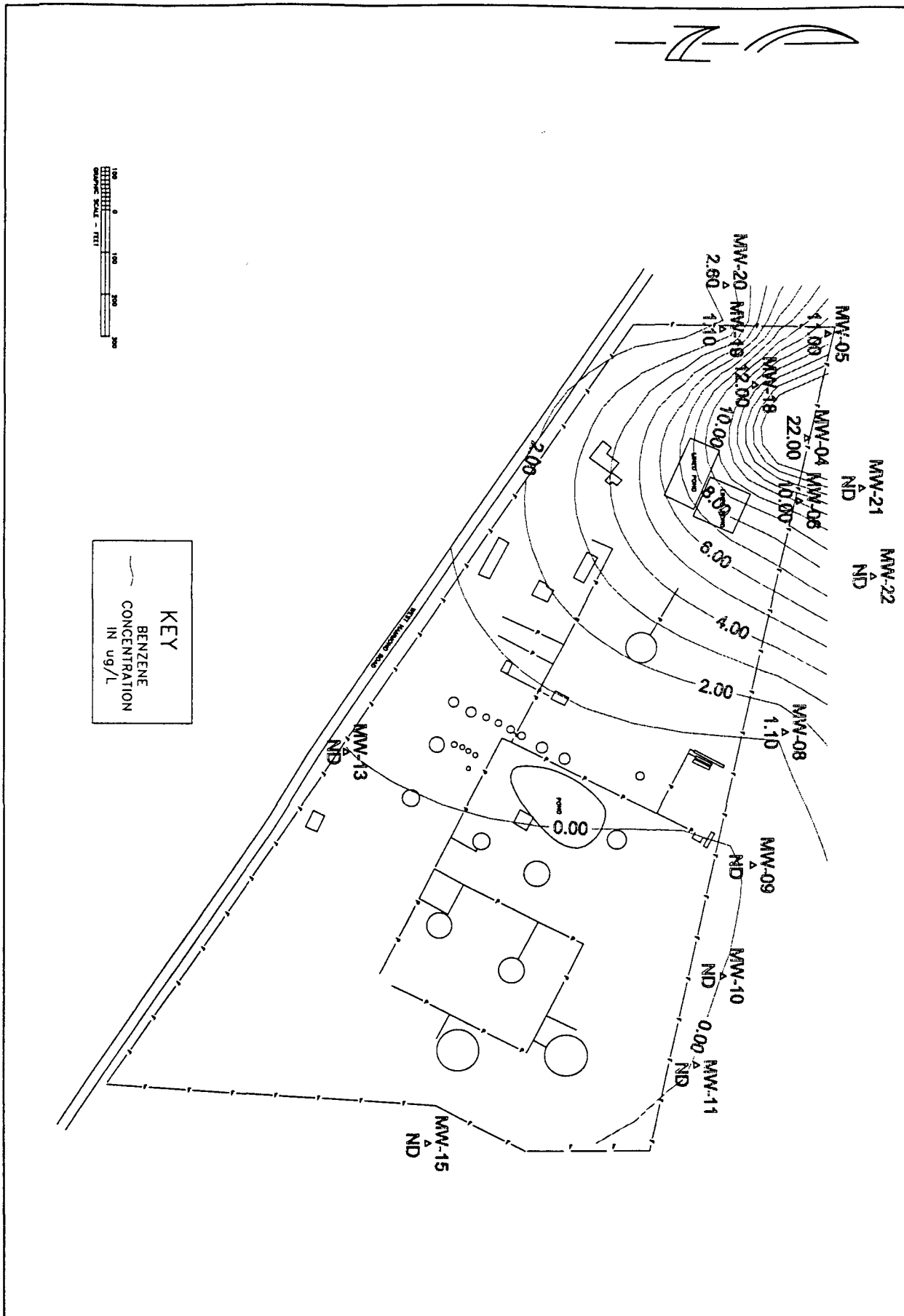
THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810/0000002

DRAWN BY: K. SINKS
FIGURE 2B
BENZENE
CONCENTRATION
MAP
JUNE 8, 2000



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

810/00050082

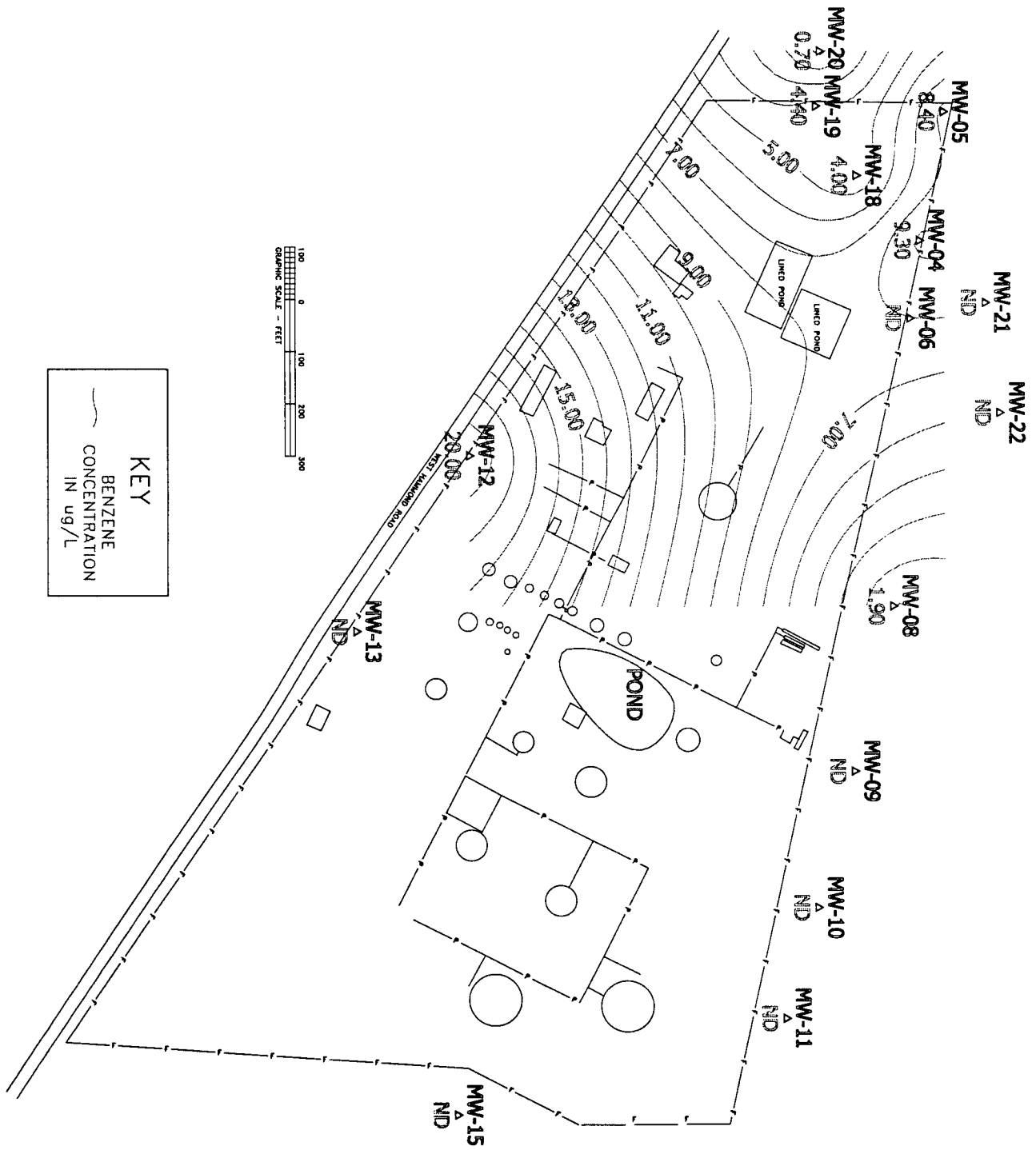
DRAWN BY: K. SINKS

FIGURE 2C
 MTBE CONCENTRATION
 MAP

SEPTEMBER 5, 2000



710 EAST 20TH STREET, SUITE 400
 FARMINGTON, NEW MEXICO 87401
 PHONE 505-327-4865
 FAX 505-564-3604



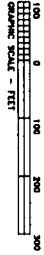
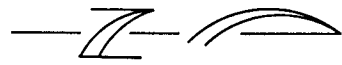
THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\121101bx

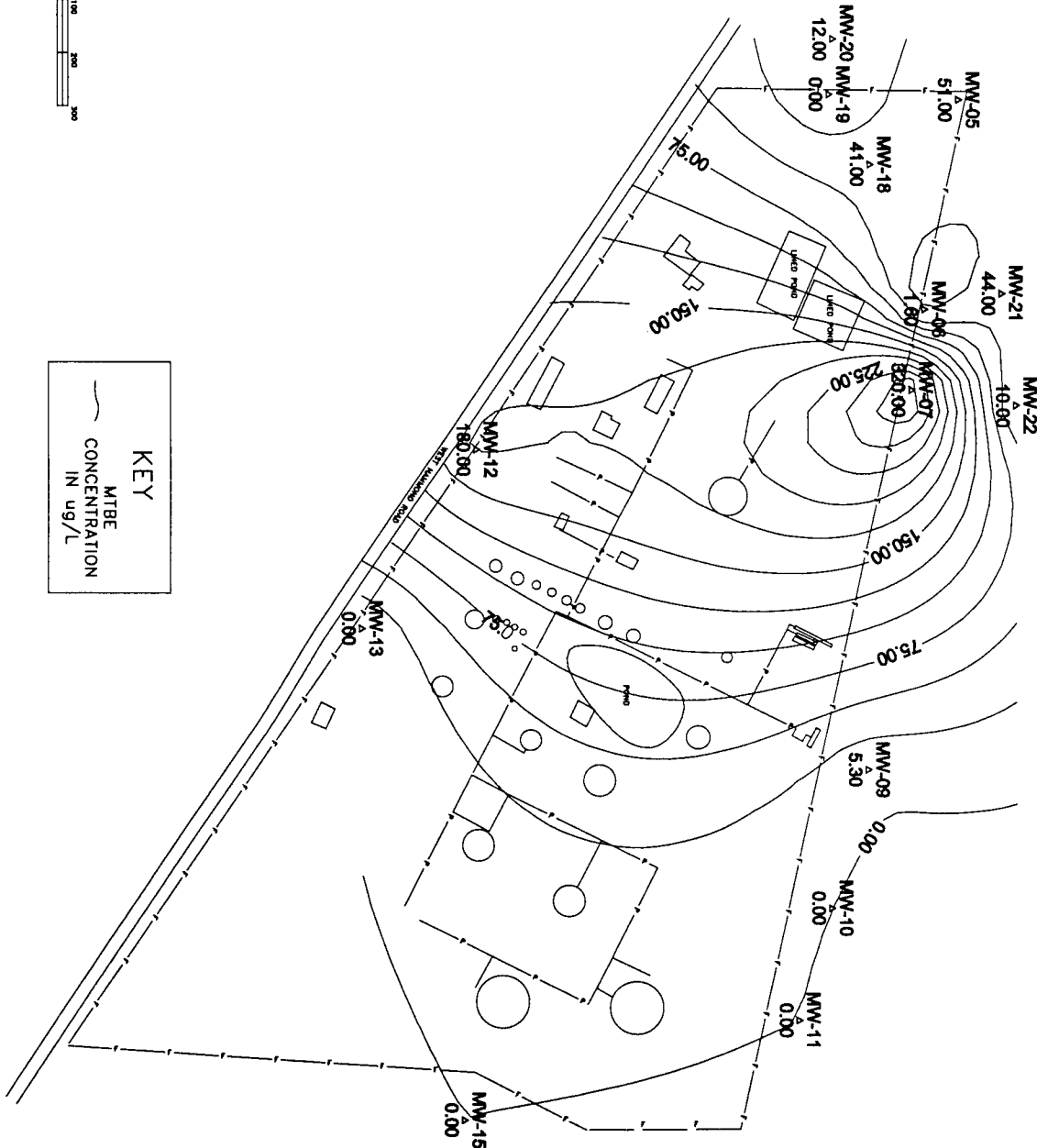
DRAWN BY: K. SINKS
FIGURE 2D
BENZENE CONCENTRATION
MAP
DECEMBER 11, 2000



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\040300MT

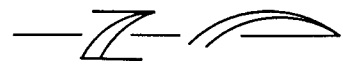
DRAWN BY: K. SINKS

FIGURE 3A MTBE
CONCENTRATION MAP

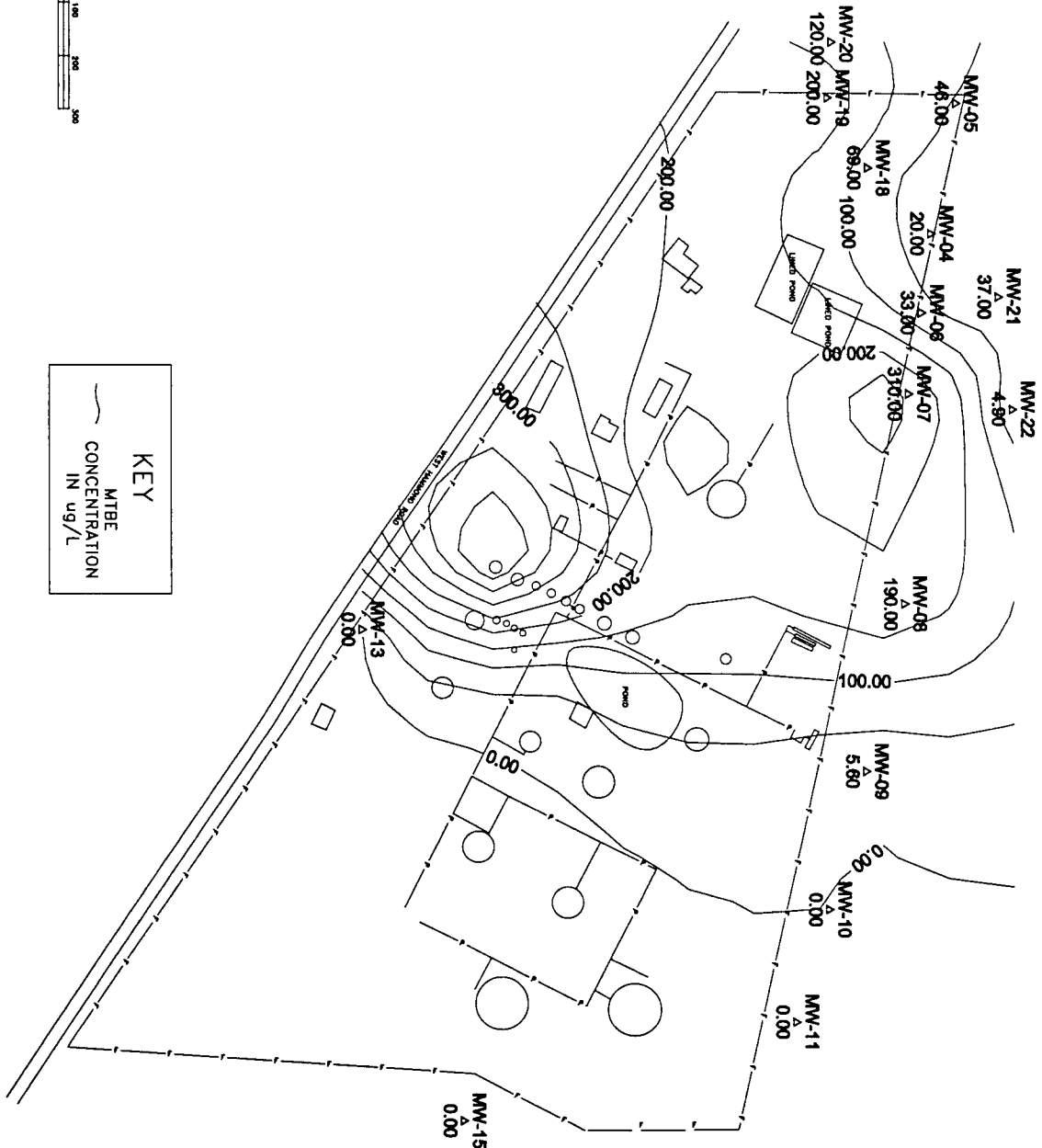
APRIL 4, 2000



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\DEB000MT

DRAWN BY: K. SINKS

FIGURE 3B
MTBE CONCENTRATION
MAP

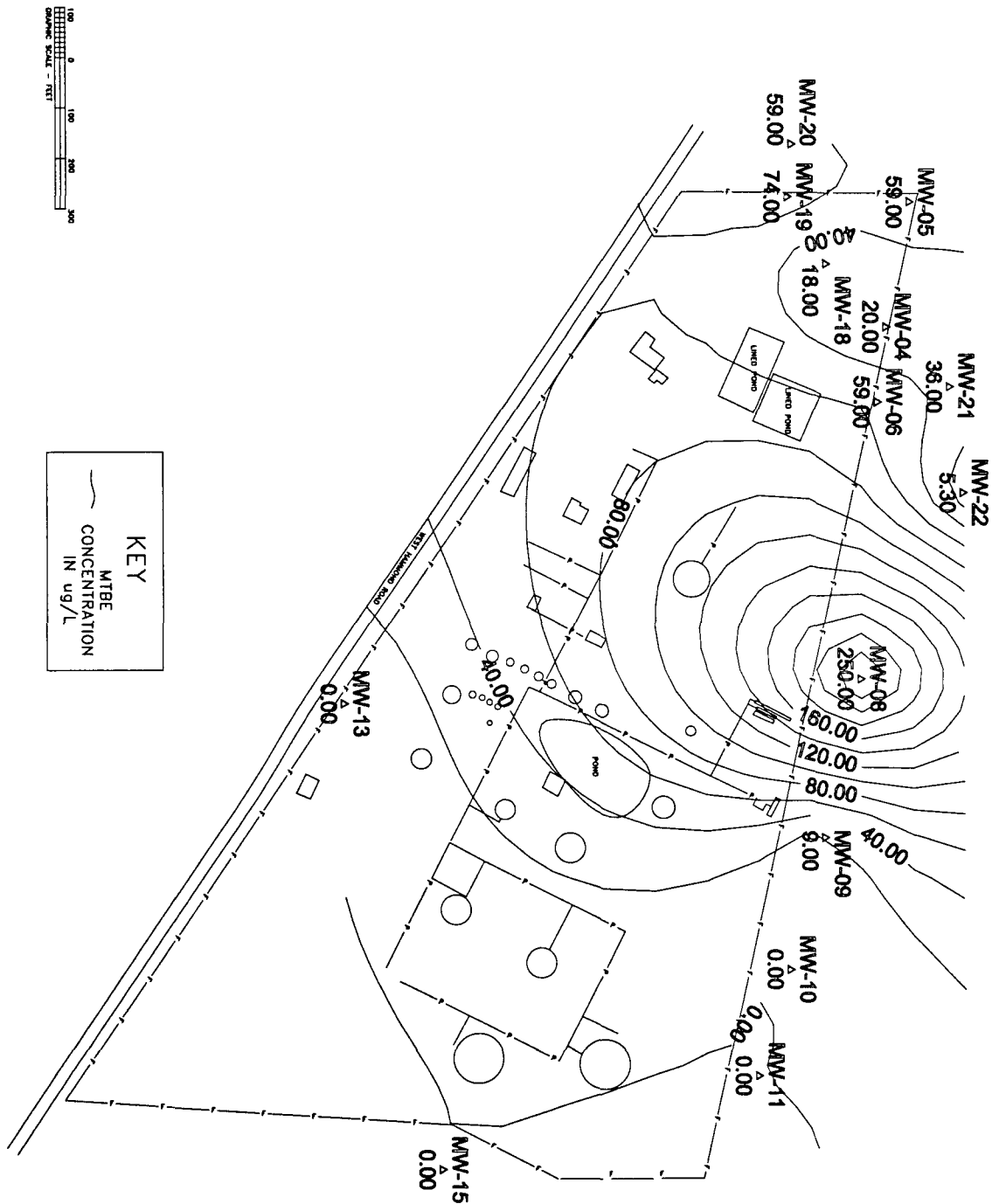
JUNE 8, 2000



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\090500MT

DRAWN BY: K. SINKS

FIGURE 3C
MTBE CONCENTRATION
MAP

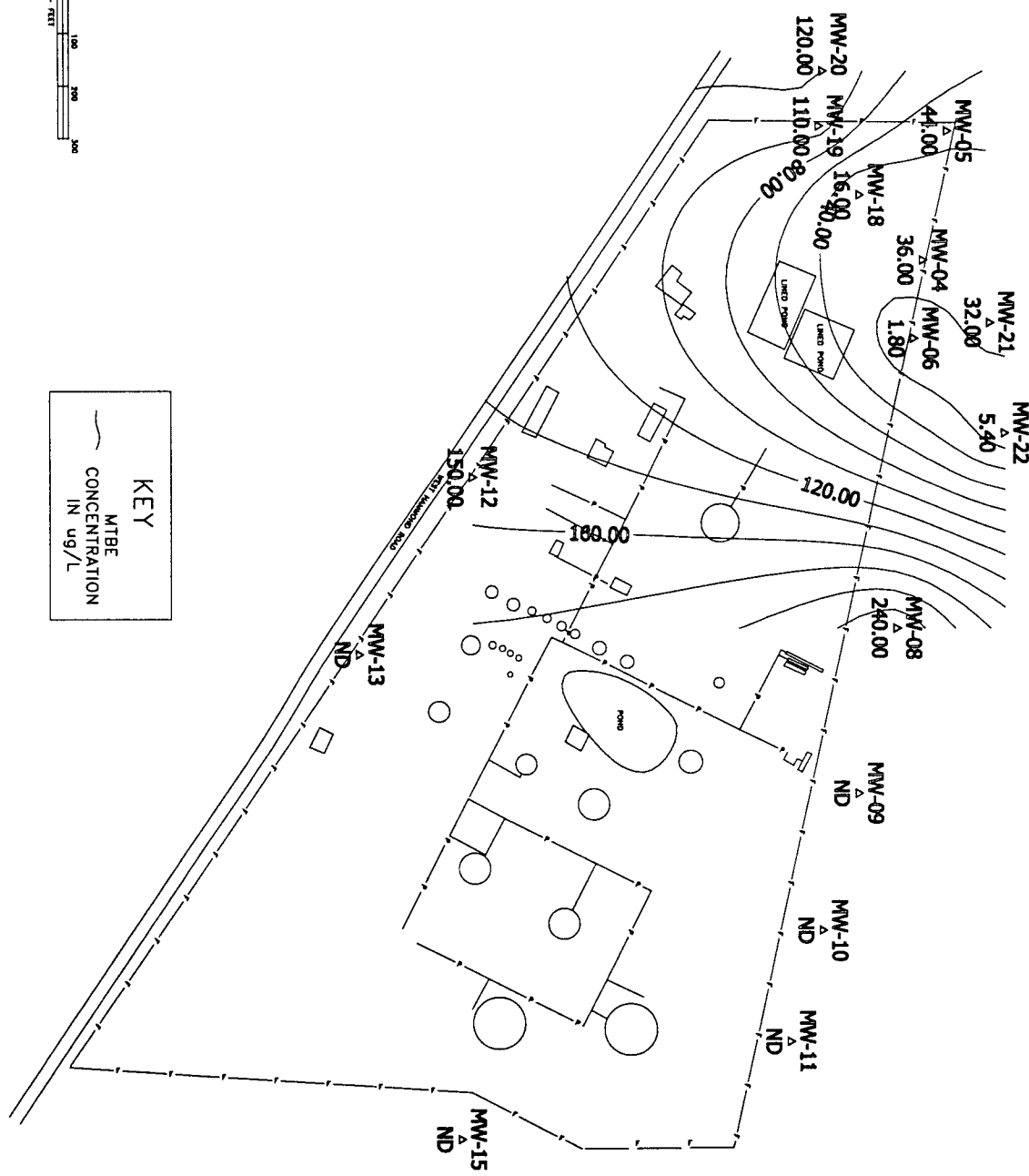
SEPTEMBER 5, 2000



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401

PHONE 505-327-4963

FAX 505-564-3604

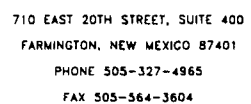


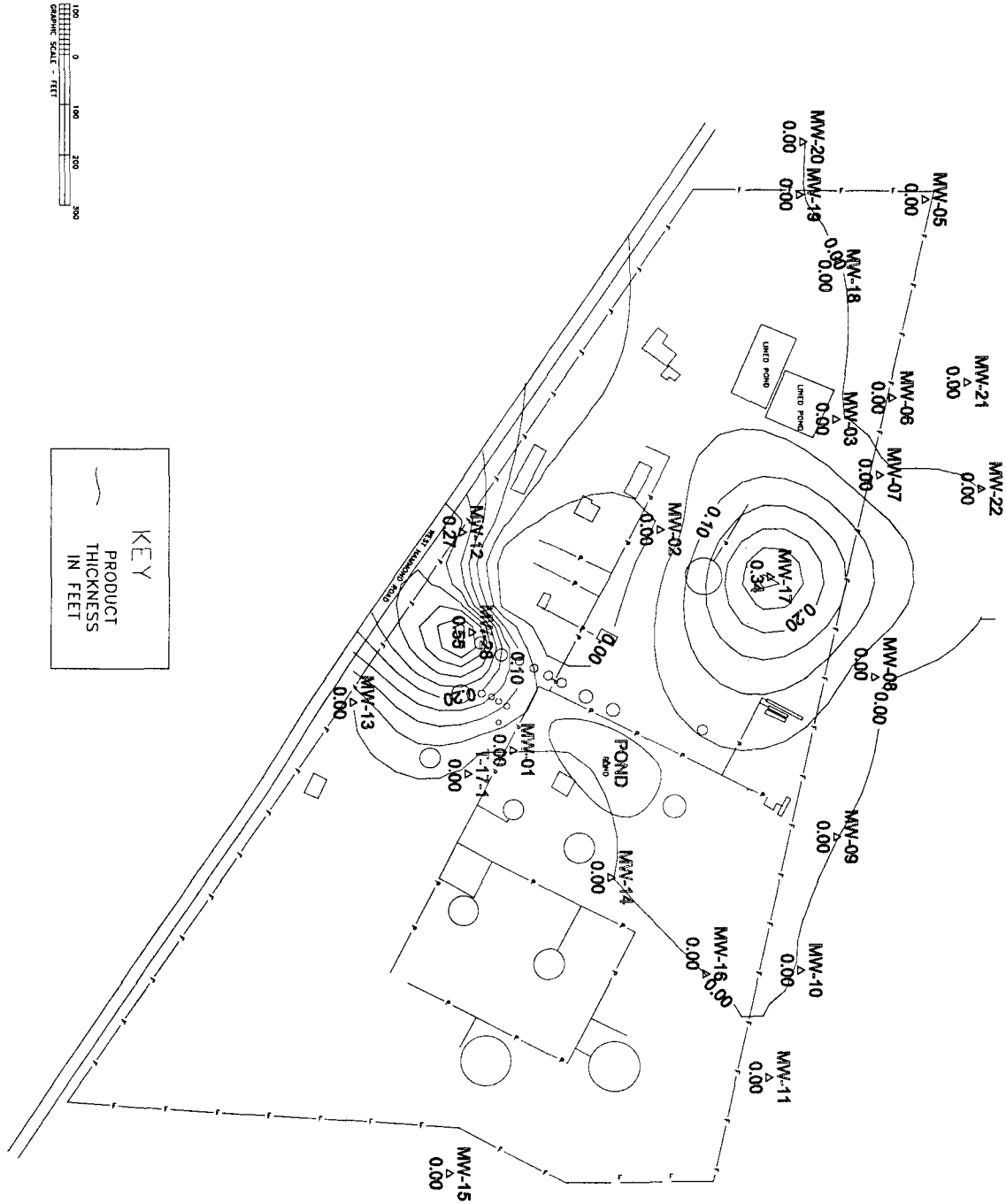
THRIFTWAY REFINERY
 626 RD 5500
 BLOOMFIELD, NM

DRAWN BY: K. SINKS
 FIGURE 3D
 MTBE CONCENTRATION
 MAP
 DECEMBER 11, 2000



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\060800PL

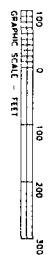
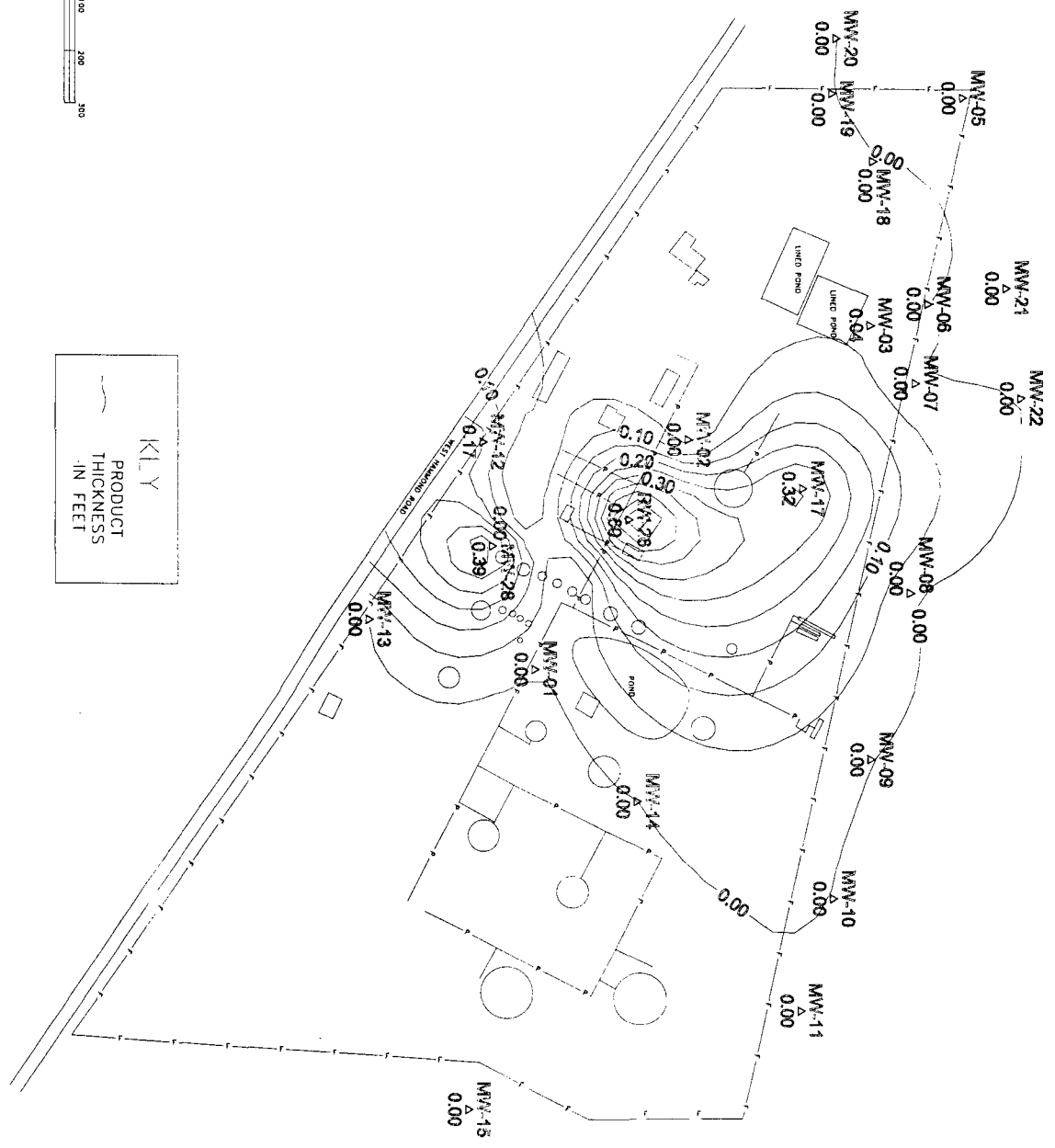
DRAWN BY: K. SINKS

FIGURE 4B PRODUCT
THICKNESS MAP

JUNE 8, 2000

BioTech
REMEDICATION

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



KLY
PRODUCT
THICKNESS
IN FEET

THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\090700PL

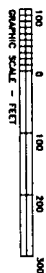
DRAWN BY: K. SINKS

FIGURE 4C PRODUCT
THICKNESS MAP

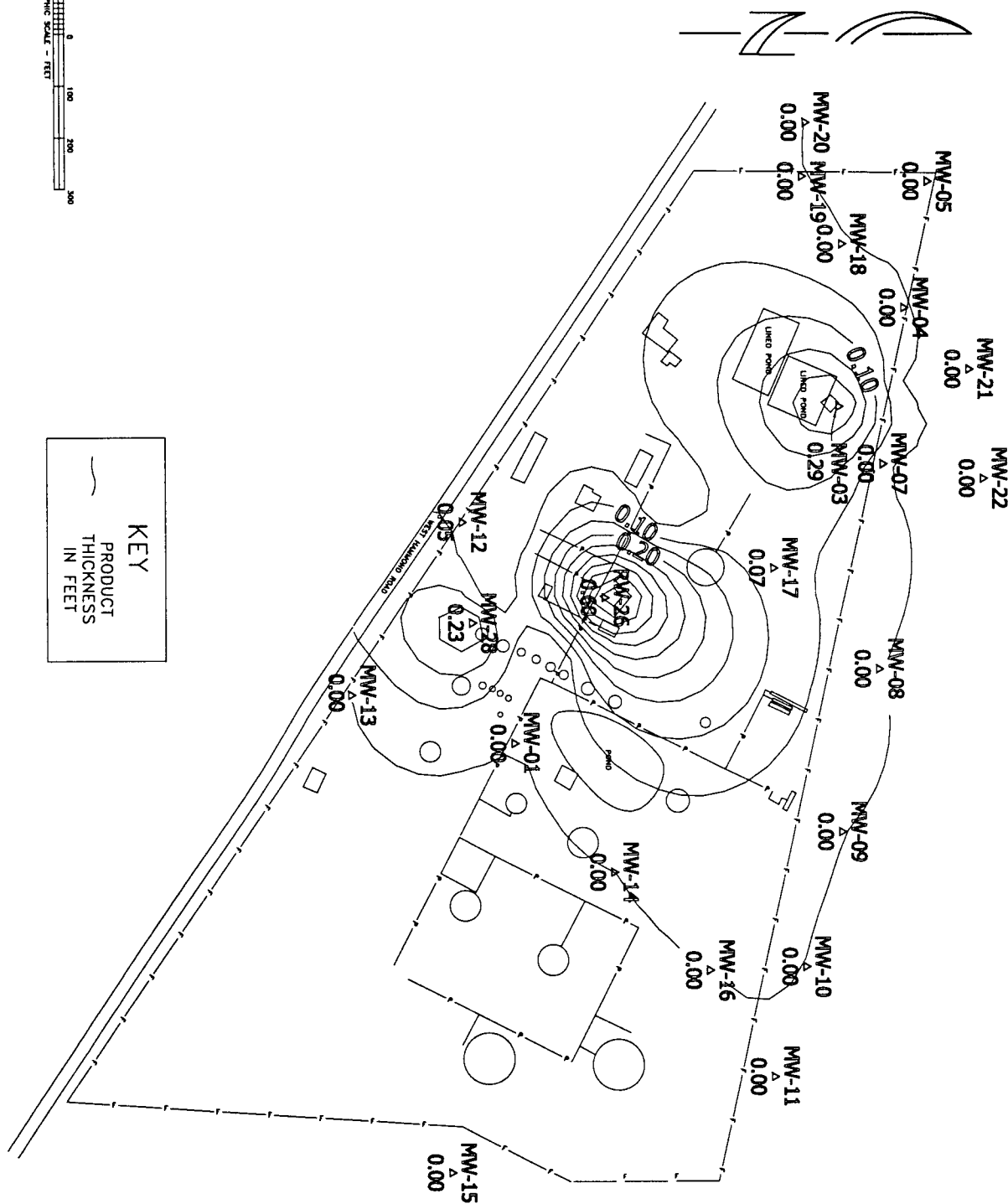
SEPTEMBER 7, 2000



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\121100PL

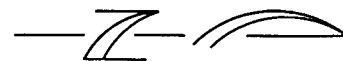
DRAWN BY: K. SINKS

FIGURE 4D PRODUCT
THICKNESS MAP

DECEMBER 11, 2000



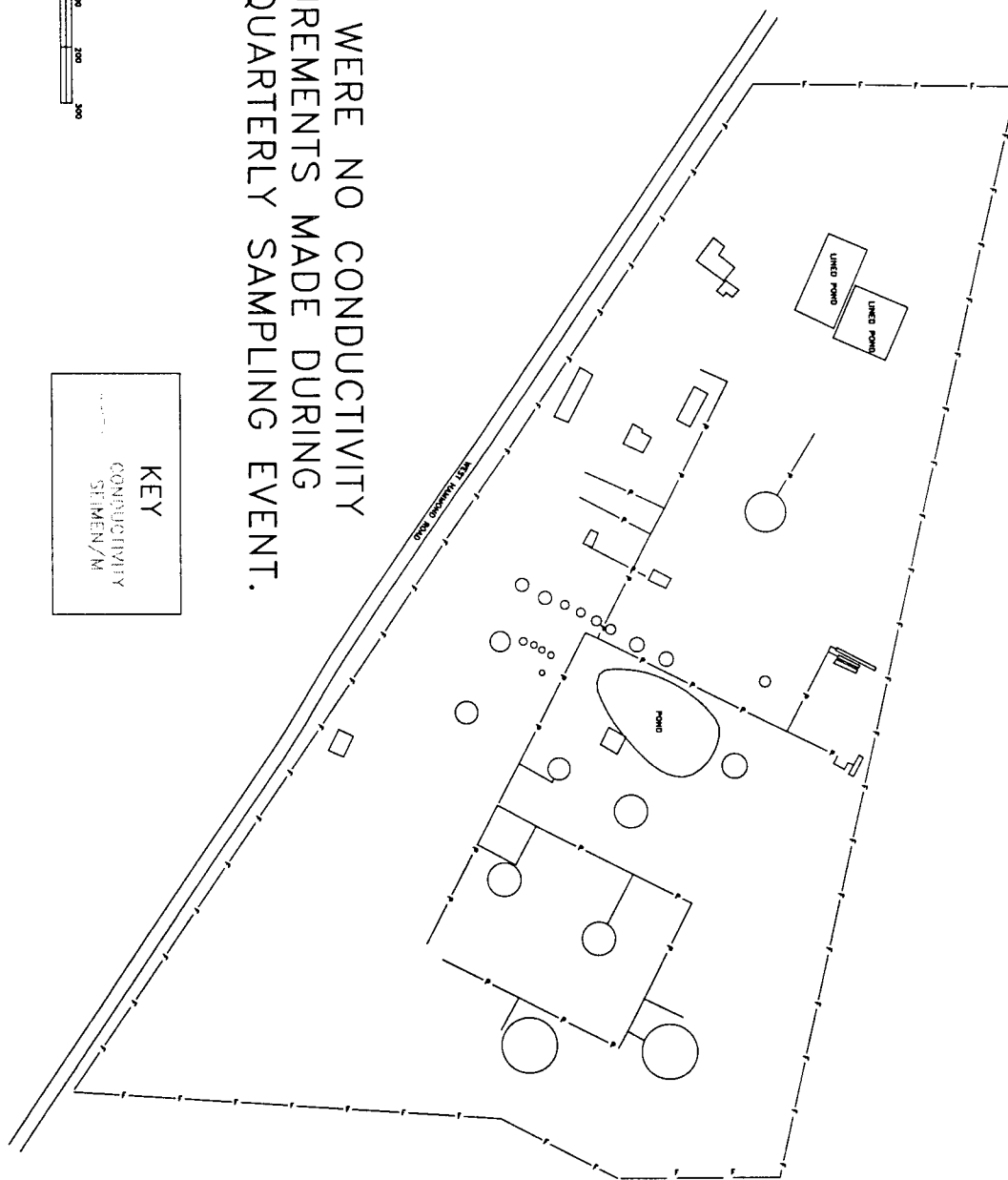
710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3804



THERE WERE NO CONDUCTIVITY
MEASUREMENTS MADE DURING
THIS QUARTERLY SAMPLING EVENT.



KEY
CONDUCTIVITY
SIEMEN/M



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\04030000

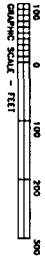
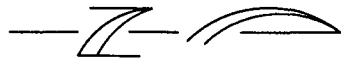
DRAWN BY: K. SINKS

FIGURE 5A CONDUCTIVITY
CONTOUR MAP

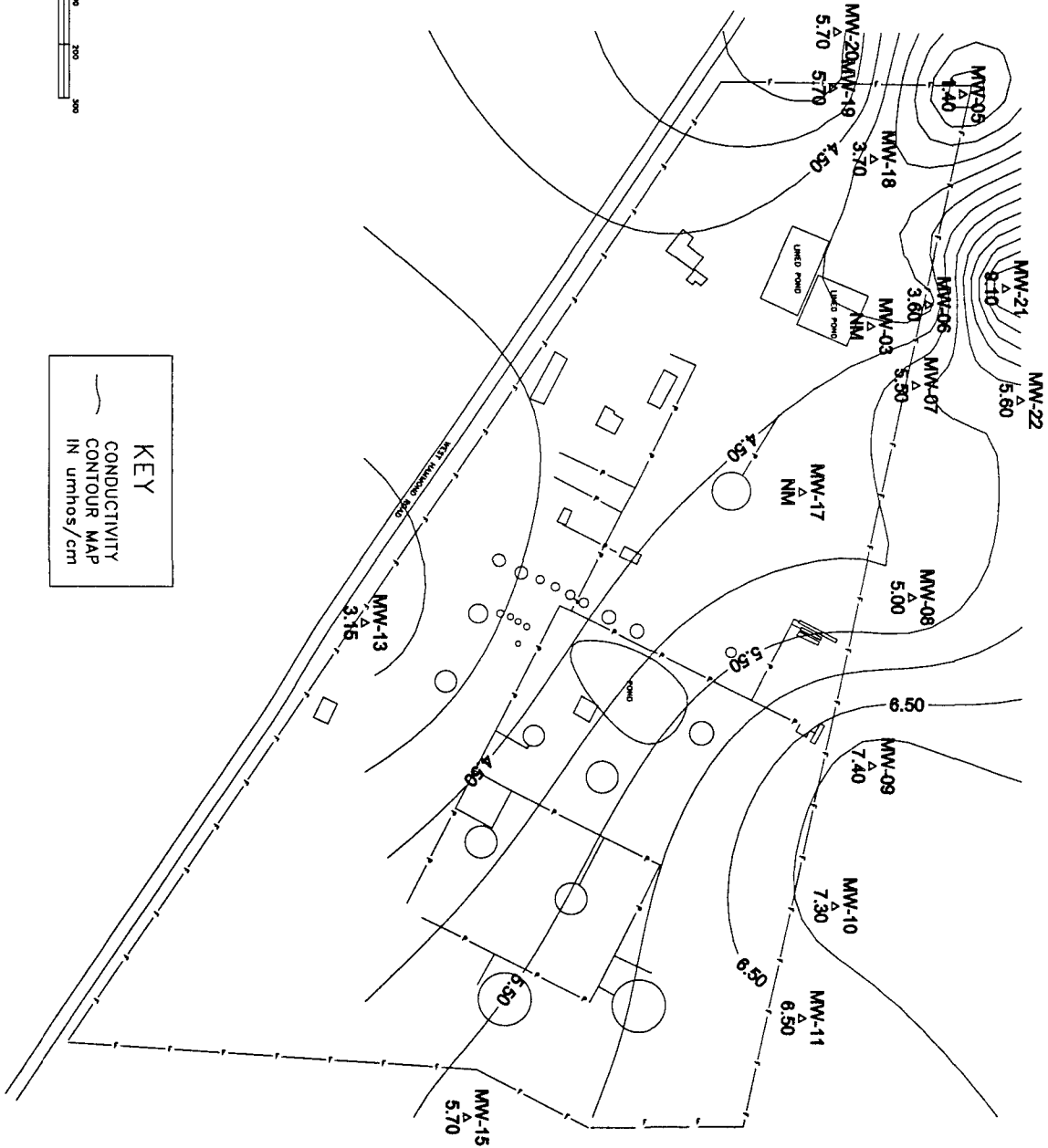
APRIL 4, 2000



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\060800CD

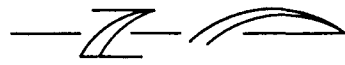
DRAWN BY: K. SINKS

FIGURE 5B
CONDUCTIVITY
CONTOUR MAP

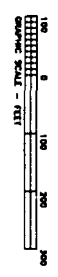
JUNE 8, 2000



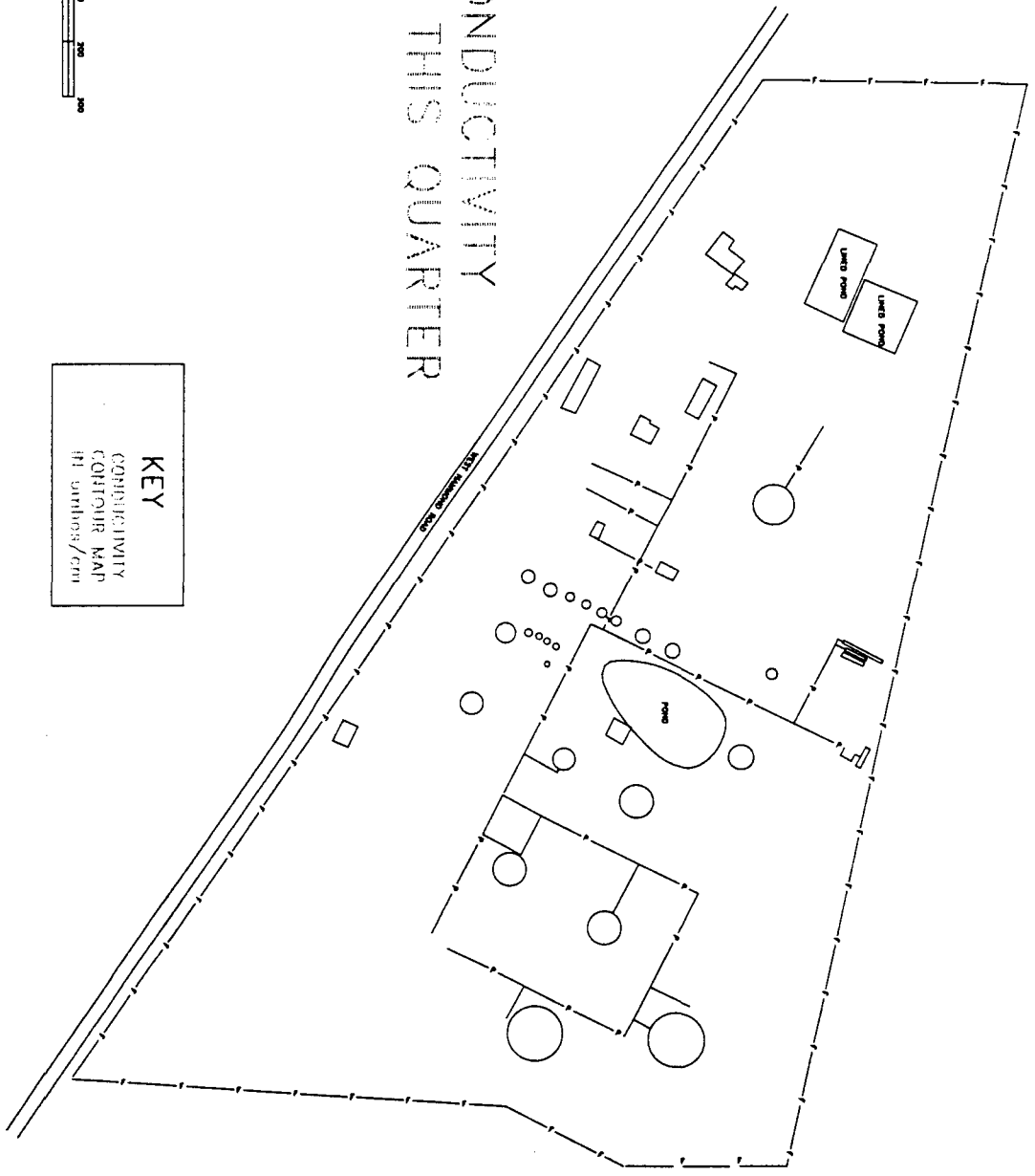
710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4965
FAX 505-564-3604



NO CONDUCTIVITY
READINGS THIS QUARTER



KEY
CONDUCTIVITY
CONTOUR MAP
in umhos/cm

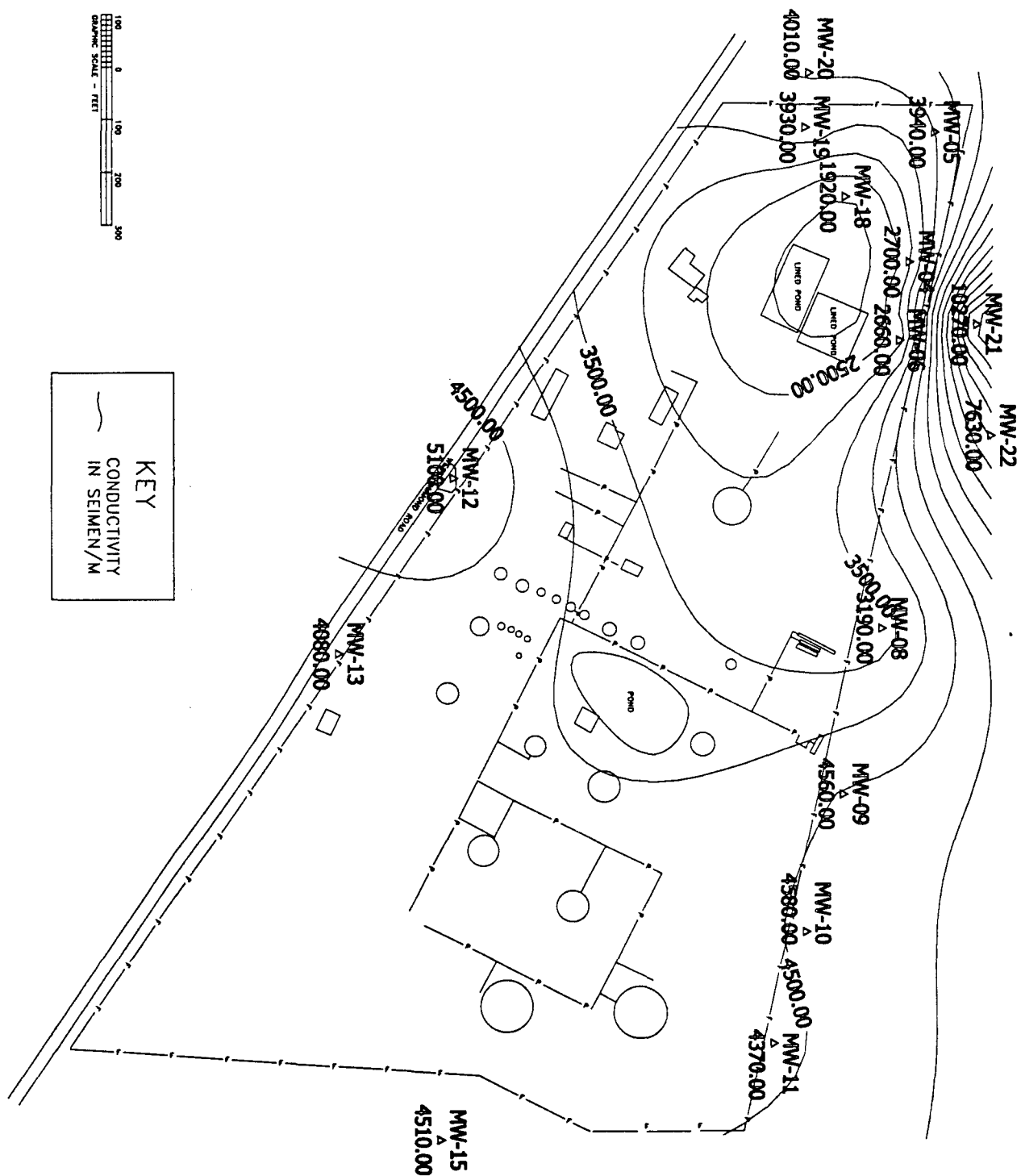


THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

DRAWN BY: K. SINKS
FIGURE 5C
CONDUCTIVITY
CONTOUR MAP
SEPTEMBER 7, 2000



710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4985
FAX 505-564-3804



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\121100CD

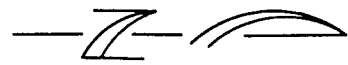
DRAWN BY: K. SINKS

FIGURE 5D
CONDUCTIVITY
IN SEIMEN/M

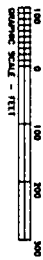
DECEMBER 11, 2000

BioTech
REMEDATION

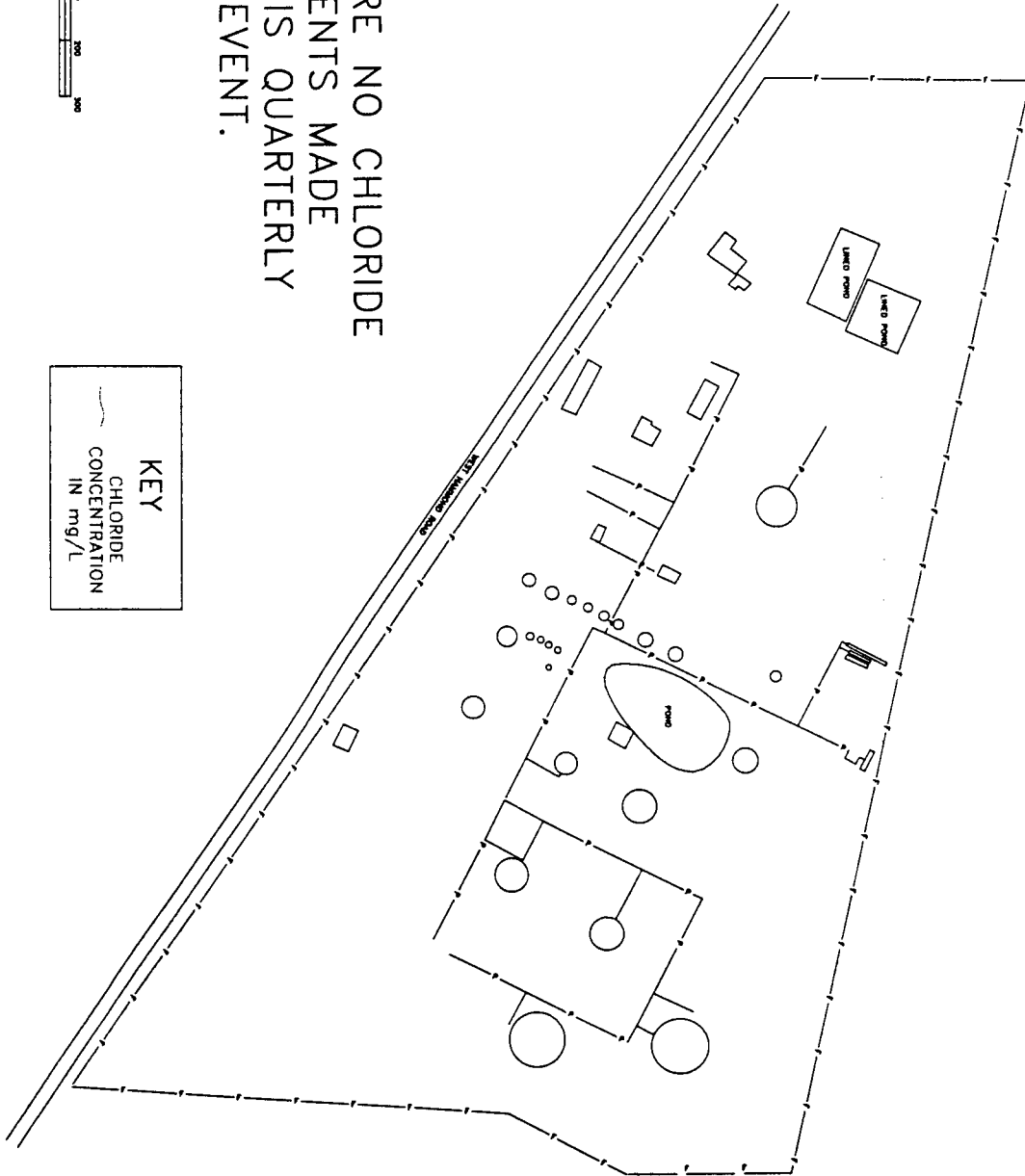
710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4985
FAX 505-564-3604



THERE WERE NO CHLORIDE
MEASUREMENTS MADE
DURING THIS QUARTERLY
SAMPLING EVENT.



KEY
CHLORIDE
CONCENTRATION
IN mg/L



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\040300CL

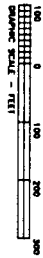
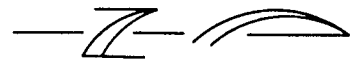
DRAWN BY: K. SINKS

FIGURE 6A CHLORIDE
CONCENTRATION MAP

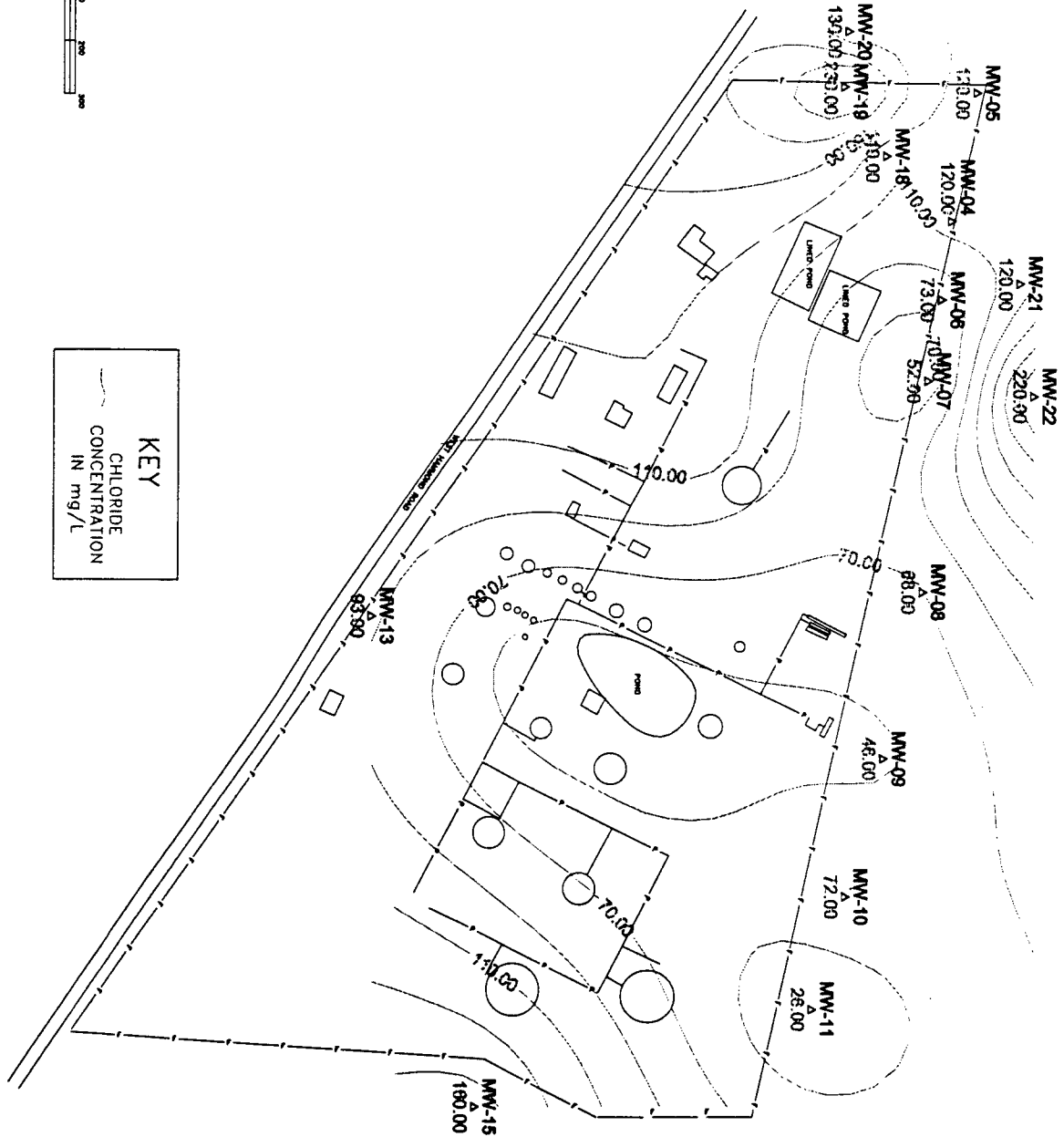
APRIL 4, 2000



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



KEY
CHLORIDE
CONCENTRATION
IN mg/L



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

8107_060800CL

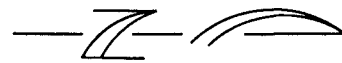
DRAWN BY: K. SINKS

FIGURE 6B CHLORIDE
CONCENTRATION MAP

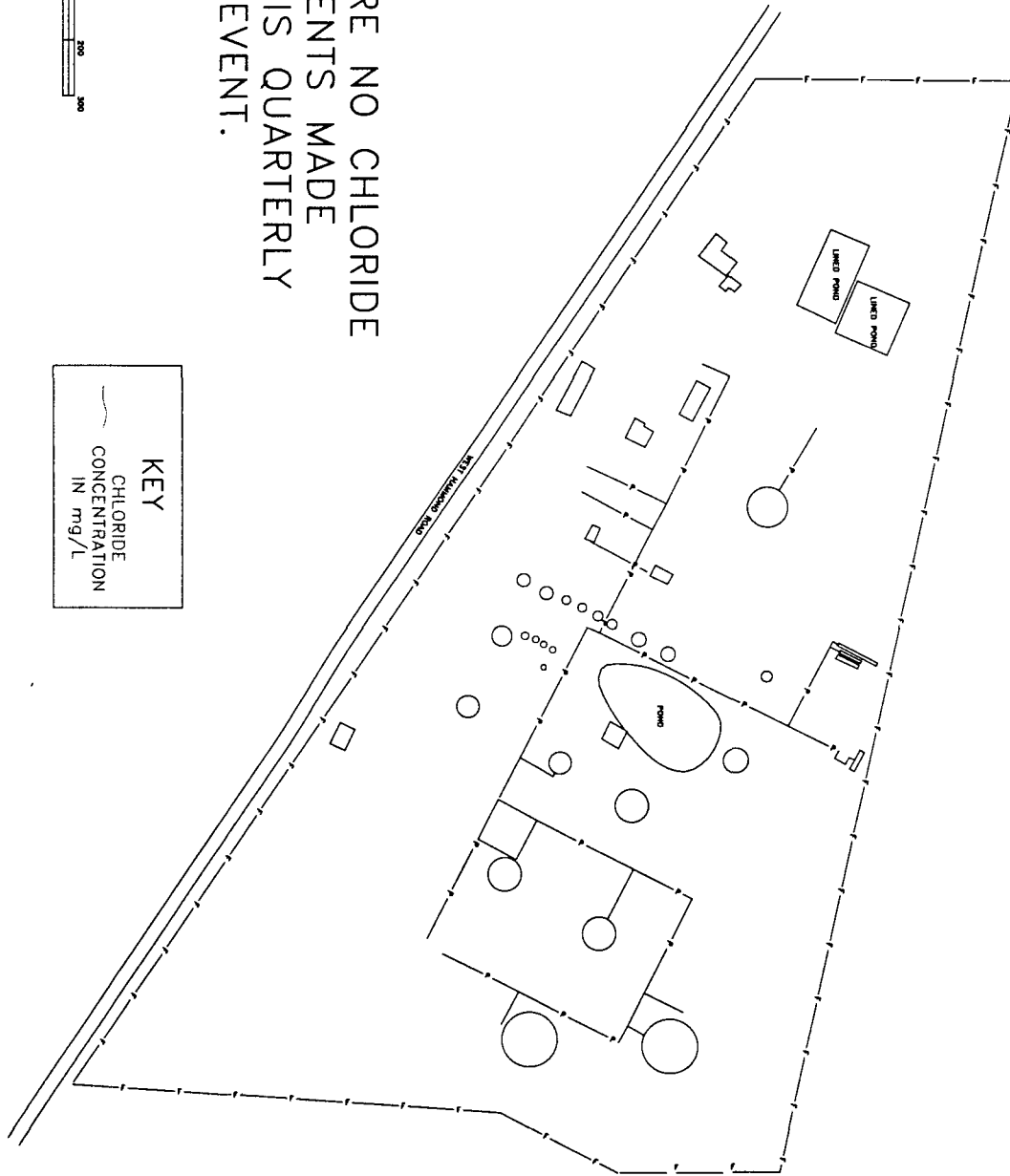
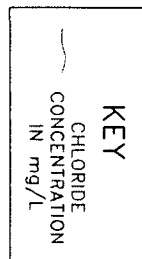
JUNE 8, 2000



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



THERE WERE NO CHLORIDE
MEASUREMENTS MADE
DURING THIS QUARTERLY
SAMPLING EVENT.



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\080700CL

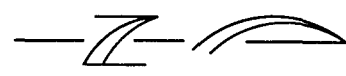
DRAWN BY: K. SINKS

FIGURE 6C CHLORIDE
CONCENTRATION MAP

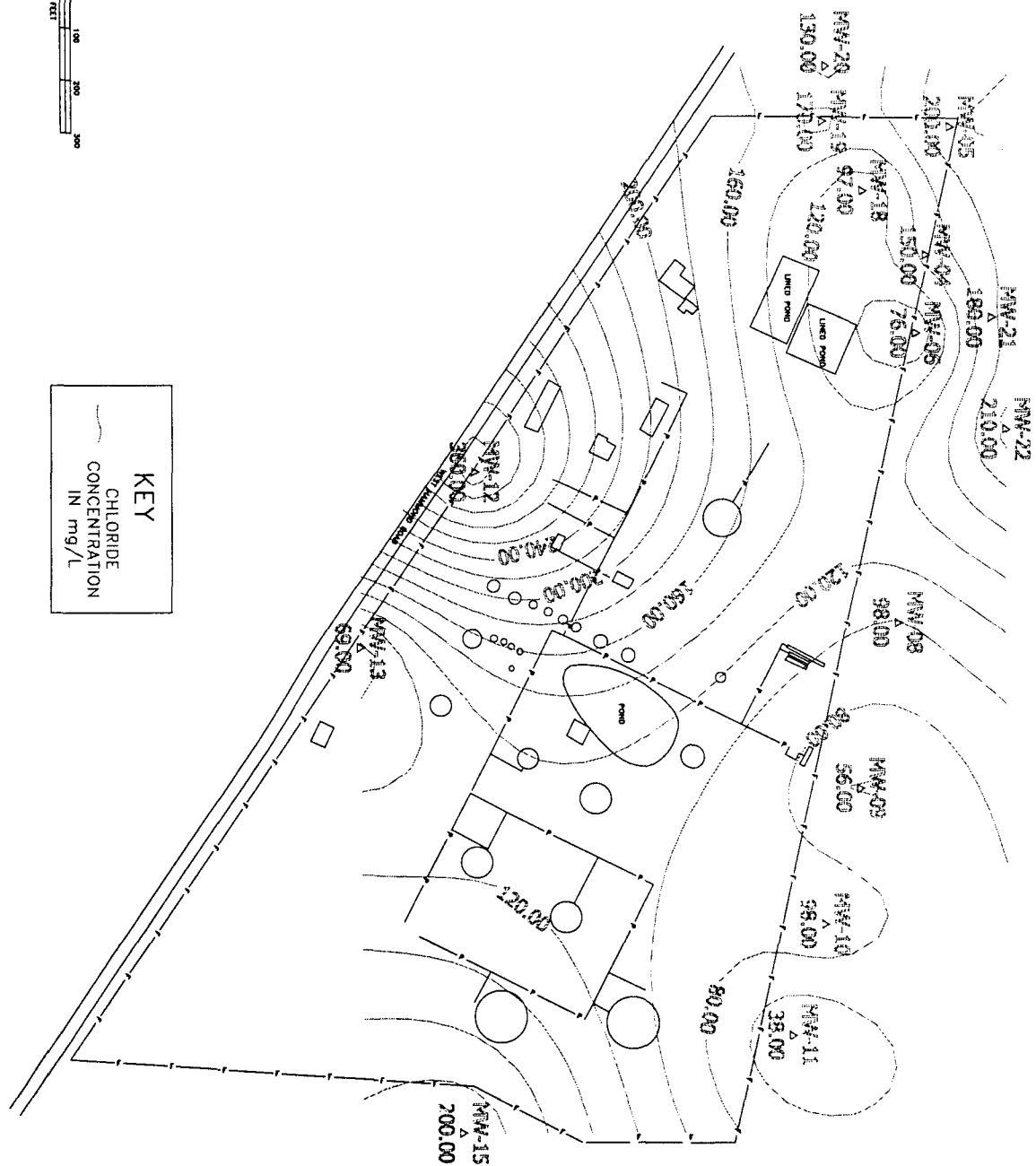
SEPTEMBER 7, 2000



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



KEY
CHLORIDE
CONCENTRATION
IN mg/L



THRIFTWAY REFINERY
626 RD 5500
BLOOMFIELD, NM

810\121100CL

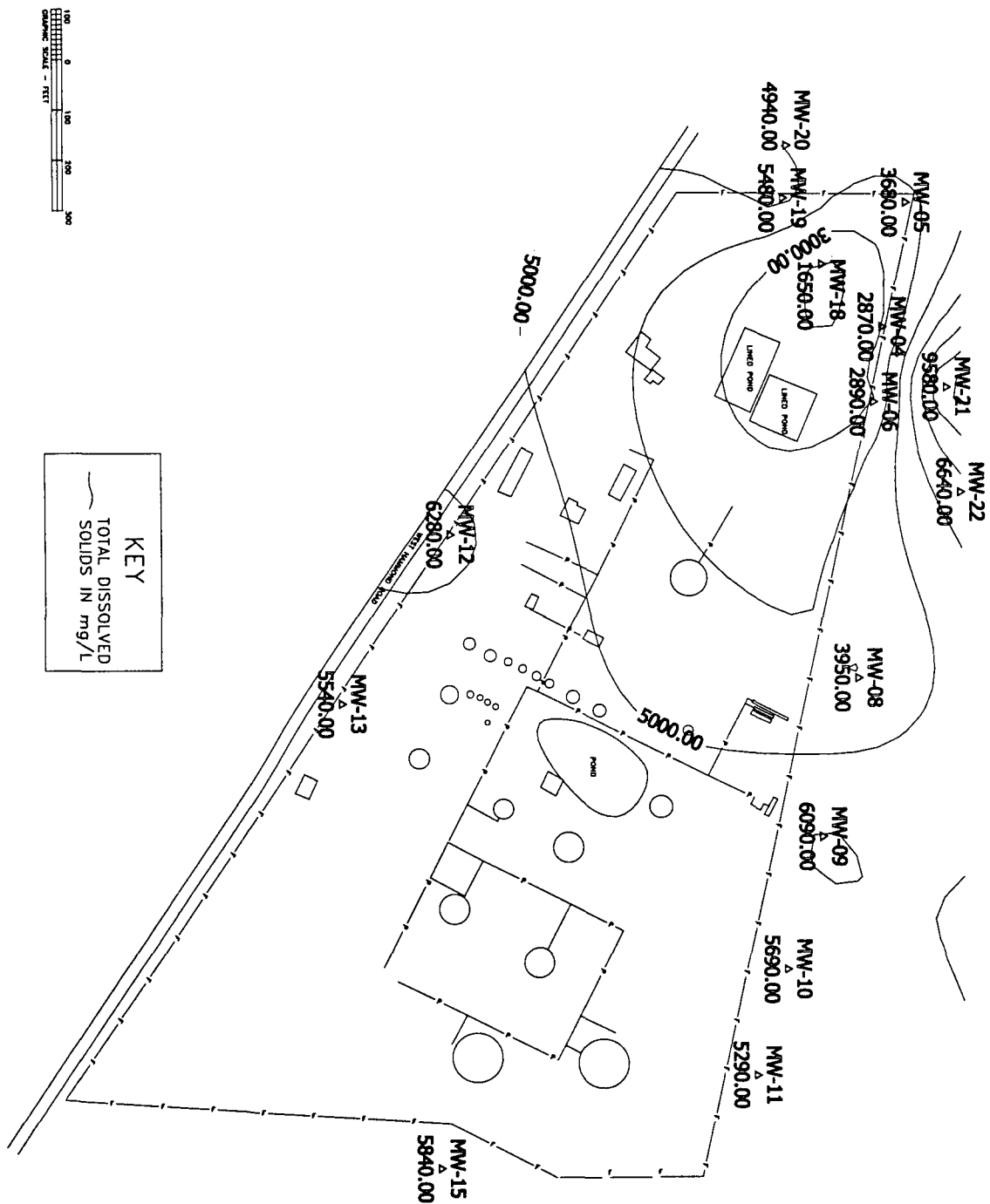
DRAWN BY: K. SINKS

FIGURE 6D
CHLORIDE
CONCENTRATION MAP

DECEMBER 11, 2000



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\1211100TD

DRAWN BY: K. SINKS

FIGURE 7
TOTAL DISSOLVED SOLIDS

DECEMBER 11, 2000



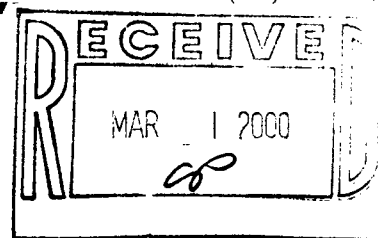
710 EAST 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401
PHONE 505-327-4963
FAX 505-564-3604

Appendices

OFF: (505) 325-5667



LAB: (505) 325-1556



February 28, 2000

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.: 0002030

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 2/8/2000 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 "D. Cox".

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 28-Feb-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 0002030

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: 28-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Air Stripper
Work Order:	0002030	Client Sample ID:	Travel Blank
Lab ID:	0002030-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	2/7/2000 3:50:00 PM
		COC Record:	10539

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
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AROMATIC VOLATILES BY GC/PID

SW8021B

Analyst: DC

Methyl tert-Butyl Ether	ND	1		µg/L	1	2/15/2000
Benzene	ND	0.5		µg/L	1	2/15/2000
Toluene	ND	0.5		µg/L	1	2/15/2000
Ethylbenzene	ND	0.5		µg/L	1	2/15/2000
m,p-Xylene	ND	1		µg/L	1	2/15/2000
o-Xylene	ND	0.5		µg/L	1	2/15/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

1 of 3

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 28-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Air Stripper
Work Order:	0002030	Client Sample ID:	Stripper Influent
Lab ID:	0002030-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	2/8/2000 9:00:00 AM
		COC Record:	10539

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	190	10		µg/L	10	2/15/2000
Benzene	1800	5		µg/L	10	2/15/2000
Toluene	540	5		µg/L	10	2/15/2000
Ethylbenzene	640	5		µg/L	10	2/15/2000
m,p-Xylene	2000	10		µg/L	10	2/15/2000
o-Xylene	230	5		µg/L	10	2/15/2000

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: 28-Feb-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Air Stripper
Work Order:	0002030	Client Sample ID:	Stripper Effluent
Lab ID:	0002030-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	2/8/2000 9:05:00 AM
		COC Record:	10539

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	8.7	1		µg/L	1	2/15/2000
Benzene	3.3	0.5		µg/L	1	2/15/2000
Toluene	1.3	0.5		µg/L	1	2/15/2000
Ethylbenzene	1.3	0.5		µg/L	1	2/15/2000
m,p-Xylene	4.9	1		µg/L	1	2/15/2000
o-Xylene	0.8	0.5		µg/L	1	2/15/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 28-Feb-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0002030

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000215	Test Code: SW8021B	Units: µg/L	Analysis Date: 2/15/2000	Prep Date:
Client ID:	0002030	Run ID: GC-1_000215B		SeqNo: 24004	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.034	0.5			J
Ethylbenzene	.0534	0.5			J
m,p-Xylene	.1721	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0708	0.5			J
Toluene	.1003	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: 28-Feb-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0002030
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0002028-04AMS		Batch ID: GC-1_000215	Test Code: SW8021B	Units: µg/L	Analysis Date: 2/15/2000		Prep Date:
Client ID: 0002030		Run ID: GC-1_000215B	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 24005
Analyte	Result						
Benzene	1000		5	400	586	103.5%	73 126
Ethylbenzene	654.9		5	400	263.7	97.8%	88 113
m,p-Xylene	2901		10	800	2080	102.6%	83 112
Methyl tert-Butyl Ether	426.4		10	400	6.191	105.0%	81 125
o-Xylene	911.7		5	400	502.4	102.3%	93 110
Toluene	454.8		5	400	48.11	101.7%	76 126

Sample ID: 0002028-04AMSD		Batch ID: GC-1_000215	Test Code: SW8021B	Units: µg/L	Analysis Date: 2/15/2000		Prep Date:
Client ID: 0002030		Run ID: GC-1_000215B	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 24006
Analyte	Result						
Benzene	976.4		5	400	586	97.6%	73 126
Ethylbenzene	642.8		5	400	263.7	94.8%	88 113
m,p-Xylene	2844		10	800	2080	95.5%	83 112
Methyl tert-Butyl Ether	424.8		10	400	6.191	104.7%	81 125
o-Xylene	896.8		5	400	502.4	98.6%	93 110
Toluene	465.7		5	400	48.11	104.4%	76 126

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: 28-Feb-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0002030

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000215	Test Code: SW8021B	Units: µg/L		Analysis Date: 2/15/2000			Prep Date:				
Client ID:		0002030	Run ID: GC-1_000215B	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 24003	RPD	RPDLimit	Qual
Analyte	Result												
Benzene	40.51			0.5	40	0.034	101.2%	89	112				
Ethylbenzene	39.92			0.5	40	0.0534	99.7%	93	112				
m,p-Xylene	76.24			1	80	0.1721	95.1%	88	108				
Methyl tert-Butyl Ether	41.66			1	40	0	104.2%	87	115				
o-Xylene	39.95			0.5	40	0.0708	99.7%	93	112				
Toluene	40.16			0.5	40	0.1003	100.1%	92	111				

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: 28-Feb-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0002030

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0001		Batch ID: GC-1_000215		Test Code: SW8021B		Units: µg/L		Analysis Date: 2/15/2000			Prep Date:	
Client ID:		0002030		Run ID:		GC-1_000215B		SeqNo: 23999				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	20.69	0.5	20	0	103.4%	85	115					
Ethylbenzene	20.7	0.5	20	0	103.5%	85	115					
m,p-Xylene	39.26	1	40	0	98.1%	85	115					
Methyl tert-Butyl Ether	21.12	1	20	0	105.6%	85	115					
o-Xylene	20.57	0.5	20	0	102.8%	85	115					
Toluene	20.47	0.5	20	0	102.3%	85	115					
1,4-Difluorobenzene	89	0	100	0	89.0%	80	105					
4-Bromochlorobenzene	89.26	0	100	0	89.3%	78	108					
Fluorobenzene	88.32	0	100	0	88.3%	78	108					

Sample ID: CCV2 BTEX_0001		Batch ID: GC-1_000215		Test Code: SW8021B		Units: µg/L		Analysis Date: 2/15/2000		Prep Date:	
Client ID:		0002030		Run ID: GC-1_000215B				SeqNo: 24000			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.44	0.5	40	0	103.6%	85	115				
Ethylbenzene	40.63	0.5	40	0	101.6%	85	115				
m,p-Xylene	77.37	1	80	0	96.7%	85	115				
Methyl tert-Butyl Ether	42.12	1	40	0	105.3%	85	115				
o-Xylene	40.57	0.5	40	0	101.4%	85	115				
Toluene	40.96	0.5	40	0	102.4%	85	115				
1,4-Difluorobenzene	89.17	0	100	0	89.2%	80	105				
4-Bromochlorobenzene	89.57	0	100	0	89.6%	78	108				
Fluorobenzene	87.54	0	100	0	87.5%	78	108				

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: 0002030
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0001		Batch ID: GC-1_000215	Test Code: SW8021B	Units: µg/L	Analysis Date: 2/15/2000			Prep Date:			
Client ID:		0002030	Run ID: GC-1_000215B			SeqNo: 24001					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.15	0.5	20	0	105.7%	85	115				
Ethylbenzene	21.16	0.5	20	0	105.8%	85	115				
m,p-Xylene	39.81	1	40	0	99.5%	85	115				
Methyl tert-Butyl Ether	21.62	1	20	0	108.1%	85	115				
o-Xylene	20.66	0.5	20	0	103.3%	85	115				
Toluene	20.91	0.5	20	0	104.5%	85	115				
1,4-Difluorobenzene	89.68	0	100	0	89.7%	80	105				
4-Bromochlorobenzene	88.72	0	100	0	88.7%	78	108				
Fluorobenzene	87.96	0	100	0	88.0%	78	108				

Sample ID: CCV4 BTEX_0001		Batch ID: GC-1_000215		Test Code: SW8021B		Units: µg/L		Analysis Date: 2/15/2000				Prep Date:	
Client ID:		0002030		Run ID:		GC-1_000215B		SeqNo: 24002					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Benzene	20.75	0.5	20	0	103.8%	85	115						
Ethylbenzene	20.47	0.5	20	0	102.3%	85	115						
m,p-Xylene	38.63	1	40	0	96.6%	85	115						
Methyl tert-Butyl Ether	21.49	1	20	0	107.4%	85	115						
o-Xylene	20.4	0.5	20	0	102.0%	85	115						
Toluene	20.46	0.5	20	0	102.3%	85	115						
1,4-Difluorobenzene	89.4	0	100	0	89.4%	80	105						
4-Bromochlorobenzene	89.73	0	100	0	89.7%	78	108						
Fluorobenzene	88.01	0	100	0	88.0%	78	108						

On Site Technologies, LTD.

Date: 28-Feb-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0002030
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0002028-01A	87.4	90	86.1
0002028-02A	89.7	89.5	88.1
0002028-03A	87.3	89.2	86.3
0002028-04A	86.7	89.1	86.7
0002028-04AMS	85.9	89.5	85.9
0002028-04AMSD	85.8	89.5	85.7
0002028-05A	89.6	89.2	89
0002028-06A	88.8	88.8	88.5
0002028-07A	88.1	87.4	87.4
0002028-08A	88.1	86.9	86.5
0002030-01A	90	88.8	89.1
0002030-02A	91.1	87.3	87.4
0002030-03A	89.3	88.7	89
0002032-01A	90	88.9	89.3
0002032-02A	89.2	88.5	88.1
0002032-03A	97.5	87.8	154 *
0002032-04A	89.7	89	89.1
0002032-05A	90.4	88.8	88.9
0002032-06A	90.2	89.8	88.4
0002032-07A	89.4	90.1	88.8
0002032-08A	90.3	89.4	89.2
0002032-09A	89.5	89.4	89.2
CCV1 BTEX_00010	89	89.3	88.3
CCV2 BTEX_00010	89.2	89.6	87.5
CCV3 BTEX_00010	89.7	88.7	88
CCV4 BTEX_00010	89.4	89.7	88
LCS WATER	88.8	89.7	87.7

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 0002030
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

**QC SUMMARY REPORT
SURROGATE RECOVERIES**

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
MB1	89.8	89.2	89

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

CHAIN OF CUSTODY RECORD

ON SITE

TECHNOLOGIES, LTD.

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date:

Page: 1 of 1[illegible]

OFF: (505) 325-5667



LAB: (505) 325-1556

April 19, 2000

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

RE: Thriftway Refinery

Order No.: 0004015

Dear Terry Griffin,

On Site Technologies, LTD. received 10 samples on 4/5/2000 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: 19-Apr-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery
Lab Order: 0004015

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



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ANALYTICAL REPORT

Date: 19-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004015	Client Sample ID:	Travel Blank
Lab ID:	0004015-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/4/2000 9:30:00 AM
		COC Record:	5278

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	4/10/2000
Benzene	ND	0.5		µg/L	1	4/10/2000
Toluene	ND	0.5		µg/L	1	4/10/2000
Ethylbenzene	ND	0.5		µg/L	1	4/10/2000
m,p-Xylene	ND	1		µg/L	1	4/10/2000
o-Xylene	ND	0.5		µg/L	1	4/10/2000

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 10

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 19-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004015	Client Sample ID:	Equipment Blank
Lab ID:	0004015-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/4/2000 9:50:00 AM
		COC Record:	5278

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	4/10/2000
Benzene	ND	0.5		µg/L	1	4/10/2000
Toluene	ND	0.5		µg/L	1	4/10/2000
Ethylbenzene	ND	0.5		µg/L	1	4/10/2000
m,p-Xylene	ND	1		µg/L	1	4/10/2000
o-Xylene	ND	0.5		µg/L	1	4/10/2000

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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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 19-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004015	Client Sample ID:	MW-15
Lab ID:	0004015-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/4/2000 10:20:00 AM
		COC Record:	5278

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	4/10/2000
Benzene	ND	0.5		µg/L	1	4/10/2000
Toluene	ND	0.5		µg/L	1	4/10/2000
Ethylbenzene	ND	0.5		µg/L	1	4/10/2000
m,p-Xylene	ND	1		µg/L	1	4/10/2000
o-Xylene	ND	0.5		µg/L	1	4/10/2000

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: 19-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004015	Client Sample ID:	MW-9
Lab ID:	0004015-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/4/2000 11:15:00 AM
		COC Record:	5278

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	5.3	1		µg/L	1	4/10/2000
Benzene	ND	0.5		µg/L	1	4/10/2000
Toluene	ND	0.5		µg/L	1	4/10/2000
Ethylbenzene	ND	0.5		µg/L	1	4/10/2000
m,p-Xylene	ND	1		µg/L	1	4/10/2000
o-Xylene	ND	0.5		µg/L	1	4/10/2000

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: 19-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004015	Client Sample ID:	MW-21
Lab ID:	0004015-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/4/2000 1:49:00 PM
		COC Record:	5278

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	44	1		µg/L	1	4/11/2000
Benzene	ND	0.5		µg/L	1	4/11/2000
Toluene	ND	0.5		µg/L	1	4/11/2000
Ethylbenzene	ND	0.5		µg/L	1	4/11/2000
m,p-Xylene	ND	1		µg/L	1	4/11/2000
o-Xylene	ND	0.5		µg/L	1	4/11/2000

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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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 19-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004015	Client Sample ID:	MW-21 Duplicate
Lab ID:	0004015-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/4/2000 1:49:00 PM
		COC Record:	5278

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	45	1		µg/L	1	4/11/2000
Benzene	ND	0.5		µg/L	1	4/11/2000
Toluene	ND	0.5		µg/L	1	4/11/2000
Ethylbenzene	ND	0.5		µg/L	1	4/11/2000
m,p-Xylene	ND	1		µg/L	1	4/11/2000
o-Xylene	ND	0.5		µg/L	1	4/11/2000

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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ANALYTICAL REPORT

Date: 19-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004015	Client Sample ID:	MW-22
Lab ID:	0004015-07A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/4/2000 2:43:00 PM
		COC Record:	5278

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	10	1		µg/L	1	4/11/2000
Benzene	ND	0.5		µg/L	1	4/11/2000
Toluene	ND	0.5		µg/L	1	4/11/2000
Ethylbenzene	ND	0.5		µg/L	1	4/11/2000
m,p-Xylene	ND	1		µg/L	1	4/11/2000
o-Xylene	ND	0.5		µg/L	1	4/11/2000

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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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 19-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004015	Client Sample ID:	MW-20
Lab ID:	0004015-08A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/4/2000 3:30:00 PM
		COC Record:	5278

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	12	1		µg/L	1	4/11/2000
Benzene	ND	0.5		µg/L	1	4/11/2000
Toluene	ND	0.5		µg/L	1	4/11/2000
Ethylbenzene	ND	0.5		µg/L	1	4/11/2000
m,p-Xylene	ND	1		µg/L	1	4/11/2000
o-Xylene	ND	0.5		µg/L	1	4/11/2000

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: 19-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004015	Client Sample ID:	Rinse #1
Lab ID:	0004015-09A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/4/2000 3:37:00 PM
		COC Record:	5278

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	4/11/2000
Benzene	ND	0.5		µg/L	1	4/11/2000
Toluene	ND	0.5		µg/L	1	4/11/2000
Ethylbenzene	ND	0.5		µg/L	1	4/11/2000
m,p-Xylene	ND	1		µg/L	1	4/11/2000
o-Xylene	ND	0.5		µg/L	1	4/11/2000

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: 19-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004015	Client Sample ID:	MW-19
Lab ID:	0004015-10A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/4/2000 4:39:00 PM
		COC Record:	5278

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	4/11/2000
Benzene	ND	0.5		µg/L	1	4/11/2000
Toluene	ND	0.5		µg/L	1	4/11/2000
Ethylbenzene	1.2	0.5		µg/L	1	4/11/2000
m,p-Xylene	1.7	1		µg/L	1	4/11/2000
o-Xylene	ND	0.5		µg/L	1	4/11/2000

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

10 of 10

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 19-Apr-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004015

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000410	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/10/2000	Prep Date:
Client ID:	0004015	Run ID: GC-1_000410A		SeqNo: 26444	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.1067	0.5			J
Ethylbenzene	.0733	0.5			J
m,p-Xylene	.1202	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0798	0.5			J
Toluene	.1433	0.5			J

Sample ID: MB1	Batch ID: GC-1_000411	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/11/2000	Prep Date:
Client ID:	0004015	Run ID: GC-1_000411A		SeqNo: 26473	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0684	0.5			J
Ethylbenzene	.1412	0.5			J
m,p-Xylene	.3403	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.1887	0.5			J
Toluene	.2499	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-Apr-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004015

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0004001-19AMS		Batch ID: GC-1_000410	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/10/2000				Prep Date:		
Client ID: 0004015		Run ID: GC-1_000410A			SeqNo: 26445						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	31270	250	20000	10270	105.0%	73	126				
Ethylbenzene	23370	250	20000	2623	103.8%	88	113				
m,p-Xylene	43360	500	40000	3768	99.0%	83	112				
Methyl tert-Butyl Ether	88500	500	20000	69200	96.5%	81	125				
o-Xylene	21320	250	20000	520.1	104.0%	93	110				
Toluene	21410	250	20000	619.7	103.9%	76	126				

Sample ID: 0004001-19AMSD		Batch ID: GC-1_000410	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/10/2000				Prep Date:		
Client ID: 0004015		Run ID: GC-1_000410A	SeqNo: 26446								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	30310	250	20000	10270	100.2%	73	126	31270	3.1%	6	
Ethylbenzene	22670	250	20000	2623	100.2%	88	113	23370	3.1%	5	
m,p-Xylene	42070	500	40000	3768	95.7%	83	112	43360	3.0%	7	
Methyl tert-Butyl Ether	87450	500	20000	69200	91.2%	81	125	88500	1.2%	9	
o-Xylene	20770	250	20000	520.1	101.2%	93	110	21320	2.6%	6	
Toluene	20770	250	20000	619.7	100.7%	76	126	21410	3.0%	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: 0004015

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0004025-02AMS		Batch ID: GC-1_000411		Test Code: SW8021B		Units: µg/L		Analysis Date: 4/11/2000		Prep Date:	
Client ID: 0004015		Run ID: GC-1_000411A		SeqNo: 26474							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	420.3	5	400	6.069	103.6%	73	126				
Ethylbenzene	420.2	5	400	8.097	103.0%	88	113				
m,p-Xylene	811.7	10	800	24.79	98.4%	83	112				
Methyl tert-Butyl Ether	743.4	10	400	317.1	106.6%	81	125				
o-Xylene	411	5	400	2.755	102.1%	93	110				
Toluene	417.4	5	400	4.375	103.3%	76	126				

Sample ID: 0004025-02AMSD		Batch ID: GC-1_000411		Test Code: SW8021B		Units: µg/L		Analysis Date: 4/11/2000		Prep Date:	
Client ID: 0004015		Run ID: GC-1_000411A		SeqNo: 26475							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	412.2	5	400	6.069	101.5%	73	126	420.3	2.0%	6	
Ethylbenzene	401.6	5	400	8.097	98.4%	88	113	420.2	4.5%	5	
m,p-Xylene	775.7	10	800	24.79	93.9%	83	112	811.7	4.5%	7	
Methyl tert-Butyl Ether	725.4	10	400	317.1	102.1%	81	125	743.4	2.4%	9	
o-Xylene	393	5	400	2.755	97.6%	93	110	411	4.5%	6	
Toluene	401.4	5	400	4.375	99.3%	76	126	417.4	3.9%	6	

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: 19-Apr-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004015

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID:	LCS WATER	Batch ID:	GC-1_000410	Test Code:	SW8021B	Units:	µg/L	Analysis Date:	4/10/2000	Prep Date:
Client ID:	0004015	Run ID:	GC-1_000410A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 26443
Analyte	Result									
Benzene	42.87	0.5	40	0.1067	106.9%	89	112			
Ethylbenzene	42.27	0.5	40	0.0733	105.5%	93	112			
m,p-Xylene	80.6	1	80	0.1202	100.6%	88	108			
Methyl tert-Butyl Ether	41.02	1	40	0	102.6%	87	115			
o-Xylene	42.17	0.5	40	0.0798	105.2%	93	112			
Toluene	42.09	0.5	40	0.1433	104.9%	92	111			

Sample ID:	LCS WATER	Batch ID:	GC-1_000411	Test Code:	SW8021B	Units:	µg/L	Analysis Date:	4/11/2000	Prep Date:
Client ID:	0004015	Run ID:	GC-1_000411A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 26472
Analyte	Result									
Benzene	41.64	0.5	40	0.0684	103.9%	89	112			
Ethylbenzene	41.46	0.5	40	0.1412	103.3%	93	112			
m,p-Xylene	79.13	1	80	0.3403	98.5%	88	108			
Methyl tert-Butyl Ether	41.78	1	40	0	104.5%	87	115			
o-Xylene	41.31	0.5	40	0.1887	102.8%	93	112			
Toluene	41.48	0.5	40	0.2499	103.1%	92	111			

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: 19-Apr-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004015

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000410	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/10/2000		Prep Date:	
Client ID: 0004015		Run ID: GC-1_000410A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	21.53		0.5	20	0	107.6%	85	115
Ethylbenzene	22.25		0.5	20	0	111.2%	85	115
m,p-Xylene	42.03		1	40	0	105.1%	85	115
Methyl tert-Butyl Ether	21.22		1	20	0	106.1%	85	115
o-Xylene	22.2		0.5	20	0	111.0%	85	115
Toluene	21.72		0.5	20	0	108.6%	85	115
1,4-Difluorobenzene	89.77		0	100	0	89.8%	80	105
4-Bromochlorobenzene	88.92		0	100	0	88.9%	78	108
Fluorobenzene	89.66		0	100	0	89.7%	78	108

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000410	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/10/2000		Prep Date:	
Client ID: 0004015		Run ID: GC-1_000410A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	20.57		0.5	20	0	102.9%	85	115
Ethylbenzene	21.16		0.5	20	0	105.8%	85	115
m,p-Xylene	39.94		1	40	0	99.8%	85	115
Methyl tert-Butyl Ether	21.1		1	20	0	105.5%	85	115
o-Xylene	21.18		0.5	20	0	105.9%	85	115
Toluene	20.77		0.5	20	0	103.8%	85	115
1,4-Difluorobenzene	89.77		0	100	0	89.8%	80	105
4-Bromochlorobenzene	89.08		0	100	0	89.1%	78	108
Fluorobenzene	89.5		0	100	0	89.5%	78	108

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: 0004015

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000410	Test Code: SW8021B	Units: µg/L		Analysis Date: 4/10/2000		Prep Date:	
Client ID: 0004015		Run ID: GC-1_000410A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 26442
Analyte	Result								
Benzene	40.54		0.5	40	0	101.3%	85	115	
Ethylbenzene	40.34		0.5	40	0	100.9%	85	115	
m,p-Xylene	76.79		1	80	0	96.0%	85	115	
Methyl tert-Butyl Ether	42.4		1	40	0	106.0%	85	115	
o-Xylene	40.52		0.5	40	0	101.3%	85	115	
Toluene	40.37		0.5	40	0	100.9%	85	115	
1,4-Difluorobenzene	89.28		0	100	0	89.3%	80	105	
4-Bromochlorobenzene	89.24		0	100	0	89.2%	78	108	
Fluorobenzene	88.99		0	100	0	89.0%	78	108	

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000411	Test Code: SW8021B	Units: µg/L		Analysis Date: 4/11/2000		Prep Date:	
Client ID: 0004015		Run ID: GC-1_000411A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 26469
Analyte	Result								
Benzene	21.69		0.5	20	0	108.5%	85	115	
Ethylbenzene	22.25		0.5	20	0	111.3%	85	115	
m,p-Xylene	42.18		1	40	0	105.4%	85	115	
Methyl tert-Butyl Ether	21.79		1	20	0	108.9%	85	115	
o-Xylene	22.3		0.5	20	0	111.5%	85	115	
Toluene	21.79		0.5	20	0	108.9%	85	115	
1,4-Difluorobenzene	89.72		0	100	0	89.7%	80	105	
4-Bromochlorobenzene	89.33		0	100	0	89.3%	78	108	
Fluorobenzene	89.7		0	100	0	89.7%	78	108	

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: 0004015

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000411		Test Code: SW8021B		Units: µg/L		Analysis Date: 4/11/2000			Prep Date:						
Client ID: 0004015		Run ID: GC-1_000411A		PQL		SPK value		SPK Ref Val		%REC		SeqNo: 26470					
Analyte	Result											LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.47	0.5		20		0		107.4%		85		115					
Ethylbenzene	21.78	0.5		20		0		108.9%		85		115					
m,p-Xylene	41.02	1		40		0		102.6%		85		115					
Methyl tert-Butyl Ether	21.84	1		20		0		109.2%		85		115					
o-Xylene	21.82	0.5		20		0		109.1%		85		115					
Toluene	21.29	0.5		20		0		106.4%		85		115					
1,4-Difluorobenzene	90.17	0		100		0		90.2%		80		105					
4-Bromochlorobenzene	90.04	0		100		0		90.0%		78		108					
Fluorobenzene	90.28	0		100		0		90.3%		78		108					

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000411	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/11/2000				Prep Date:			
Client ID: 0004015		Run ID:	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	41.24		0.5	40	0	103.1%	85	115				
Ethylbenzene	40.97		0.5	40	0	102.4%	85	115				
m,p-Xylene	77.49		1	80	0	96.9%	85	115				
Methyl tert-Butyl Ether	41.6		1	40	0	104.0%	85	115				
o-Xylene	40.88		0.5	40	0	102.2%	85	115				
Toluene	40.96		0.5	40	0	102.4%	85	115				
1,4-Difluorobenzene	89.42		0	100	0	89.4%	80	105				
4-Bromochlorobenzene	89.04		0	100	0	89.0%	78	108				
Fluorobenzene	89.02		0	100	0	89.0%	78	108				

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-Apr-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004015

Project: Thriftway Refinery

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0004001-11A	95.9	90.3	90.4
0004001-12A	104	90.9	91.9
0004001-14A	90.2	89.1	89.8
0004001-15A	90.4	88.6	89.9
0004001-16A	97.4	86.9	92.9
0004001-17A	92.8	90.2	89.6
0004001-18A	89.7	89.4	89
0004001-19A	89.8	88.5	89.6
0004001-19AMS	89.2	89.8	88.6
0004001-19AMSD	89.1	88.8	88.8
0004001-21A	90.2	88.4	89.8
0004001-23A	105	88.2	93
0004001-24A	90.5	88	89.8
0004001-25A	91.1	88.5	90
0004001-26A	88.9	88.2	88.3
0004001-27A	90.1	88.5	89.9
0004001-28A	90.5	89.4	90.7
0004001-29A	90.1	86.8	90.4
0004003-01A	90.3	88.6	90.1
0004003-02A	88.7	88.1	89.8
0004003-03A	88.7	91.1	87.3
0004003-04A	90.4	89.2	91.1
0004003-05A	89.9	89.8	90.4
0004003-06A	89.7	89.5	89.7
0004003-07A	90.8	89.9	91.5
0004003-08A	90.4	90	90.4
0004015-01A	90.1	88.2	90.4

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 0004015
Project: Thriftway Refinery
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0004015-02A	90.4	89.4	90.1
0004015-03A	90.3	88.6	90.2
0004015-04A	90.5	88.9	90.4
0004015-05A	90.2	89.8	90.4
0004015-06A	90.2	88.6	90.8
0004015-07A	90.3	89.1	90.6
0004015-08A	90.1	89.4	90.4
0004015-09A	90.7	89	91.1
0004015-10A	89.5	89.1	89.9
0004025-01A	90.8	88.6	91.1
0004025-02A	89.1	88.8	89.5
0004025-02AMS	88.3	87.9	88.5
0004025-02AMSD	88.8	88.9	88.9
0004025-03A	90	88.6	90.4
0004025-05A	90.2	89.8	88.4
CCV1 BTEX_00040	89.7	89.3	89.7
CCV2 BTEX_00040	90.2	90	90.3
CCV3 BTEX_00040	89.4	89	89
LCS WATER	89.4	89.2	88.6
MB1	89.7	88	89.7

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

TECHNOLOGIES, LTD.

Distribution: White – On Site	Yellow – LAB	Pink – Sampler	Goldenrod – Client
-------------------------------	--------------	----------------	--------------------

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

April 27, 2000

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

MAY 1 2000

Order No.: 0004003

RE: Thriftway Refinery

Dear Terry Griffin,

On Site Technologies, LTD. received 8 samples on 4/3/2000 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)
- Hardness, Total (M2340 B)
- 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 (CALC)
- Total Dissolved Solids (E160.1)

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

April 27, 2000

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

RE: Thriftway Refinery

Order No.: 0004003

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,

A handwritten signature in black ink, appearing to read "David Cox", written over a horizontal line.

David Cox

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 27-Apr-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery
Lab Order: 0004003

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 27-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004003	Client Sample ID:	Travel Blank
Lab ID:	0004003-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/3/2000 10:00:00 AM
		COC Record:	10558

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	4/11/2000
Benzene	ND	0.5		µg/L	1	4/11/2000
Toluene	ND	0.5		µg/L	1	4/11/2000
Ethylbenzene	ND	0.5		µg/L	1	4/11/2000
m,p-Xylene	ND	1		µg/L	1	4/11/2000
o-Xylene	ND	0.5		µg/L	1	4/11/2000

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 -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 27-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004003	Client Sample ID:	Stripper Effluent
Lab ID:	0004003-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/3/2000 10:51:00 AM
		COC Record:	10558

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	20	1		µg/L	1	4/11/2000
Benzene	6.2	0.5		µg/L	1	4/11/2000
Toluene	1.8	0.5		µg/L	1	4/11/2000
Ethylbenzene	2.6	0.5		µg/L	1	4/11/2000
m,p-Xylene	10	1		µg/L	1	4/11/2000
o-Xylene	1.4	0.5		µg/L	1	4/11/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	270	25		mg/L	100	4/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	6	0.5		mg/L	2	4/24/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	48	5		mg/L	20	4/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	830	100		mg/L	400	4/20/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO3)	640	5		mg/L CaCO3	1	4/4/2000
Alkalinity, Carbonate (As CaCO3)	ND	5		mg/L CaCO3	1	4/4/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO3	1	4/4/2000
Alkalinity, Total (As CaCO3)	640	5		mg/L CaCO3	1	4/4/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	320	1		mg/L	1	4/4/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	4420	2		uS/cm	1	4/4/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO3)	880	1		mg/L	1	4/24/2000
PH						
		E150.1				Analyst: HR
pH	8.79	2		pH units	1	4/4/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	1530	8		mg/L	1	4/4/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	3370	40		mg/L	1	4/4/2000
TOTAL DISSOLVED SOLIDS						
		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	3400	40		mg/L	1	4/24/2000

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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ANALYTICAL REPORT

Date: 27-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004003	Client Sample ID:	Stripper Influent
Lab ID:	0004003-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/3/2000 10:42:00 AM
		COC Record:	10558

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	250	10		µg/L	10	4/11/2000
Benzene	1900	5		µg/L	10	4/11/2000
Toluene	410	5		µg/L	10	4/11/2000
Ethylbenzene	660	5		µg/L	10	4/11/2000
m,p-Xylene	2300	10		µg/L	10	4/11/2000
o-Xylene	230	5		µg/L	10	4/11/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	320	25		mg/L	100	4/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	6	0.5		mg/L	2	4/24/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	49	5		mg/L	20	4/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	810	100		mg/L	400	4/20/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	930	5		mg/L CaCO ₃	1	4/4/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	4/4/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	4/4/2000
Alkalinity, Total (As CaCO ₃)	930	5		mg/L CaCO ₃	1	4/4/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	170	1		mg/L	1	4/4/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	4360	2		uS/cm	1	4/4/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	1000	1		mg/L	1	4/24/2000
PH						
		E150.1				Analyst: HR
pH	7.27	2		pH units	1	4/4/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	1500	8		mg/L	1	4/4/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	3430	40		mg/L	1	4/4/2000
TOTAL DISSOLVED SOLIDS						
		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	3470	40		mg/L	1	4/24/2000

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
Sur: - Surrogate

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ANALYTICAL REPORT

Date: 27-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004003	Client Sample ID:	MW-13
Lab ID:	0004003-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/3/2000 12:58:00 PM
		COC Record:	10558

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	4/11/2000
Benzene	ND	0.5		µg/L	1	4/11/2000
Toluene	ND	0.5		µg/L	1	4/11/2000
Ethylbenzene	ND	0.5		µg/L	1	4/11/2000
m,p-Xylene	ND	1		µg/L	1	4/11/2000
o-Xylene	ND	0.5		µg/L	1	4/11/2000

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

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R - RPD outside accepted recovery limits
E - Value above quantitation range
Surr: - Surrogate

1 of 1

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ANALYTICAL REPORT

Date: 27-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004003	Client Sample ID:	MW-06
Lab ID:	0004003-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/3/2000 1:47:00 PM
		COC Record:	10558

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	1.6	1		µg/L	1	4/11/2000
Benzene	ND	0.5		µg/L	1	4/11/2000
Toluene	ND	0.5		µg/L	1	4/11/2000
Ethylbenzene	ND	0.5		µg/L	1	4/11/2000
m,p-Xylene	ND	1		µg/L	1	4/11/2000
o-Xylene	ND	0.5		µg/L	1	4/11/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

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R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

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ANALYTICAL REPORT

Date: 27-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004003	Client Sample ID:	MW-05
Lab ID:	0004003-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/3/2000 2:18:00 PM
		COC Record:	10558

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	51	1		µg/L	1	4/11/2000
Benzene	11	0.5		µg/L	1	4/11/2000
Toluene	ND	0.5		µg/L	1	4/11/2000
Ethylbenzene	0.6	0.5		µg/L	1	4/11/2000
m,p-Xylene	ND	1		µg/L	1	4/11/2000
o-Xylene	ND	0.5		µg/L	1	4/11/2000

Qualifiers: PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
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ANALYTICAL REPORT

Date: 27-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004003	Client Sample ID:	MW-11
Lab ID:	0004003-07A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/3/2000 2:57:00 PM
		COC Record:	10558

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	4/11/2000
Benzene	ND	0.5		µg/L	1	4/11/2000
Toluene	ND	0.5		µg/L	1	4/11/2000
Ethylbenzene	ND	0.5		µg/L	1	4/11/2000
m,p-Xylene	ND	1		µg/L	1	4/11/2000
o-Xylene	ND	0.5		µg/L	1	4/11/2000

Qualifiers:

PQL - Practical Quantitation Limit
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R - RPD outside accepted recovery limits
E - Value above quantitation range
Surr: - Surrogate

1 of 1

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FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 27-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004003	Client Sample ID:	MW-10
Lab ID:	0004003-08A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	4/3/2000 4:00:00 PM
		COC Record:	10558

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	4/11/2000
Benzene	ND	0.5		µg/L	1	4/11/2000
Toluene	ND	0.5		µg/L	1	4/11/2000
Ethylbenzene	ND	0.5		µg/L	1	4/11/2000
m,p-Xylene	ND	1		µg/L	1	4/11/2000
o-Xylene	ND	0.5		µg/L	1	4/11/2000

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: 27-Apr-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004003

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000411	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/11/2000	Prep Date:
Client ID:	0004003	Run ID: GC-1_000411A		SeqNo: 26473	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0684	0.5			J
Ethylbenzene	.1412	0.5			J
m,p-Xylene	.3403	1			J
Methyl tert-Butyl Ether	ND	1			J
o-Xylene	.1887	0.5			J
Toluene	.2499	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: 27-Apr-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004003

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0004025-02AMS		Batch ID: GC-1_000411		Test Code: SW8021B		Units: µg/L		Analysis Date: 4/11/2000		Prep Date:	
Client ID: 0004003		Run ID: GC-1_000411A		PQL		SPK value		SeqNo: 26474			
Analyte	Result					SPK Ref Val		LowLimit		HighLimit	
Benzene	420.3	5		400		6.069		73		126	
Ethylbenzene	420.2	5		400		8.097		88		113	
m,p-Xylene	811.7	10		800		24.79		83		112	
Methyl tert-Butyl Ether	743.4	10		400		317.1		81		125	
o-Xylene	411	5		400		2.755		93		110	
Toluene	417.4	5		400		4.375		76		126	
								%REC		%RPD	
								RPD Limit		RPD Limit	
								RPD Ref Val		Qual	

Sample ID: 0004025-02AMSD		Batch ID: GC-1_000411		Test Code: SW8021B		Units: µg/L		Analysis Date: 4/11/2000		Prep Date:	
Client ID:		0004003		Run ID: GC-1_000411A		SeqNo: 26475					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	412.2	5	400	6.069	101.5%	73	126	420.3	2.0%	6	
Ethylbenzene	401.6	5	400	8.097	98.4%	88	113	420.2	4.5%	5	
m,p-Xylene	775.7	10	800	24.79	93.9%	83	112	811.7	4.5%	7	
Methyl tert-Butyl Ether	725.4	10	400	317.1	102.1%	81	125	743.4	2.4%	9	
o-Xylene	393	5	400	2.755	97.6%	93	110	411	4.5%	6	
Toluene	401.4	5	400	4.375	99.3%	76	126	417.4	3.9%	6	

Qualifiers:

N/D - 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: 0004003
Project: Thriftway Refinery

Date: 27-Apr-00

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000411	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/11/2000		Prep Date:	
Client ID:		0004003	Run ID: GC-1_000411A		SeqNo:	26472		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Benzene	41.64	0.5	40	0.0684	103.9%	89	112	
Ethylbenzene	41.46	0.5	40	0.1412	103.3%	93	112	
m,p-Xylene	79.13	1	80	0.3403	98.5%	88	108	
Methyl tert-Butyl Ether	41.78	1	40	0	104.5%	87	115	
o-Xylene	41.31	0.5	40	0.1887	102.8%	93	112	
Toluene	41.48	0.5	40	0.2499	103.1%	92	111	

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

On Site Technologies, LTD.

CLIENT: BioTech Remediation, Inc.
 Work Order: 0004003
 Project: Thriftway Refinery

Date: 27-Apr-00

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000411	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/11/2000				Prep Date:		
Client ID: 0004003		Run ID: GC-1_000411A	SeqNo: 26469								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.69	0.5	20	0	108.5%	85	115				
Ethylbenzene	22.25	0.5	20	0	111.3%	85	115				
m,p-Xylene	42.18	1	40	0	105.4%	85	115				
Methyl tert-Butyl Ether	21.79	1	20	0	108.9%	85	115				
o-Xylene	22.3	0.5	20	0	111.5%	85	115				
Toluene	21.79	0.5	20	0	108.9%	85	115				
1,4-Difluorobenzene	89.72	0	100	0	89.7%	80	105				
4-Bromochlorobenzene	89.33	0	100	0	89.3%	78	108				
Fluorobenzene	89.7	0	100	0	89.7%	78	108				

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000411	Test Code: SW8021B	Units: µg/L		Analysis Date: 4/11/2000			Prep Date:			
Client ID: 0004003		Run ID: GC-1_000411A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	21.47		0.5	20	0	107.4%	85	115				
Ethylbenzene	21.78		0.5	20	0	108.9%	85	115				
m,p-Xylene	41.02		1	40	0	102.6%	85	115				
Methyl tert-Butyl Ether	21.84		1	20	0	109.2%	85	115				
o-Xylene	21.82		0.5	20	0	109.1%	85	115				
Toluene	21.29		0.5	20	0	106.4%	85	115				
1,4-Difluorobenzene	90.17		0	100	0	90.2%	80	105				
4-Bromochlorobenzene	90.04		0	100	0	90.0%	78	108				
Fluorobenzene	90.28		0	100	0	90.3%	78	108				

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: 0004003

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000411	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/11/2000		Prep Date:	
Client ID: 0004003		Run ID: GC-1_000411A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte		Result					RPD Ref Val	RPD Limit
Benzene		41.24	0.5	40	0	103.1%	85	115
Ethylbenzene		40.97	0.5	40	0	102.4%	85	115
m,p-Xylene		77.49	1	80	0	96.9%	85	115
Methyl tert-Butyl Ether		41.6	1	40	0	104.0%	85	115
o-Xylene		40.88	0.5	40	0	102.2%	85	115
Toluene		40.96	0.5	40	0	102.4%	85	115
1,4-Difluorobenzene		89.42	0	100	0	89.4%	80	105
4-Bromochlorobenzene		89.04	0	100	0	89.0%	78	108
Fluorobenzene		89.02	0	100	0	89.0%	78	108

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: 27-Apr-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004003

Project: Thriftway Refinery

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0004001-25A	91.1	88.5	90
0004003-01A	90.3	88.6	90.1
0004003-02A	88.7	88.1	89.8
0004003-03A	88.7	91.1	87.3
0004003-04A	90.4	89.2	91.1
0004003-05A	89.9	89.8	90.4
0004003-06A	89.7	89.5	89.7
0004003-07A	90.8	89.9	91.5
0004003-08A	90.4	90	90.4
0004015-05A	90.2	89.8	90.4
0004015-06A	90.2	88.6	90.8
0004015-07A	90.3	89.1	90.6
0004015-08A	90.1	89.4	90.4
0004015-09A	90.7	89	91.1
0004015-10A	89.5	89.1	89.9
0004025-01A	90.8	88.6	91.1
0004025-02A	89.1	88.8	89.5
0004025-02AMS	88.3	87.9	88.5
0004025-02AMSD	88.8	88.9	88.9
0004025-03A	90	88.6	90.4
0004025-05A	90.2	89.8	88.4
CCV1 BTEX_00040	89.7	89.3	89.7
CCV2 BTEX_00040	90.2	90	90.3
CCV3 BTEX_00040	89.4	89	89
LCS WATER	89.4	89.2	88.6
MB1	89.7	88	89.7

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

On Site Technologies, LTD.

Date: 27-Apr-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004003

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: AA_0004025	Test Code: E273.1	Units: mg/L	Analysis Date: 4/20/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420A			SeqNo: 26882	
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_0004025	Test Code: E215.1	Units: mg/L	Analysis Date: 4/20/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420B			SeqNo: 26907	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	ND	0.25			
Sample ID: MBlank	Batch ID: AA_0004025	Test Code: E242.1	Units: mg/L	Analysis Date: 4/20/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420C			SeqNo: 26932	
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_0004025	Test Code: E258.1	Units: mg/L	Analysis Date: 4/24/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420D			SeqNo: 26957	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	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.

Date: 27-Apr-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004003

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0004033-08AMS	Batch ID: AA_0004025	Test Code: E273.1	Units: mg/L	Analysis Date: 4/20/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420A	SeqNo: 26894			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	736	50	400	360	94.0% 84 118
Sample ID: 0004033-08AMS	Batch ID: AA_0004025	Test Code: E242.1	Units: mg/L	Analysis Date: 4/20/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420C	SeqNo: 26944			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	20.9	1.2	10	10.45	104.5% 84 131
Sample ID: 0004033-08AMS	Batch ID: AA_0004025	Test Code: E258.1	Units: mg/L	Analysis Date: 4/24/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420D	SeqNo: 26969			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	25.3	1.2	10	14.6	107.0% 51 167
Sample ID: 0004037-01AMS	Batch ID: AA_0004025	Test Code: E215.1	Units: mg/L	Analysis Date: 4/20/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420B	SeqNo: 26923			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	420	25	200	208	106.0% 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: 0004003
Project: Thriftway Refinery

Date: 27-Apr-00

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1	Batch ID: AA_0004025	Test Code: E273.1	Units: mg/L	Analysis Date: 4/20/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420A			SeqNo: 26883	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	3.01	0.25	3.06	0	98.4% 90 110
Sample ID: CCV1	Batch ID: AA_0004025	Test Code: E215.1	Units: mg/L	Analysis Date: 4/20/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420B			SeqNo: 26908	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	3.32	0.25	3.42	0	97.1% 90 110
Sample ID: CCV1	Batch ID: AA_0004025	Test Code: E242.1	Units: mg/L	Analysis Date: 4/20/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420C			SeqNo: 26933	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	1.35	0.25	1.24	0	108.9% 90 110
Sample ID: CCV1	Batch ID: AA_0004025	Test Code: E258.1	Units: mg/L	Analysis Date: 4/24/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420D			SeqNo: 26958	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	3.58	0.25	3.63	0	98.6% 90 110
Sample ID: CCV2	Batch ID: AA_0004025	Test Code: E273.1	Units: mg/L	Analysis Date: 4/20/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420A			SeqNo: 26895	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	2.93	0.25	3.06	0	95.8% 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: 0004003

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2		Batch ID: AA_0004025		Test Code: E215.1		Units: mg/L		Analysis Date: 4/20/2000		Prep Date:	
Client ID:		0004003		Run ID: AA_000420B				SeqNo: 26919			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	3.3	0.25	3.42	0	96.5%	90	110				
Sample ID: CCV2		Batch ID: AA_0004025		Test Code: E242.1		Units: mg/L		Analysis Date: 4/20/2000		Prep Date:	
Client ID:		0004003		Run ID: AA_000420C				SeqNo: 26945			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	1.23	0.25	1.24	0	99.2%	90	110				
Sample ID: CCV2		Batch ID: AA_0004025		Test Code: E258.1		Units: mg/L		Analysis Date: 4/24/2000		Prep Date:	
Client ID:		0004003		Run ID: AA_000420D				SeqNo: 26970			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	3.58	0.25	3.63	0	98.6%	90	110				
Sample ID: CCV3		Batch ID: AA_0004025		Test Code: E273.1		Units: mg/L		Analysis Date: 4/20/2000		Prep Date:	
Client ID:		0004003		Run ID: AA_000420A				SeqNo: 26906			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	2.94	0.25	3.06	0	96.1%	90	110				
Sample ID: CCV3		Batch ID: AA_0004025		Test Code: E215.1		Units: mg/L		Analysis Date: 4/20/2000		Prep Date:	
Client ID:		0004003		Run ID: AA_000420B				SeqNo: 26931			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	3.25	0.25	3.42	0	95.0%	90	110				

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: 0004003

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3	Batch ID: AA_00040025	Test Code: E242.1	Units: mg/L	Analysis Date: 4/20/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420C			SeqNo: 26956	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	1.22	0.25	1.24	0	98.4% 90 110
Sample ID: CCV3	Batch ID: AA_00040025	Test Code: E258.1	Units: mg/L	Analysis Date: 4/24/2000	Prep Date:
Client ID: 0004003	Run ID: AA_000420D			SeqNo: 26981	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	3.52	0.25	3.63	0	97.0% 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

On Site Technologies, LTD.

Date: 27-Apr-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0004003
Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: API_000405A	Test Code: E120.1	Units: uS/cm	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404B	SeqNo: 26241			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	ND	2			
Sample ID: MBlank	Batch ID: API_000405A	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404C	SeqNo: 26246			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	2.8	5			J
Alkalinity, Carbonate (As CaCO3)	ND	5			
Alkalinity, Hydroxide	ND	5			
Alkalinity, Total (As CaCO3)	2.8	5			J
Sample ID: MBlank	Batch ID: API_000405A	Test Code: E325.3	Units: mg/L	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404D	SeqNo: 26251			
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_000405A	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404E	SeqNo: 26343			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	8			

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: 0004003

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: API_000405A	Test Code: E160.1	Units: mg/L	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404F			SeqNo: 26348	
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

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: 0004003
Project: Thriftway Refinery

Date: 27-Apr-00

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0004003-02CD	Batch ID: API_000405A	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date: 4/4/2000	Prep Date:
Client ID: Stripper Effluent	0004003	Run ID: WET CHEM_000404C		SeqNo: 26250	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	652	5	0	0	0.0% 0 643 1.4% 4
Alkalinity, Carbonate (As CaCO3)	ND	5	0	0	0.0% 0 0 0.0% 4
Alkalinity, Hydroxide	ND	5	0	0	0.0% 0 0 0.0% 4
Alkalinity, Total (As CaCO3)	652	5	0	0	0.0% 0 643 1.4% 4

Sample ID: 0004003-02CD	Batch ID: API_000405A	Test Code: E325.3	Units: mg/L	Analysis Date: 4/4/2000	Prep Date:
Client ID: Stripper Effluent	0004003	Run ID: WET CHEM_000404D		SeqNo: 26254	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	328	1	0	0	0.0% 0 322 1.8% 10

Sample ID: 0004003-02CD	Batch ID: API_000405A	Test Code: E160.1	Units: mg/L	Analysis Date: 4/4/2000	Prep Date:
Client ID: Stripper Effluent	0004003	Run ID: WET CHEM_000404F		SeqNo: 26352	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	3310	40	0	0	0.0% 0 3368 1.7% 5

Sample ID: 0004003-03CD	Batch ID: API_000405A	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 4/4/2000	Prep Date:
Client ID: Stripper Influent	0004003	Run ID: WET CHEM_000404E		SeqNo: 26347	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	1557	8	0	0	0.0% 0 1504 3.5% 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.

CLIENT: BioTech Remediation, Inc.
 Work Order: 0004003
 Project: Thriftway Refinery

Date: 27-Apr-00

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS	Batch ID: API_000405A	Test Code: E325.3	Units: mg/L	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404D			SeqNo: 26252	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	174	1	200	0 87.0%	83 113

Sample ID: LCS	Batch ID: API_000405A	Test Code: E160.1	Units: mg/L	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404F			SeqNo: 26349	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	814	40	810	0 100.5%	88 105

Sample ID: LCS 3018	Batch ID: API_000405A	Test Code: E150.1	Units: pH units	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404A			SeqNo: 26237	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
pH	8.988	2	9.08	0 99.0%	97 102

Sample ID: LCS 3018	Batch ID: API_000405A	Test Code: E150.1	Units: pH units	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404A			SeqNo: 26240	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
pH	9.007	2	9.08	0 99.2%	97 102

Sample ID: LCS 3018	Batch ID: API_000405A	Test Code: E120.1	Units: uS/cm	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404B			SeqNo: 26242	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	932	2	925	0 100.8%	96 103

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: 0004003

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3018	Batch ID: API_000405A	Test Code: E120.1	Units: uS/cm	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404B			SeqNo: 26245	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val
Specific Conductance	935	2	925	0 101.1%	96 103

Sample ID: LCS 3018	Batch ID: API_000405A	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404C			SeqNo: 26247	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val
Alkalinity, Total (As CaCO3)	203	5	203	2.8 98.6%	89 109

Sample ID: LCS 3018	Batch ID: API_000405A	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 4/4/2000	Prep Date:
Client ID: 0004003	Run ID: WET CHEM_000404E			SeqNo: 26344	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val
Sulfate	69.4	8	69.2	0 100.3%	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



Mountain States Analytical, Inc.

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

Analytical Report

April 13, 2000

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

Project: PAH Analysis

Work Order: 0004054

Dear Mr. David Cox,

Mountain States Analytical, Inc. received 2 samples on Thursday, April 06, 2000, for the analyses presented in the following report. Please note that this report is designated as Report Number 0004054-1 and consists of 14 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

Analytical Report

Work Order Receipt Summary

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

Report Number: 0004054-1
Date Reported: 04/13/00
Work Order: 0004054

Received by: Pamela Olsen
Cooler Number/ID: 1/OST Cooler
Thermometer ID: 2018
Air Bill: 1Z-66E-585-011001-524-0
Packing Material: Bubble wrap, ice.
Samples: 0004003-02B, 0004003-03B
Carrier name: UPS

Date Received: 04/06/00 10:15
Temperature: 5.1 °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:

Comments: Bottle lid for 0004003-02B was cracked upon arrival; no leakage. Lid was replaced at MSAI.



Mountain States Analytical, Inc.

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

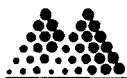
Analytical Report

Sample Summary

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

Report Number: 0004054-1
Date Reported: 04/13/00
Work Order: 0004054

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0004054-01A	0004003-02B		Water	04/03/00
0004054-02A	0004003-03B		Water	04/03/00



Holding Time Summary

Client: On Site Technologies, Ltd.

Project: PAH Analysis

Project ID:

Report Number: 0004054-1

Date Reported: 04/13/00

Work Order: 0004054

Sample ID	Client Sample ID	Date Collected						
0004054-01A	0004003-02B	04/03/00 10:51						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				04/10/00 15:00	7	04/11/00 21:48	40	
0004054-02A	0004003-03B	04/03/00 10:42						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				04/10/00 15:00	7	04/11/00 22:35	40	

* - The recommended holding time was exceeded

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

Report Number: 0004054-1
Date Reported: 04/13/00
Work Order: 0004054
Lab Sample ID: 0004054-01A
Client Sample ID: 0004003-02B
Date Collected: 04/03/00
Date Received: 04/06/00 10:15
Matrix: Water
COC ID:

Project: PAH Analysis
Project ID: **Thriftway Refinery; Stripper Effluent**
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	04/11/00 21:48	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	04/11/00 21:48	KPF
Anthracene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	04/11/00 21:48	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	04/11/00 21:48	KPF
Chrysene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Fluorene	U	2.8	9.43	µg/L	1	04/11/00 21:48	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
2-Methylnaphthalene	6.90 J	5.7	9.43	µg/L	1	04/11/00 21:48	KPF
Naphthalene	12.1	4.7	9.43	µg/L	1	04/11/00 21:48	KPF
Phenanthrene	2.40 J	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Pyrene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	53.3	1-141.25		% Recovery	1	04/11/00 21:48	KPF
2-Fluorophenol	44.7	1-81.1		% Recovery	1	04/11/00 21:48	KPF
2-Fluorobiphenyl	72.6	30.84-108.77		% Recovery	1	04/11/00 21:48	KPF
Nitrobenzene-d5	76.8	32.75-105.37		% Recovery	1	04/11/00 21:48	KPF
Phenol-d6	35.4	1-71.88		% Recovery	1	04/11/00 21:48	KPF
Terphenyl-d14	63.4	25.98-134.37		% Recovery	1	04/11/00 21:48	KPF

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

Prep Batch ID: 2379

0.94 04/10/00 15:00 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

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

Report Number: 0004054-1
Date Reported: 04/13/00
Work Order: 0004054
Lab Sample ID: 0004054-02A
Client Sample ID: 0004003-03B
Date Collected: 04/03/00
Date Received: 04/06/00 10:15
Matrix: Water
COC ID:

Project: PAH Analysis
Project ID: Thriftway Refinery; Stripper Influent
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.39	µg/L	1	04/11/00 22:35	KPF
Acenaphthylene	U	3.8	9.39	µg/L	1	04/11/00 22:35	KPF
Anthracene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Benz(a)anthracene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Benzo(a)pyrene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Benzo(b)fluoranthene	U	2.8	9.39	µg/L	1	04/11/00 22:35	KPF
Benzo(ghi)perylene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Benzo(k)fluoranthene	U	2.8	9.39	µg/L	1	04/11/00 22:35	KPF
Chrysene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Dibenz(a,h)anthracene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Fluoranthene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Fluorene	4.60 J	2.8	9.39	µg/L	1	04/11/00 22:35	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
2-Methylnaphthalene	61.9	5.6	9.39	µg/L	1	04/11/00 22:35	KPF
Naphthalene	87.4	4.7	9.39	µg/L	1	04/11/00 22:35	KPF
Phenanthrene	3.60 J	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Pyrene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	87.3	1-141.25		% Recovery	1	04/11/00 22:35	KPF
2-Fluorophenol	14.3	1-81.1		% Recovery	1	04/11/00 22:35	KPF
2-Fluorobiphenyl	75.2	30.84-108.77		% Recovery	1	04/11/00 22:35	KPF
Nitrobenzene-d5	72.7	32.75-105.37		% Recovery	1	04/11/00 22:35	KPF
Phenol-d6	28.4	1-71.88		% Recovery	1	04/11/00 22:35	KPF
Terphenyl-d14	63.3	25.98-134.37		% Recovery	1	04/11/00 22:35	KPF

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

Prep Batch ID: 2379

0.94 04/10/00 15:00 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

Analytical Report

Quality Control Summary

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

Report Number: 0004054-1
Date Reported: 04/13/00
Work Order: 0004054

SW-846 8270C: Semi-Volatiles, Extract

QC Type: Method Blank
Sample ID: MB-2379
Run ID: HP-1_000411A

Analysis Date: 04/11/00 19:24
Prep Batch ID: 2379

Units: µg/L
Seq No: 77077

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	U					145			
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			
Benidine	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			
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			
4-Chloro-3-methylphenol	U					147			
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



Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

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

Report Number: 0004054-1
Date Reported: 04/13/00
Work Order: 0004054

2-Chloronaphthalene	U	6
2-Chlorophenol	U	134
4-Chlorophenyl-phenyl ether	U	5
3-Chloropropionitrile	U	1
Chrysene	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)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	124
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
2,4-Dinitrophenol	U	20
Dinoseb	U	5
2,4-Dinitrotoluene	U	139
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

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 Analysis

Project ID:

Report Number: 0004054-1

Date Reported: 04/13/00

Work Order: 0004054

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
Hexachloropropene	U	9
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
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	230
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
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

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

**Quality Control Summary****Client:** On Site Technologies, Ltd.**Project:** PAH Analysis**Project ID:****Report Number:** 0004054-1**Date Reported:** 04/13/00**Work Order:** 0004054

Nitrobenzene	U	3
2-Nitrophenol	U	6
4-Nitrophenol	U	132
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	176
Phenacetin	U	3
Phenanthrene	U	2
Phenol	U	112
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	115
Pyridine	U	3
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
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
Surrogates		
2,4,6-Tribromophenol	146.2	200 73.1 1 141.25

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

**Quality Control Summary****Client:** On Site Technologies, Ltd.**Project:** PAH Analysis**Project ID:****Report Number:** 0004054-1**Date Reported:** 04/13/00**Work Order:** 0004054**QC Type:** Laboratory Control Spike Duplicate**Sample ID:** LCSD-2379**Analysis Date:** 04/11/00 21:00**Units:** µg/L**Run ID:** HP-1_000411A**Prep Batch ID:** 2379**Seq No:** 77101

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	83.4		100	83.4	43	115	88.12	5.51	31
4-Chloro-3-methylphenol	88.59		100	88.6	53	113	91.13	2.83	42
2-Chlorophenol	79.2		100	79.2	47	107	79.96	0.96	40
1,4-Dichlorobenzene	67.92		100	67.9	19	91	69.37	2.12	28
2,4-Dinitrotoluene	92.11		100	92.1	60	120	95.89	4.02	38
N-Nitrosodi-N-propylamine	77.75		100	77.7	55	115	78.11	0.47	38
4-Nitrophenol	46.4		100	46.4	2	80	50.65	8.76	50
Pentachlorophenol	89.99		100	90.0	39	123	91.1	1.22	50
Phenol	40.88		100	40.9	3	81	41.33	1.12	42
Pyrene	89.6		100	89.6	60	120	94.7	5.53	31
1,2,4-Trichlorobenzene	71.59		100	71.6	20	98	75	4.65	28
Surrogates									
2,4,6-Tribromophenol	158.3		200	79.1	1	141.25			
2-Fluorophenol	103.2		200	51.6	1	81.1			
2-Fluorobiphenyl	74.14		100	74.1	30.84	108.77			
Nitrobenzene-d5	82.96		100	83.0	32.75	105.37			
Phenol-d6	72.19		200	36.1	1	71.88			
Terphenyl-d14	79.09		100	79.1	25.98	134.37			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

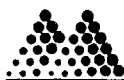
S - Results outside normal recovery limits

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

**Quality Control Summary**

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

Report Number: 0004054-1
Date Reported: 04/13/00
Work Order: 0004054

QC Type: Matrix Spike
Sample ID: 0004041-01CMS
Run ID: HP-1_000411A

Analysis Date: 04/12/00 00:10
Prep Batch ID: 2380

Units: µg/L
Seq No: 77105

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	302.8	U	400	75.7	43	115			
4-Chloro-3-methylphenol	384.7	U	400	96.2	53	113			
2-Chlorophenol	285.3	U	400	71.3	47	107			
1,4-Dichlorobenzene	271.5	U	400	67.9	19	91			
2,4-Dinitrotoluene	347.1	U	400	86.8	60	120			
N-Nitrosodi-N-propylamine	302	U	400	75.5	55	115			
4-Nitrophenol	35.3 J	U	400	8.82	2	80			
Pentachlorophenol	36.66 JS(2q)	U	400	9.16	39	123			
Phenol	161.3	U	400	40.3	3	81			
Pyrene	369.9	U	400	92.5	60	120			
1,2,4-Trichlorobenzene	285.8	U	400	71.5	20	98			
Surrogates									
2,4,6-Tribromophenol	397.3		800	49.7	1	141.25			
2-Fluorophenol	293.1		800	36.6	1	81.1			
2-Fluorobiphenyl	305.9		400	76.5	30.84	108.77			
Nitrobenzene-d5	322.3		400	80.6	32.75	105.37			
Phenol-d6	261.9		800	32.7	1	71.88			
Terphenyl-d14	335.6		400	83.9	25.98	134.37			

2q: MS/MSD are outside acceptable limits - LCS was within limits - non-target analyte coelution suspected

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

**Quality Control Summary**

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

Report Number: 0004054-1
Date Reported: 04/13/00
Work Order: 0004054

QC Type: Matrix Spike Duplicate
Sample ID: 0004041-01CMSD
Run ID: HP-1_000411A

Analysis Date: 04/12/00 00:58
Prep Batch ID: 2380

Units: µg/L
Seq No: 77106

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	308.2	U	400	77.0	43	115	302.8	1.75	31
4-Chloro-3-methylphenol	349.4	U	400	87.3	53	113	384.7	9.62	42
2-Chlorophenol	147.2 SR(2q)	U	400	36.8	47	107	285.3	63.90	40
1,4-Dichlorobenzene	279.6	U	400	69.9	19	91	271.5	2.93	28
2,4-Dinitrotoluene	354.4	U	400	88.6	60	120	347.1	2.07	38
N-Nitrosodi-N-propylamine	298.6	U	400	74.6	55	115	302	1.13	38
4-Nitrophenol	0 S(2q)	U	400	0	2	80	35.3	NC	50
Pentachlorophenol	0 S(2q)	U	400	0	39	123	36.66	NC	50
Phenol	109.3	U	400	27.3	3	81	161.3	38.40	42
Pyrene	375.4	U	400	93.8	60	120	369.9	1.45	31
1,2,4-Trichlorobenzene	300.6	U	400	75.1	20	98	285.8	5.04	28
Surrogates									
2,4,6-Tribromophenol	70.46		800	8.81	1	141.25			
2-Fluorophenol	88.2		800	11.0	1	81.1			
2-Fluorobiphenyl	315.7		400	78.9	30.84	108.77			
Nitrobenzene-d5	334.5		400	83.6	32.75	105.37			
Phenol-d6	178.7		800	22.3	1	71.88			
Terphenyl-d14	338.3		400	84.6	25.98	134.37			

2q: MS/MSD are outside acceptable limits - LCS was within limits - non-target analyte coelution suspected

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

On Site Technologies, LTD.

612 E. Murray Drive
Farmington, NM 87401
(505) 325-2432

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Subcontractor:

Mountain States Analytical, Inc.
1645 West 2200 South

TEL: (800) 973-6724
FAX: (801) 972-6278

Salt Lake City, UT 84119

Acct #:

05-Apr-00

Sample ID	Matrix	Collection Date	Bottle Type	SW8270C	Requested Tests
0004003-02B	Aqueous	4/3/2000 10:51:00 AM	1LAMGU	1	
0004003-03B	Aqueous	4/3/2000 10:42:00 AM	1LAMGU	1	

Comments: Please analyze two (2) water samples for PAH by Method 8270.

Relinquished by: Heidi Rose

Date/Time

4/5/00 1620

Received by: Pam Olsen (MSA)

Date/Time

4-6-00 1015

Relinquished by:

Received by:



Mountain States Analytical, Inc.

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

Analytical Report

April 20, 2000

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

Project: Total Metals & Anion Analysis

Work Order: 0004074

Dear Mr. David Cox,

Mountain States Analytical, Inc. received 2 samples on Friday, April 07, 2000, for the analyses presented in the following report. Please note that this report is designated as Report Number 0004074-1 and consists of 25 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

Analytical Report

Work Order Receipt Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

Received by: Pamela Olsen
Cooler Number/ID: 1/OST-E
Thermometer ID: 2018
Air Bill: 1Z-66E-585-01-1001-529-5
Packing Material: Newspaper, bubble wrap around glass containers and sealed inside zip-lock bags.
Samples: 000403-02, 000403-03, 0004017-01, 0004017-02, 0004017-03
Carrier name: UPS

Date Received: 04/07/00 10:25
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: Sample 0004003-02 & 0004003-03 HNO₃ pH <2

Comments:



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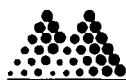
Analytical Report

Sample Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0004074-01A	0004003-02D		Water	04/03/00
0004074-01B	0004003-02E		Water	04/03/00
0004074-02A	0004003-03D		Water	04/03/00
0004074-02B	0004003-03E		Water	04/03/00



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Analytical Report

Holding Time Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

Sample ID	Client Sample ID	Date Collected						
0004074-01A	0004003-02D	04/03/00 10:51						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)						04/10/00 11:36	28	
0004074-01B	0004003-02E	04/03/00 10:51						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA				04/11/00 13:26		04/11/00 16:38	28	
Metals by hrICP				04/11/00 16:47		04/14/00 21:09	180	
0004074-02A	0004003-03D	04/03/00 10:42						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (B, Cl, Fl, SO4)						04/10/00 13:33	28	
0004074-02B	0004003-03E	04/03/00 10:42						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA				04/11/00 13:26		04/11/00 16:39	28	
Metals by hrICP				04/11/00 16:47		04/14/00 21:13	180	

* - The recommended holding time was exceeded



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Analytical Report

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074
Lab Sample ID: 0004074-01A
Client Sample ID: 0004003-02D
Date Collected: 04/03/00
Date Received: 04/07/00 10:25
Matrix: Water
COC ID:

Project: Total Metals & Anion Analysis
Project ID: **Thriftway Refinery; Stripper Effluent**
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (B, Cl, F, SO ₄), Water							
Bromide	1.96 J	0.4	2	mg/L	20	04/10/00 11:36	NWL
Fluoride	1.05	0.2	1	mg/L	20	04/10/00 11:36	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

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074
Lab Sample ID: 0004074-01B
Client Sample ID: 0004003-02E
Date Collected: 04/03/00
Date Received: 04/07/00 10:25
Matrix: Water
COC ID:

Project: Total Metals & Anion Analysis
Project ID: Thriftway Refinery; Stripper Effluent
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/hrICP Prep, Water							
Prep Batch ID: 2393						04/11/00 16:47	JWC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	04/11/00 16:38	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 2386						04/11/00 13:26	JEP
SW-846 6010B: Metals by hrICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	04/14/00 21:09	ITI
Barium	0.0517	0.003	0.015	mg/L	1	04/14/00 21:09	ITI
Cadmium	U	0.003	0.015	mg/L	1	04/14/00 21:09	ITI
Chromium	U	0.01	0.05	mg/L	1	04/14/00 21:09	ITI
Lead	0.0380 J	0.02	0.1	mg/L	1	04/14/00 21:09	ITI
Selenium	U	0.03	0.15	mg/L	1	04/14/00 21:09	ITI
Silver	0.00450 J	0.004	0.02	mg/L	1	04/14/00 21:09	ITI

U - Not detected above the MDL

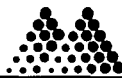
B - Analyte detected in the associated Method Blank

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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Analytical Report

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074
Lab Sample ID: 0004074-02A
Client Sample ID: 0004003-03D
Date Collected: 04/03/00
Date Received: 04/07/00 10:25
Matrix: Water
COC ID:

Project: Total Metals & Anion Analysis
Project ID: **Thriftway Refinery; Stripper Influent**
Purchase Order:

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	04/10/00 13:33	NWL
Fluoride	1.22	0.2	1	mg/L	20	04/10/00 13:33	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



Mountain States Analytical, Inc.

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Analytical Report

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074
Lab Sample ID: 0004074-02B
Client Sample ID: 0004003-03E
Date Collected: 04/03/00
Date Received: 04/07/00 10:25
Matrix: Water
COC ID:

Project: Total Metals & Anion Analysis
Project ID: **Thriftway Refinery; Stripper Influent**
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/hrICP Prep, Water							
Prep Batch ID: 2393						04/11/00 16:47	JWC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	04/11/00 16:39	JEP
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 2386						04/11/00 13:26	JEP
SW-846 6010B: Metals by hrICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	04/14/00 21:13	ITI
Barium	0.0522	0.003	0.015	mg/L	1	04/14/00 21:13	ITI
Cadmium	U	0.003	0.015	mg/L	1	04/14/00 21:13	ITI
Chromium	U	0.01	0.05	mg/L	1	04/14/00 21:13	ITI
Lead	U	0.02	0.1	mg/L	1	04/14/00 21:13	ITI
Selenium	0.0310 J	0.03	0.15	mg/L	1	04/14/00 21:13	ITI
Silver	U	0.004	0.02	mg/L	1	04/14/00 21:13	ITI

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

**Quality Control Summary**

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

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_000410A

Analysis Date: 04/10/00 10:29
Prep Batch ID: R4546

Units: mg/L
Seq No: 76471

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: WCH-000218-01
Run ID: IC 1_000410A

Analysis Date: 04/10/00 10:46
Prep Batch ID: IC 1_000410A

Units: mg/L
Seq No: 76472

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	407.4	U	400	102	90	110			
Fluoride	100.3	U	100	100	90	110			

QC Type: Laboratory Fortified Blank Duplicate
Sample ID: WCH-000218-01D
Run ID: IC 1_000410A

Analysis Date: 04/10/00 11:02
Prep Batch ID: IC 1_000410A

Units: mg/L
Seq No: 76473

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	406.7	U	400	102	90	110	407.4	0.17	20
Fluoride	100	U	100	100	90	110	100.3	0.31	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

**Quality Control Summary**

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Matrix Spike
Sample ID: 0004074-01A MS
Run ID: IC 1_000410A

Analysis Date: 04/10/00 11:53
Prep Batch ID: R4546

Units: mg/L
Seq No: 76476

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	80.34	1.957	80	98.0	80	120			
Fluoride	21.39	1.051	20	102	80	120			

QC Type: Matrix Spike Duplicate
Sample ID: 0004074-01A MSD
Run ID: IC 1_000410A

Analysis Date: 04/10/00 12:09
Prep Batch ID: R4546

Units: mg/L
Seq No: 76477

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	81.34	1.957	80	99.2	80	120	80.34	1.24	20
Fluoride	20.81	1.051	20	98.8	80	120	21.39	2.76	20

QC Type: Laboratory Reagent Blank
Sample ID: LRB 2
Run ID: IC 1_000410A

Analysis Date: 04/10/00 12:26
Prep Batch ID: R4546

Units: mg/L
Seq No: 76478

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

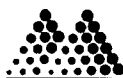
J - Analyte detected below the PQL

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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Mountain States Analytical, Inc.

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Analytical Report

Quality Control Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

SW-846 6010B: Metals by hrICP, Water

QC Type: Method Blank
Sample ID: PBW-2393
Run ID: TJA-IRIS_000417A

Analysis Date: 04/14/00 20:29
Prep Batch ID: 2393

Units: mg/L
Seq No: 78106

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Aluminum	0.01154				-0.2	0.1			
Antimony	-0.0108				-0.04	0.02			
Arsenic	-0.00948				-0.04	0.02			
Barium	0.0004				-0.006	0.003			
Beryllium	0.00001				-0.0004	0.0002			
Boron	0.02158				-0.2	0.2			
Cadmium	0.00024				-0.006	0.003			
Calcium	0.04909				-1	0.5			
Chromium	0.00277				-0.02	0.01			
Cobalt	0.00079				-0.006	0.003			
Copper	0.00445				-0.02	0.01			
Iron	0.02342				-0.2	0.1			
Lead	0.00196				-0.04	0.02			
Magnesium	0.01084				-0.2	0.1			
Manganese	0.00093				-0.006	0.003			
Molybdenum	0.00201				-0.02	0.01			
Nickel	0.00215				-0.1	0.005			
Phosphorus	0.00751				-0.4	0.2			
Potassium	-0.01242				-0.6	0.2			
Selenium	-0.01548				-0.06	0.03			
Silver	0.0002				-0.006	0.004			
Sodium	0.1117				-1	1			
Strontium	0.00027				-0.004	0.002			
Thallium	-0.00102				-0.04	0.02			
Tin	0.00177				-0.04	0.02			
Titanium	0.00084				-0.004	0.002			
Vanadium	0.00042				-0.008	0.004			
Zinc	0.00997				-0.1	0.05			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

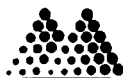
J - Analyte detected below the PQL

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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Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-2393
Run ID: TJA-IRIS_000417A

Analysis Date: 04/14/00 20:33
Prep Batch ID: 2393

Units: mg/L
Seq No: 78107

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Aluminum	8.837		8	110	75	125			
Antimony	2.23		2	111	75	125			
Arsenic	2.295		2	115	75	125			
Barium	0.4708		0.4	118	75	125			
Beryllium	0.04501		0.04	113	75	125			
Boron	2.318		2	116	75	125			
Cadmium	0.2355		0.2	118	75	125			
Calcium	23.45		20	117	75	125			
Chromium	0.9224		0.8	115	75	125			
Cobalt	0.232		0.2	116	75	125			
Copper	0.9107		0.8	114	75	125			
Iron	4.755		4	119	75	125			
Lead	2.313		2	116	75	125			
Magnesium	9.331		8	117	75	125			
Manganese	0.2336		0.2	117	75	125			
Molybdenum	0.9357		0.8	117	75	125			
Nickel	0.9216		0.8	115	75	125			
Phosphorus	11.93		10	119	75	125			
Potassium	22.58		20	113	75	125			
Selenium	2.348		2	117	75	125			
Silver	0.2343		0.2	117	75	125			
Sodium	22.31		20	112	75	125			
Strontium	0.2378		0.2	119	75	125			
Thallium	2.291		2	115	75	125			
Tin	2.408		2	120	75	125			
Titanium	0.2331		0.2	117	75	125			
Vanadium	0.4603		0.4	115	75	125			
Zinc	4.787		4	120	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.

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

Analytical Report

Quality Control Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Sample Duplicate
Sample ID: 0004110-01A D
Run ID: TJA-IRIS_000417A

Analysis Date: 04/14/00 20:40
Prep Batch ID: 2393

Units: mg/L
Seq No: 78109

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Aluminum	U						U	NC	20
Antimony	U						U	NC	20
Arsenic	U						U	NC	20
Barium	0.05252						0.05272	0.38	20
Beryllium	U						U	NC	20
Boron	U						U	NC	20
Cadmium	U						U	NC	20
Calcium	108.3						107.5	0.82	20
Chromium	U						U	NC	20
Cobalt	U						U	NC	20
Copper	U						U	NC	20
Iron	U						U	NC	20
Lead	U						U	NC	20
Magnesium	41.53						41.51	0.05	20
Manganese	0.03309						0.03319	0.30	20
Molybdenum	U						U	NC	20
Nickel	U						U	NC	20
Phosphorus	U						U	NC	20
Potassium	3.411						3.468	1.64	20
Selenium	U						U	NC	20
Silver	U						U	NC	20
Sodium	127.9						130.6	2.06	20
Strontium	0.9562						0.9578	0.17	20
Thallium	U						U	NC	20
Tin	U						U	NC	20
Titanium	0.00254J						0.00268	5.36	20
Vanadium	U						U	NC	20
Zinc	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

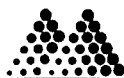
E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Mountain States Analytical, Inc.

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Analytical Report

Quality Control Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Matrix Spike
Sample ID: 0004110-01A MS
Run ID: TJA-IRIS_000417A

Analysis Date: 04/14/00 20:43
Prep Batch ID: 2393

Units: mg/L
Seq No: 78110

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Aluminum	7.902	U	8	98.8	75	125			
Antimony	2.063	U	2	103	75	125			
Arsenic	2.105	U	2	105	75	125			
Barium	0.4714	0.05272	0.4	105	75	125			
Beryllium	0.03973	U	0.04	99.3	75	125			
Boron	2.218	U	2	111	75	125			
Cadmium	0.2086	U	0.2	104	75	125			
Calcium	132.1	107.5	20	123	75	125			
Chromium	0.8212	U	0.8	103	75	125			
Cobalt	0.2025	U	0.2	101	75	125			
Copper	0.8114	U	0.8	101	75	125			
Iron	4.361	U	4	109	75	125			
Lead	2.027	U	2	101	75	125			
Magnesium	51.19	41.51	8	121	75	125			
Manganese	0.2332	0.03319	0.2	100	75	125			
Molybdenum	0.847	U	0.8	106	75	125			
Nickel	0.7953	U	0.8	99.4	75	125			
Phosphorus	10.98	U	10	110	75	125			
Potassium	24.61	3.468	20	106	75	125			
Selenium	2.172	U	2	109	75	125			
Silver	0.2106	U	0.2	105	75	125			
Sodium	147.7	130.6	20	85.7	75	125			
Strontium	1.191	0.9578	0.2	117	75	125			
Thallium	1.966	U	2	98.3	75	125			
Tin	2.152	U	2	108	75	125			
Titanium	0.2134	0.00268	0.2	105	75	125			
Vanadium	0.4106	U	0.4	103	75	125			
Zinc	4.251	U	4	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: Total Metals & Anion Analysis
Project ID:

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Matrix Spike Duplicate
Sample ID: 0004110-01A MSD
Run ID: TJA-IRIS_000417A

Analysis Date: 04/14/00 20:46
Prep Batch ID: 2393

Units: mg/L
Seq No: 78111

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Aluminum	7.741	U	8	96.8	75	125	7.902	2.06	20
Antimony	2.018	U	2	101	75	125	2.063	2.24	20
Arsenic	2.053	U	2	103	75	125	2.105	2.46	20
Barium	0.463	0.05272	0.4	103	75	125	0.4714	1.78	20
Beryllium	0.03882	U	0.04	97.0	75	125	0.03973	2.32	20
Boron	2.129	U	2	106	75	125	2.218	4.09	20
Cadmium	0.2041	U	0.2	102	75	125	0.2086	2.16	20
Calcium	128.7	107.5	20	106	75	125	132.1	2.59	20
Chromium	0.8037	U	0.8	100	75	125	0.8212	2.16	20
Cobalt	0.1974	U	0.2	98.7	75	125	0.2025	2.52	20
Copper	0.7852	U	0.8	98.1	75	125	0.8114	3.28	20
Iron	4.168	U	4	104	75	125	4.361	4.54	20
Lead	1.991	U	2	99.5	75	125	2.027	1.82	20
Magnesium	49.94	41.51	8	105	75	125	51.19	2.46	20
Manganese	0.228	0.03319	0.2	97.4	75	125	0.2332	2.23	20
Molybdenum	0.8351	U	0.8	104	75	125	0.847	1.41	20
Nickel	0.7811	U	0.8	97.6	75	125	0.7953	1.81	20
Phosphorus	10.74	U	10	107	75	125	10.98	2.18	20
Potassium	24.39	3.468	20	105	75	125	24.61	0.87	20
Selenium	2.121	U	2	106	75	125	2.172	2.40	20
Silver	0.2079	U	0.2	104	75	125	0.2106	1.29	20
Sodium	145.5 S(2c)	130.6	20	74.5	75	125	147.7	1.53	20
Strontium	1.171	0.9578	0.2	106	75	125	1.191	1.72	20
Thallium	1.937	U	2	96.9	75	125	1.966	1.46	20
Tin	2.098	U	2	105	75	125	2.152	2.54	20
Titanium	0.2061	0.00268	0.2	102	75	125	0.2134	3.49	20
Vanadium	0.4032	U	0.4	101	75	125	0.4106	1.83	20
Zinc	4.129	U	4	103	75	125	4.251	2.90	20

2c: Matrix concentration >4x spike concentration - Serial dilution is within 10% limits

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

Analytical Report

Quality Control Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Post Digestion/Distillation Spike
Sample ID: 0004110-01A A
Run ID: TJA-IRIS_000417A

Analysis Date: 04/14/00 20:50
Prep Batch ID: R4634

Units: mg/L
Seq No: 78112

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Aluminum	8.077	U	8	101	75	125			
Antimony	2.118	U	2	106	75	125			
Arsenic	2.141	U	2	107	75	125			
Barium	0.4834	0.05272	0.4	108	75	125			
Beryllium	0.04027	U	0.04	101	75	125			
Boron	2.265	U	2	113	75	125			
Cadmium	0.2144	U	0.2	107	75	125			
Calcium	130.3	107.5	20	114	75	125			
Chromium	0.8344	U	0.8	104	75	125			
Cobalt	0.2082	U	0.2	104	75	125			
Copper	0.8263	U	0.8	103	75	125			
Iron	4.341	U	4	109	75	125			
Lead	2.079	U	2	104	75	125			
Magnesium	50.27	41.51	8	110	75	125			
Manganese	0.2314	0.03319	0.2	99.1	75	125			
Molybdenum	0.8703	U	0.8	109	75	125			
Nickel	0.8127	U	0.8	102	75	125			
Phosphorus	11.3	U	10	113	75	125			
Potassium	25.38	3.468	20	110	75	125			
Selenium	2.175	U	2	109	75	125			
Silver	0.216	U	0.2	108	75	125			
Sodium	147	130.6	20	82.2	75	125			
Strontium	1.192	0.9578	0.2	117	75	125			
Thallium	2.016	U	2	101	75	125			
Tin	2.214	U	2	111	75	125			
Titanium	0.2173	0.00268	0.2	107	75	125			
Vanadium	0.4221	U	0.4	106	75	125			
Zinc	4.327	U	4	108	75	125			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

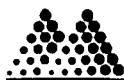
J - Analyte detected below the PQL

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.

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

Analytical Report

Quality Control Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Serial Dilution
Sample ID: 0004110-01A L
Run ID: TJA-IRIS_000417A

Analysis Date: 04/14/00 20:54
Prep Batch ID: R4634

Units: mg/L
Seq No: 78113

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Aluminum	U						U	NC	10
Antimony	U						U	NC	10
Arsenic	U						U	NC	10
Barium	0.05212J						0.05272	1.14	10
Beryllium	U						U	NC	10
Boron	U						U	NC	10
Cadmium	U						U	NC	10
Calcium	107.6						107.5	0.14	10
Chromium	U						U	NC	10
Cobalt	U						U	NC	10
Copper	U						U	NC	10
Iron	U						U	NC	10
Lead	U						U	NC	10
Magnesium	41.16						41.51	0.83	10
Manganese	0.03609J						0.03319	8.37	10
Molybdenum	U						U	NC	10
Nickel	U						U	NC	10
Phosphorus	U						U	NC	10
Potassium	2.997JR(6a)						3.468	14.50	10
Selenium	U						U	NC	10
Silver	U						U	NC	10
Sodium	124.3						130.6	4.93	10
Strontium	0.9614						0.9578	0.37	10
Thallium	U						U	NC	10
Tin	U						U	NC	10
Titanium	U						0.00268	NC	10
Vanadium	U						U	NC	10
Zinc	U						U	NC	10

6a: Serial dilution not evaluated - result <10x the detection limit

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

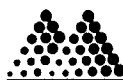
J - Analyte detected below the PQL

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

Analytical Report

Quality Control Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Method Blank
Sample ID: PBW-2393
Run ID: TJA-IRIS_000417B

Analysis Date: 04/17/00 13:26
Prep Batch ID: 2393

Units: mg/L
Seq No: 78412

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	-0.00685				-0.04	0.02			
Barium	0.00114				-0.006	0.003			
Cadmium	-0.00084				-0.006	0.003			
Chromium	-0.00043				-0.02	0.01			
Lead	-0.00681				-0.04	0.02			
Selenium	0.00534				-0.06	0.03			
Silver	0.00037				-0.006	0.004			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-2393
Run ID: TJA-IRIS_000417B

Analysis Date: 04/17/00 13:29
Prep Batch ID: 2393

Units: mg/L
Seq No: 78413

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	2.268		2	113	75	125			
Barium	0.4655		0.4	116	75	125			
Cadmium	0.2418		0.2	121	75	125			
Chromium	0.8768		0.8	110	75	125			
Lead	2.282		2	114	75	125			
Selenium	2.449		2	122	75	125			
Silver	0.242		0.2	121	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



Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Sample Duplicate
Sample ID: 0004110-01A D
Run ID: TJA-IRIS_000417B

Analysis Date: 04/17/00 13:35
Prep Batch ID: 2393

Units: mg/L
Seq No: 78415

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	20
Barium	0.05315						0.05311	0.08	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: 0004110-01A MS
Run ID: TJA-IRIS_000417B

Analysis Date: 04/17/00 13:37
Prep Batch ID: 2393

Units: mg/L
Seq No: 78416

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	2.122	U	2	106	75	125			
Barium	0.4695	0.05311	0.4	104	75	125			
Cadmium	0.2027	U	0.2	101	75	125			
Chromium	0.8337	U	0.8	104	75	125			
Lead	2.035	U	2	102	75	125			
Selenium	2.175	U	2	109	75	125			
Silver	0.2061	U	0.2	103	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: Total Metals & Anion Analysis
Project ID:

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Matrix Spike Duplicate
Sample ID: 0004110-01A MSD
Run ID: TJA-IRIS_000417B

Analysis Date: 04/17/00 13:40
Prep Batch ID: 2393

Units: mg/L
Seq No: 78417

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	2.065	U	2	103	75	125	2.122	2.72	20
Barium	0.46	0.05311	0.4	102	75	125	0.4695	2.04	20
Cadmium	0.2056	U	0.2	103	75	125	0.2027	1.43	20
Chromium	0.7944	U	0.8	99.3	75	125	0.8337	4.83	20
Lead	1.987	U	2	99.3	75	125	2.035	2.38	20
Selenium	2.168	U	2	108	75	125	2.175	0.32	20
Silver	0.207	U	0.2	103	75	125	0.2061	0.42	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0004110-01A A
Run ID: TJA-IRIS_000417B

Analysis Date: 04/17/00 13:43
Prep Batch ID: 2393

Units: mg/L
Seq No: 78418

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	0.9461	U	1	94.6	75	125			
Barium	0.2478	0.05311	0.2	97.3	75	125			
Cadmium	0.09932	U	0.1	99.3	75	125			
Chromium	0.368	U	0.4	92.0	75	125			
Lead	0.9406	U	1	94.1	75	125			
Selenium	1.067	U	1	107	75	125			
Silver	0.1036	U	0.1	104	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.

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

Analytical Report

Quality Control Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Serial Dilution
Sample ID: 0004110-01A L
Run ID: TJA-IRIS_000417B

Analysis Date: 04/17/00 13:46
Prep Batch ID: 2393

Units: mg/L
Seq No: 78419

Parameter	Result	Spike Parent	True Percent Value Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U					U	NC	10
Barium	0.0554J					0.05311	4.22	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: Total Metals & Anion Analysis
Project ID:

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

SW-846 7470A: Mercury by CVAA (USACE), Water

QC Type: Method Blank
Sample ID: PBW-2386
Run ID: FIMS_000411B

Analysis Date: 04/11/00 16:14
Prep Batch ID: 2386

Units: µg/L
Seq No: 76764

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	-0.002894				-0.1	0.1			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-2386
Run ID: FIMS_000411B

Analysis Date: 04/11/00 16:16
Prep Batch ID: 2386

Units: µg/L
Seq No: 76765

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.049		5	101	80	120			

QC Type: Sample Duplicate
Sample ID: 0004110-01A D
Run ID: FIMS_000411B

Analysis Date: 04/11/00 16:19
Prep Batch ID: 2386

Units: µg/L
Seq No: 76767

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

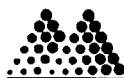
S - Results outside normal recovery limits

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



Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Matrix Spike
Sample ID: 0004110-01A MS
Run ID: FIMS_000411B

Analysis Date: 04/11/00 16:21
Prep Batch ID: 2386

Units: µg/L
Seq No: 76768

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.916	U	5	98.3	80	120			

QC Type: Matrix Spike Duplicate
Sample ID: 0004110-01A MSD
Run ID: FIMS_000411B

Analysis Date: 04/11/00 16:23
Prep Batch ID: 2386

Units: µg/L
Seq No: 76769

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.948	U	5	99.0	80	120	4.916	0.64	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0004110-01A A
Run ID: FIMS_000411B

Analysis Date: 04/11/00 16:25
Prep Batch ID: R4558

Units: µg/L
Seq No: 76770

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.961	U	5	99.2	85	115			

QC Type: Serial Dilution
Sample ID: 0004110-01A L
Run ID: FIMS_000411B

Analysis Date: 04/11/00 16:27
Prep Batch ID: R4558

Units: µg/L
Seq No: 76771

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	U						U	NC	10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

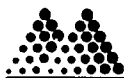
J - Analyte detected below the PQL

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: Total Metals & Anion Analysis
Project ID:

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Method Blank
Sample ID: PBW-2386
Run ID: FIMS_000411C

Analysis Date: 04/11/00 16:14
Prep Batch ID: 2386

Units: µg/L
Seq No: 76788

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	-0.002894				-0.1	0.1			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-2386
Run ID: FIMS_000411C

Analysis Date: 04/11/00 16:16
Prep Batch ID: 2386

Units: µg/L
Seq No: 76789

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.049		5	101	80	120			

QC Type: Sample Duplicate
Sample ID: 0004110-01A D
Run ID: FIMS_000411C

Analysis Date: 04/11/00 16:19
Prep Batch ID: 2386

Units: µg/L
Seq No: 76791

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: 0004110-01A MS
Run ID: FIMS_000411C

Analysis Date: 04/11/00 16:21
Prep Batch ID: 2386

Units: µg/L
Seq No: 76792

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.916	U	5	98.3	80	120			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

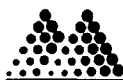
J - Analyte detected below the PQL

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.

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

Analytical Report

Quality Control Summary

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

Report Number: 0004074-1
Date Reported: 04/20/00
Work Order: 0004074

QC Type: Matrix Spike Duplicate
Sample ID: 0004110-01A MSD
Run ID: FIMS_000411C

Analysis Date: 04/11/00 16:23
Prep Batch ID: 2386

Units: µg/L
Seq No: 76793

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.948	U	5	99.0	80	120	4.916	0.64	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0004110-01A A
Run ID: FIMS_000411C

Analysis Date: 04/11/00 16:25
Prep Batch ID: R4559

Units: µg/L
Seq No: 76794

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.961	U	5	99.2	85	115			

QC Type: Serial Dilution
Sample ID: 0004110-01A L
Run ID: FIMS_000411C

Analysis Date: 04/11/00 16:27
Prep Batch ID: R4559

Units: µg/L
Seq No: 76795

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	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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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 #:

06-Apr-00

Sample ID	Matrix	Collection Date	Bottle Type	E300	Requested Tests	
					SW6010B	SW747D
0004003-02D	Aqueous	4/3/2000 10:51:00 AM	250HDPE	2		
0004003-02E	Aqueous	4/3/2000 10:51:00 AM	500HDPEHNO3			
0004003-03D	Aqueous	4/3/2000 10:42:00 AM	250HDPE	2	7	1
0004003-03E	Aqueous	4/3/2000 10:42:00 AM	500HDPEHNO3		7	1

Comments:

Please analyze two (2) water samples for (a) TOTAL Metals: Cr, Pb, As, Se, Ag, Ba, Cd, and Hg by SW6010B, (b) Fluoride and Bromide.

SW747D 10

Relinquished by:

[Signature]

Received by:

Pam Olsen (NSA)

Relinquished by:

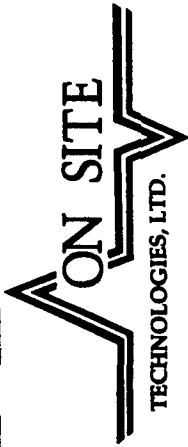
Received by:

Date/Time

4/6/00 1630

Date/Time

4-7-00 1025



CHAIN OF CUSTODY RECORD

10558

Date: 4/3/2000

Page: 1 of 1

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Purchase Order No.:		Project No.	
SEND INVOICE TO		Name	Title
Company		BioTech Remediation	
Address		Mailing Address 710 E. 20th St., Suite 400	
City, State, Zip		Farmington, NM 87401	
Telephone No.		505-327-4965	
Fax No.		505-327-4965	
PROJECT LOCATION: Thriftway Refinery 626 Rd 5500 Bloomfield, NM 87417			
SAMPLER'S SIGNATURE: Ken Sinks			
SAMPLE IDENTIFICATION		ANALYSIS REQUESTED	
DATE	TIME	MATRIX	PRES.
4/3	1000	H ₂ O	10d
4/7	1051	✓	✓
✓	1042	✓	✓
✓	1250	✓	✓
✓	1347	✓	✓
✓	1419	✓	✓
✓	1457	✓	✓
✓	1600	✓	✓
Travel Blank		✓	
Steppen Effluent		✓	
Steppen Influent		✓	
MW-13		✓	
MW-06		✓	
MW-05		✓	
MW-11		✓	
MW-10		✓	
Relinquished by: Ken Sinks		Date/Time: 4/3/00	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Method of Shipment:		Date/Time:	
Authorized by: Ken Sinks		Date: 4/3/2000	

REPORT RESULTS TO		Name		Title	
Containers		Terry Griffin		BioTech Remediation	
Number of		Mailing Address		710 E. 20th St., Suite 400	
Containers		City, State, Zip		Farmington, NM 87401	
Containers		Telephone No.		505-327-4965	
Containers		Fax No.		505-327-4965	
PAHs		✓		✓	
METALS		✓		✓	
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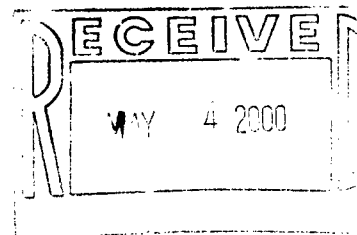
OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

April 28, 2000

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.: 0004042

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 4/17/2000 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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 28-Apr-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 0004042

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 28-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004042	Client Sample ID:	Travel Blank
Lab ID:	0004042-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	4/17/2000 10:00:00 AM
		COC Record:	10622

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	4/17/2000
Benzene	ND	0.5		µg/L	1	4/17/2000
Toluene	ND	0.5		µg/L	1	4/17/2000
Ethylbenzene	ND	0.5		µg/L	1	4/17/2000
m,p-Xylene	ND	1		µg/L	1	4/17/2000
o-Xylene	ND	0.5		µg/L	1	4/17/2000

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 -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 28-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004042	Client Sample ID:	Air Stripper Effluent
Lab ID:	0004042-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	4/17/2000 10:59:00 AM
		COC Record:	10622

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	22	1		µg/L	1	4/17/2000
Benzene	19	0.5		µg/L	1	4/17/2000
Toluene	4.2	0.5		µg/L	1	4/17/2000
Ethylbenzene	9	0.5		µg/L	1	4/17/2000
m,p-Xylene	35	1		µg/L	1	4/17/2000
o-Xylene	5.3	0.5		µg/L	1	4/17/2000

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 -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 28-Apr-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004042	Client Sample ID:	Air Stripper Influent
Lab ID:	0004042-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	4/17/2000 10:53:00 AM
		COC Record:	10622

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	4/17/2000
Toluene	440	5		µg/L	10	4/17/2000
Ethylbenzene	660	5		µg/L	10	4/17/2000
m,p-Xylene	2200	10		µg/L	10	4/17/2000
o-Xylene	240	5		µg/L	10	4/17/2000
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	2100	10		µg/L	20	4/26/2000

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 -

On Site Technologies, LTD.

Date: 28-Apr-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004042

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000417	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/17/2000				Prep Date:			
Client ID:	0004042	Run ID: GC-1_000417A		SeqNo: 26707							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.1004		0.5								J
Ethylbenzene	.1015		0.5								J
m,p-Xylene	.1613		1								J
Methyl tert-Butyl Ether	ND		1								
o-Xylene	ND		0.5								
Toluene	.1177		0.5								J

Sample ID: MB1	Batch ID: GC-1_000426	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/26/2000				Prep Date:			
Client ID:	0004042	Run ID: GC-1_000426A		SeqNo: 27097							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0817		0.5								J
Ethylbenzene	.1222		0.5								J
m,p-Xylene	.1907		1								J
Methyl tert-Butyl Ether	ND		1								
o-Xylene	.1052		0.5								J
Toluene	.1659		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: 28-Apr-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0004042
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0004024-01AMS		Batch ID: GC-1_000417		Test Code: SW8021B		Units: µg/L		Analysis Date: 4/17/2000		Prep Date:	
Client ID: 0004042		Run ID: GC-1_000417A		SeqNo: 26708							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	313.5	2.5	200	98.38	107.6%	73	126				
Ethylbenzene	407.2	2.5	200	207.6	99.8%	88	113				
m,p-Xylene	553.8	5	400	171	95.7%	83	112				
Methyl tert-Butyl Ether	205.8	5	200	0	102.9%	81	125				
o-Xylene	232.7	2.5	200	28.4	102.1%	93	110				
Toluene	251.4	2.5	200	45.92	102.7%	76	126				

Sample ID: 0004024-01AMSD		Batch ID: GC-1_000417		Test Code: SW8021B		Units: µg/L		Analysis Date: 4/17/2000		Prep Date:	
Client ID: 0004042		Run ID: GC-1_000417A		SeqNo: 26709							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	303.9	2.5	200	98.38	102.8%	73	126	313.5	3.1%	6	
Ethylbenzene	400.8	2.5	200	207.6	96.6%	88	113	407.2	1.6%	5	
m,p-Xylene	544.8	5	400	171	93.4%	83	112	553.8	1.6%	7	
Methyl tert-Butyl Ether	205.4	5	200	0	102.7%	81	125	205.8	0.2%	9	
o-Xylene	229.3	2.5	200	28.4	100.5%	93	110	232.7	1.5%	6	
Toluene	247.8	2.5	200	45.92	100.9%	76	126	251.4	1.5%	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: 0004042
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT
 Sample Matrix Spike

Sample ID: 0004053-01AMS		Batch ID: GC-1_000426	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/26/2000		Prep Date:	
Client ID: 0004042		Run ID: GC-1_000426A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result						RPD Limit	RPD Ref Val
Benzene	439.1	5	400	28.05	102.8%	73	126	
Ethylbenzene	409.9	5	400	1.578	102.1%	88	113	
m,p-Xylene	775.1	10	800	13.73	95.2%	83	112	
Methyl tert-Butyl Ether	430.8	10	400	0	107.7%	81	125	
o-Xylene	408.6	5	400	6.235	100.6%	93	110	
Toluene	436.2	5	400	34.42	100.4%	76	126	

Sample ID: 0004053-01AMS		Batch ID: GC-1_000426	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/26/2000		Prep Date:	
Client ID: 0004042		Run ID: GC-1_000426A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result						RPD Limit	RPD Ref Val
Benzene	427.8	5	400	28.05	99.9%	73	126	439.1
Ethylbenzene	397.5	5	400	1.578	99.0%	88	113	409.9
m,p-Xylene	752.6	10	800	13.73	92.4%	83	112	775.1
Methyl tert-Butyl Ether	427.8	10	400	0	106.9%	81	125	430.8
o-Xylene	397.8	5	400	6.235	97.9%	93	110	408.6
Toluene	423	5	400	34.42	97.2%	76	126	436.2

On Site Technologies, LTD.

Date: 28-Apr-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004042

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000417	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/17/2000		Prep Date:				
Client ID:		0004042	Run ID:	GC-1_000417A	SeqNo:	26706					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.65	0.5	40	0.1004	106.4%	89	112				
Ethylbenzene	41.7	0.5	40	0.1015	104.0%	93	112				
m,p-Xylene	78.23	1	80	0.1613	97.6%	88	108				
Methyl tert-Butyl Ether	41.49	1	40	0	103.7%	87	115				
o-Xylene	41.04	0.5	40	0	102.6%	93	112				
Toluene	41.2	0.5	40	0.1177	102.7%	92	111				

Sample ID: LCS WATER		Batch ID: GC-1_000426	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/26/2000		Prep Date:				
Client ID:		0004042	Run ID:	GC-1_000426A	SeqNo:	27096					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.58	0.5	40	0.0817	103.8%	89	112				
Ethylbenzene	42.33	0.5	40	0.1222	105.5%	93	112				
m,p-Xylene	79.13	1	80	0.1907	98.7%	88	108				
Methyl tert-Butyl Ether	41.56	1	40	0	103.9%	87	115				
o-Xylene	41.6	0.5	40	0.1052	103.7%	93	112				
Toluene	41.69	0.5	40	0.1659	103.8%	92	111				

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: 0004042
Project: Thriftway Refinery Air Stripper

Date: 28-Apr-00

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000417	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/17/2000		Prep Date:	
Client ID: 0004042		Run ID: GC-1_000417A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	21.1		0.5	20	0	105.5%	85	115
Ethylbenzene	21.08		0.5	20	0	105.4%	85	115
m,p-Xylene	39.21		1	40	0	98.0%	85	115
Methyl tert-Butyl Ether	20.85		1	20	0	104.3%	85	115
o-Xylene	20.76		0.5	20	0	103.8%	85	115
Toluene	20.44		0.5	20	0	102.2%	85	115
1,4-Difluorobenzene	90.81		0	100	0	90.8%	80	105
4-Bromochlorobenzene	89.6		0	100	0	89.6%	78	108
Fluorobenzene	90.86		0	100	0	90.9%	78	108

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000417	Test Code: SW8021B	Units: µg/L	Analysis Date: 4/17/2000		Prep Date:	
Client ID: 0004042		Run ID: GC-1_000417A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	19.71		0.5	20	0	98.5%	85	115
Ethylbenzene	20.09		0.5	20	0	100.5%	85	115
m,p-Xylene	37.37		1	40	0	93.4%	85	115
Methyl tert-Butyl Ether	20.31		1	20	0	101.6%	85	115
o-Xylene	19.86		0.5	20	0	99.3%	85	115
Toluene	19.61		0.5	20	0	98.0%	85	115
1,4-Difluorobenzene	90.26		0	100	0	90.3%	80	105
4-Bromochlorobenzene	90.7		0	100	0	90.7%	78	108
Fluorobenzene	89.08		0	100	0	89.1%	78	108

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: 0004042
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000417		Test Code: SW8021B		Units: µg/L		Analysis Date: 4/17/2000			Prep Date:						
Client ID: 0004042		Run ID: GC-1_000417A		PQL		SPK value		SPK Ref Val		%REC		SeqNo: 26705		RPD Limit		Qual	
Analyte	Result											LowLimit		HighLimit		RPD Ref Val	
Benzene	21.26	0.5		20		0		106.3%		85		115					
Ethylbenzene	21.99	0.5		20		0		110.0%		85		115					
m,p-Xylene	40.48	1		40		0		101.2%		85		115					
Methyl tert-Butyl Ether	21.79	1		20		0		108.9%		85		115					
o-Xylene	21.7	0.5		20		0		108.5%		85		115					
Toluene	21.34	0.5		20		0		106.7%		85		115					
1,4-Difluorobenzene	90.52	0		100		0		90.5%		80		105					
4-Bromochlorobenzene	88.1	0		100		0		88.1%		78		108					
Fluorobenzene	89.28	0		100		0		89.3%		78		108					

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000426		Test Code: SW8021B		Units: µg/L		Analysis Date: 4/26/2000			Prep Date:	
Client ID:		Run ID:		GC-1_000426A				SeqNo:		27093		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	21.44	0.5	20	0	107.2%	85	115					
Ethylbenzene	22.09	0.5	20	0	110.4%	85	115					
m,p-Xylene	41.18	1	40	0	103.0%	85	115					
Methyl tert-Butyl Ether	21.55	1	20	0	107.7%	85	115					
o-Xylene	21.82	0.5	20	0	109.1%	85	115					
Toluene	21.34	0.5	20	0	106.7%	85	115					
1,4-Difluorobenzene	91.04	0	100	0	91.0%	80	105					
4-Bromochlorobenzene	85.21	0	100	0	85.2%	78	108					
Fluorobenzene	90.83	0	100	0	90.8%	78	108					

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: 0004042

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0000		Batch ID: GC-1_000426		Test Code: SW8021B		Units: µg/L		Analysis Date: 4/26/2000		Prep Date:	
Client ID:		0004042		Run ID: GC-1_000426A				SeqNo: 27094			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.17	0.5	20	0	100.9%	85	115				
Ethylbenzene	20.91	0.5	20	0	104.6%	85	115				
m,p-Xylene	38.9	1	40	0	97.3%	85	115				
Methyl tert-Butyl Ether	21.22	1	20	0	106.1%	85	115				
o-Xylene	20.7	0.5	20	0	103.5%	85	115				
Toluene	20.26	0.5	20	0	101.3%	85	115				
1,4-Difluorobenzene	90.89	0	100	0	90.9%	80	105				
4-Bromochlorobenzene	87.32	0	100	0	87.3%	78	108				
Fluorobenzene	90.67	0	100	0	90.7%	78	108				

Sample ID: CCV3 BTEX_0001		Batch ID: GC-1_000426		Test Code: SW8021B		Units: µg/L		Analysis Date: 4/26/2000		Prep Date:	
Client ID:		0004042		Run ID:		GC-1_000426A		SeqNo: 27095			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.71	0.5	20	0	103.6%	85	115				
Ethylbenzene	21.16	0.5	20	0	105.8%	85	115				
m,p-Xylene	39.42	1	40	0	98.5%	85	115				
Methyl tert-Butyl Ether	21.59	1	20	0	108.0%	85	115				
o-Xylene	20.82	0.5	20	0	104.1%	85	115				
Toluene	20.8	0.5	20	0	104.0%	85	115				
1,4-Difluorobenzene	90.89	0	100	0	90.9%	80	105				
4-Bromochlorobenzene	86.92	0	100	0	86.9%	78	108				
Fluorobenzene	90.67	0	100	0	90.7%	78	108				

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: 28-Apr-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0004042
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0004024-01A	90.5	89.7	90.6
0004024-01AMS	89.8	91.8	89.2
0004024-01AMSD	89.7	91.6	88.6
0004031-11A	91.1	90.9	90.8
0004031-12A	91	89.6	90.7
0004031-13A	90.9	89.5	90.6
0004031-14A	93.6	90.1	94.4
0004031-15A	91.2	90.8	90.7
0004032-01A	88.9	88.6	89.5
0004032-02A	90.5	91	89.9
0004032-03A	89.3	88.7	89.8
0004038-01A	89.9	90.6	90.2
0004041-01A	90.5	91	90.5
0004041-02A	90.2	90.7	90
0004041-03A	90.9	90.6	91.2
0004041-04A	95.2	90.4	90.2
0004041-05A	95.3	91.5	93.8
0004041-06A	93.7	91	91.8
0004041-07A	91.5	91.5	90.5
0004042-01A	90.4	91.1	90.1
0004042-02A	89.7	88.8	90.9
0004042-03A	89.3	86.7	88.6
0004053-01A	90.9	84.9	91.4
0004053-01AMS	90.7	83.1	90.8
0004053-01AMSD	90.9	84.6	90.8
0004053-02A	91	81.3	91.9
0004054-01A	90.6	86.4	91.1

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 0004042
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0004054-02A	91.7	85.7	92.2
0004054-03A	90.8	86.7	91.4
0004055-01A	87.2	85	88.1
CCV1 BTEX_00040	91	85.2	90.8
CCV2 BTEX_00004	90.9	87.3	90.7
CCV2 BTEX_00040	90.3	90.7	89.1
CCV3 BTEX_00010	90.9	86.9	90.7
CCV3 BTEX_00040	90.5	88.1	89.3
LCS WATER	90.2	84.7	89.9
MB1	90.6	86.1	91.4

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

May 04, 2000

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.: 0004057

Dear Terry Griffin,

On Site Technologies, LTD. received 1 sample on 4/27/2000 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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 04-May-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 0004057

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 04-May-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0004057	Client Sample ID:	Air Stripper Effluent
Lab ID:	0004057-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	4/27/2000 9:05:00 AM
		COC Record:	10640

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	5/1/2000
Benzene	17	0.5		µg/L	1	5/1/2000
Toluene	3.3	0.5		µg/L	1	5/1/2000
Ethylbenzene	5.6	0.5		µg/L	1	5/1/2000
m,p-Xylene	20	1		µg/L	1	5/1/2000
o-Xylene	2.9	0.5		µg/L	1	5/1/2000

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 -

On Site Technologies, LTD.

Date: 04-May-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004057

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000501	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/1/2000	Prep Date:
Client ID:	0004057	Run ID: GC-1_000501A		SeqNo: 27195	
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	.1023	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: 04-May-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004057

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0004058-01AMS		Batch ID: GC-1_000501		Test Code: SW8021B		Units: µg/L		Analysis Date 5/1/2000		Prep Date:	
Client ID: 0004057		Run ID: GC-1_000501A		SeqNo: 27196							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	4159	50	4000	69.2	102.3%	73	126				
Ethylbenzene	4308	50	4000	144.4	104.1%	88	113				
m,p-Xylene	9211	100	8000	1541	95.9%	83	112				
Methyl tert-Butyl Ether	4104	100	4000	0	102.6%	81	125				
o-Xylene	4242	50	4000	151.8	102.3%	93	110				
Toluene	4242	50	4000	131	102.8%	76	126				

Sample ID: 0004058-01AMSD		Batch ID: GC-1_000501		Test Code: SW8021B		Units: µg/L		Analysis Date 5/1/2000		Prep Date:	
Client ID: 0004057		Run ID: GC-1_000501A		SeqNo: 27197							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	4174	50	4000	69.2	102.6%	73	126	4159	0.4%	6	
Ethylbenzene	4301	50	4000	144.4	103.9%	88	113	4308	0.2%	5	
m,p-Xylene	9201	100	8000	1541	95.8%	83	112	9211	0.1%	7	
Methyl tert-Butyl Ether	4134	100	4000	0	103.3%	81	125	4104	0.7%	9	
o-Xylene	4250	50	4000	151.8	102.4%	93	110	4242	0.2%	6	
Toluene	4224	50	4000	131	102.3%	76	126	4242	0.4%	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: 04-May-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0004057

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000501	Test Code: SW8021B	Units: µg/L	Analysis Date 5/1/2000				Prep Date:		
Client ID:		0004057	Run ID: GC-1_000501A		SeqNo:	27194					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.97	0.5	40	0	102.4%	89	112				
Ethylbenzene	42.36	0.5	40	0	105.9%	93	112				
m,p-Xylene	79.2	1	80	0	99.0%	88	108				
Methyl tert-Butyl Ether	41.52	1	40	0	103.8%	87	115				
o-Xylene	41.66	0.5	40	0	104.1%	93	112				
Toluene	41.46	0.5	40	0.1023	103.4%	92	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: 04-May-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0004057
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000501	Test Code: SW8021B	Units: µg/L		Analysis Date 5/1/2000				Prep Date:				
Client ID:		0004057	Run ID:	GC-1_000501A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result													
Benzene	21.48		0.5	20	0	107.4%	85	115						
Ethylbenzene	21.95		0.5	20	0	109.8%	85	115						
m,p-Xylene	40.66		1	40	0	101.7%	85	115						
Methyl tert-Butyl Ether	21.04		1	20	0	105.2%	85	115						
o-Xylene	21.58		0.5	20	0	107.9%	85	115						
Toluene	21.01		0.5	20	0	105.1%	85	115						
1,4-Difluorobenzene	90.78		0	100	0	90.8%	80	105						
4-Bromochlorobenzene	87.22		0	100	0	87.2%	78	108						
Fluorobenzene	91.26		0	100	0	91.3%	78	108						

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000501	Test Code: SW8021B		Units: µg/L		Analysis Date 5/1/2000			Prep Date:		
Client ID: 0004057		Run ID: GC-1_000501A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	21.34		0.5	20	0	106.7%	85	115				
Ethylbenzene	22.08		0.5	20	0	110.4%	85	115				
m,p-Xylene	40.55		1	40	0	101.4%	85	115				
Methyl tert-Butyl Ether	21.36		1	20	0	106.8%	85	115				
o-Xylene	21.72		0.5	20	0	108.6%	85	115				
Toluene	21.2		0.5	20	0	106.0%	85	115				
1,4-Difluorobenzene	90.62		0	100	0	90.6%	80	105				
4-Bromochlorobenzene	87.39		0	100	0	87.4%	78	108				
Fluorobenzene	90.48		0	100	0	90.5%	78	108				

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: 04-May-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0004057
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0004057-01A	90.1	88.8	90.7
0004058-01A	89.4	86.3	90.1
0004058-01AMS	89.6	87.5	89.4
0004058-01AMSD	89.7	86.7	89.8
0005003-01A	90.6	87.2	90.8
0005003-02A	89.7	87.5	90.2
0005003-03A	90.7	88.1	91.1
0005003-04A	90.6	86.5	90.7
0005003-05A	90.2	86.1	90.7
CCV1 BTEX_00040	90.8	87.2	91.3
CCV2 BTEX_00040	90.6	87.4	90.5
LCS WATER	89.7	88.4	89.5
MBI	89.9	87.5	89.8

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits



1546

Page: / of /

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Authorized by: *[Signature]*
(Client Signature Must Accompany)

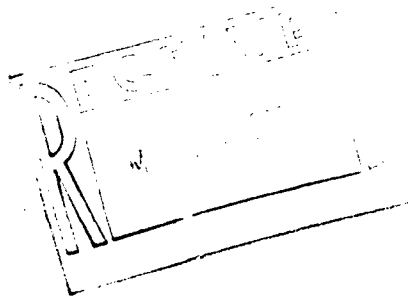
OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

May 19, 2000

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



RE: Thriftway Refinery

Order No. 0004003

Dear Terry Griffin,

On Site Technologies, LTD. received 8 samples on 4/3/2000 and were reported on 4/27/2000 with the initial requested analyses.

Ken Sinks contacted On Site Technologies, LTD. and requested that the Polynuclear Aromatic Hydrocarbons (SW8270C) parameter list be modified to include all parameters as reported previously.

Enclosed please find the respective reports that include the revised Polynuclear Aromatic Hydrocarbons.

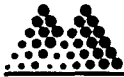
There were no problems with the analyses and all the data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

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 dark ink. The signature is stylized, with a large, looped 'D' and a cursive 'C'.

David Cox



Mountain States Analytical, Inc.

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

Analytical Report

May 03, 2000

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

Project: PAH Analysis

Work Order: 0004054

Dear Mr. David Cox,

Mountain States Analytical, Inc. received 2 samples on Thursday, April 06, 2000, for the analyses presented in the following report. Please note that this report is designated as Report Number 0004054-3 and consists of 14 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



Work Order Receipt Summary

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

Report Number: 0004054-3
Date Reported: 05/03/00
Work Order: 0004054

Received by: Pamela Olsen
Cooler Number/ID: 1/OST Cooler
Thermometer ID: 2018
Air Bill: 1Z-66E-585-011001-524-0
Packing Material: Bubble wrap, ice.
Samples: 0004003-02B, 0004003-03B
Carrier name: UPS

Date Received: 04/06/00 10:15
Temperature: 5.1 °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:

Comments: Bottle lid for 0004003-02B was cracked upon arrival; no leakage. Lid was replaced at MSAI.



Mountain States Analytical, Inc.

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

Analytical Report

Sample Summary

Client: On Site Technologies, Ltd.

Project: PAH Analysis

Project ID:

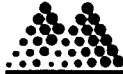
Report Number: 0004054-3

Date Reported: 05/03/00

Work Order: 0004054

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0004054-01A	0004003-02B		Water	04/03/00
0004054-02A	0004003-03B		Water	04/03/00

RECEIVED MAY 1 2000



Mountain States Analytical, Inc.

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

Analytical Report

Holding Time Summary

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

Report Number: 0004054-3
Date Reported: 05/03/00
Work Order: 0004054

Sample ID	Client Sample ID	Date Collected						
0004054-01A	0004003-02B	04/03/00 10:51						
		Leachate						
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				04/10/00 15:00	7	04/11/00 21:48	40	
0004054-02A	0004003-03B	04/03/00 10:42						
		Leachate						
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				04/10/00 15:00	7	04/11/00 22:35	40	

* - The recommended holding time was exceeded

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

Report Number: 0004054-3
Date Reported: 05/03/00
Work Order: 0004054
Lab Sample ID: 0004054-01A
Client Sample ID: 0004003-02B
Date Collected: 04/03/00
Date Received: 04/06/00 10:15
Matrix: Water
COC ID:

Project: PAH Analysis
Project ID: **Thriftway Refinery; Stripper Effluent**
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.43	µg/L	1	04/11/00 21:48	KPF
Acenaphthylene	U	3.8	9.43	µg/L	1	04/11/00 21:48	KPF
Anthracene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Benz(a)anthracene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Benzo(a)pyrene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Benzo(b)fluoranthene	U	2.8	9.43	µg/L	1	04/11/00 21:48	KPF
Benzo(ghi)perylene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Benzo(k)fluoranthene	U	2.8	9.43	µg/L	1	04/11/00 21:48	KPF
Chrysene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Dibenz(a,h)acridine	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Dibenz(a,h)anthracene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Fluoranthene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Fluorene	U	2.8	9.43	µg/L	1	04/11/00 21:48	KPF
Indene	U	4.7	9.43	µg/L	1	04/11/00 21:48	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
2-Methylnaphthalene	6.90 J	5.7	9.43	µg/L	1	04/11/00 21:48	KPF
Naphthalene	12.1	4.7	9.43	µg/L	1	04/11/00 21:48	KPF
Phenanthrene	2.40 J	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Pyrene	U	1.9	9.43	µg/L	1	04/11/00 21:48	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	53.3	1-141.25		% Recovery	1	04/11/00 21:48	KPF
2-Fluorophenol	44.7	1-81.1		% Recovery	1	04/11/00 21:48	KPF
2-Fluorobiphenyl	72.6	30.84-108.77		% Recovery	1	04/11/00 21:48	KPF
Nitrobenzene-d5	76.8	32.75-105.37		% Recovery	1	04/11/00 21:48	KPF
Phenol-d6	35.4	1-71.88		% Recovery	1	04/11/00 21:48	KPF
Terphenyl-d14	63.4	25.98-134.37		% Recovery	1	04/11/00 21:48	KPF

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

Prep Batch ID: 2379
 0.94 04/10/00 15:00 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

Analytical Report

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

Report Number: 0004054-3
Date Reported: 05/03/00
Work Order: 0004054
Lab Sample ID: 0004054-02A
Client Sample ID: 0004003-03B
Date Collected: 04/03/00
Date Received: 04/06/00 10:15
Matrix: Water
COC ID:

Project: PAH Analysis
Project ID: Thriftway Refinery; Stripper Influent
Purchase Order:

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.39	µg/L	1	04/11/00 22:35	KPF
Acenaphthylene	U	3.8	9.39	µg/L	1	04/11/00 22:35	KPF
Anthracene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Benz(a)anthracene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Benzo(a)pyrene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Benzo(b)fluoranthene	U	2.8	9.39	µg/L	1	04/11/00 22:35	KPF
Benzo(ghi)perylene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Benzo(k)fluoranthene	U	2.8	9.39	µg/L	1	04/11/00 22:35	KPF
Chrysene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Dibenz(a,h)acridine	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Dibenz(a,h)anthracene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Fluoranthene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Fluorene	4.60 J	2.8	9.39	µg/L	1	04/11/00 22:35	KPF
Indene	U	4.7	9.39	µg/L	1	04/11/00 22:35	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
2-Methylnaphthalene	61.9	5.6	9.39	µg/L	1	04/11/00 22:35	KPF
Naphthalene	87.4	4.7	9.39	µg/L	1	04/11/00 22:35	KPF
Phenanthrene	3.60 J	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Pyrene	U	1.9	9.39	µg/L	1	04/11/00 22:35	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	87.3	1-141.25		% Recovery	1	04/11/00 22:35	KPF
2-Fluorophenol	14.3	1-81.1		% Recovery	1	04/11/00 22:35	KPF
2-Fluorobiphenyl	75.2	30.84-108.77		% Recovery	1	04/11/00 22:35	KPF
Nitrobenzene-d5	72.7	32.75-105.37		% Recovery	1	04/11/00 22:35	KPF
Phenol-d6	28.4	1-71.88		% Recovery	1	04/11/00 22:35	KPF
Terphenyl-d14	63.3	25.98-134.37		% Recovery	1	04/11/00 22:35	KPF

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

Prep Batch ID: 2379 0.94 04/10/00 15:00 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

**Quality Control Summary**

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

Report Number: 0004054-3
Date Reported: 05/03/00
Work Order: 0004054

SW-846 8270C: Semi-Volatiles, Extract

QC Type: Method Blank
Sample ID: MB-2379
Run ID: HP-1_000411A

Analysis Date: 04/11/00 19:24
Prep Batch ID: 2379

Units: µg/L
Seq No: 77077

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	U					145			
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			
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			
4-Chloro-3-methylphenol	U					147			
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

**Quality Control Summary****Client:** On Site Technologies, Ltd.**Project:** PAH Analysis**Project ID:****Report Number:** 0004054-3**Date Reported:** 05/03/00**Work Order:** 0004054

2-Chloronaphthalene	U	6
2-Chlorophenol	U	134
4-Chlorophenyl-phenyl ether	U	5
3-Chloropropionitrile	U	1
Chrysene	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)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	124
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
2,4-Dinitrophenol	U	20
Dinoseb	U	5
2,4-Dinitrotoluene	U	139
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

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

**Quality Control Summary****Client:** On Site Technologies, Ltd.**Project:** PAH Analysis**Project ID:****Report Number:** 0004054-3**Date Reported:** 05/03/00**Work Order:** 0004054

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
Hexachloropropene	U	9
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
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	230
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
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

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

**Quality Control Summary****Client:** On Site Technologies, Ltd.**Project:** PAH Analysis**Project ID:****Report Number:** 0004054-3**Date Reported:** 05/03/00**Work Order:** 0004054

Nitrobenzene	U	3
2-Nitrophenol	U	6
4-Nitrophenol	U	132
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	176
Phenacetin	U	3
Phenanthrene	U	2
Phenol	U	112
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	115
Pyridine	U	3
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
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

Surrogates

2,4,6-Tribromophenol	146.2	200	73.1	1	141.25
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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

10



Quality Control Summary

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

Report Number: 0004054-3
Date Reported: 05/03/00
Work Order: 0004054

2-Fluorophenol	112.3	200	56.1	1	81.1
2-Fluorobiphenyl	72.9	100	72.9	30.84	108.77
Nitrobenzene-d5	79.49	100	79.5	32.75	105.37
Phenol-d6	77.67	200	38.8	1	71.88
Terphenyl-d14	80.82	100	80.8	25.98	134.37

QC Type: Laboratory Control Spike
Sample ID: LCS-2379
Run ID: HP-1_000411A

Analysis Date: 04/11/00 20:12
Prep Batch ID: 2379

Units: µg/L
Seq No: 77084

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	88.12		100	88.1	52	103			
4-Chloro-3-methylphenol	91.13		100	91.1	55	106			
2-Chlorophenol	79.96		100	80.0	48	94			
1,4-Dichlorobenzene	69.37		100	69.4	39	82			
2,4-Dinitrotoluene	95.89		100	95.9	57	113			
N-Nitrosodi-N-propylamine	78.11		100	78.1	48	97			
4-Nitrophenol	50.65		100	50.6	21	55			
Pentachlorophenol	91.1		100	91.1	49	122			
Phenol	41.33		100	41.3	18	52			
Pyrene	94.7		100	94.7	50	112			
1,2,4-Trichlorobenzene	75		100	75.0	41	86			
Surrogates									
2,4,6-Tribromophenol	167.5		200	83.8	1	141.25			
2-Fluorophenol	103.8		200	51.9	1	81.1			
2-Fluorobiphenyl	80.58		100	80.6	30.84	108.77			
Nitrobenzene-d5	86.47		100	86.5	32.75	105.37			
Phenol-d6	72.57		200	36.3	1	71.88			
Terphenyl-d14	83.19		100	83.2	25.98	134.37			

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

**Quality Control Summary****Client:** On Site Technologies, Ltd.**Project:** PAH Analysis**Project ID:****Report Number:** 0004054-3**Date Reported:** 05/03/00**Work Order:** 0004054**QC Type:** Laboratory Control Spike Duplicate**Sample ID:** LCSD-2379**Analysis Date:** 04/11/00 21:00**Units:** µg/L**Run ID:** HP-1_000411A**Prep Batch ID:** 2379**Seq No:** 77101

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	83.4		100	83.4	43	115	88.12	5.51	31
4-Chloro-3-methylphenol	88.59		100	88.6	53	113	91.13	2.83	42
2-Chlorophenol	79.2		100	79.2	47	107	79.96	0.96	40
1,4-Dichlorobenzene	67.92		100	67.9	19	91	69.37	2.12	28
2,4-Dinitrotoluene	92.11		100	92.1	60	120	95.89	4.02	38
N-Nitrosodi-N-propylamine	77.75		100	77.7	55	115	78.11	0.47	38
4-Nitrophenol	46.4		100	46.4	2	80	50.65	8.76	50
Pentachlorophenol	89.99		100	90.0	39	123	91.1	1.22	50
Phenol	40.88		100	40.9	3	81	41.33	1.12	42
Pyrene	89.6		100	89.6	60	120	94.7	5.53	31
1,2,4-Trichlorobenzene	71.59		100	71.6	20	98	75	4.65	28
Surrogates									
2,4,6-Tribromophenol	158.3		200	79.1	1	141.25			
2-Fluorophenol	103.2		200	51.6	1	81.1			
2-Fluorobiphenyl	74.14		100	74.1	30.84	108.77			
Nitrobenzene-d5	82.96		100	83.0	32.75	105.37			
Phenol-d6	72.19		200	36.1	1	71.88			
Terphenyl-d14	79.09		100	79.1	25.98	134.37			

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

12

**Quality Control Summary**

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

Report Number: 0004054-3
Date Reported: 05/03/00
Work Order: 0004054

QC Type: Matrix Spike
Sample ID: 0004041-01CMS
Run ID: HP-1_000411A

Analysis Date: 04/12/00 00:10
Prep Batch ID: 2380

Units: µg/L
Seq No: 77105

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	302.8	U	400	75.7	43	115			
4-Chloro-3-methylphenol	384.7	U	400	96.2	53	113			
2-Chlorophenol	285.3	U	400	71.3	47	107			
1,4-Dichlorobenzene	271.5	U	400	67.9	19	91			
2,4-Dinitrotoluene	347.1	U	400	86.8	60	120			
N-Nitrosodi-N-propylamine	302	U	400	75.5	55	115			
4-Nitrophenol	35.3J	U	400	8.82	2	80			
Pentachlorophenol	36.66JS(2q)	U	400	9.16	39	123			
Phenol	161.3	U	400	40.3	3	81			
Pyrene	369.9	U	400	92.5	60	120			
1,2,4-Trichlorobenzene	285.8	U	400	71.5	20	98			
Surrogates									
2,4,6-Tribromophenol	397.3		800	49.7	1	141.25			
2-Fluorophenol	293.1		800	36.6	1	81.1			
2-Fluorobiphenyl	305.9		400	76.5	30.84	108.77			
Nitrobenzene-d5	322.3		400	80.6	32.75	105.37			
Phenol-d6	261.9		800	32.7	1	71.88			
Terphenyl-d14	335.6		400	83.9	25.98	134.37			

2q: MS/MSD are outside acceptable limits - LCS was within limits - non-target analyte coelution suspected

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

**Quality Control Summary**

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

Report Number: 0004054-3
Date Reported: 05/03/00
Work Order: 0004054

QC Type: Matrix Spike Duplicate
Sample ID: 0004041-01CMSD
Run ID: HP-1_000411A

Analysis Date: 04/12/00 00:58
Prep Batch ID: 2380

Units: µg/L
Seq No: 77106

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	308.2	U	400	77.0	43	115	302.8	1.75	31
4-Chloro-3-methylphenol	349.4	U	400	87.3	53	113	384.7	9.62	42
2-Chlorophenol	147.2 SR(2q)	U	400	36.8	47	107	285.3	63.90	40
1,4-Dichlorobenzene	279.6	U	400	69.9	19	91	271.5	2.93	28
2,4-Dinitrotoluene	354.4	U	400	88.6	60	120	347.1	2.07	38
N-Nitrosodi-N-propylamine	298.6	U	400	74.6	55	115	302	1.13	38
4-Nitrophenol	0 S(2q)	U	400	0	2	80	35.3	NC	50
Pentachlorophenol	0 S(2q)	U	400	0	39	123	36.66	NC	50
Phenol	109.3	U	400	27.3	3	81	161.3	38.40	42
Pyrene	375.4	U	400	93.8	60	120	369.9	1.45	31
1,2,4-Trichlorobenzene	300.6	U	400	75.1	20	98	285.8	5.04	28
Surrogates									
2,4,6-Tribromophenol	70.46		800	8.81	1	141.25			
2-Fluorophenol	88.2		800	11.0	1	81.1			
2-Fluorobiphenyl	315.7		400	78.9	30.84	108.77			
Nitrobenzene-d5	334.5		400	83.6	32.75	105.37			
Phenol-d6	178.7		800	22.3	1	71.88			
Terphenyl-d14	338.3		400	84.6	25.98	134.37			

2q: MS/MSD are outside acceptable limits - LCS was within limits - non-target analyte coelution suspected

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

Purchase Order No.:		Project No.	
Name: Same		Dept.	
Company:			
Address:			
City, State, Zip:			
PROJECT LOCATION: Thriftway Refinery 626 Rd 5500 Bloomfield, NM 87413			
SAMPLER'S SIGNATURE: Ken Sinks			
SEND INVOICE TO			
PROJECT LOCATION:			
Thriftway Refinery			
626 Rd 5500			
Bloomfield, NM 87413			
SAMPLER'S SIGNATURE: Ken Sinks			
SAMPLE IDENTIFICATION			
DATE			
TIME			
MATRIX			
PRES.			
Travel Blank			
4/3			
1000			
H2O			
Hcl			
Stripper Effluent			
4/3			
1051			
✓			
Stripper Influent			
✓			
1042			
✓			
MW-13			
✓			
1250			
✓			
MW-06			
✓			
1347			
✓			
MW-05			
✓			
1718			
✓			
MW-11			
✓			
1457			
✓			
MW-10			
✓			
1600			
✓			
Relinquished by: Ken Sinks			
Date/Time: 4/3/00			
Relinquished by:			
Date/Time:			
Relinquished by:			
Date/Time:			
Method of Shipment:			
Authorized by: Ken Sinks			
Date: 4/3/2000			
(Client Signature Must Accompany Request)			

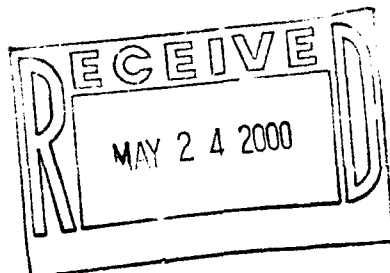
OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

May 22, 2000

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.: 0005018

Dear Terry Griffin,

On Site Technologies, LTD. received 2 samples on 5/8/2000 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". The signature is fluid and cursive.

David Cox

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 22-May-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 0005018

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 22-May-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	0005018	Client Sample ID:	Effluent
Lab ID:	0005018-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	5/8/2000 8:16:00 AM
		COC Record:	10677

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	460	20		µg/L	20	5/20/2000
Benzene	3100	10		µg/L	20	5/20/2000
Toluene	3200	10		µg/L	20	5/20/2000
Ethylbenzene	660	10		µg/L	20	5/20/2000
m,p-Xylene	2400	20		µg/L	20	5/20/2000
o-Xylene	440	10		µg/L	20	5/20/2000

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 22-May-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	0005018	Client Sample ID:	Trip Blank
Lab ID:	0005018-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	5/8/2000 8:16:00 AM
		COC Record:	10677

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	5/12/2000
Benzene	ND	0.5		µg/L	1	5/12/2000
Toluene	ND	0.5		µg/L	1	5/12/2000
Ethylbenzene	ND	0.5		µg/L	1	5/12/2000
m,p-Xylene	ND	1		µg/L	1	5/12/2000
o-Xylene	ND	0.5		µg/L	1	5/12/2000

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 -

On Site Technologies, LTD.

Date: 22-May-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0005018

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000512	Test Code: SW8021B	Units: µg/L	Analysis Date 5/12/2000	Prep Date:
Client ID:	0005018	Run ID: GC-1_000512A		SeqNo: 27502	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0523	0.5			J
Ethylbenzene	.1098	0.5			J
m,p-Xylene	.2052	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.2019	0.5			J
Toluene	.246	0.5			J

Sample ID: MB1	Batch ID: GC-1_000520	Test Code: SW8021B	Units: µg/L	Analysis Date 5/20/2000	Prep Date:
Client ID:	0005018	Run ID: GC-1_000520A		SeqNo: 27838	
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	.0893	0.5			J

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: 22-May-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0005018

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0005020-02AMS		Batch ID: GC-1_000512		Test Code: SW8021B		Units: µg/L		Analysis Date 5/12/2000		Prep Date:	
Client ID: 0005018		Run ID: GC-1_000512A		SeqNo: 27503							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	421.4	5	400	8.69	103.2%	73	126				
Ethylbenzene	682.6	5	400	256.9	106.4%	88	113				
m,p-Xylene	4103	10	800	3147	119.5%	83	112				
Methyl tert-Butyl Ether	422.4	10	400	0	105.6%	81	125				ES
o-Xylene	790.3	5	400	361.8	107.1%	93	110				
Toluene	453.6	5	400	16.98	109.2%	76	126				

Sample ID: 0005020-02AMSD		Batch ID: GC-1_000512		Test Code: SW8021B		Units: µg/L		Analysis Date 5/12/2000		Prep Date:	
Client ID: 0005018		Run ID: GC-1_000512A		SeqNo: 27504							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	400.7	5	400	8.69	98.0%	73	126	421.4	5.1%	6	
Ethylbenzene	657	5	400	256.9	100.0%	88	113	682.6	3.8%	5	
m,p-Xylene	3949	10	800	3147	100.2%	83	112	4103	3.8%	7	
Methyl tert-Butyl Ether	413.4	10	400	0	103.3%	81	125	422.4	2.2%	9	
o-Xylene	761.7	5	400	361.8	100.0%	93	110	790.3	3.7%	6	
Toluene	435.3	5	400	16.98	104.6%	76	126	453.6	4.1%	6	

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: 0005018
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT
 Sample Matrix Spike

Sample ID: 0005022-03AMS		Batch ID: GC-1_000520		Test Code: SW8021B		Units: µg/L		Analysis Date 5/20/2000		Prep Date:		
Client ID:		0005018		Run ID:		GC-1_000520A		SeqNo: 27839				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		6560	25	2000	4300	113.0%	73	126				
Ethylbenzene		2252	25	2000	120	106.6%	88	113				
m,p-Xylene		4980	50	4000	1000	99.5%	83	112				
Methyl tert-Butyl Ether		2174	50	2000	0	108.7%	81	125				
o-Xylene		2250	25	2000	170	104.0%	93	110				
Toluene		4377	25	2000	2300	103.8%	76	126				

Sample ID: 0005022-03AMSD		Batch ID: GC-1_000520	Test Code: SW8021B	Units: µg/L	Analysis Date 5/20/2000		Prep Date:				
Client ID:		0005018	Run ID:	GC-1_000520A	SeqNo:	27840					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	6404	25	2000	4300	105.2%	73	126	6560	2.4%	6	
Ethylbenzene	2201	25	2000	120	104.1%	88	113	2252	2.3%	5	
m,p-Xylene	4874	50	4000	1000	96.8%	83	112	4980	2.2%	7	
Methyl tert-Butyl Ether	2155	50	2000	0	107.8%	81	125	2174	0.9%	9	
o-Xylene	2207	25	2000	170	101.9%	93	110	2250	1.9%	6	
Toluene	4271	25	2000	2300	98.5%	76	126	4377	2.5%	6	

On Site Technologies, LTD.

Date: 22-May-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0005018

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_000512	Test Code: SW8021B	Units: µg/L	Analysis Date 5/12/2000	Prep Date:						
Client ID:	0005018	Run ID: GC-1_000512A		SeqNo: 27501							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.58	0.5	40	0.0523	101.3%	89	112				
Ethylbenzene	41.64	0.5	40	0.1098	103.8%	93	112				
m,p-Xylene	77.92	1	80	0.2052	97.2%	88	108				
Methyl tert-Butyl Ether	40.7	1	40	0	101.8%	87	115				
o-Xylene	41	0.5	40	0.2019	102.0%	93	112				
Toluene	40.96	0.5	40	0.246	101.8%	92	111				

Sample ID: LCS WATER		Batch ID: GC-1_000520	Test Code: SW8021B	Units: µg/L	Analysis Date 5/20/2000		Prep Date:				
Client ID:		0005018	Run ID:	GC-1_000520A	SeqNo:	27837					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.46	0.5	40	0	106.1%	89	112				
	42.76	0.5	40	0	106.9%	93	112				
Ethylbenzene	79.8	1	80	0	99.7%	88	108				
	43.17	1	40	0	107.9%	87	115				
Methyl tert-Butyl Ether	42.04	0.5	40	0	105.1%	93	112				
	42.16	0.5	40	0.0893	105.2%	92	111				
Toluene											

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: 22-May-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0005018

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000512	Test Code: SW8021B	Units: µg/L		Analysis Date 5/12/2000		Prep Date:	
Client ID: 0005018		Run ID: GC-1_000512A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 27498
Analyte	Result								
Benzene	20.34	0.5	20	0	101.7%	85	115		
Ethylbenzene	21.28	0.5	20	0	106.4%	85	115		
m,p-Xylene	39.77	1	40	0	99.4%	85	115		
Methyl tert-Butyl Ether	20.72	1	20	0	103.6%	85	115		
o-Xylene	21.03	0.5	20	0	105.2%	85	115		
Toluene	20.81	0.5	20	0	104.0%	85	115		
1,4-Difluorobenzene	88.52	0	100	0	88.5%	80	105		
4-Bromochlorobenzene	89.39	0	100	0	89.4%	78	108		
Fluorobenzene	86.81	0	100	0	86.8%	78	108		

Sample ID: CCV2 BTEX_0001		Batch ID: GC-1_000512	Test Code: SW8021B	Units: µg/L		Analysis Date 5/12/2000		Prep Date:	
Client ID: 0005018		Run ID: GC-1_000512A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 27499
Analyte	Result								
Benzene	20.16	0.5	20	0	100.8%	85	115		
Ethylbenzene	21.19	0.5	20	0	106.0%	85	115		
m,p-Xylene	39.95	1	40	0	99.9%	85	115		
Methyl tert-Butyl Ether	21.59	1	20	0	108.0%	85	115		
o-Xylene	20.96	0.5	20	0	104.8%	85	115		
Toluene	20.9	0.5	20	0	104.5%	85	115		
1,4-Difluorobenzene	89.08	0	100	0	89.1%	80	105		
4-Bromochlorobenzene	90.4	0	100	0	90.4%	78	108		
Fluorobenzene	87	0	100	0	87.0%	78	108		

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: 0005018
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000512	Test Code: SW8021B	Units: µg/L	Analysis Date 5/12/2000		Prep Date:				
Client ID: 0005018		Run ID: GC-1_000512A			SeqNo: 27500						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.4	0.5	40	0	101.0%	85	115				
Ethylbenzene	41.5	0.5	40	0	103.7%	85	115				
m,p-Xylene	77.58	1	80	0	97.0%	85	115				
Methyl tert-Butyl Ether	41.43	1	40	0	103.6%	85	115				
o-Xylene	41.06	0.5	40	0	102.6%	85	115				
Toluene	40.78	0.5	40	0	101.9%	85	115				
1,4-Difluorobenzene	88.76	0	100	0	88.8%	80	105				
4-Bromochlorobenzene	91.44	0	100	0	91.4%	78	108				
Fluorobenzene	86.94	0	100	0	86.9%	78	108				

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000520	Test Code: SW8021B	Units: µg/L	Analysis Date 5/20/2000	Prep Date:					
Client ID:		0005018	Run ID:	GC-1_000520A	SeqNo: 27834						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.59	0.5	20	0	112.9%	85	115				
Ethylbenzene	22.45	0.5	20	0	112.3%	85	115				
m,p-Xylene	41.89	1	40	0	104.7%	85	115				
Methyl tert-Butyl Ether	22.37	1	20	0	111.8%	85	115				
o-Xylene	22.1	0.5	20	0	110.5%	85	115				
Toluene	21.9	0.5	20	0	109.5%	85	115				
1,4-Difluorobenzene	88.27	0	100	0	88.3%	80	105				
4-Bromochlorobenzene	94.25	0	100	0	94.3%	78	108				
Fluorobenzene	84.19	0	100	0	84.2%	78	108				

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: 0005018

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000520	Test Code: SW8021B		Units: µg/L		Analysis Date: 5/20/2000		Prep Date:					
Client ID:		0005018	Run ID:	GC-1_000520A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result												
Benzene		21.55		0.5		20	0	107.7%	85	115				
Ethylbenzene		21.85		0.5		20	0	109.2%	85	115				
m,p-Xylene		40.65		1		40	0	101.6%	85	115				
Methyl tert-Butyl Ether		22.5		1		20	0	112.5%	85	115				
o-Xylene		21.57		0.5		20	0	107.8%	85	115				
Toluene		21.37		0.5		20	0	106.9%	85	115				
1,4-Difluorobenzene		87.86		0		100	0	87.9%	80	105				
4-Bromochlorobenzene		95.32		0		100	0	95.3%	78	108				
Fluorobenzene		83.48		0		100	0	83.5%	78	108				

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000520	Test Code: SW8021B		Units: µg/L		Analysis Date 5/20/2000		Prep Date:			
Client ID:	0005018	Run ID:	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	41.16		0.5	40	0	102.9%	85	115				
Ethylbenzene	41.2		0.5	40	0	103.0%	85	115				
m,p-Xylene	76.73		1	80	0	95.9%	85	115				
Methyl tert-Butyl Ether	43.95		1	40	0	109.9%	85	115				
o-Xylene	40.74		0.5	40	0	101.9%	85	115				
Toluene	40.75		0.5	40	0	101.9%	85	115				
1,4-Difluorobenzene	87.67		0	100	0	87.7%	80	105				
4-Bromochlorobenzene	94.93		0	100	0	94.9%	78	108				
Fluorobenzene	83.13		0	100	0	83.1%	78	108				

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: 22-May-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0005018
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0005004-01A	89.4	90.3	88.4
0005004-02A	87	92	85.2
0005004-03A	90.1	90.2	89.2
0005004-04A	90.2	89.8	88.6
0005004-05A	85.8	91.3	84.2
0005018-01A	86.2	96.2	81.3
0005018-02A	89.4	90	87.4
0005020-01A	89.5	90.3	88.4
0005020-02A	88	87.8	87.5
0005020-02AMS	88	90.3	87.1
0005020-02AMSD	88	90.5	86.8
0005020-03A	84.6	84.6	83.1
0005020-04A	88.4	93.9	84.4
0005020-05A	89	89.6	87.1
0005020-06A	88.2	90.2	87.2
0005022-01A	88.8	94.4	84.4
0005022-02A	86.5	92.6	85.4
0005022-03A	86.6	95.1	82.1
0005022-03AMS	86.4	95.4	82.3
0005022-03AMSD	86.3	95.4	82.2
0005022-04A	89.5	91.3	89.7
0005022-05A	86.7	91.1	84.6
0005022-06A	83.2	93.4	79.3
0005022-07A	86.8	88.2	84.8
0005022-08A	87.5	92.8	83.1
0005023-01A	86.5	94.1	82.6
0005031-01A	87	94.3	83.8

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 0005018
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0005031-02A	87.8	94.7	83.9
0005031-03A	87.9	95.1	83.8
0005031-04A	87.6	94.6	83.7
0005032-01A	88	95	83.5
0005032-02A	88	94.6	84
0005036-01A	88.3	94.9	84.6
0005036-02A	88.3	95.1	84.1
0005036-03A	85.1	93.1	81.6
0005036-04A	88.3	95.1	84.2
0005036-05A	87.7	94.9	83.5
0005049-03A	87.6	92.9	83.3
0005049-05A	88.5	95	84.5
CCV1 BTEX_00040	88.3	94.2	84.2
CCV2 BTEX_00010	89.1	90.4	87
CCV2 BTEX_00040	87.8	95.3	83.5
CCV3 BTEX_00040	87.7	94.9	83.1
LCS WATER	87.7	95	83
MBI	88.5	92.1	83.8

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* 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: 5/9/13

Page: 1 of 1[illegible]

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

May 30, 2000

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.: 0005053

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 5/22/2000 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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 30-May-00

CLIENT: BioTech Remediation, Inc.
Project: Thifftway Refinery Air Stripper
Lab Order: 0005053

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

OFF: (505) 325-5667
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LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 30-May-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0005053	Client Sample ID:	Stripper Influent
Lab ID:	0005053-01A	Matrix:	AQUEOUS
Project:	Thiftway Refinery Air Stripper	Collection Date:	5/22/2000 2:49:00 PM
		COC Record:	10711

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	5/24/2000
Benzene	2400	10		µg/L	20	5/25/2000
Toluene	1800	5		µg/L	10	5/24/2000
Ethylbenzene	600	5		µg/L	10	5/24/2000
m,p-Xylene	2100	10		µg/L	10	5/24/2000
o-Xylene	360	5		µg/L	10	5/24/2000

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 30-May-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0005053	Client Sample ID:	Stripper Effluent
Lab ID:	0005053-02A	Matrix:	AQUEOUS
Project:	Thiftway Refinery Air Stripper	Collection Date:	5/22/2000 3:00:00 PM
		COC Record:	10711

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	39	1		µg/L	1	5/25/2000
Benzene	26	0.5		µg/L	1	5/25/2000
Toluene	19	0.5		µg/L	1	5/25/2000
Ethylbenzene	6.4	0.5		µg/L	1	5/25/2000
m,p-Xylene	25	1		µg/L	1	5/25/2000
o-Xylene	7	0.5		µg/L	1	5/25/2000

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 -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 30-May-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0005053	Client Sample ID:	Trip Blank
Lab ID:	0005053-03A	Matrix:	AQUEOUS
Project:	Thiftway Refinery Air Stripper	Collection Date:	5/22/2000 8:45:00 AM
		COC Record:	10711

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	5/24/2000
Benzene	ND	0.5		µg/L	1	5/24/2000
Toluene	ND	0.5		µg/L	1	5/24/2000
Ethylbenzene	ND	0.5		µg/L	1	5/24/2000
m,p-Xylene	ND	1		µg/L	1	5/24/2000
o-Xylene	ND	0.5		µg/L	1	5/24/2000

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 -

On Site Technologies, LTD.

Date: 30-May-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0005053

Project: Thifway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000524	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/24/2000	Prep Date:
Client ID: 0005053	Run ID: GC-1_000524A	PQL	SPK value	SeqNo: 28092	
Analyte	Result	%REC	LowLimit	HighLimit	RPD Ref Val
Benzene	.2418				RPDLimit
Ethylbenzene	.1025				Qual
m,p-Xylene	.2478				
Methyl tert-Butyl Ether	ND				
o-Xylene	.1145				
Toluene	.2237				
Sample ID: MB1	Batch ID: GC-1_000525	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/25/2000	Prep Date:
Client ID: 0005053	Run ID: GC-1_000525A	PQL	SPK value	SeqNo: 28128	
Analyte	Result	%REC	LowLimit	HighLimit	RPD Ref Val
Benzene	ND				RPDLimit
Ethylbenzene	ND				Qual
m,p-Xylene	.1182				
Methyl tert-Butyl Ether	ND				
o-Xylene	.0413				
Toluene	.2642				

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-May-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0005053

Project: Thifway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0005053-01AMS		Batch ID: GC-1_000524	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/24/2000		Prep Date:				
Client ID: Stripper Influent		0005053	Run ID: GC-1_000524A		SeqNo: 28093						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2901	5	400	2393	126.9%	73	126				ES
Ethylbenzene	1023	5	400	599.5	105.8%	88	113				
m,p-Xylene	3010	10	800	2112	112.3%	83	112				S
Methyl tert-Butyl Ether	645.4	10	400	222.2	105.8%	81	125				
o-Xylene	783.8	5	400	355.6	107.1%	93	110				
Toluene	2233	5	400	1763	117.4%	76	126				E

Sample ID: 0005053-01AMSD		Batch ID: GC-1_000524	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/24/2000		Prep Date:				
Client ID: Stripper Influent		0005053	Run ID: GC-1_000524A		SeqNo: 28094						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2788	5	400	2393	98.7%	73	126	2901	4.0%	6	E
Ethylbenzene	983.6	5	400	599.5	96.0%	88	113	1023	3.9%	5	
m,p-Xylene	2894	10	800	2112	97.7%	83	112	3010	3.9%	7	
Methyl tert-Butyl Ether	633.8	10	400	222.2	102.9%	81	125	645.4	1.8%	9	
o-Xylene	764.9	5	400	355.6	102.3%	93	110	783.8	2.4%	6	
Toluene	2147	5	400	1763	95.9%	76	126	2233	3.9%	6	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: 0005053
Project: Thiftway Refinery Air Stripper

QC SUMMARY REPORT
 Sample Matrix Spike

Sample ID: 0005053-01AMS		Batch ID: GC-1_000525	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/25/2000			Prep Date:			
Client ID: Stripper Influent		0005053	Run ID: GC-1_000525A		SeqNo: 28129						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	3237	10	800	2403	104.2%	73	126				
Ethylbenzene	1427	10	800	621.6	100.7%	88	113				
m,p-Xylene	3722	20	1600	2150	98.3%	83	112				
Methyl tert-Butyl Ether	1072	20	800	211.5	107.6%	81	125				
o-Xylene	1190	10	800	363.4	103.4%	93	110				
Toluene	2636	10	800	1819	102.2%	76	126				

Sample ID: 0005053-01AMSD		Batch ID: GC-1_000525	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/25/2000			Prep Date:			
Client ID: Stripper Influent		0005053	Run ID: GC-1_000525A			SeqNo: 28130					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	3214	10	800	2400	101.7%	73	126	3237	0.7%	6	
Ethylbenzene	1419	10	800	620	99.8%	88	113	1427	0.6%	5	
m,p-Xylene	3694	20	1600	2100	99.6%	83	112	3722	0.7%	7	
Methyl tert-Butyl Ether	1074	20	800	210	107.9%	81	125	1072	0.1%	9	
o-Xylene	1164	10	800	360	100.5%	93	110	1190	2.2%	6	
Toluene	2622	10	800	1800	102.8%	76	126	2636	0.5%	6	

On Site Technologies, LTD.

CLIENT: BioTech Remediation, Inc.
Work Order: 0005053
Project: Thifftway Refinery Air Stripper

Date: 30-May-00

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_000524	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/24/2000		Prep Date:					
Client ID:	0005053	Run ID:	GC-1_000524A	SeqNo:	28091						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.68	0.5	40	0.2418	103.6%	89	112				
Ethylbenzene	41.22	0.5	40	0.1025	102.8%	93	112				
m,p-Xylene	78.64	1	80	0.2478	98.0%	88	108				
Methyl tert-Butyl Ether	40.9	1	40	0	102.2%	87	115				
o-Xylene	41.03	0.5	40	0.1145	102.3%	93	112				
Toluene	41.32	0.5	40	0.2237	102.7%	92	111				

Sample ID: LCS WATER		Batch ID: GC-1_000525	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/25/2000		Prep Date:						
Client ID:	0005053	Run ID:	GC-1_000525A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	41.43		0.5	40	0		103.6%	89	112				
Ethylbenzene	40.83		0.5	40	0		102.1%	93	112				
m,p-Xylene	77.56		1	80	0.1182		96.8%	88	108				
Methyl tert-Butyl Ether	41.92		1	40	0		104.8%	87	115				
o-Xylene	40.64		0.5	40	0.0413		101.5%	93	112				
Toluene	42.02		0.5	40	0.2642		104.4%	92	111				

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: 30-May-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0005053

Project: Thiftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000524	Test Code: SW8021B	Units: µg/L		Analysis Date: 5/24/2000		Prep Date:	
Client ID: 0005053		Run ID: GC-1_000524A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 28088
Analyte	Result								
Benzene	21.4	0.5	20	0	107.0%	85	115		
Ethylbenzene	21.3	0.5	20	0	106.5%	85	115		
m,p-Xylene	40.36	1	40	0	100.9%	85	115		
Methyl tert-Butyl Ether	20.88	1	20	0	104.4%	85	115		
o-Xylene	21.31	0.5	20	0	106.5%	85	115		
Toluene	21.06	0.5	20	0	105.3%	85	115		
1,4-Difluorobenzene	90.77	0	100	0	90.8%	80	105		
4-Bromochlorobenzene	88.51	0	100	0	88.5%	78	108		
Fluorobenzene	90.69	0	100	0	90.7%	78	108		

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000524	Test Code: SW8021B	Units: µg/L		Analysis Date: 5/24/2000		Prep Date:	
Client ID: 0005053		Run ID: GC-1_000524A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 28089
Analyte	Result								
Benzene	20.59	0.5	20	0	103.0%	85	115		
Ethylbenzene	20.61	0.5	20	0	103.1%	85	115		
m,p-Xylene	38.95	1	40	0	97.4%	85	115		
Methyl tert-Butyl Ether	21.51	1	20	0	107.5%	85	115		
o-Xylene	20.66	0.5	20	0	103.3%	85	115		
Toluene	20.38	0.5	20	0	101.9%	85	115		
1,4-Difluorobenzene	90.07	0	100	0	90.1%	80	105		
4-Bromochlorobenzene	87	0	100	0	87.0%	78	108		
Fluorobenzene	90.06	0	100	0	90.1%	78	108		

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

QC SUMMARY REPORT
Continuing Calibration Verification Standard

CLIENT: BioTech Remediation, Inc.
Work Order: 0005053
Project: Thifway Refinery Air Stripper

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000524	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/24/2000		Prep Date:				
Client ID:		0005053	Run ID: GC-1_000524A		SeqNo: 28090						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.45	0.5	40	0	101.1%	85	115				
Ethylbenzene	39.88	0.5	40	0	99.7%	85	115				
m,p-Xylene	75.55	1	80	0	94.4%	85	115				
Methyl tert-Butyl Ether	42.77	1	40	0	106.9%	85	115				
o-Xylene	39.98	0.5	40	0	99.9%	85	115				
Toluene	40.07	0.5	40	0	100.2%	85	115				
1,4-Difluorobenzene	89.05	0	100	0	89.0%	80	105				
4-Bromochlorobenzene	88.07	0	100	0	88.1%	78	108				
Fluorobenzene	89.28	0	100	0	89.3%	78	108				

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000525	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/25/2000				Prep Date:		
Client ID:		0005053	Run ID: GC-1_000525A		SeqNo: 28124						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	22.01	0.5	20	0	110.0%	85	115				
Ethylbenzene	21.74	0.5	20	0	108.7%	85	115				
m,p-Xylene	41.11	1	40	0	102.8%	85	115				
Methyl tert-Butyl Ether	21.6	1	20	0	108.0%	85	115				
o-Xylene	21.69	0.5	20	0	108.5%	85	115				
Toluene	22.46	0.5	20	0	112.3%	85	115				
1,4-Difluorobenzene	89.91	0	100	0	89.9%	80	105				
4-Bromochlorobenzene	89	0	100	0	89.0%	78	108				
Fluorobenzene	90.48	0	100	0	90.5%	78	108				

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

QC SUMMARY REPORT
Continuing Calibration Verification Standard

CLIENT: BioTech Remediation, Inc.
Work Order: 0005053
Project: Thifftway Refinery Air Stripper

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000525	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/25/2000			Prep Date:			
Client ID:		0005053	Run ID:	GC-1_000525A		SeqNo:	28125				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.07	0.5	20	0	105.4%	85	115				
Ethylbenzene	21.05	0.5	20	0	105.3%	85	115				
m,p-Xylene	39.81	1	40	0	99.5%	85	115				
Methyl tert-Butyl Ether	22.4	1	20	0	112.0%	85	115				
o-Xylene	21.14	0.5	20	0	105.7%	85	115				
Toluene	21.87	0.5	20	0	109.3%	85	115				
1,4-Difluorobenzene	89.41	0	100	0	89.4%	80	105				
4-Bromochlorobenzene	85.91	0	100	0	85.9%	78	108				
Fluorobenzene	90.04	0	100	0	90.0%	78	108				

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000525	Test Code: SW8021B	Units: µg/L	Analysis Date: 5/25/2000			Prep Date:			
Client ID:		0005053	Run ID:	GC-1_000525A			SeqNo:	28126			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.96	0.5	40	0	99.9%	85	115				
Ethylbenzene	39.38	0.5	40	0	98.5%	85	115				
m,p-Xylene	74.59	1	80	0	93.2%	85	115				
Methyl tert-Butyl Ether	41.88	1	40	0	104.7%	85	115				
o-Xylene	39.39	0.5	40	0	98.5%	85	115				
Toluene	40.5	0.5	40	0	101.3%	85	115				
1,4-Difluorobenzene	89.66	0	100	0	89.7%	80	105				
4-Bromochlorobenzene	85.66	0	100	0	85.7%	78	108				
Fluorobenzene	89.09	0	100	0	89.1%	78	108				

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: 30-May-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0005053
Project: Thiftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0005047-01A	89.4	87.8	90.7
0005047-02A	83	80.2	83.8
0005047-03A	89.5	87.8	90.4
0005047-04A	89.7	88.4	90.9
0005047-05A	89.8	87.5	90.7
0005047-06A	90.2	88.9	91
0005048-01A	88.3	87.9	89
0005048-02A	90	89.1	90.6
0005048-03A	88.5	87.3	88.4
0005048-05A	90.1	88.4	90.8
0005048-06A	90.7	88.4	92.1
0005048-07A	87.8	87.9	87.7
0005053-01A	88.6	89.4	88.3
0005053-01AMS	88.3	90	87.7
0005053-01AMSD	88.3	88.9	87.7
0005053-02A	88.8	87.7	89.9
0005053-03A	89.9	87.6	90.6
0005055-01A	89.8	88.9	90.7
0005055-02A	90.6	89.1	91.6
0005055-03A	99.5	88.7	94.4
0005055-04A	102	89.4	93.3
0005055-05A	101	88.6	92.2
0005055-06A	90.5	88.8	91.2
0005055-07A	89.8	87.4	90.3
0005055-08A	89.5	87.7	90.9
0005055-09A	87.4	87	88.3
0005055-10A	89.6	88.2	90.8

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 0005053
Project: Thiftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0005055-11A	89.9	88.6	90.7
0005055-12A	90.8	88.2	92.1
0005055-13A	90.7	88	91.2
0005055-14A	90.3	88.1	91.8
0005055-15A	90.1	88.6	90.7
0005056-01A	89	87.3	89.4
0005056-02A	89.6	88.1	90.8
0005056-03A	88.8	87.1	91.1
0005056-04A	90.7	88.4	90.7
0005057-01A	87.9	87.3	87.8
CCV1 BTEX_00040	89.9	89	90.5
CCV2 BTEX_00040	89.4	85.9	90
CCV3 BTEX_00040	89.6	85.7	89.1
LCS WATER	89.2	89.2	89.1
MBI	89.9	88.8	90.8

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* 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

Purchase Order No.: Site 812

Project No.

REPORT

RESULTS TO

Name Terry Griffin

Title

Company BioTech

Mailing Address 710 E 20th St. Suite 400

City, State, Zip Farmington, NM 87401

Telephone No.

Telefax No.

LAB ID

PROJECT LOCATION: Defensive Air Stripper Check Sample

626 Rd 5500
Bloomfield, NM 87401

SAMPLER'S SIGNATURE: Ken Sink

SAMPLE IDENTIFICATION

DATE

TIME

MATRIX

PRES.

Stripper Influent

Stripper Effluent

Tapwater Blank

5/22

1449

H₂O

gr

5/22

1500

H₂O

gr

5/31

845

H₂O

gr

Number of Containers

2

2

1

ANALYSIS REQUESTED

Relinquished by: Ken Sink

Relinquished by:

Relinquished by:

Method of Shipment:

Date/Time 5/22/00 1600

Date/Time

Date/Time

Received by: David J. Ince

Received by:

Received by:

Rush

24-48 Hours

10 Working Days

By Date

Date/Time 5/22/00 1600

Date/Time

Date/Time

Authorized by: Ken Sink

(Client Signature Must Accompany Request)

Date 5/22/00

Special Instructions / Remarks:

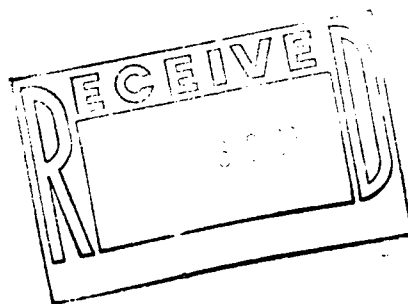
OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

June 20, 2000

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



RE: Bloomfield Refinery Air Stripper

Order No.: 0006003

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 5/31/2000 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".

David Cox

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 20-Jun-00

CLIENT: BioTech Remediation, Inc.
Project: Bloomfield Refinery Air Stripper
Lab Order: 0006003

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0006003	Client Sample ID:	Stripper Influent
Lab ID:	0006003-01A	Matrix:	AQUEOUS
Project:	Bloomfield Refinery Air Stripper	Collection Date:	5/31/2000 11:26:00 AM
		COC Record:	10724

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	190	20		µg/L	20	6/2/2000
Benzene	1200	10		µg/L	20	6/2/2000
Toluene	500	10		µg/L	20	6/2/2000
Ethylbenzene	530	10		µg/L	20	6/2/2000
m,p-Xylene	970	20		µg/L	20	6/2/2000
o-Xylene	210	10		µg/L	20	6/2/2000

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0006003	Client Sample ID:	Stripper Effluent
Lab ID:	0006003-02A	Matrix:	AQUEOUS
Project:	Bloomfield Refinery Air Stripper	Collection Date:	5/31/2000 11:33:00 AM
		COC Record:	10724

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	4.1	1		µg/L	1	6/2/2000
Benzene	1.7	0.5		µg/L	1	6/2/2000
Toluene	ND	0.5		µg/L	1	6/2/2000
Ethylbenzene	1.2	0.5		µg/L	1	6/2/2000
m,p-Xylene	2.1	1		µg/L	1	6/2/2000
o-Xylene	0.7	0.5		µg/L	1	6/2/2000

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

2 of 3

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0006003	Client Sample ID:	Trip Blank
Lab ID:	0006003-03A	Matrix:	AQUEOUS
Project:	Bloomfield Refinery Air Stripper	Collection Date:	5/31/2000 11:00:00 AM
		COC Record:	10724

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	6/2/2000
Benzene	ND	0.5		µg/L	1	6/2/2000
Toluene	ND	0.5		µg/L	1	6/2/2000
Ethylbenzene	ND	0.5		µg/L	1	6/2/2000
m,p-Xylene	ND	1		µg/L	1	6/2/2000
o-Xylene	ND	0.5		µg/L	1	6/2/2000

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

3 of 3

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 20-Jun-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0006003
Project: Bloomfield Refinery Air Stripper

QC SUMMARY REPORT
Method Blank

Sample ID: MB1	Batch ID: GC-1_000602	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/2/2000		Prep Date:					
Client ID:	0006003	Run ID: GC-1_000602A		SeqNo: 28294							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0361	0.5									J
Ethylbenzene	ND	0.5									
m,p-Xylene	ND	1									
Methyl tert-Butyl Ether	ND	1									
o-Xylene	ND	0.5									
Toluene	.0798	0.5									J

On Site Technologies, LTD.

Date: 20-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006003

Project: Bloomfield Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006003-01AMS		Batch ID: GC-1_000602		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/2/2000		Prep Date:	
Client ID: Stripper Influent		0006003		Run ID: GC-1_000602A				SeqNo: 28295			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2065	10	800	1223	105.3%	73	126				
Ethylbenzene	1349	10	800	529.6	102.4%	88	113				
m,p-Xylene	2519	20	1600	967.2	97.0%	83	112				
Methyl tert-Butyl Ether	1066	20	800	190.4	109.4%	81	125				
o-Xylene	1024	10	800	214.6	101.2%	93	110				
Toluene	1328	10	800	496.5	104.0%	76	126				

Sample ID: 0006003-01AMSD		Batch ID: GC-1_000602		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/2/2000		Prep Date:	
Client ID: Stripper Influent		0006003		Run ID: GC-1_000602A				SeqNo: 28296			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2029	10	800	1223	100.8%	73	126	2065	1.8%	6	
Ethylbenzene	1327	10	800	529.6	99.7%	88	113	1349	1.6%	5	
m,p-Xylene	2474	20	1600	967.2	94.2%	83	112	2519	1.8%	7	
Methyl tert-Butyl Ether	1019	20	800	190.4	103.5%	81	125	1066	4.5%	9	
o-Xylene	1021	10	800	214.6	100.8%	93	110	1024	0.3%	6	
Toluene	1320	10	800	496.5	102.9%	76	126	1328	0.6%	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: 20-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006003

Project: Bloomfield Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_000602	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/2/2000	Prep Date:
Client ID: 0006003	Run ID: GC-1_000602A	PQL	SPK value	SeqNo: 28293	
Analyte	Result	PQL	SPK value	LowLimit	HighLimit
Benzene	40.86	0.5	40	89	112
Ethylbenzene	40.82	0.5	40	93	112
m,p-Xylene	77.09	1	80	88	108
Methyl tert-Butyl Ether	41.92	1	40	87	115
o-Xylene	40.75	0.5	40	93	112
Toluene	40.93	0.5	40	92	111
				%REC	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: 20-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006003

Project: Bloomfield Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000602	Test Code: SW8021B		Units: µg/L		Analysis Date: 6/2/2000			Prep Date:					
Client ID:		0006003	Run ID:	GC-1_000602A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 28290	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result													
Benzene		19.94			0.5	20	0	99.7%	85	115					
Ethylbenzene		20.2			0.5	20	0	101.0%	85	115					
m,p-Xylene		37.98			1	40	0	95.0%	85	115					
Methyl tert-Butyl Ether		21.94			1	20	0	109.7%	85	115					
o-Xylene		20.19			0.5	20	0	101.0%	85	115					
Toluene		20			0.5	20	0	100.0%	85	115					
1,4-Difluorobenzene		88.8			0	100	0	88.8%	80	105					
4-Bromochlorobenzene		88.31			0	100	0	88.3%	78	108					
Fluorobenzene		87.52			0	100	0	87.5%	78	108					

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000602	Test Code: SW8021B		Units: µg/L		Analysis Date: 6/2/2000		Prep Date:		
Client ID:		0006003	Run ID:	GC-1_000602A			SeqNo:	28291			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.24	0.5	20	0	101.2%	85	115				
Ethylbenzene	20.82	0.5	20	0	104.1%	85	115				
m,p-Xylene	39.13	1	40	0	97.8%	85	115				
Methyl tert-Butyl Ether	22.59	1	20	0	113.0%	85	115				
o-Xylene	20.69	0.5	20	0	103.4%	85	115				
Toluene	20.48	0.5	20	0	102.4%	85	115				
1,4-Difluorobenzene	88.3	0	100	0	88.3%	80	105				
4-Bromochlorobenzene	90.36	0	100	0	90.4%	78	108				
Fluorobenzene	87.31	0	100	0	87.3%	78	108				

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: 0006003
Project: Bloomfield Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000602	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/2/2000		Prep Date:	
Client ID: 0006003		Run ID: GC-1_000602A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte		Result					SeqNo: 28292	
Benzene		38.65	0.5	40	0	96.6%	85	115
Ethylbenzene		38.52	0.5	40	0	96.3%	85	115
m,p-Xylene		72.89	1	80	0	91.1%	85	115
Methyl tert-Butyl Ether		42.9	1	40	0	107.2%	85	115
o-Xylene		38.62	0.5	40	0	96.5%	85	115
Toluene		38.82	0.5	40	0	97.0%	85	115
1,4-Difluorobenzene		88.28	0	100	0	88.3%	80	105
4-Bromochlorobenzene		88.57	0	100	0	88.6%	78	108
Fluorobenzene		86.73	0	100	0	86.7%	78	108

On Site Technologies, LTD.

Date: 20-Jun-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0006003
Project: Bloomfield Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0005063-01A	81.7	85.9	80.8
0005067-01A	89.6	92	88
0005067-03A	90.3	87.9	89.3
0005067-04A	88.9	87.7	87.8
0005067-05A	89	88.1	87.9
0006001-01A	89.5	89.8	88
0006001-02A	89.4	90.4	88.2
0006001-03A	89.1	90	88.4
0006001-04A	89.2	89.7	88.4
0006001-05A	89.6	89.5	88.1
0006002-01A	92.3	89.4	85.2
0006002-02A	88.8	88.9	86.6
0006002-03A	82	84.4	81.4
0006002-04A	111 *	90.3	93
0006002-05A	88.3	90.4	87.1
0006002-06A	136 *	93.9	95.7
0006003-01A	87.8	90.1	86.3
0006003-01AMS	87.8	90.2	85.5
0006003-01AMSD	87.3	90.1	85.6
0006003-02A	88.7	88.6	87.3
0006003-03A	89.8	90	88.1
CCV1 BTEX_00040	88.8	88.3	87.5
CCV2 BTEX_00040	88.3	90.4	87.3
CCV3 BTEX_00040	88.3	88.6	86.7
LCS WATER	88.3	89	86.7
MBI	89.4	88.7	88.1

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits



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Page: 1 of 1

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Authorized by: [Signature] Date 5/31/2000
(Client Signature Must Accompany Request)

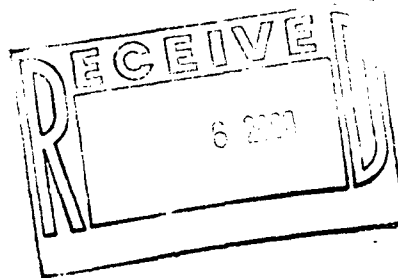
OFF: (505) 325-5667
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LAB: (505) 325-1556
FAX: (505) 327-1496

June 20, 2000

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



RE: Thriftway Refinery

Order No.: 0006016

Dear Terry Griffin,

On Site Technologies, LTD. received 10 samples on 6/7/2000 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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 20-Jun-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery
Lab Order: 0006016

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

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ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006016	Client Sample ID:	Travel Blank
Lab ID:	0006016-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/6/2000 9:00:00 AM
		COC Record:	10737

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	6/13/2000
Benzene	ND	0.5		µg/L	1	6/13/2000
Toluene	ND	0.5		µg/L	1	6/13/2000
Ethylbenzene	ND	0.5		µg/L	1	6/13/2000
m,p-Xylene	ND	1		µg/L	1	6/13/2000
o-Xylene	ND	0.5		µg/L	1	6/13/2000

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
Surrogate - Surrogate

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ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006016	Client Sample ID:	MW-6
Lab ID:	0006016-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/6/2000 11:37:00 AM
		COC Record:	10737

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	33	1		µg/L	1	6/13/2000
Benzene	7.6	0.5		µg/L	1	6/13/2000
Toluene	ND	0.5		µg/L	1	6/13/2000
Ethylbenzene	1.9	0.5		µg/L	1	6/13/2000
m,p-Xylene	ND	1		µg/L	1	6/13/2000
o-Xylene	ND	0.5		µg/L	1	6/13/2000

Qualifiers:
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Surr: - Surrogate

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ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006016	Client Sample ID:	MW-7
Lab ID:	0006016-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/6/2000 12:21:00 PM
		COC Record:	10737

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	310	5		µg/L	5	6/13/2000
Benzene	4.7	0.5		µg/L	1	6/14/2000
Toluene	ND	0.5		µg/L	1	6/14/2000
Ethylbenzene	7.9	0.5		µg/L	1	6/14/2000
m,p-Xylene	27	1		µg/L	1	6/14/2000
o-Xylene	1	0.5		µg/L	1	6/14/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006016	Client Sample ID:	MW-8
Lab ID:	0006016-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/6/2000 2:39:00 PM
		COC Record:	10737

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	190	5		µg/L	5	6/14/2000
Benzene	1.3	0.5		µg/L	1	6/13/2000
Toluene	ND	0.5		µg/L	1	6/13/2000
Ethylbenzene	ND	0.5		µg/L	1	6/13/2000
m,p-Xylene	ND	1		µg/L	1	6/13/2000
o-Xylene	ND	0.5		µg/L	1	6/13/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006016	Client Sample ID:	MW-9
Lab ID:	0006016-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/6/2000 3:38:00 PM
		COC Record:	10737

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	5.6	1		µg/L	1	6/13/2000
Benzene	ND	0.5		µg/L	1	6/13/2000
Toluene	ND	0.5		µg/L	1	6/13/2000
Ethylbenzene	ND	0.5		µg/L	1	6/13/2000
m,p-Xylene	ND	1		µg/L	1	6/13/2000
o-Xylene	ND	0.5		µg/L	1	6/13/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006016	Client Sample ID:	MW-10
Lab ID:	0006016-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/6/2000 2:14:00 PM
		COC Record:	10737

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	6/13/2000
Benzene	ND	0.5		µg/L	1	6/13/2000
Toluene	ND	0.5		µg/L	1	6/13/2000
Ethylbenzene	ND	0.5		µg/L	1	6/13/2000
m,p-Xylene	ND	1		µg/L	1	6/13/2000
o-Xylene	ND	0.5		µg/L	1	6/13/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006016	Client Sample ID:	MW-11
Lab ID:	0006016-07A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/6/2000 1:35:00 PM
		COC Record:	10737

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	6/13/2000
Benzene	ND	0.5		µg/L	1	6/13/2000
Toluene	ND	0.5		µg/L	1	6/13/2000
Ethylbenzene	ND	0.5		µg/L	1	6/13/2000
m,p-Xylene	ND	1		µg/L	1	6/13/2000
o-Xylene	ND	0.5		µg/L	1	6/13/2000

Qualifiers:

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Surr: - Surrogate

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ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006016	Client Sample ID:	MW-19
Lab ID:	0006016-08A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/6/2000 10:45:00 AM
		COC Record:	10737

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	200	5		µg/L	5	6/14/2000
Benzene	50	0.5		µg/L	1	6/13/2000
Toluene	ND	0.5		µg/L	1	6/13/2000
Ethylbenzene	83	0.5		µg/L	1	6/13/2000
m,p-Xylene	24	1		µg/L	1	6/13/2000
o-Xylene	ND	0.5		µg/L	1	6/13/2000

Qualifiers:

- PQL - Practical Quantitation Limit
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ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006016	Client Sample ID:	MW-21
Lab ID:	0006016-09A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/6/2000 3:52:00 PM
		COC Record:	10737

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	37	1		µg/L	1	6/13/2000
Benzene	ND	0.5		µg/L	1	6/13/2000
Toluene	ND	0.5		µg/L	1	6/13/2000
Ethylbenzene	ND	0.5		µg/L	1	6/13/2000
m,p-Xylene	ND	1		µg/L	1	6/13/2000
o-Xylene	ND	0.5		µg/L	1	6/13/2000

Qualifiers:

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

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ANALYTICAL REPORT

Date: 20-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006016	Client Sample ID:	MW-22
Lab ID:	0006016-10A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/6/2000 4:20:00 PM
		COC Record:	10737

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	4.9	1		µg/L	1	6/13/2000
Benzene	ND	0.5		µg/L	1	6/13/2000
Toluene	ND	0.5		µg/L	1	6/13/2000
Ethylbenzene	ND	0.5		µg/L	1	6/13/2000
m,p-Xylene	ND	1		µg/L	1	6/13/2000
o-Xylene	ND	0.5		µg/L	1	6/13/2000

Qualifiers:

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R - RPD outside accepted recovery limits
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Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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On Site Technologies, LTD.

Date: 20-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006016

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000613	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/13/2000	Prep Date:
Client ID:	0006016	Run ID: GC-1_000613A		SeqNo: 28553	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.1564	0.5			J
Ethylbenzene	.0697	0.5			J
m,p-Xylene	.136	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0751	0.5			J
Toluene	.123	0.5			J

Sample ID: MB1	Batch ID: GC-1_000614	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/14/2000	Prep Date:
Client ID:	0006016	Run ID: GC-1_000614A		SeqNo: 28641	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.1238	0.5			J
Ethylbenzene	.0782	0.5			J
m,p-Xylene	.1357	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0763	0.5			J
Toluene	.1186	0.5			J

Qualifiers:

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B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 20-Jun-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0006016
Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006021-10AMS		Batch ID: GC-1_000613		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/13/2000		Prep Date:	
Client ID:		0006016		Run ID:		GC-1_000613A		SeqNo: 28554			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1556	5	400	1158	99.4%	73	126				
Ethylbenzene	430.4	5	400	26.78	100.9%	88	113				
m,p-Xylene	871.2	10	800	96.31	96.9%	83	112				
Methyl tert-Butyl Ether	404.1	10	400	11.28	98.2%	81	125				
o-Xylene	412	5	400	7.616	101.1%	93	110				
Toluene	528.5	5	400	124.5	101.0%	76	126				

Sample ID: 0006021-10AMSD		Batch ID: GC-1_000613		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/13/2000		Prep Date:	
Client ID:		0006016		Run ID:		GC-1_000613A		SeqNo: 28555			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1537	5	400	1158	94.7%	73	126	1556	1.2%	6	
Ethylbenzene	426	5	400	26.78	99.8%	88	113	430.4	1.0%	5	
m,p-Xylene	862.5	10	800	96.31	95.8%	83	112	871.2	1.0%	7	
Methyl tert-Butyl Ether	406.8	10	400	11.28	98.9%	81	125	404.1	0.7%	9	
o-Xylene	410.4	5	400	7.616	100.7%	93	110	412	0.4%	6	
Toluene	522.7	5	400	124.5	99.6%	76	126	528.5	1.1%	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: 0006016

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006016-04AMS	Batch ID: GC-1_000614	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/14/2000	Prep Date:						
Client ID: MW-8	0006016	Run ID: GC-1_000614A		SeqNo: 28642							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	197	2.5	200	1.343	97.8%	73	126				
Ethylbenzene	201.2	2.5	200	0.2472	100.5%	88	113				
m,p-Xylene	384	5	400	0.1107	96.0%	83	112				
Methyl tert-Butyl Ether	378.8	5	200	206	86.4%	81	125				
o-Xylene	202.6	2.5	200	0	101.3%	93	110				
Toluene	200.7	2.5	200	0.4683	100.1%	76	126				

Sample ID: 0006016-04AMSD	Batch ID: GC-1_000614	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/14/2000	Prep Date:						
Client ID: MW-8	0006016	Run ID: GC-1_000614A		SeqNo: 28643							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	194.3	2.5	200	1.343	96.5%	73	126	197	1.4%	6	
Ethylbenzene	198.6	2.5	200	0.2472	99.2%	88	113	201.2	1.3%	5	
m,p-Xylene	379.3	5	400	0.1107	94.8%	83	112	384	1.2%	7	
Methyl tert-Butyl Ether	381.5	5	200	206	87.7%	81	125	378.8	0.7%	9	
o-Xylene	200.7	2.5	200	0	100.3%	93	110	202.6	0.9%	6	
Toluene	197.8	2.5	200	0.4683	98.7%	76	126	200.7	1.4%	6	

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: 20-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006016

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_000613	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/13/2000	Prep Date:						
Client ID:	0006016	Run ID: GC-1_000613A		SeqNo: 28552							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.75	0.5	40	0.1564	101.5%	89	112				
Ethylbenzene	41.71	0.5	40	0.0697	104.1%	93	112				
m,p-Xylene	80.19	1	80	0.136	100.1%	88	108				
Methyl tert-Butyl Ether	40.08	1	40	0	100.2%	87	115				
o-Xylene	41.85	0.5	40	0.0751	104.4%	93	112				
Toluene	41.49	0.5	40	0.123	103.4%	92	111				

Sample ID: LCS WATER	Batch ID: GC-1_000614	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/14/2000	Prep Date:						
Client ID:	0006016	Run ID: GC-1_000614A		SeqNo: 28640							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.32	0.5	40	0.1238	98.0%	89	112				
Ethylbenzene	40.58	0.5	40	0.0782	101.2%	93	112				
m,p-Xylene	77.77	1	80	0.1357	97.0%	88	108				
Methyl tert-Butyl Ether	39.59	1	40	0	99.0%	87	115				
o-Xylene	40.99	0.5	40	0.0763	102.3%	93	112				
Toluene	40.27	0.5	40	0.1186	100.4%	92	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: 0006016
Project: Thriftway Refinery

Date: 20-Jun-00

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000613		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/13/2000		Prep Date:	
Client ID: 0006016		Run ID: GC-1_000613A		SeqNo: 28549							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.08	0.5	20	0	100.4%	85	115				
Ethylbenzene	20.75	0.5	20	0	103.8%	85	115				
m,p-Xylene	39.78	1	40	0	99.5%	85	115				
Methyl tert-Butyl Ether	19.83	1	20	0	99.1%	85	115				
o-Xylene	20.89	0.5	20	0	104.5%	85	115				
Toluene	20.54	0.5	20	0	102.7%	85	115				
1,4-Difluorobenzene	89.36	0	100	0	89.4%	80	105				
4-Bromochlorobenzene	87.05	0	100	0	87.0%	78	108				
Fluorobenzene	87.9	0	100	0	87.9%	78	108				

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000613		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/13/2000		Prep Date:	
Client ID: 0006016		Run ID: GC-1_000613A		SeqNo: 28550							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.26	0.5	20	0	101.3%	85	115				
Ethylbenzene	21	0.5	20	0	105.0%	85	115				
m,p-Xylene	40.09	1	40	0	100.2%	85	115				
Methyl tert-Butyl Ether	20.84	1	20	0	104.2%	85	115				
o-Xylene	21.11	0.5	20	0	105.6%	85	115				
Toluene	20.74	0.5	20	0	103.7%	85	115				
1,4-Difluorobenzene	89.63	0	100	0	89.6%	80	105				
4-Bromochlorobenzene	90.97	0	100	0	91.0%	78	108				
Fluorobenzene	87.68	0	100	0	87.7%	78	108				

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: 0006016

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000614	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/14/2000		Prep Date:
Client ID: 0006016		Run ID: GC-1_000614A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 28638
Analyte	Result						LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	19.34	0.5	0.5	20	0	96.7%	85 115
Ethylbenzene	20.15	0.5	0.5	20	0	100.8%	85 115
m,p-Xylene	38.45	1	1	40	0	96.1%	85 115
Methyl tert-Butyl Ether	20.35	1	1	20	0	101.8%	85 115
o-Xylene	20.43	0.5	0.5	20	0	102.2%	85 115
Toluene	19.9	0.5	0.5	20	0	99.5%	85 115
1,4-Difluorobenzene	89.08	0	0	100	0	89.1%	80 105
4-Bromochlorobenzene	87.41	0	0	100	0	87.4%	78 108
Fluorobenzene	87.56	0	0	100	0	87.6%	78 108

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000614	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/14/2000		Prep Date:
Client ID: 0006016		Run ID: GC-1_000614A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 28639
Analyte	Result						LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	39.14	0.5	0.5	40	0	97.8%	85 115
Ethylbenzene	40.32	0.5	0.5	40	0	100.8%	85 115
m,p-Xylene	76.14	1	1	80	0	95.2%	85 115
Methyl tert-Butyl Ether	39.49	1	1	40	0	98.7%	85 115
o-Xylene	40.9	0.5	0.5	40	0	102.3%	85 115
Toluene	40.12	0.5	0.5	40	0	100.3%	85 115
1,4-Difluorobenzene	88.97	0	0	100	0	89.0%	80 105
4-Bromochlorobenzene	88.48	0	0	100	0	88.5%	78 108
Fluorobenzene	86.88	0	0	100	0	86.9%	78 108

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: 20-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006016

Project: Thriftway Refinery

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0006014-01D	87.9	83.7	87.4
0006016-01A	89.8	87.1	88.4
0006016-02A	88.9	87.3	87.2
0006016-03A	87.4	84.5	86.7
0006016-04A	89.5	87.2	88.2
0006016-04AMS	88.4	88.1	87.1
0006016-04AMSD	88.8	88	87
0006016-05A	90.1	86.5	88.4
0006016-06A	89.6	85.1	88.5
0006016-07A	89.9	86.8	88.4
0006016-08A	88.4	85	87.1
0006016-09A	89.7	87.4	88.1
0006016-10A	89.6	86.3	88
0006019-01A	88.2	85.8	86.7
0006020-02A	85	83	84.6
0006021-03A	89.2	87	87.3
0006021-10A	87.3	86.3	86.2
0006021-10AMS	87.3	88.4	86
0006021-10AMSD	87.4	88	86
0006023-07A	89.5	86.9	88.5
0006023-08A	89.5	86.3	88
0006023-09A	89.7	86.2	87.9
0006023-10A	90	86.3	88
0006023-11A	89.4	86.1	87.9
0006023-12A	89.6	86	87.8
0006023-13A	89.4	87.3	88.1
0006023-14A	89.5	87	87.8

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.

Work Order: 0006016

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000613		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/13/2000		Prep Date:	
Client ID: 0006016		Run ID: GC-1_000613A		SeqNo: 28551							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.97	0.5	40	0	97.4%	85	115				
Ethylbenzene	39.86	0.5	40	0	99.6%	85	115				
m,p-Xylene	76.28	1	80	0	95.4%	85	115				
Methyl tert-Butyl Ether	41.58	1	40	0	104.0%	85	115				
o-Xylene	40.4	0.5	40	0	101.0%	85	115				
Toluene	39.87	0.5	40	0	99.7%	85	115				
1,4-Difluorobenzene	88.71	0	100	0	88.7%	80	105				
4-Bromochlorobenzene	85.94	0	100	0	85.9%	78	108				
Fluorobenzene	87.2	0	100	0	87.2%	78	108				

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000614		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/14/2000		Prep Date:	
Client ID: 0006016		Run ID: GC-1_000614A		SeqNo: 28637							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.18	0.5	20	0	100.9%	85	115				
Ethylbenzene	21.07	0.5	20	0	105.3%	85	115				
m,p-Xylene	40.25	1	40	0	100.6%	85	115				
Methyl tert-Butyl Ether	20.82	1	20	0	104.1%	85	115				
o-Xylene	21.29	0.5	20	0	106.4%	85	115				
Toluene	20.75	0.5	20	0	103.7%	85	115				
1,4-Difluorobenzene	89.42	0	100	0	89.4%	80	105				
4-Bromochlorobenzene	86.54	0	100	0	86.5%	78	108				
Fluorobenzene	87.38	0	100	0	87.4%	78	108				

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: 0006016
Project: Thriftway Refinery
Test No: SW8021B

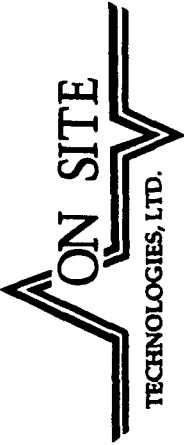
QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0006023-15A	89	86.5	96.8
0006023-16A	89.4	86.8	103
0006023-17A	89.4	86.2	87.9
0006023-20A	89.3	86.8	87.9
0006023-21A	89.7	86.8	88
0006023-22A	89.6	86.7	88
0006023-23A	89.5	85.6	87.9
0006023-24A	89.9	87.2	88
0006023-25A	89.4	86.4	89.3
0006023-26A	89.9	86.6	101
0006023-28A	89.3	86.8	93.3
0006023-29A	89.7	86.7	87.9
0006026-02A	87.8	85.3	86.7
CCV1 BTEX_00040	89.4	86.5	87.4
CCV2 BTEX_00040	89.1	87.4	87.6
CCV3 BTEX_00040	89	88.5	86.9
LCS WATER	89	87.5	87.2
MB1	90	86.3	88

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* 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: 6/27/00

Page: 1 of 1

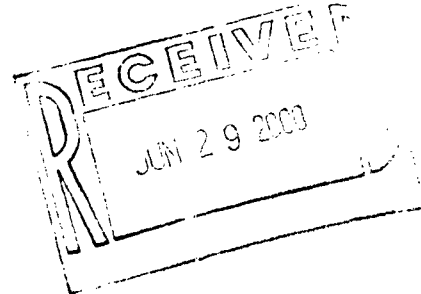
Purchase Order No.:		Project No.		Name		Title	
SEND INVOICE TO		Dept.		Company		Biotech Remediation	
Address				Mailing Address		210 E. 20th St., Suite 400	
City, State, Zip				City, State, Zip		Farmington, NM 87401	
PROJECT LOCATION: Thruway Refinery 626 Rd. 5500 Bloomfield, NM 87413				Telephone No.		Telefax No.	
SAMPLER'S SIGNATURE: Ken Sinks <i>Ken Sinks</i>				ANALYSIS REQUESTED			
SAMPLE IDENTIFICATION		DATE		TIME		MATRIX	
Travel Blank		6/6		0900		H2O jar	
MW-06		✓		1137		✓	
MW-07		✓		1221		✓	
MW-08		✓		1439		✓	
MW-09		✓		1538		✓	
MW-10		✓		1414		✓	
MW-11		✓		1335		✓	
MW-19		✓		1045		✓	
MW-21		✓		1532		✓	
MW-22		✓		1620		✓	
RELINQUISHED BY: <i>Ken Sinks</i>		DATE/TIME		11/00		2052	
RELINQUISHED BY:		DATE/TIME					
RELINQUISHED BY:		DATE/TIME					
METHOD OF SHIPMENT:		Rush		24-48 Hours		10 Working Days	
AUTHORIZED BY: <i>Samuel Sinks</i>		DATE		6/27/00			
(Client Signature Must Accompany Request)							
RECEIVED BY: <i>Heidi Reese</i>		DATE/TIME		6/17/00		0652	
RECEIVED BY:		DATE/TIME					
RECEIVED BY:		DATE/TIME					
SPECIAL INSTRUCTIONS / REMARKS:							

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

June 27, 2000



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

RE: Thriftway Refinery

Order No.: 0006024

Dear Terry Griffin,

On Site Technologies, LTD. received 17 samples on 6/8/2000 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

Aromatic Volatiles by GC/PID (SW8021B)
Chloride (E325.3)

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 'D Cox', written over a horizontal line.

David Cox

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 27-Jun-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery
Lab Order: 0006024

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	Trip Blank
Lab ID:	0006024-01B	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 9:30:00 AM
		COC Record:	10738

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	6/15/2000
Benzene	ND	0.5		µg/L	1	6/15/2000
Toluene	ND	0.5		µg/L	1	6/15/2000
Ethylbenzene	ND	0.5		µg/L	1	6/15/2000
m,p-Xylene	ND	1		µg/L	1	6/15/2000
o-Xylene	ND	0.5		µg/L	1	6/15/2000

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 15
Lab ID:	0006024-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 10:54:00 AM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE		E325.3				Analyst: HR
Chloride	160		1	mg/L	1	6/14/2000
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DC
Methyl tert-Butyl Ether	ND		1	µg/L	1	6/16/2000
Benzene	ND	0.5		µg/L	1	6/16/2000
Toluene	ND	0.5		µg/L	1	6/16/2000
Ethylbenzene	ND	0.5		µg/L	1	6/16/2000
m,p-Xylene	ND	1		µg/L	1	6/16/2000
o-Xylene	ND	0.5		µg/L	1	6/16/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
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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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 20
Lab ID:	0006024-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 11:44:00 AM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE		E325.3				Analyst: HR
Chloride	130	1		mg/L	1	6/14/2000
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	120	1		µg/L	1	6/15/2000
Benzene	1.7	0.5		µg/L	1	6/15/2000
Toluene	ND	0.5		µg/L	1	6/15/2000
Ethylbenzene	1.9	0.5		µg/L	1	6/15/2000
m,p-Xylene	ND	1		µg/L	1	6/15/2000
o-Xylene	1.1	0.5		µg/L	1	6/15/2000

Qualifiers:

PQL - Practical Quantitation Limit
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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 18
Lab ID:	0006024-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 1:40:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE		E325.3				Analyst: HR
Chloride	110	1		mg/L	1	6/14/2000
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	69	1		µg/L	1	6/15/2000
Benzene	62	0.5		µg/L	1	6/15/2000
Toluene	ND	0.5		µg/L	1	6/15/2000
Ethylbenzene	6.7	0.5		µg/L	1	6/15/2000
m,p-Xylene	ND	1		µg/L	1	6/15/2000
o-Xylene	ND	0.5		µg/L	1	6/15/2000

Qualifiers:

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ND - Not Detected at Practical Quantitation Limit
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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 19
Lab ID:	0006024-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 1:55:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE		E325.3				
Chloride	230		1	mg/L	1	Analyst: HR 6/14/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 21
Lab ID:	0006024-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 2:20:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE		E325.3				
Chloride	120		1	mg/L	1	Analyst: HR 6/14/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 22
Lab ID:	0006024-07A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 2:27:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE		E325.3				Analyst: HR
Chloride	220		1	mg/L	1	6/14/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 13
Lab ID:	0006024-08A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 2:40:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE	E325.3					Analyst: HR
Chloride	93		1	mg/L	1	6/14/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 05
Lab ID:	0006024-09A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 2:52:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE	E325.3					Analyst: HR
Chloride	120		1	mg/L	1	6/14/2000

Qualifiers:

PQL - Practical Quantitation Limit

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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 04
Lab ID:	0006024-10A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 2:59:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE		E325.3				Analyst: HR
Chloride	120		1	mg/L	1	6/14/2000

Qualifiers:

PQL - Practical Quantitation Limit

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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 06
Lab ID:	0006024-11A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 3:10:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE	E325.3					Analyst: HR
Chloride	73		1	mg/L	1	6/14/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 08
Lab ID:	0006024-12A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 1:31:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE	E325.3					Analyst: HR
Chloride	68		1	mg/L	1	6/14/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 09
Lab ID:	0006024-13A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 1:43:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE		E325.3				
Chloride	46		1	mg/L	1	Analyst: HR 6/14/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 10
Lab ID:	0006024-14A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 1:47:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE		E325.3				
Chloride	72		1	mg/L	1	Analyst: HR 6/14/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 11
Lab ID:	0006024-15A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 1:57:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CHLORIDE		E325.3				
Chloride	26		1	mg/L	1	Analyst: HR 6/14/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 09 Duplicate
Lab ID:	0006024-16B	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 2:08:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	6.9	1		µg/L	1	6/16/2000
Benzene	ND	0.5		µg/L	1	6/16/2000
Toluene	ND	0.5		µg/L	1	6/16/2000
Ethylbenzene	ND	0.5		µg/L	1	6/16/2000
m,p-Xylene	ND	1		µg/L	1	6/16/2000
o-Xylene	ND	0.5		µg/L	1	6/16/2000

Qualifiers:

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ANALYTICAL REPORT

Date: 27-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006024	Client Sample ID:	MW 05 Duplicate
Lab ID:	0006024-17B	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/7/2000 2:40:00 PM
		COC Record:	10738

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	35	1		µg/L	1	6/16/2000
Benzene	6.5	0.5		µg/L	1	6/16/2000
Toluene	ND	0.5		µg/L	1	6/16/2000
Ethylbenzene	ND	0.5		µg/L	1	6/16/2000
m,p-Xylene	ND	1		µg/L	1	6/16/2000
o-Xylene	ND	0.5		µg/L	1	6/16/2000

Qualifiers:
PQL - Practical Quantitation Limit
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P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 27-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006024

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000615	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/15/2000	Prep Date:					
Client ID:	0006024	Run ID: GC-1_000615A		SeqNo: 28668						
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0584	0.5								J
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	1								
Methyl tert-Butyl Ether	ND	1								
o-Xylene	ND	0.5								
Toluene	.0676	0.5								J

Sample ID: MB1	Batch ID: GC-1_000616	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/16/2000	Prep Date:						
Client ID:	0006024	Run ID: GC-1_000616A		SeqNo: 28705							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0838	0.5									J
Ethylbenzene	.0527	0.5									J
m,p-Xylene	.1145	1									J
Methyl tert-Butyl Ether	ND	1									
o-Xylene	.0515	0.5									J
Toluene	.1391	0.5									J

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: 27-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006024

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006028-09AMS		Batch ID: GC-1_000615	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/15/2000			Prep Date:			
Client ID: 0006024		Run ID: GC-1_000615A	SeqNo: 28669								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	197.9	2.5	200	2.132	97.9%	73	126				
Ethylbenzene	202.8	2.5	200	0.568	101.1%	88	113				
m,p-Xylene	387	5	400	0.7165	96.6%	83	112				
Methyl tert-Butyl Ether	458	5	200	248	105.0%	81	125				
o-Xylene	205.3	2.5	200	0.688	102.3%	93	110				
Toluene	202	2.5	200	0.346	100.8%	76	126				

Sample ID: 0006028-09AMS		Batch ID: GC-1_000615	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/15/2000				Prep Date:					
Client ID:		0006024	Run ID:	GC-1_000615A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result												
Benzene		188.5			2.5	200	2	93.3%	73	126	197.9	4.8%	6	
Ethylbenzene		193.5			2.5	200	0.6	96.5%	88	113	202.8	4.7%	5	
m,p-Xylene		369.7			5	400	0.7	92.2%	83	112	387	4.6%	7	
Methyl tert-Butyl Ether		445.1			5	200	250	97.6%	81	125	458	2.8%	9	
o-Xylene		196.9			2.5	200	0.7	98.1%	93	110	205.3	4.2%	6	
Toluene		193			2.5	200	0.3	96.3%	76	126	202	4.6%	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

CLIENT: BioTech Remediation, Inc.

Work Order: 0006024

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006025-02AMS		Batch ID: GC-1_000616		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/16/2000		Prep Date:		
Client ID:		0006024		Run ID:		GC-1_000616A		SeqNo: 28706				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		2720	10	800	1972	93.5%	73	126				
Ethylbenzene		968.7	10	800	171.3	99.7%	88	113				
m,p-Xylene		4150	20	1600	2456	105.9%	83	112				
Methyl tert-Butyl Ether		833.5	20	800	0	104.2%	81	125				
o-Xylene		1396	10	800	568.1	103.4%	93	110				
Toluene		4527	10	800	3678	106.2%	76	126				E

Sample ID: 0006025-02AMSD		Batch ID: GC-1_000616	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/16/2000			Prep Date:			
Client ID: 0006024		Run ID: GC-1_000616A	SeqNo: 28707								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2600	10	800	2000	74.9%	73	126	2720	4.5%	6	
Ethylbenzene	929.7	10	800	170	95.0%	88	113	968.7	4.1%	5	
m,p-Xylene	4002	20	1600	2400	100.1%	83	112	4150	3.6%	7	
Methyl tert-Butyl Ether	815.8	20	800	0	102.0%	81	125	833.5	2.1%	9	
o-Xylene	1353	10	800	570	97.9%	93	110	1396	3.1%	6	
Toluene	4341	10	800	3700	80.1%	76	126	4527	4.2%	6	E

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: 0006024
Project: Thriftway Refinery

Date: 27-Jun-00

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_000615	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/15/2000	Prep Date:						
Client ID:	0006024	Run ID:	GC-1_000615A	SeqNo:	28667						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.61	0.5	40	0.0584	103.9%	89	112				
Ethylbenzene	43.2	0.5	40	0	108.0%	93	112				
m,p-Xylene	82.62	1	80	0	103.3%	88	108				
Methyl tert-Butyl Ether	41.35	1	40	0	103.4%	87	115				
o-Xylene	43.73	0.5	40	0	109.3%	93	112				
Toluene	42.88	0.5	40	0.0676	107.0%	92	111				

Sample ID: LCS WATER	Batch ID: GC-1_000616	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/16/2000	Prep Date:						
Client ID:	0006024	Run ID:	GC-1_000616A	SeqNo:	28704						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.64	0.5	40	0.0838	96.4%	89	112				
Ethylbenzene	41.06	0.5	40	0.0527	102.5%	93	112				
m,p-Xylene	78.34	1	80	0.1145	97.8%	88	108				
Methyl tert-Butyl Ether	38.43	1	40	0	96.1%	87	115				
o-Xylene	41.42	0.5	40	0.0515	103.4%	93	112				
Toluene	40.6	0.5	40	0.1391	101.2%	92	111				

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: 0006024

Project: Thriftway Refinery

Date: 27-Jun-00

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000615	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/15/2000				Prep Date:		
Client ID:		0006024	Run ID:	GC-1_000615A	SeqNo:	28664					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.76	0.5	20	0	103.8%	85	115				
Ethylbenzene	21.74	0.5	20	0	108.7%	85	115				
m,p-Xylene	41.44	1	40	0	103.6%	85	115				
Methyl tert-Butyl Ether	20.83	1	20	0	104.2%	85	115				
o-Xylene	21.96	0.5	20	0	109.8%	85	115				
Toluene	21.32	0.5	20	0	106.6%	85	115				
1,4-Difluorobenzene	89.98	0	100	0	90.0%	80	105				
4-Bromochlorobenzene	86	0	100	0	86.0%	78	108				
Fluorobenzene	89.02	0	100	0	89.0%	78	108				

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000615	Test Code: SW8021B		Units: µg/L		Analysis Date: 6/15/2000				Prep Date:			
Client ID:		0006024	Run ID:	GC-1_000615A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result													
Benzene	19.11		0.5	20		0		95.5%	85	115				
Ethylbenzene	19.99		0.5	20		0		100.0%	85	115				
m,p-Xylene	38.1		1	40		0		95.2%	85	115				
Methyl tert-Butyl Ether	20.78		1	20		0		103.9%	85	115				
o-Xylene	20.33		0.5	20		0		101.6%	85	115				
Toluene	19.82		0.5	20		0		99.1%	85	115				
1,4-Difluorobenzene	89.61		0	100		0		89.6%	80	105				
4-Bromochlorobenzene	84.61		0	100		0		84.6%	78	108				
Fluorobenzene	88.76		0	100		0		88.8%	78	108				

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: 0006024

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000615	Test Code: SW8021B		Units: µg/L		Analysis Date: 6/15/2000		Prep Date:			
Client ID: 0006024		Run ID: GC-1_000615A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 28666	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result						LowLimit					
Benzene	37.58	0.5	40	0	94.0%	85	115					
Ethylbenzene	38.96	0.5	40	0	97.4%	85	115					
m,p-Xylene	74.17	1	80	0	92.7%	85	115					
Methyl tert-Butyl Ether	39.24	1	40	0	98.1%	85	115					
o-Xylene	39.67	0.5	40	0	99.2%	85	115					
Toluene	38.84	0.5	40	0	97.1%	85	115					
1,4-Difluorobenzene	89.88	0	100	0	89.9%	80	105					
4-Bromochlorobenzene	85.14	0	100	0	85.1%	78	108					
Fluorobenzene	88.5	0	100	0	88.5%	78	108					

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000616	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/16/2000				Prep Date:			
Client ID: 0006024		Run ID: GC-1_000616A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	19.2		0.5	20	0	96.0%	85	115				
Ethylbenzene	20.57		0.5	20	0	102.8%	85	115				
m,p-Xylene	39.21		1	40	0	98.0%	85	115				
Methyl tert-Butyl Ether	19.62		1	20	0	98.1%	85	115				
o-Xylene	20.84		0.5	20	0	104.2%	85	115				
Toluene	20.08		0.5	20	0	100.4%	85	115				
1,4-Difluorobenzene	90.02		0	100	0	90.0%	80	105				
4-Bromochlorobenzene	84.86		0	100	0	84.9%	78	108				
Fluorobenzene	88.88		0	100	0	88.9%	78	108				

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: 0006024

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000616		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/16/2000		Prep Date:	
Client ID: 0006024		Run ID: GC-1_000616A		SeqNo: 28702							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.6	0.5	20	0	93.0%	85	115				
Ethylbenzene	19.85	0.5	20	0	99.3%	85	115				
m,p-Xylene	37.83	1	40	0	94.6%	85	115				
Methyl tert-Butyl Ether	20.12	1	20	0	100.6%	85	115				
o-Xylene	20.29	0.5	20	0	101.5%	85	115				
Toluene	19.53	0.5	20	0	97.7%	85	115				
1,4-Difluorobenzene	89.76	0	100	0	89.8%	80	105				
4-Bromochlorobenzene	84.36	0	100	0	84.4%	78	108				
Fluorobenzene	88.31	0	100	0	88.3%	78	108				

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000616		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/16/2000		Prep Date:	
Client ID: 0006024		Run ID: GC-1_000616A		SeqNo: 28703							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	36.77	0.5	40	0	91.9%	85	115				
Ethylbenzene	38.87	0.5	40	0	97.2%	85	115				
m,p-Xylene	74.26	1	80	0	92.8%	85	115				
Methyl tert-Butyl Ether	38.78	1	40	0	97.0%	85	115				
o-Xylene	39.69	0.5	40	0	99.2%	85	115				
Toluene	38.73	0.5	40	0	96.8%	85	115				
1,4-Difluorobenzene	89.58	0	100	0	89.6%	80	105				
4-Bromochlorobenzene	82.36	0	100	0	82.4%	78	108				
Fluorobenzene	88.32	0	100	0	88.3%	78	108				

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: 27-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006024

Project: Thriftway Refinery

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0006015-01D	89.9	85.3	88.7
0006015-02D	92.1	87.1	91.5
0006015-03A	90.4	85.6	89.4
0006017-01A	90.4	86	89.1
0006017-02A	90.4	85.4	89.3
0006017-03A	90.3	85.3	89.3
0006017-04A	89.9	84.8	89.4
0006017-05A	90.4	84.6	89.3
0006017-06A	89.8	84.3	89
0006017-07A	90.1	86.3	89.2
0006020-01A	90.4	85.2	89.4
0006020-03A	90.3	85	89
0006020-04A	90.2	85	89.2
0006020-05A	91.7	84.7	90.7
0006020-06A	91.3	83.7	90.1
0006022-01D	91.1	88.3	90
0006022-02D	90.9	86.3	91.8
0006022-03A	90.5	85.5	89.4
0006023-27A	91.7	85.4	89.7
0006024-01B	90.5	84.7	89.4
0006024-02B	90.2	85.6	89.4
0006024-03B	89.6	86.6	88.3
0006024-04B	90.9	85.5	89.2
0006024-16B	90.2	83.8	89.2
0006024-17B	89.8	83.4	88.8
0006025-01A	90.6	83.5	89.3
0006025-02A	86.4	85.7	86.6

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 0006024
Project: Thriftway Refinery
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0006025-02AMS	84.4	84.4	84.9
0006025-02AMSD	84.5	83.5	84.8
0006025-03A	89.3	84.2	88.7
0006025-04A	90.2	85.1	89.5
0006025-05A	90.2	82.5	89
0006025-06A	89.6	82.5	88.5
0006025-07A	87.4	81.9	87.1
0006028-01A	90.2	85.4	89.5
0006028-02A	89.8	81.9	90.1
0006028-03A	89.6	80.7	90.5
0006028-09A	89.6	83.2	88.8
0006028-09AMS	89.6	85.7	88.4
0006028-09AMSD	89.6	84.9	88.4
CCV1 BTEX_00040	90	84.8	88.9
CCV2 BTEX_00040	89.8	84.4	88.3
CCV3 BTEX_00040	89.6	82.4	88.3
LCS WATER	89.5	86.4	88.5
MBI	90.5	84.7	89

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

On Site Technologies, LTD.

Date: 27-Jun-00

CLIENT: BioTech Remediation, Inc.
 Work Order: 0006024
 Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: CL-TW-6/14/2	Test Code: E325.3	Units: mg/L	Analysis Date: 6/14/2000	Prep Date:
Client ID:	0006024	Run ID: WET CHEM_000614A		SeqNo: 28556	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val
Chloride	ND	1			%RPD RPDLimit Qual
Sample ID: MBlank	Batch ID: CL-TW-6/15/2	Test Code: E325.3	Units: mg/L	Analysis Date: 6/14/2000	Prep Date:
Client ID:	0006024	Run ID: WET CHEM_000614B		SeqNo: 28595	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val
Chloride	ND	1			%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: 27-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006024

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0006013-048D		Batch ID: CL-TW-6/14/2		Test Code: E325.3		Units: mg/L		Analysis Date: 6/14/2000				Prep Date:	
Client ID:		0006024		Run ID:		WET CHEM_000614A		SeqNo: 28563					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Chloride		4086	1	0	0	0.0%	0	0	3806	7.1%	10		

Sample ID: 0006001-01CD		Batch ID: CL-TW-6/15/2		Test Code: E325.3		Units: mg/L		Analysis Date: 6/14/2000				Prep Date:	
Client ID:		0006024		Run ID:		WET CHEM_000614B		SeqNo: 28598					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Chloride		12.6	1	0	0	0.0%	0	0	13	3.1%	10		

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: 27-Jun-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0006024
Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

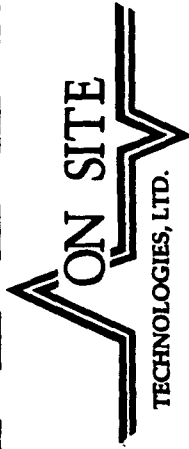
Sample ID: LCS 3017	Batch ID: CL-TW-6/14/2	Test Code: E325.3	Units: mg/L	Analysis Date: 6/14/2000	Prep Date:
Client ID:	0006024	Run ID: WET CHEM_000614A		SeqNo: 28557	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	188	1	200	0	94.0% 83 113
Sample ID: LCS 3017	Batch ID: CL-TW-6/14/2	Test Code: E325.3	Units: mg/L	Analysis Date: 6/14/2000	Prep Date:
Client ID:	0006024	Run ID: WET CHEM_000614A		SeqNo: 28567	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	187	1	200	0	93.5% 83 113
Sample ID: LCS 3023	Batch ID: CL-TW-6/15/2	Test Code: E325.3	Units: mg/L	Analysis Date: 6/14/2000	Prep Date:
Client ID:	0006024	Run ID: WET CHEM_000614B		SeqNo: 28596	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	55.4	1	62.7	0	88.4% 83 113
Sample ID: LCS 3023	Batch ID: CL-TW-6/15/2	Test Code: E325.3	Units: mg/L	Analysis Date: 6/14/2000	Prep Date:
Client ID:	0006024	Run ID: WET CHEM_000614B		SeqNo: 28607	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	56.3	1	62.7	0	89.8% 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



CHAIN OF CUSTODY RECORD

16738

Date: 6/17/2000

Page: 1 of 2

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: Same		Dept.:	
Company:			
Address:			
City, State, Zip:			
PROJECT LOCATION: Thirtway Refinery 626 Rd 5500 Gloomfield, NM 87413			
SAMPLER'S SIGNATURE: Ken Sinks <i>Ken Sinks</i>			
SEND INVOICE TO		SAMPLE IDENTIFICATION	
		DATE	TIME
		MATRIX	PRES.
Travel Blank		6/17	0930
MW-15		6/17	1054
MW-17		6/17	1344
MW-20		6/17	1144
MW-18		6/17	1340
MW-19		6/17	1355
MW-21		6/17	1420
MW-22		6/17	1427
MW-13		6/17	1440
MW-05		6/17	1452
MW-04		6/17	1459
MW-06		6/17	1510
Relinquished by: <i>Ken Sinks</i>		Date/Time: 6/17/00 0840	Received by: <i>[Signature]</i>
Relinquished by:		Date/Time:	Received by:
Relinquished by:		Date/Time:	Received by:
Method of Shipment:		Rush	24-48 Hours
		10 Working Days	By Date
Special Instructions / Remarks:			
Authorized by: <i>Ken Sinks</i>		Date: 6/18/2000	
(Client Signature Must Accompany Request)			

CHAIN OF CUSTODY RECORD

Date: 6/7/2000

Page: 2 of 2

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

[illegible]

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

June 30, 2000

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

RE: Thriftway Refinery

Order No.: 0006013

Dear Terry Griffin,

On Site Technologies, LTD. received 6 samples on 6/5/2000 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)
- Hardness, Total (M2340 B)
- 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 (CALC)
- Total Dissolved Solids (E160.1)

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

June 30, 2000

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

RE: Thriftway Refinery

Order No.: 0006013

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 30-Jun-00

CLIENT: BioTech Remediation, Inc.

Project: Thriftway Refinery

Lab Order: 0006013

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

Cation-Anion Balance 0006013-03B: Stripper Influent

Total Cation-Anion = 106.95 meq/L

Difference Cation-Anion = 3.63 meq/L

% Difference = 3.4 %

Cation-Anion Balance 0006013-04B: Stripper Effluent

Total Cation-Anion = 214.56 meq/L

Difference Cation-Anion = 60.65 meq/L

% Difference = 28.3 %new line

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 30-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006013	Client Sample ID:	Travel Blank
Lab ID:	0006013-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/5/2000 11:30:00 AM
		COC Record:	5286

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	6/11/2000
Benzene	ND	0.5		µg/L	1	6/11/2000
Toluene	ND	0.5		µg/L	1	6/11/2000
Ethylbenzene	ND	0.5		µg/L	1	6/11/2000
m,p-Xylene	ND	1		µg/L	1	6/11/2000
o-Xylene	ND	0.5		µg/L	1	6/11/2000

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 30-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006013	Client Sample ID:	MW-13
Lab ID:	0006013-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/5/2000 1:59:00 PM
		COC Record:	5286

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	6/11/2000
Benzene	ND	0.5		µg/L	1	6/11/2000
Toluene	ND	0.5		µg/L	1	6/11/2000
Ethylbenzene	ND	0.5		µg/L	1	6/11/2000
m,p-Xylene	ND	1		µg/L	1	6/11/2000
o-Xylene	ND	0.5		µg/L	1	6/11/2000

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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ANALYTICAL REPORT

Date: 30-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006013	Client Sample ID:	Stripper Influent
Lab ID:	0006013-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/5/2000 2:35:00 PM
		COC Record:	5286

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	260	100		µg/L	100	6/11/2000
Benzene	2400	50		µg/L	100	6/11/2000
Toluene	2400	50		µg/L	100	6/11/2000
Ethylbenzene	680	50		µg/L	100	6/11/2000
m,p-Xylene	2200	100		µg/L	100	6/11/2000
o-Xylene	440	50		µg/L	100	6/11/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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E - Value above quantitation range
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ANALYTICAL REPORT

Date: 30-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006013	Client Sample ID:	Stripper Influent
Lab ID:	0006013-03B	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/5/2000 2:35:00 PM
		COC Record:	5286

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CALCIUM, DISSOLVED	E215.1					Analyst: HR
Calcium	320	25		mg/L	100	6/22/2000
POTASSIUM, DISSOLVED	E258.1					Analyst: HR
Potassium	8.8	0.5		mg/L	2	6/22/2000
MAGNESIUM, DISSOLVED	E242.1					Analyst: HR
Magnesium	46	5		mg/L	20	6/23/2000
SODIUM, DISSOLVED	E273.1					Analyst: HR
Sodium	810	100		mg/L	400	6/22/2000
ALKALINITY, TOTAL	M2320 B					Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	970	5		mg/L CaCO ₃	1	6/9/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	6/9/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	6/9/2000
Alkalinity, Total (As CaCO ₃)	970	5		mg/L CaCO ₃	1	6/9/2000
CHLORIDE	E325.3					Analyst: HR
Chloride	160	1		mg/L	1	6/14/2000
CONDUCTIVITY @ 25C	E120.1					Analyst: HR
Specific Conductance	4400	2		uS/cm	1	6/7/2000
HARDNESS, TOTAL	M2340 B					Analyst: HR
Hardness (As CaCO ₃)	1000	1		mg/L	1	6/23/2000
PH	E150.1					Analyst: HR
pH	7.26	2		pH units	1	6/6/2000
SULFATE	M4500-SO4 D					Analyst: HR
Sulfate	1500	5		mg/L	1	6/15/2000
TOTAL DISSOLVED SOLIDS	E160.1					Analyst: HR
Total Dissolved Solids (Residue, Filterable)	3440	40		mg/L	1	6/8/2000
TOTAL DISSOLVED SOLIDS	CALC					Analyst: HR
Total Dissolved Solids (Calculated)	3430	40		mg/L	1	6/23/2000

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

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R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

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ANALYTICAL REPORT

Date: 30-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006013	Client Sample ID:	Stripper Effluent
Lab ID:	0006013-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/5/2000 2:45:00 PM
		COC Record:	5286

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	10	1		µg/L	1	6/11/2000
Benzene	3	0.5		µg/L	1	6/11/2000
Toluene	2.1	0.5		µg/L	1	6/11/2000
Ethylbenzene	0.7	0.5		µg/L	1	6/11/2000
m,p-Xylene	3.3	1		µg/L	1	6/11/2000
o-Xylene	1.1	0.5		µg/L	1	6/11/2000

Qualifiers:

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- R - RPD outside accepted recovery limits
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- Surr: - Surrogate

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ANALYTICAL REPORT

Date: 30-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006013	Client Sample ID:	Stripper Effluent
Lab ID:	0006013-04B	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/5/2000 2:45:00 PM
		COC Record:	5286

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CALCIUM, DISSOLVED		E215.1				Analyst: HR
Calcium	750	50		mg/L	200	6/22/2000
POTASSIUM, DISSOLVED		E258.1				Analyst: HR
Potassium	8.7	0.5		mg/L	2	6/22/2000
MAGNESIUM, DISSOLVED		E242.1				Analyst: HR
Magnesium	47	5		mg/L	20	6/23/2000
SODIUM, DISSOLVED		E273.1				Analyst: HR
Sodium	810	100		mg/L	400	6/22/2000
ALKALINITY, TOTAL		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	6/9/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	6/9/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	6/9/2000
Alkalinity, Total (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	6/9/2000
CHLORIDE		E325.3				Analyst: HR
Chloride	3810	1		mg/L	1	6/14/2000
CONDUCTIVITY @ 25C		E120.1				Analyst: HR
Specific Conductance	7300	2		uS/cm	1	6/7/2000
HARDNESS, TOTAL		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	2070	1		mg/L	1	6/23/2000
PH		E150.1				Analyst: HR
pH	3.03	2		pH units	1	6/6/2000
SULFATE		M4500-SO4 D				Analyst: HR
Sulfate	1420	5		mg/L	1	6/15/2000
TOTAL DISSOLVED SOLIDS		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	5060	40		mg/L	1	6/8/2000
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	6880	40		mg/L	1	6/23/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

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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: 30-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006013	Client Sample ID:	MW-05
Lab ID:	0006013-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/5/2000 3:30:00 PM
		COC Record:	5286

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	46	1		µg/L	1	6/11/2000
Benzene	9.4	0.5		µg/L	1	6/11/2000
Toluene	ND	0.5		µg/L	1	6/11/2000
Ethylbenzene	ND	0.5		µg/L	1	6/11/2000
m,p-Xylene	ND	1		µg/L	1	6/11/2000
o-Xylene	ND	0.5		µg/L	1	6/11/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

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R - RPD outside accepted recovery limits

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Surr: - Surrogate

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ANALYTICAL REPORT

Date: 30-Jun-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0006013	Client Sample ID:	MW-04
Lab ID:	0006013-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	6/5/2000 4:20:00 PM
		COC Record:	5286

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	20	1		µg/L	1	6/12/2000
Benzene	9.4	0.5		µg/L	1	6/12/2000
Toluene	ND	0.5		µg/L	1	6/12/2000
Ethylbenzene	2.7	0.5		µg/L	1	6/12/2000
m,p-Xylene	ND	1		µg/L	1	6/12/2000
o-Xylene	ND	0.5		µg/L	1	6/12/2000

Qualifiers:

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- ND - Not Detected at Practical Quantitation Limit
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- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 30-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/11/2000	Prep Date:
Client ID:	0006013	Run ID: GC-1_000611A		SeqNo: 28499	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0637	0.5			J
Ethylbenzene	.0623	0.5			J
m,p-Xylene	.1196	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0999	0.5			J
Toluene	.1549	0.5			J

Sample ID: MB1	Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000	Prep Date:
Client ID:	0006013	Run ID: GC-1_000612A		SeqNo: 28526	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0396	0.5			J
Ethylbenzene	.0711	0.5			J
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.0739	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: 30-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006013-03AMS	Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/11/2000	Prep Date:
Client ID: Stripper Influent	0006013	Run ID: GC-1_000611A		SeqNo: 28500	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	6433	50	4000	2368	101.6% 73 126
Ethylbenzene	4675	50	4000	678.8	99.9% 88 113
m,p-Xylene	10100	100	8000	2226	98.5% 83 112
Methyl tert-Butyl Ether	4145	100	4000	258.9	97.2% 81 125
o-Xylene	4492	50	4000	438.8	101.3% 93 110
Toluene	6509	50	4000	2430	102.0% 76 126

Sample ID: 0006013-03AMSD	Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/11/2000	Prep Date:
Client ID: Stripper Influent	0006013	Run ID: GC-1_000611A		SeqNo: 28501	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	6267	50	4000	2368	97.5% 73 126 6433 2.6% 6
Ethylbenzene	4556	50	4000	678.8	96.9% 88 113 4675 2.6% 5
m,p-Xylene	9862	100	8000	2226	95.4% 83 112 10100 2.4% 7
Methyl tert-Butyl Ether	4095	100	4000	258.9	95.9% 81 125 4145 1.2% 9
o-Xylene	4403	50	4000	438.8	99.1% 93 110 4492 2.0% 6
Toluene	6349	50	4000	2430	98.0% 76 126 6509 2.5% 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: 0006013
Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006020-02AMS		Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000		Prep Date:				
Client ID:	0006013	Run ID:	GC-1_000612A		SeqNo:	28527					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	205.6	2.5	200	13	96.3%	73	126				
Ethylbenzene	187.4	2.5	200	9	89.2%	88	113				
m,p-Xylene	402.1	5	400	20	95.5%	83	112				
Methyl tert-Butyl Ether	208.2	5	200	2	103.1%	81	125				
o-Xylene	207.5	2.5	200	11	98.2%	93	110				
Toluene	206.7	2.5	200	10	98.3%	76	126				

Sample ID: 0006020-02AMSD		Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000		Prep Date:				
Client ID: 0006013		Run ID: GC-1_000612A			SeqNo: 28528						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	204	2.5	200	13	95.5%	73	126	205.6	0.8%	6	
Ethylbenzene	182.8	2.5	200	9	86.9%	88	113	187.4	2.5%	5	S
m,p-Xylene	397.9	5	400	20	94.5%	83	112	402.1	1.0%	7	
Methyl tert-Butyl Ether	211.9	5	200	2	105.0%	81	125	208.2	1.8%	9	
o-Xylene	209	2.5	200	11	99.0%	93	110	207.5	0.7%	6	
Toluene	205.1	2.5	200	10	97.6%	76	126	206.7	0.8%	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

I - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 30-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/11/2000		Prep Date:				
Client ID:	0006013	Run ID:	GC-1_000611A		SeqNo:	28498					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41	0.5	40	0.0637	102.3%	89	112				
Ethylbenzene	40.91	0.5	40	0.0623	102.1%	93	112				
m,p-Xylene	80.6	1	80	0.1196	100.6%	88	108				
Methyl tert-Butyl Ether	41.85	1	40	0	104.6%	87	115				
o-Xylene	41.25	0.5	40	0.0999	102.9%	93	112				
Toluene	41.21	0.5	40	0.1549	102.6%	92	111				

Sample ID: LCS WATER	Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000				Prep Date:					
Client ID:	0006013	Run ID:	GC-1_000612A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	39.93			0.5	40	0.0396	99.7%	89	112				
Ethylbenzene	40.45			0.5	40	0.0711	100.9%	93	112				
m,p-Xylene	78.29			1	80	0	97.9%	88	108				
Methyl tert-Butyl Ether	39.47			1	40	0	98.7%	87	115				
o-Xylene	40.59			0.5	40	0	101.5%	93	112				
Toluene	40.4			0.5	40	0.0739	100.8%	92	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: 30-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/11/2000				Prep Date:		
Client ID: 0006013		Run ID: GC-1_000611A			SeqNo: 28495						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20	0.5	20	0	100.0%	85	115				
Ethylbenzene	20.1	0.5	20	0	100.5%	85	115				
m,p-Xylene	39.34	1	40	0	98.4%	85	115				
Methyl tert-Butyl Ether	20.51	1	20	0	102.6%	85	115				
o-Xylene	20.32	0.5	20	0	101.6%	85	115				
Toluene	20.15	0.5	20	0	100.7%	85	115				
1,4-Difluorobenzene	90.27	0	100	0	90.3%	80	105				
4-Bromochlorobenzene	86.68	0	100	0	86.7%	78	108				
Fluorobenzene	90.45	0	100	0	90.4%	78	108				

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/11/2000				Prep Date:		
Client ID: 0006013		Run ID: GC-1_000611A	SeqNo: 28496								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.73	0.5	20	0	98.6%	85	115				
Ethylbenzene	19.78	0.5	20	0	98.9%	85	115				
m,p-Xylene	38.53	1	40	0	96.3%	85	115				
Methyl tert-Butyl Ether	20.32	1	20	0	101.6%	85	115				
o-Xylene	20.12	0.5	20	0	100.6%	85	115				
Toluene	19.9	0.5	20	0	99.5%	85	115				
1,4-Difluorobenzene	89.99	0	100	0	90.0%	80	105				
4-Bromochlorobenzene	82.9	0	100	0	82.9%	78	108				
Fluorobenzene	89.18	0	100	0	89.2%	78	108				

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: 0006013
 Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/11/2000		Prep Date:				
Client ID:		0006013	Run ID: GC-1_000611A		SeqNo: 28497						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.22	0.5	40	0	105.6%	85	115				
Ethylbenzene	42.32	0.5	40	0	105.8%	85	115				
m,p-Xylene	82.02	1	80	0	102.5%	85	115				
Methyl tert-Butyl Ether	41.88	1	40	0	104.7%	85	115				
o-Xylene	42.6	0.5	40	0	106.5%	85	115				
Toluene	42.54	0.5	40	0	106.3%	85	115				
1,4-Difluorobenzene	89.76	0	100	0	89.8%	80	105				
4-Bromochlorobenzene	87.82	0	100	0	87.8%	78	108				
Fluorobenzene	88.91	0	100	0	88.9%	78	108				

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000				Prep Date:		
Client ID:		0006013	Run ID:	GC-1_000612A		SeqNo:	28522				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.04	0.5	20	0	100.2%	85	115				
Ethylbenzene	20.53	0.5	20	0	102.6%	85	115				
m,p-Xylene	39.53	1	40	0	98.8%	85	115				
Methyl tert-Butyl Ether	20.16	1	20	0	100.8%	85	115				
o-Xylene	20.7	0.5	20	0	103.5%	85	115				
Toluene	20.42	0.5	20	0	102.1%	85	115				
1,4-Difluorobenzene	89.79	0	100	0	89.8%	80	105				
4-Bromochlorobenzene	87	0	100	0	87.0%	78	108				
Fluorobenzene	88.66	0	100	0	88.7%	78	108				

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: 0006013
Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000		Prep Date:	
Client ID: 0006013		Run ID: GC-1_000612A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte		Result					RPD Ref Val	%RPD
							RPDLimit	Qual
Benzene		19.98	0.5	20	0	99.9%	85	115
Ethylbenzene		20.48	0.5	20	0	102.4%	85	115
m,p-Xylene		39.64	1	40	0	99.1%	85	115
Methyl tert-Butyl Ether		21.55	1	20	0	107.7%	85	115
o-Xylene		20.81	0.5	20	0	104.1%	85	115
Toluene		20.38	0.5	20	0	101.9%	85	115
1,4-Difluorobenzene		89.68	0	100	0	89.7%	80	105
4-Bromochlorobenzene		87.48	0	100	0	87.5%	78	108
Fluorobenzene		88.1	0	100	0	88.1%	78	108

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000		Prep Date:	
Client ID: 0006013		Run ID: GC-1_000612A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte		Result					RPD Ref Val	%RPD
							RPDLimit	Qual
Benzene		39.97	0.5	40	0	99.9%	85	115
Ethylbenzene		40.46	0.5	40	0	101.1%	85	115
m,p-Xylene		77.8	1	80	0	97.3%	85	115
Methyl tert-Butyl Ether		41.57	1	40	0	103.9%	85	115
o-Xylene		40.92	0.5	40	0	102.3%	85	115
Toluene		40.55	0.5	40	0	101.4%	85	115
1,4-Difluorobenzene		89.34	0	100	0	89.3%	80	105
4-Bromochlorobenzene		86.73	0	100	0	86.7%	78	108
Fluorobenzene		88.11	0	100	0	88.1%	78	108

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: 0006013
Project: Thriftway Refinery
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0006005-11A	90.6	84.7	104
0006005-12A	89.3	82.6	88.4
0006006-01A	90.7	81.9	89.5
0006006-02A	90.7	85.4	90.3
0006006-03A	90.6	85	90.1
0006006-04A	90.1	81.5	89.5
0006006-05A	90.4	83.8	89.7
0006007-01A	82.5	84.3	96.4
0006007-02A	89.8	86.6	90.9
0006007-03A	90.2	84.2	90.2
0006012-01A	90.8	85.3	89.9
0006012-02A	90.7	88.4	90.8
0006012-03A	89.5	86	88.3
0006013-01A	90.6	85.2	89.9
0006013-02A	90.8	84.6	90.2
0006013-03A	89.7	82.5	89.1
0006013-03AMS	89.3	83.2	89
0006013-03AMSD	89.5	82.5	89
0006013-04A	90.6	85.1	89.2
0006013-05A	90.2	83.5	90
0006013-06A	87.8	85.3	87
0006020-02AMS	88.2	85.1	87
0006020-02AMSD	88	84.6	87
0006021-01A	83.6	86.2	83.8
0006021-02A	88.7	83.6	87
0006021-03A	88	87.2	87
0006021-04A	87.7	81.5	86.4

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 0006013
Project: Thriftway Refinery
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0006021-05A	88.2	83.7	87.1
0006021-06A	89.9	84.1	88.8
0006021-07A	90.2	84	88.6
0006021-08A	87.2	84.7	86.5
0006021-09A	90.1	83.5	88.5
0006021-10A	86.4	84.3	85.6
0006023-01A	90.8	85.2	90
0006023-02A	90	85.6	89.1
0006023-03A	89.9	86	89.1
0006023-04A	90	86.1	88.7
0006023-05A	90.1	86.2	89.1
0006023-06A	90.4	86.8	89.1
0006026-02A	87.2	83.4	86.2
CCV1 BTEX_00040	89.8	87	88.6
CCV2 BTEX_00040	89.7	87.5	88.1
CCV3 BTEX_00040	89.3	86.7	88.1
LCS WATER	89.4	87.6	88.4
MBI	90.1	86.4	89.1

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

On Site Technologies, LTD.

Date: 30-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: AA_000622	Test Code: E273.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622A			SeqNo: 29028	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Sodium	ND	0.25			
Sample ID: MBlank	Batch ID: AA_000622	Test Code: E273.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622A			SeqNo: 29053	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Sodium	ND	0.25			
Sample ID: MBlank	Batch ID: AA_000622	Test Code: E215.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622B			SeqNo: 29066	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Calcium	ND	0.25			
Sample ID: MBlank	Batch ID: AA_000622	Test Code: E215.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622B			SeqNo: 29091	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Calcium	ND	0.25			
Sample ID: MBlank	Batch ID: AA_000622	Test Code: E242.1	Units: mg/L	Analysis Date: 6/23/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622C			SeqNo: 29104	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Magnesium	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

CLIENT: BioTech Remediation, Inc.
Work Order: 0006013
Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank Batch ID: AA_000622 Test Code: E242.1 Units: mg/L Analysis Date: 6/23/2000 Prep Date:
Client ID: 0006013 Run ID: AA_000622C SeqNo: 29129
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_000622 Test Code: E258.1 Units: mg/L Analysis Date: 6/22/2000 Prep Date:
Client ID: 0006013 Run ID: AA_000622D SeqNo: 29173
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_000622 Test Code: E258.1 Units: mg/L Analysis Date: 6/22/2000 Prep Date:
Client ID: 0006013 Run ID: AA_000622D SeqNo: 29198
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium 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

FI - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 30-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006005-08CMS	Batch ID: AA_000622	Test Code: E258.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622D	SeqNo: 29185			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	6.5	0.25	2	4	125.0% 51 167
Sample ID: 0006005-11CMS	Batch ID: AA_000622	Test Code: E273.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622A	SeqNo: 29040			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	1196	50	800	400	99.5% 84 118
Sample ID: 0006005-11CMS	Batch ID: AA_000622	Test Code: E215.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622B	SeqNo: 29078			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	309	12	200	120	94.5% 90 126
Sample ID: 0006005-11CMS	Batch ID: AA_000622	Test Code: E242.1	Units: mg/L	Analysis Date: 6/23/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622C	SeqNo: 29116			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	112.8	5	80	28	106.0% 84 131
Sample ID: 0006030-01BMS	Batch ID: AA_000622	Test Code: E258.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622D	SeqNo: 29209			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	124	6.2	50	60	128.0% 51 167

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: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006034-19CMS	Batch ID: AA_000622	Test Code: E215.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:						
Client ID: 0006013	Run ID: AA_000622B	SeqNo: 29102									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	289	12	200	100	94.5%	90	126				

Sample ID: 0006051-01AMS	Batch ID: AA_000622	Test Code: E273.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:						
Client ID: 0006013	Run ID: AA_000622A	SeqNo: 29064									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	6820	250	4000	2800	100.5%	84	118				

Sample ID: 0006051-01AMS	Batch ID: AA_000622	Test Code: E242.1	Units: mg/L	Analysis Date: 6/23/2000	Prep Date:						
Client ID: 0006013	Run ID: AA_000622C	SeqNo: 29140									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	28.3	1.2	20	7.95	101.8%	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

On Site Technologies, LTD.

Date: 30-Jun-00

CLIENT: BioTech Remediation, Inc.
 Work Order: 0006013
 Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 Ca_000622	Batch ID: AA_000622	Test Code: E215.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622B	SeqNo: 29067			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	2.58	0.25	2.62	0	98.5% 90 110
Sample ID: CCV1 Ca_000622	Batch ID: AA_000622	Test Code: E215.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622B	SeqNo: 29092			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	2.57	0.25	2.62	0	98.1% 90 110
Sample ID: CCV1 K_000622A	Batch ID: AA_000622	Test Code: E258.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622D	SeqNo: 29174			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	3.46	0.25	3.36	0	103.0% 90 110
Sample ID: CCV1 K_000622A	Batch ID: AA_000622	Test Code: E258.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622D	SeqNo: 29199			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	3.4	0.25	3.36	0	101.2% 90 110
Sample ID: CCV1 MG_000622	Batch ID: AA_000622	Test Code: E242.1	Units: mg/L	Analysis Date: 6/23/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622C	SeqNo: 29105			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	2.18	0.25	2.08	0	104.8% 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: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID:	CCV1 MG_000623	Batch ID:	AA_000622	Test Code:	E242.1	Units:	mg/L	Analysis Date:	6/23/2000	Prep Date:	
Client ID:	0006013			Run ID:	AA_000622C			SeqNo:	29130		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	2.22	0.25	2.08	0	106.7%	90	110				

Sample ID:	CCV1 Na_000622	Batch ID:	AA_000622	Test Code:	E273.1	Units:	mg/L	Analysis Date:	6/22/2000	Prep Date:	
Client ID:	0006013			Run ID:	AA_000622A			SeqNo:	29029		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	2.78	0.25	2.82	0	98.6%	90	110				

Sample ID:	CCV1 Na_000622	Batch ID:	AA_000622	Test Code:	E273.1	Units:	mg/L	Analysis Date:	6/22/2000	Prep Date:	
Client ID:	0006013			Run ID:	AA_000622A			SeqNo:	29054		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	2.82	0.25	2.82	0	100.0%	90	110				

Sample ID:	CCV2 Ca_000622	Batch ID:	AA_000622	Test Code:	E215.1	Units:	mg/L	Analysis Date:	6/22/2000	Prep Date:	
Client ID:	0006013			Run ID:	AA_000622B			SeqNo:	29079		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	2.63	0.25	2.62	0	100.4%	90	110				

Sample ID:	CCV2 Ca_000622	Batch ID:	AA_000622	Test Code:	E215.1	Units:	mg/L	Analysis Date:	6/22/2000	Prep Date:	
Client ID:	0006013			Run ID:	AA_000622B			SeqNo:	29103		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	2.62	0.25	2.62	0	100.0%	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: 0006013
Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 K_000622A	Batch ID: AA_000622	Test Code: E258.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:					
Client ID: 0006013		Run ID: AA_000622D		SeqNo: 29186						
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	3.47	0.25	3.36	0	103.3%	90	110			

Sample ID: CCV2 K_000622A	Batch ID: AA_000622	Test Code: E258.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:					
Client ID: 0006013		Run ID: AA_000622D		SeqNo: 29210						
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	3.4	0.25	3.36	0	101.2%	90	110			

Sample ID: CCV2 MG_000623	Batch ID: AA_000622	Test Code: E242.1	Units: mg/L	Analysis Date: 6/23/2000	Prep Date:					
Client ID: 0006013		Run ID: AA_000622C		SeqNo: 29117						
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	2.24	0.25	2.08	0	107.7%	90	110			

Sample ID: CCV2 MG_000623	Batch ID: AA_000622	Test Code: E242.1	Units: mg/L	Analysis Date: 6/23/2000	Prep Date:					
Client ID: 0006013		Run ID: AA_000622C		SeqNo: 29141						
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	2.19	0.25	2.08	0	105.3%	90	110			

Sample ID: CCV2 Na_000622	Batch ID: AA_000622	Test Code: E273.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:					
Client ID: 0006013		Run ID: AA_000622A		SeqNo: 29041						
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	2.82	0.25	2.82	0	100.0%	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: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 Na_000622	Batch ID: AA_000622	Test Code: E273.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622A	SeqNo: 29065			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	2.85	0.25	2.82	0	101.1% 90 110

Sample ID: CCV3 Ca_000622	Batch ID: AA_000622	Test Code: E215.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622B	SeqNo: 29090			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	2.61	0.25	2.62	0	99.6% 90 110

Sample ID: CCV3 K_000622A	Batch ID: AA_000622	Test Code: E258.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622D	SeqNo: 29197			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	3.44	0.25	3.36	0	102.4% 90 110

Sample ID: CCV3 MG_000623	Batch ID: AA_000622	Test Code: E242.1	Units: mg/L	Analysis Date: 6/23/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622C	SeqNo: 29128			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	2.19	0.25	2.08	0	105.3% 90 110

Sample ID: CCV3 Na_000622	Batch ID: AA_000622	Test Code: E273.1	Units: mg/L	Analysis Date: 6/22/2000	Prep Date:
Client ID: 0006013	Run ID: AA_000622A	SeqNo: 29052			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	2.83	0.25	2.82	0	100.4% 90 110

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: 30-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBLank	Batch ID: API_000609	Test Code: E120.1	Units: uS/cm	Analysis Date: 6/7/2000	Prep Date:
Client ID: 0006013	Run ID: WET CHEM_000606B			SeqNo: 28362	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	ND	2			
Sample ID: MBLank	Batch ID: API_000609	Test Code: E160.1	Units: mg/L	Analysis Date: 6/8/2000	Prep Date:
Client ID: 0006013	Run ID: WET CHEM_000607B			SeqNo: 28375	
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: MBLank	Batch ID: API_000609	Test Code: E325.3	Units: mg/L	Analysis Date: 6/14/2000	Prep Date:
Client ID: 0006013	Run ID: WET CHEM_000614A			SeqNo: 28556	
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_000609	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date: 6/9/2000	Prep Date:
Client ID: 0006013	Run ID: WET CHEM_000609A			SeqNo: 28582	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	3.2	5			J
Alkalinity, Carbonate (As CaCO3)	ND	5			
Alkalinity, Hydroxide	ND	5			
Alkalinity, Total (As CaCO3)	3.2	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: 0006013
Project: Thriftway Refinery

QC SUMMARY REPORT
Method Blank

Sample ID: MBlank	Batch ID: API_000609	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 6/15/2000	Prep Date:
Client ID: 0006013	Run ID: 0006013	WET CHEM_000615B		SeqNo: 28829	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	2.5				
				RPD Ref Val	%RPD
				HighLimit	RPDLimit
					Qual
					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: 30-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0006013-03BD	Batch ID: API_000609	Test Code: E160.1	Units: mg/L	Analysis Date: 6/8/2000	Prep Date:
Client ID: Stripper Influent	0006013	Run ID: WET CHEM_000607B		SeqNo: 28378	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	3422	40	0	0	0.0% 0 0 3442 0.6% 5

Sample ID: 0006013-03BD	Batch ID: API_000609	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date: 6/9/2000	Prep Date:
Client ID: Stripper Influent	0006013	Run ID: WET CHEM_000609A		SeqNo: 28587	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	982	5	0	0	0.0% 0 0 974 0.8% 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)	982	5	0	0	0.0% 0 0 974 0.8% 4

Sample ID: 0006013-03BD	Batch ID: API_000609	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 6/15/2000	Prep Date:
Client ID: Stripper Influent	0006013	Run ID: WET CHEM_000615B		SeqNo: 28832	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	1482	5	0	0	0.0% 0 0 1498 1.1% 6

Sample ID: 0006013-04BD	Batch ID: API_000609	Test Code: E325.3	Units: mg/L	Analysis Date: 6/14/2000	Prep Date:
Client ID: Stripper Effluent	0006013	Run ID: WET CHEM_000614A		SeqNo: 28563	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	4086	1	0	0	0.0% 0 0 3806 7.1% 10

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

I - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 30-Jun-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3017	Batch ID: API_000609	Test Code: E325.3	Units: mg/L	Analysis Date: 6/14/2000	Prep Date:
Client ID: 0006013	Run ID: WET CHEM_000614A			SeqNo: 28557	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Chloride	188	1	200	0	94.0%
				83	113

Sample ID: LCS 3017	Batch ID: API_000609	Test Code: E325.3	Units: mg/L	Analysis Date: 6/14/2000	Prep Date:
Client ID: 0006013	Run ID: WET CHEM_000614A			SeqNo: 28567	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Chloride	187	1	200	0	93.5%
				83	113

Sample ID: LCS 3023	Batch ID: API_000609	Test Code: E160.1	Units: mg/L	Analysis Date: 6/8/2000	Prep Date:
Client ID: 0006013	Run ID: WET CHEM_000607B			SeqNo: 28376	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Total Dissolved Solids (Residue, Filtera	760	40	781	0	97.3%
				88	105

Sample ID: LCS 3023	Batch ID: API_000609	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date: 6/9/2000	Prep Date:
Client ID: 0006013	Run ID: WET CHEM_000609A			SeqNo: 28583	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Alkalinity, Total (As CaCO3)	216	5	219	3.2	97.2%
				89	109

Sample ID: LCS 3023	Batch ID: API_000609	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 6/15/2000	Prep Date:
Client ID: 0006013	Run ID: WET CHEM_000615B			SeqNo: 28830	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
Sulfate	53.5	5	55	2.5	92.7%
				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

CLIENT: BioTech Remediation, Inc.

Work Order: 0006013

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3024	Batch ID: API_000609	Test Code: E120.1	Units: uS/cm	Analysis Date: 6/7/2000			Prep Date:		
Client ID:	0006013	Run ID:	WET CHEM_000606B		SeqNo:	28363			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Specific Conductance	839	2	780	0	107.6%	80	120		
Sample ID: LCS 3024	Batch ID: API_000609	Test Code: E120.1	Units: uS/cm	Analysis Date: 6/7/2000			Prep Date:		
Client ID:	0006013	Run ID:	WET CHEM_000606B		SeqNo:	28366			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Specific Conductance	834	2	780	0	106.9%	80	120		
Sample ID: LCS 3025	Batch ID: API_000609	Test Code: E150.1	Units: pH units	Analysis Date: 6/6/2000			Prep Date:		
Client ID:	0006013	Run ID:	WET CHEM_000606A		SeqNo:	28358			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
pH	7.642	2	7.68	0	99.5%	97	102		
Sample ID: LCS 3025	Batch ID: API_000609	Test Code: E150.1	Units: pH units	Analysis Date: 6/6/2000			Prep Date:		
Client ID:	0006013	Run ID:	WET CHEM_000606A		SeqNo:	28361			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
pH	7.629	2	7.68	0	99.3%	97	102		

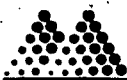
Qualifiers: ND - Not Detected at the Reporting Limit

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



Mountain States Analytical, Inc.

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

June 21, 2000

Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-1556 Fax: (505) 325-6256

Project: Water Analysis

Work Order: 0006097

Dear Mr. David Cox,

Thank you for using Mountain States Analytical, Inc. (MSAI) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0006097-1 and contains 44 pages of information for the 2 samples submitted to MSAI on Wednesday, June 07, 2000. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached " are included by reference as attachments following page 44. For regulatory compliance reporting, individual pages or portions of this report may not be separated.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6274 ext. 3026 or by e-mail at rlarsen@msailabs.com.

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

Analytical Report

Work Order Receipt Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0006097-1

Date Reported: 06/21/00

Work Order: 0006097

Received by: Pamela Olsen

Date Received: 06/07/00 10:00

Cooler Number/ID: 1/OST Cooler

Temperature: 3.1 °C

Thermometer ID: 2390

Coolant Used: Wet Ice

Air Bill: 1Z-66E-585-01-1001-564-2

Packing Material: Paper, ice, bubble wrap

Samples: 0006013-03 (C,D,E), 0006013-04 (C,D,E)

Carrier name: UPS

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: HNO3 pH <2

Comments:



Mountain States Analytical, Inc.

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

Analytical Report

Sample Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0006097-1

Date Reported: 06/21/00

Work Order: 0006097

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0006097-01A	0006013-03C		Water	06/05/00
0006097-01B	0006013-03D		Water	06/05/00
0006097-01C	0006013-03E		Water	06/05/00
0006097-02A	0006013-04C		Water	06/05/00
0006097-02B	0006013-04D		Water	06/05/00
0006097-02C	0006013-04E		Water	06/05/00



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: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

Sample ID	Client Sample ID	Date Collected						
0006097-01A	0006013-03C	06/05/00 14:35						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Anions by I. C. (B, Cl, Fl, SO4)							06/13/00 13:21	28
0006097-01B	0006013-03D	06/05/00 14:35						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Semi-Volatiles					06/08/00 16:00	7	06/15/00 00:11	40
0006097-01C	0006013-03E	06/05/00 14:35						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CVAA					06/19/00 17:29		06/20/00 09:53	28
Metals by hrICP					06/08/00 12:19		06/08/00 16:40	180
0006097-02A	0006013-04C	06/05/00 14:45						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Anions by I. C. (B, Cl, Fl, SO4)							06/13/00 14:12	28
0006097-02B	0006013-04D	06/05/00 14:45						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Semi-Volatiles					06/08/00 16:00	7	06/15/00 14:16	40
0006097-02C	0006013-04E	06/05/00 14:45						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CVAA					06/19/00 17:29		06/20/00 09:55	28
Metals by hrICP					06/08/00 12:19		06/08/00 16:43	180

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

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

Analytical Report

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

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097
Lab Sample ID: 0006097-01A
Client Sample ID: 0006013-03C
Date Collected: 06/05/00
Date Received: 06/07/00 10:00
Matrix: Water
COC ID:

Project: Water Analysis
Project ID: PC
Purchase Order: Thriftway Refinery; 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	1	5	mg/L	50	06/13/00 13:21	NWL
Fluoride	1.20 J	0.5	2.5	mg/L	50	06/13/00 13:21	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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical Report

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

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097
Lab Sample ID: 0006097-01B
Client Sample ID: 0006013-03D
Date Collected: 06/05/00
Date Received: 06/07/00 10:00
Matrix: Water
COC ID:

Project: Water Analysis
Project ID: **Thriftway Refinery; Stripper Influent**
Purchase Order:

(DL)

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	3.8	9.48	µg/L	1	06/15/00 00:11	KPF
Acenaphthylene	U	3.8	9.48	µg/L	1	06/15/00 00:11	KPF
Anthracene	U	1.9	9.48	µg/L	1	06/15/00 00:11	KPF
Benz(a)anthracene	U	1.9	9.48	µg/L	1	06/15/00 00:11	KPF
Benzo(a)pyrene	U	1.9	9.48	µg/L	1	06/15/00 00:11	KPF
Benzo(b)fluoranthene	U	2.8	9.48	µg/L	1	06/15/00 00:11	KPF
Benzo(ghi)perylene	U	1.9	9.48	µg/L	1	06/15/00 00:11	KPF
Benzo(k)fluoranthene	U	2.8	9.48	µg/L	1	06/15/00 00:11	KPF
Chrysene	U	1.9	9.48	µg/L	1	06/15/00 00:11	KPF
Dibenz(a,h)acridine	U	1.9	9.48	µg/L	1	06/15/00 00:11	KPF
Dibenz(a,h)anthracene	U	1.9	9.48	µg/L	1	06/15/00 00:11	KPF
Fluoranthene	U	1.9	9.48	µg/L	1	06/15/00 00:11	KPF
Fluorene	3.00 J	2.8	9.48	µg/L	1	06/15/00 00:11	KPF
Indene	U	4.7	9.48	µg/L	1	06/15/00 00:11	KPF
Indeno(1,2,3-cd)pyrene	U	1.9	9.48	µg/L	1	06/15/00 00:11	KPF
2-Methylnaphthalene	46.8	5.7	9.48	µg/L	1	06/15/00 00:11	KPF
Naphthalene	79.5	4.7	9.48	µg/L	1	06/15/00 00:11	KPF
Phenanthrene	2.00 J	1.9	9.48	µg/L	1	06/15/00 00:11	KPF
Pyrene	U	1.9	9.48	µg/L	1	06/15/00 00:11	KPF
Surrogates							
		Recovery Range					
2,4,6-Tribromophenol	116	1-141.25		% Recovery	1	06/15/00 00:11	KPF
2-Fluorophenol	53.8	1-81.1		% Recovery	1	06/15/00 00:11	KPF
2-Fluorobiphenyl	78.1	30.84-108.77		% Recovery	1	06/15/00 00:11	KPF
Nitrobenzene-d5	79.2	32.75-105.37		% Recovery	1	06/15/00 00:11	KPF
Phenol-d6	31.2	1-71.88		% Recovery	1	06/15/00 00:11	KPF
Terphenyl-d14	55.0	25.98-134.37		% Recovery	1	06/15/00 00:11	KPF

SW-846 3510C: Separatory Funnel Liq/Liq Ext., SV, Extract

Prep Batch ID: 3006 0.95 06/08/00 16:00 JLS

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

* - Result is greater than the associated action level

6



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: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097
Lab Sample ID: 0006097-01C
Client Sample ID: 0006013-03E
Date Collected: 06/05/00
Date Received: 06/07/00 10:00
Matrix: Water
COC ID:

Project: Water Analysis
Project ID:
Purchase Order: Thriftway Refinery; Stripper Influent

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/hrICP Prep, Water							
Prep Batch ID: 2986						06/08/00 12:19	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	06/20/00 09:53	MM
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 3083						06/19/00 17:29	JWC
SW-846 6010B: Metals by hrICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	06/08/00 16:40	ITI
Barium	0.192	0.003	0.015	mg/L	1	06/08/00 16:40	ITI
Cadmium	U	0.003	0.015	mg/L	1	06/08/00 16:40	ITI
Chromium	U	0.01	0.05	mg/L	1	06/08/00 16:40	ITI
Lead	0.0800 J	0.02	0.1	mg/L	1	06/08/00 16:40	ITI
Selenium	U	0.03	0.15	mg/L	1	06/08/00 16:40	ITI
Silver	U	0.004	0.02	mg/L	1	06/08/00 16:40	ITI

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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical Report

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

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097
Lab Sample ID: 0006097-02A
Client Sample ID: 0006013-04C
Date Collected: 06/05/00
Date Received: 06/07/00 10:00
Matrix: Water
COC ID:

Project: Water Analysis
Project ID:
Purchase Order: Thriftway Refinery; Stripper Effluent

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	06/13/00 14:12	NWL
Fluoride	2.11 J	0.5	2.5	mg/L	50	06/13/00 14:12	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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analysis of

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

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097
Lab Sample ID: 0006097-02B
Client Sample ID: 0006013-04D
Date Collected: 06/05/00
Date Received: 06/07/00 10:00
Matrix: Water
COC ID:

Project: Water Analysis
Project ID:
Purchase Order: Thriftway Refinery; Stripper Effluent

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	19	47.2	µg/L	5	06/15/00 14:16	MSS
Acenaphthylene	U	19	47.2	µg/L	5	06/15/00 14:16	MSS
Anthracene	U	9.4	47.2	µg/L	5	06/15/00 14:16	MSS
Benz(a)anthracene	U	9.4	47.2	µg/L	5	06/15/00 14:16	MSS
Benzo(a)pyrene	U	9.4	47.2	µg/L	5	06/15/00 14:16	MSS
Benzo(b)fluoranthene	U	14	47.2	µg/L	5	06/15/00 14:16	MSS
Benzo(ghi)perylene	U	9.4	47.2	µg/L	5	06/15/00 14:16	MSS
Benzo(k)fluoranthene	U	14	47.2	µg/L	5	06/15/00 14:16	MSS
Chrysene	U	9.4	47.2	µg/L	5	06/15/00 14:16	MSS
Dibenz(a,h)acridine	U	9.4	47.2	µg/L	5	06/15/00 14:16	MSS
Dibenz(a,h)anthracene	U	9.4	47.2	µg/L	5	06/15/00 14:16	MSS
Fluoranthene	U	9.4	47.2	µg/L	5	06/15/00 14:16	MSS
Fluorene	U	14	47.2	µg/L	5	06/15/00 14:16	MSS
Indene	U	24	47.2	µg/L	5	06/15/00 14:16	MSS
Indeno(1,2,3-cd)pyrene	U	9.4	47.2	µg/L	5	06/15/00 14:16	MSS
2-Methylnaphthalene	U	28	47.2	µg/L	5	06/15/00 14:16	MSS
Naphthalene	U	24	47.2	µg/L	5	06/15/00 14:16	MSS
Phenanthrene	U	9.4	47.2	µg/L	5	06/15/00 14:16	MSS
Pyrene	U	9.4	47.2	µg/L	5	06/15/00 14:16	MSS

Surrogates

Recovery Range

2,4,6-Tribromophenol	2.54	1-141.25	% Recovery	5	06/15/00 14:16	MSS
2-Fluorophenol	3.40	1-81.1	% Recovery	5	06/15/00 14:16	MSS
2-Fluorobiphenyl	76.7	30.84-108.77	% Recovery	5	06/15/00 14:16	MSS
Nitrobenzene-d5	70.6	32.75-105.37	% Recovery	5	06/15/00 14:16	MSS
Phenol-d6	12.6	1-71.88	% Recovery	5	06/15/00 14:16	MSS
Terphenyl-d14	144 S (2r)	25.98-134.37	% Recovery	5	06/15/00 14:16	MSS

Note for 06/15/00 14:16 analysis: Sample diluted due to matrix interferences.

2r: Surrogate spike recovery was outside acceptable limits due to dilution

SW-846 3510C: Separatory Funnel Liq/Liq Ext., SV, Extract

Prep Batch ID: 3006

0.94 06/08/00 16:00 JLS

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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical Report

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

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097
Lab Sample ID: 0006097-02C
Client Sample ID: 0006013-04E
Date Collected: 06/05/00
Date Received: 06/07/00 10:00
Matrix: Water
COC ID:

Project: Water Analysis
Project ID: **Thriftway Refinery; Stripper Effluent**
Purchase Order:

(2)

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/hrICP Prep, Water							
Prep Batch ID: 2986						06/08/00 12:19	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	06/20/00 09:55	MM
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 3083						06/19/00 17:29	JWC
SW-846 6010B: Metals by hrICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	06/08/00 16:43	ITI
Barium	0.0523	0.003	0.015	mg/L	1	06/08/00 16:43	ITI
Cadmium	U	0.003	0.015	mg/L	1	06/08/00 16:43	ITI
Chromium	U	0.01	0.05	mg/L	1	06/08/00 16:43	ITI
Lead	U	0.02	0.1	mg/L	1	06/08/00 16:43	ITI
Selenium	U	0.03	0.15	mg/L	1	06/08/00 16:43	ITI
Silver	U	0.004	0.02	mg/L	1	06/08/00 16:43	ITI

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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0006097-1

Date Reported: 06/21/00

Work Order: 0006097

EPA 300.0: Anions by I. C. (B, Cl, F, SO₄), Water

QC Type: Laboratory Reagent Blank

Sample ID: LRB 1

Run ID: IC 1_000613A

Analysis Date: 06/13/00 09:28

Prep Batch ID: R5837

Units: mg/L

Seq No: 99020

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U					0.1			
Chloride	0.08102					0.45			
Fluoride	U					0.05			
Sulfate	U					0.35			

QC Type: Laboratory Fortified Blank

Sample ID: LFB WCH-000218-01

Run ID: IC 1_000613A

Analysis Date: 06/13/00 09:44

Prep Batch ID: R5837

Units: mg/L

Seq No: 99021

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	391.9	U	400	98.0	90	110			
Chloride	188.7	U	200	94.4	90	110			
Fluoride	93.57	U	100	93.6	90	110			
Sulfate	396.6	U	400	99.2	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



Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Laboratory Fortified Blank Duplicate
Sample ID: LFBD WCH-000218-01
Run ID: IC 1_000613A

Analysis Date: 06/13/00 10:01
Prep Batch ID: R5837

Units: mg/L
Seq No: 99022

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	395.3	U	400	98.8	90	110	391.9	0.86	20
Chloride	196.4	U	200	98.2	90	110	188.7	3.98	20
Fluoride	92.31	U	100	92.3	90	110	93.57	1.35	20
Sulfate	391.6	U	400	97.9	90	110	396.6	1.28	20

QC Type: Matrix Spike
Sample ID: 0006158-10A MS
Run ID: IC 1_000613A

Analysis Date: 06/13/00 11:07
Prep Batch ID: R5837

Units: mg/L
Seq No: 99024

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	19050	U	20000	95.3	80	120			
Chloride	56060	45060	10000	110	80	120			
Fluoride	4672	U	5000	93.4	80	120			
Sulfate	26360	8355	20000	90.0	80	120			

QC Type: Matrix Spike Duplicate
Sample ID: 0006158-10A MSD
Run ID: IC 1_000613A

Analysis Date: 06/13/00 11:24
Prep Batch ID: R5837

Units: mg/L
Seq No: 99025

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	19320	U	20000	96.6	80	120	19050	1.42	20
Chloride	56110	45060	10000	110	80	120	56060	0.09	20
Fluoride	4672	U	5000	93.4	80	120	4672	0.01	20
Sulfate	25840	8355	20000	87.4	80	120	26360	2.00	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



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: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Laboratory Reagent Blank
Sample ID: LRB 2
Run ID: IC 1_000613A

Analysis Date: 06/13/00 11:57
Prep Batch ID: R5837

Units: mg/L
Seq No: 99027

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U					0.1			
Chloride	0.07879					0.45			
Fluoride	U					0.05			
Sulfate	U					0.35			

QC Type: Laboratory Reagent Blank
Sample ID: LRB 3
Run ID: IC 1_000613A

Analysis Date: 06/13/00 14:46
Prep Batch ID: R5837

Units: mg/L
Seq No: 99036

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U					0.1			
Chloride	0.09428J					0.45			
Fluoride	U					0.05			
Sulfate	U					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: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

SW-846 6010B: Metals by hrICP, Water

QC Type: Method Blank
Sample ID: PBW-2986
Run ID: TJA-IRIS_000608C

Analysis Date: 06/08/00 16:01
Prep Batch ID: 2986

Units: mg/L
Seq No: 97248

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	-0.00972				-0.04	0.02			
Barium	0.00045				-0.006	0.003			
Cadmium	0.00032				-0.006	0.003			
Chromium	0.00127				-0.02	0.01			
Lead	-0.00209				-0.04	0.02			
Selenium	-0.00674				-0.06	0.03			
Silver	-0.00053				-0.006	0.004			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-2986
Run ID: TJA-IRIS_000608C

Analysis Date: 06/08/00 16:04
Prep Batch ID: 2986

Units: mg/L
Seq No: 97249

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	0.9949		1	99.5	75	125			
Barium	0.205		0.2	103	75	125			
Cadmium	0.09703		0.1	97.0	75	125			
Chromium	0.4205		0.4	105	75	125			
Lead	0.9391		1	93.9	75	125			
Selenium	1.014		1	101	75	125			
Silver	0.1003		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



Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Sample Duplicate
Sample ID: 0006067-01B D
Run ID: TJA-IRIS_000608C

Analysis Date: 06/08/00 16:10
Prep Batch ID: 2986

Units: mg/L
Seq No: 97251

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	20
Barium	0.1328						0.1324	0.31	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: 0006067-01B MS
Run ID: TJA-IRIS_000608C

Analysis Date: 06/08/00 16:13
Prep Batch ID: 2986

Units: mg/L
Seq No: 97252

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	0.3372	0.1324	0.2	102	75	125			
Cadmium	0.1012	U	0.1	101	75	125			
Chromium	0.3933	U	0.4	98.3	75	125			
Lead	0.9988	U	1	99.9	75	125			
Selenium	1.078	U	1	108	75	125			
Silver	0.1028	U	0.1	103	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



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: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Matrix Spike Duplicate
Sample ID: 0006067-01B MSD
Run ID: TJA-IRIS_000608C

Analysis Date: 06/08/00 16:15
Prep Batch ID: 2986

Units: mg/L
Seq No: 97253

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.041	U	1	104	75	125	1.032	0.81	20
Barium	0.3389	0.1324	0.2	103	75	125	0.3372	0.51	20
Cadmium	0.09851	U	0.1	98.5	75	125	0.1012	2.69	20
Chromium	0.4034	U	0.4	101	75	125	0.3933	2.53	20
Lead	0.9726	U	1	97.3	75	125	0.9988	2.67	20
Selenium	1.049	U	1	105	75	125	1.078	2.75	20
Silver	0.1011	U	0.1	101	75	125	0.1028	1.70	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0006067-01B A
Run ID: TJA-IRIS_000608C

Analysis Date: 06/08/00 16:18
Prep Batch ID: R5750

Units: mg/L
Seq No: 97254

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.016	U	1	102	75	125			
Barium	0.3297	0.1324	0.2	98.7	75	125			
Cadmium	0.09383	U	0.1	93.8	75	125			
Chromium	0.4028	U	0.4	101	75	125			
Lead	0.9174	U	1	91.7	75	125			
Selenium	1.003	U	1	100	75	125			
Silver	0.09795	U	0.1	97.9	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



Mountain States Analytical, Inc.

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

Analytical By

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0006097-1

Date Reported: 06/21/00

Work Order: 0006097

QC Type: Serial Dilution

Sample ID: 0006067-01B L

Run ID: TJA-IRIS_000608C

Analysis Date: 06/08/00 16:21

Prep Batch ID: R5750

Units: mg/L

Seq No: 97255

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	10
Barium	0.1311						0.1324	0.98	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



Mountain States Analytical, Inc.

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

Analytical Item

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

SW-846 7470A: Mercury by CVAA, Water

QC Type: Method Blank
Sample ID: PBW-3083
Run ID: FIMS_000620A

Analysis Date: 06/20/00 09:35
Prep Batch ID: 3083

Units: µg/L
Seq No: 100688

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	-0.1236				-0.13	0.1			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-3083
Run ID: FIMS_000620A

Analysis Date: 06/20/00 09:37
Prep Batch ID: 3083

Units: µg/L
Seq No: 100689

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.212		5	104	80	120			

QC Type: Sample Duplicate
Sample ID: 0006067-01A D
Run ID: FIMS_000620A

Analysis Date: 06/20/00 09:40
Prep Batch ID: 3083

Units: µg/L
Seq No: 100691

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



Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Matrix Spike
Sample ID: 0006067-01A MS
Run ID: FIMS_000620A

Analysis Date: 06/20/00 09:41
Prep Batch ID: 3083

Units: µg/L
Seq No: 100692

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.928	U	5	98.6	80	120			

QC Type: Matrix Spike Duplicate
Sample ID: 0006067-01A MSD
Run ID: FIMS_000620A

Analysis Date: 06/20/00 09:43
Prep Batch ID: 3083

Units: µg/L
Seq No: 100693

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.041	U	5	101	80	120	4.928	2.28	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0006067-01A A
Run ID: FIMS_000620A

Analysis Date: 06/20/00 09:44
Prep Batch ID: 3083

Units: µg/L
Seq No: 100694

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.096	U	5	102	85	115			

QC Type: Serial Dilution
Sample ID: 0006067-01A L
Run ID: FIMS_000620A

Analysis Date: 06/20/00 09:46
Prep Batch ID: 3083

Units: µg/L
Seq No: 100695

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	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



Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Method Blank
Sample ID: PBW-3083
Run ID: FIMS_000620C

Analysis Date: 06/20/00 14:06
Prep Batch ID: 3083

Units: µg/L
Seq No: 101040

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	-0.1177				-0.2	0.1			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-3083
Run ID: FIMS_000620C

Analysis Date: 06/20/00 14:08
Prep Batch ID: 3083

Units: µg/L
Seq No: 101041

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.067		5	101	80	120			

QC Type: Sample Duplicate
Sample ID: 0006067-01A D
Run ID: FIMS_000620C

Analysis Date: 06/20/00 14:11
Prep Batch ID: 3083

Units: µg/L
Seq No: 101043

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: 0006067-01A MS
Run ID: FIMS_000620C

Analysis Date: 06/20/00 14:12
Prep Batch ID: 3083

Units: µg/L
Seq No: 101044

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.612	U	5	92.2	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.

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

Analytical Data

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Matrix Spike Duplicate
Sample ID: 0006067-01A MSD
Run ID: FIMS_000620C

Analysis Date: 06/20/00 14:13
Prep Batch ID: 3083

Units: µg/L
Seq No: 101045

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.769	U	5	95.4	80	120	4.612	3.34	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0006067-01A A
Run ID: FIMS_000620C

Analysis Date: 06/20/00 14:15
Prep Batch ID: 3083

Units: µg/L
Seq No: 101046

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.738	U	5	94.8	85	115			

QC Type: Serial Dilution
Sample ID: 0006067-01A L
Run ID: FIMS_000620C

Analysis Date: 06/20/00 14:16
Prep Batch ID: 3083

Units: µg/L
Seq No: 101047

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	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



Mountain States Analytical, Inc.

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Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

SW-846 8270C: Semi-Volatiles, Water

QC Type: Method Blank
Sample ID: 0006002-03A
Run ID: HP-5_000612A

Analysis Date: 06/12/00 16:27
Prep Batch ID: 3007

Units: µg/L
Seq No: 98487

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			

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0006097-1

Date Reported: 06/21/00

Work Order: 0006097

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
2,6-Dinitrotoluene	U	3

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

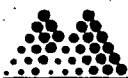
S - Results outside normal recovery limits

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.

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0006097-1

Date Reported: 06/21/00

Work Order: 0006097

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
N-Nitrosopiperidine	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



Mountain States Analytical, Inc.

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

Analytical Results

Quality Control Summary

Client: On Site Technologies, Ltd.

Report Number: 0006097-1

Project: Water Analysis

Date Reported: 06/21/00

Project ID:

Work Order: 0006097

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
Thionazin	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



Quality Control Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0006097-1

Date Reported: 06/21/00

Work Order: 0006097

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	133	200	66.5	1	141.25
2-Fluorophenol	62.22	200	31.1	1	81.1
2-Fluorobiphenyl	61.14	100	61.1	30.84	108.77
Nitrobenzene-d5	61.95	100	61.9	32.75	105.37
Phenol-d6	40.82	200	20.4	1	71.88
Terphenyl-d14	69.76	100	69.8	25.98	134.37

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

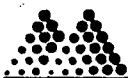
S - Results outside normal recovery limits

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

Analytical Results

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Laboratory Control Spike
Sample ID: 0006002-04A
Run ID: HP-5_000612A

Analysis Date: 06/12/00 17:02
Prep Batch ID: 3007

Units: µg/L
Seq No: 98488

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	75.86		100	75.9	52	103			
4-Chloro-3-methylphenol	79.7		100	79.7	55	106			
2-Chlorophenol	64.53		100	64.5	48	94			
1,4-Dichlorobenzene	56.41		100	56.4	39	82			
2,4-Dinitrotoluene	84.25		100	84.3	57	113			
N-Nitrosodi-N-propylamine	64.29		100	64.3	48	97			
4-Nitrophenol	37.32		100	37.3	21	55			
Pentachlorophenol	91.8		100	91.8	49	122			
Phenol	29.63		100	29.6	18	52			
Pyrene	73.16		100	73.2	50	112			
1,2,4-Trichlorobenzene	60.54		100	60.5	41	86			
Surrogates									
2,4,6-Tribromophenol	173		200	86.5	1	141.25			
2-Fluorophenol	75.83		200	37.9	1	81.1			
2-Fluorobiphenyl	76.21		100	76.2	30.84	108.77			
Nitrobenzene-d5	77.2		100	77.2	32.75	105.37			
Phenol-d6	53.2		200	26.6	1	71.88			
Terphenyl-d14	70.92		100	70.9	25.98	134.37			

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

Analytical Results

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0006097-1

Date Reported: 06/21/00

Work Order: 0006097

QC Type: Laboratory Control Spike Duplicate

Sample ID: 0006002-05A

Run ID: HP-5_000612A

Analysis Date: 06/12/00 17:37

Prep Batch ID: 3007

Units: µg/L

Seq No: 98489

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	77.86		100	77.9	52	103	75.86	2.60	28
4-Chloro-3-methylphenol	82.65		100	82.6	55	106	79.7	3.62	37
2-Chlorophenol	68.94		100	68.9	48	94	64.53	6.61	29
1,4-Dichlorobenzene	62.45		100	62.4	39	82	56.41	10.20	32
2,4-Dinitrotoluene	87.31		100	87.3	57	113	84.25	3.56	22
N-Nitrosodi-N-propylamine	68.46		100	68.5	48	97	64.29	6.29	55
4-Nitrophenol	37.78		100	37.8	21	55	37.32	1.23	47
Pentachlorophenol	85.55		100	85.5	49	122	91.8	7.05	49
Phenol	31.64		100	31.6	18	52	29.63	6.57	23
Pyrene	75.8		100	75.8	50	112	73.16	3.54	25
1,2,4-Trichlorobenzene	64.72		100	64.7	41	86	60.54	6.67	28
Surrogates									
2,4,6-Tribromophenol	174.8		200	87.4	1	141.25			
2-Fluorophenol	78.87		200	39.4	1	81.1			
2-Fluorobiphenyl	79.32		100	79.3	30.84	108.77			
Nitrobenzene-d5	80.74		100	80.7	32.75	105.37			
Phenol-d6	56.71		200	28.4	1	71.88			
Terphenyl-d14	71.14		100	71.1	25.98	134.37			

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Matrix Spike
Sample ID: 0006002-01AMS
Run ID: HP-5_000612A

Analysis Date: 06/12/00 18:48
Prep Batch ID: 3007

Units: µg/L
Seq No: 98491

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	68.69	U	96.15	71.4	52	103			
4-Chloro-3-methylphenol	117.2 S(2m)	U	96.15	122	55	106			
2-Chlorophenol	91.58 S(2m)	U	96.15	95.2	48	94			
1,4-Dichlorobenzene	46.01	U	96.15	47.9	39	82			
2,4-Dinitrotoluene	86.66	U	96.15	90.1	57	113			
N-Nitrosodi-N-propylamine	64.79	U	96.15	67.4	48	97			
4-Nitrophenol	48.66	U	96.15	50.6	21	55			
Pentachlorophenol	125.8 S(2m)	U	96.15	131	49	122			
Phenol	55.61 S(2m)	U	96.15	57.8	18	52			
Pyrene	80.89	U	96.15	84.1	50	112			
1,2,4-Trichlorobenzene	49.5	U	96.15	51.5	41	86			
Surrogates									
2,4,6-Tribromophenol	211.2		192.3	110	1	141.25			
2-Fluorophenol	94.09		192.3	48.9	1	81.1			
2-Fluorobiphenyl	74.39		96.15	77.4	30.84	108.77			
Nitrobenzene-d5	81.27		96.15	84.5	32.75	105.37			
Phenol-d6	101.9		192.3	53.0	1	71.88			
Terphenyl-d14	72.05		96.15	74.9	25.98	134.37			

2m: MS/MSD are outside acceptable limits - LCS was within limits - matrix interference is suspected

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Matrix Spike Duplicate
Sample ID: 0006002-01 AMSD
Run ID: HP-5_000612A

Analysis Date: 06/12/00 19:23
Prep Batch ID: 3007

Units: µg/L
Seq No: 98492

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	71.01	U	95.24	74.6	52	103	68.69	3.32	28
4-Chloro-3-methylphenol	53.02 R(2m)	U	95.24	55.7	55	106	117.2	75.40	37
2-Chlorophenol	38.51 SR(2m)	U	95.24	40.4	48	94	91.58	81.60	29
1,4-Dichlorobenzene	51.46	U	95.24	54.0	39	82	46.01	11.20	32
2,4-Dinitrotoluene	80.55	U	95.24	84.6	57	113	86.66	7.31	22
N-Nitrosodi-N-propylamine	58.5	U	95.24	61.4	48	97	64.79	10.20	55
4-Nitrophenol	46.66	U	95.24	49.0	21	55	48.66	4.20	47
Pentachlorophenol	119.5 S(2m)	U	95.24	125	49	122	125.8	5.13	49
Phenol	28.4 R(2m)	U	95.24	29.8	18	52	55.61	64.80	23
Pyrene	69.73	U	95.24	73.2	50	112	80.89	14.80	25
1,2,4-Trichlorobenzene	55.82	U	95.24	58.6	41	86	49.5	12.00	28

Surrogates

2,4,6-Tribromophenol	144.1		190.5	75.7	1	141.25
2-Fluorophenol	65.91		190.5	34.6	1	81.1
2-Fluorobiphenyl	76.31		95.24	80.1	30.84	108.77
Nitrobenzene-d5	76.3		95.24	80.1	32.75	105.37
Phenol-d6	52.92		190.5	27.8	1	71.88
Terphenyl-d14	43.82		95.24	46.0	25.98	134.37

2m: MS/MSD are outside acceptable limits - LCS was within limits - matrix interference is suspected

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Method Blank
Sample ID: MB-3006
Run ID: HP-5_000612A

Analysis Date: 06/12/00 19:58
Prep Batch ID: 3006

Units: µg/L
Seq No: 98493

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			
Benidine	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	18.14 S(1b)					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



Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.

Report Number: 0006097-1

Project: Water Analysis

Date Reported: 06/21/00

Project ID:

Work Order: 0006097

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



Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0006097-1

Date Reported: 06/21/00

Work Order: 0006097

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

**Quality Control Summary****Client:** On Site Technologies, Ltd.**Project:** Water Analysis**Project ID:****Report Number:** 0006097-1**Date Reported:** 06/21/00**Work Order:** 0006097

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



Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0006097-1

Date Reported: 06/21/00

Work Order: 0006097

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	202.4	200	101	1	141.25
2-Fluorophenol	80.05	200	40.0	1	81.1
2-Fluorobiphenyl	81.27	100	81.3	30.84	108.77
Nitrobenzene-d5	79.27	100	79.3	32.75	105.37
Phenol-d6	51.34	200	25.7	1	71.88
Terphenyl-d14	114.7	100	115	25.98	134.37

1b: The concentration in the blank is less than 5% of the regulatory limit for this analyte.

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

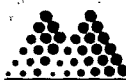
S - Results outside normal recovery limits

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

**Quality Control Summary**

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Laboratory Control Spike
Sample ID: LCS-3006
Run ID: HP-5_000612A

Analysis Date: 06/12/00 20:34
Prep Batch ID: 3006

Units: µg/L
Seq No: 98494

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	90.29		100	90.3	52	103			
4-Chloro-3-methylphenol	101		100	101	55	106			
2-Chlorophenol	57.41		100	57.4	48	94			
1,4-Dichlorobenzene	44.9		100	44.9	39	82			
2,4-Dinitrotoluene	100.6		100	101	57	113			
N-Nitrosodi-N-propylamine	73.32		100	73.3	48	97			
4-Nitrophenol	41.44		100	41.4	21	55			
Pentachlorophenol	114.7		100	115	49	122			
Phenol	26.89		100	26.9	18	52			
Pyrene	82.47		100	82.5	50	112			
1,2,4-Trichlorobenzene	61.88		100	61.9	41	86			
Surrogates									
2,4,6-Tribromophenol	227.8		200	114	1	141.25			
2-Fluorophenol	60.16		200	30.1	1	81.1			
2-Fluorobiphenyl	88.89		100	88.9	30.84	108.77			
Nitrobenzene-d5	78.37		100	78.4	32.75	105.37			
Phenol-d6	51.58		200	25.8	1	71.88			
Terphenyl-d14	84.04		100	84.0	25.98	134.37			

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

Analysis Performed

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0006097-1

Date Reported: 06/21/00

Work Order: 0006097

QC Type: Matrix Spike

Sample ID: 0006071-02AMS

Run ID: HP-5_000612A

Analysis Date: 06/12/00 21:43

Prep Batch ID: 3006

Units: µg/L

Seq No: 98496

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	56.84	U	94.79	60.0	52	103			
4-Chloro-3-methylphenol	60.22	U	94.79	63.5	55	106			
2-Chlorophenol	44.61 S(2m)	U	94.79	47.1	48	94			
1,4-Dichlorobenzene	42.18	U	94.79	44.5	39	82			
2,4-Dinitrotoluene	59.72	U	94.79	63.0	57	113			
N-Nitrosodi-N-propylamine	46.44	U	94.79	49.0	48	97			
4-Nitrophenol	20.09 J	U	94.79	21.2	21	55			
Pentachlorophenol	61.99	U	94.79	65.4	49	122			
Phenol	18.44 J	U	94.79	19.5	18	52			
Pyrene	55.05	U	94.79	58.1	50	112			
1,2,4-Trichlorobenzene	46.07	U	94.79	48.6	41	86			
Surrogates									
2,4,6-Tribromophenol	130.8		189.6	69.0	1	141.25			
2-Fluorophenol	51.14		189.6	27.0	1	81.1			
2-Fluorobiphenyl	54.45		94.79	57.4	30.84	108.77			
Nitrobenzene-d5	53.65		94.79	56.6	32.75	105.37			
Phenol-d6	34.37		189.6	18.1	1	71.88			
Terphenyl-d14	54.45		94.79	57.4	25.98	134.37			

2m: MS/MSD are outside acceptable limits - LCS was within limits - matrix interference is suspected

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

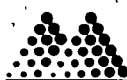
S - Results outside normal recovery limits

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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Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Matrix Spike Duplicate
Sample ID: 0006071-02AMSD
Run ID: HP-5_000612A

Analysis Date: 06/12/00 22:17
Prep Batch ID: 3006

Units: µg/L
Seq No: 98497

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	85.7 R(2m)	U	94.34	90.8	52	103	56.84	40.50	28
4-Chloro-3-methylphenol	91.52 R(2m)	U	94.34	97.0	55	106	60.22	41.30	37
2-Chlorophenol	67.68 R(2m)	U	94.34	71.7	48	94	44.61	41.10	29
1,4-Dichlorobenzene	64.49 R(2m)	U	94.34	68.4	39	82	42.18	41.80	32
2,4-Dinitrotoluene	91.79 R(2m)	U	94.34	97.3	57	113	59.72	42.30	22
N-Nitrosodi-N-propylamine	74.05	U	94.34	78.5	48	97	46.44	45.80	55
4-Nitrophenol	35.86 R(2m)	U	94.34	38.0	21	55	20.09	56.40	47
Pentachlorophenol	101	U	94.34	107	49	122	61.99	47.90	49
Phenol	28.75 R(2m)	U	94.34	30.5	18	52	18.44	43.70	23
Pyrene	79.46 R(2m)	U	94.34	84.2	50	112	55.05	36.30	25
1,2,4-Trichlorobenzene	69.43 R(2m)	U	94.34	73.6	41	86	46.07	40.50	28
Surrogates									
2,4,6-Tribromophenol	201.7		188.7	107	1	141.25			
2-Fluorophenol	80.24		188.7	42.5	1	81.1			
2-Fluorobiphenyl	87.51		94.34	92.8	30.84	108.77			
Nitrobenzene-d5	83.49		94.34	88.5	32.75	105.37			
Phenol-d6	54.27		188.7	28.8	1	71.88			
Terphenyl-d14	82.69		94.34	87.7	25.98	134.37			

2m: MS/MSD are outside acceptable limits - LCS was within limits - matrix interference is suspected

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: TCLP Blank
Sample ID: TCLP-2969
Run ID: HP-5_000612A

Analysis Date: 06/13/00 00:34
Prep Batch ID: 3006

Units: µg/L
Seq No: 98501

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
2,4-Dinitrotoluene	U					20			
Hexachlorobenzene	U					3			
Hexachlorobutadiene	U					4			
Hexachloroethane	U					8			
2-Methylphenol (o-Cresol)	U					6			
3 and 4- Methylphenol (m+p cresol)	U					3			
Nitrobenzene	U					3			
Pentachlorophenol	U					30			
Pyridine	U					2			
2,4,5-Trichlorophenol	U					7			
2,4,6-Trichlorophenol	U					7			
Surrogates									
2,4,6-Tribromophenol	780.7		800	97.6	1	141.25			
2-Fluorophenol	313.3		800	39.2	1	81.1			
2-Fluorobiphenyl	332.3		400	83.1	30.84	108.77			
Nitrobenzene-d5	315.6		400	78.9	32.75	105.37			
Phenol-d6	193		800	24.1	1	71.88			
Terphenyl-d14	370.7		400	92.7	25.98	134.37			

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Method Blank
Sample ID: MB-3030
Run ID: HP-5_000615A

Analysis Date: 06/15/00 17:06
Prep Batch ID: 3030

Units: µg/L
Seq No: 99677

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
2,4-Dinitrotoluene	U					139			
Hexachlorobenzene	U					4			
Hexachlorobutadiene	U					10			
Hexachloroethane	U					10			
2-Methylphenol (o-Cresol)	U					6			
3 and 4- Methylphenol (m+p cresol)	U					5			
Nitrobenzene	U					3			
Pentachlorophenol	U					176			
Pyridine	U					3			
2,4,5-Trichlorophenol	U					7			
2,4,6-Trichlorophenol	U					7			
Surrogates									
2,4,6-Tribromophenol	29.11		200	14.6	1	141.25			
2-Fluorophenol	77.77		200	38.9	1	81.1			
2-Fluorobiphenyl	71.27		100	71.3	30.84	108.77			
Nitrobenzene-d5	70.53		100	70.5	32.75	105.37			
Phenol-d6	51.65		200	25.8	1	71.88			
Terphenyl-d14	113.1		100	113	25.98	134.37			

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: Water Analysis
Project ID:

Report Number: 0006097-1
Date Reported: 06/21/00
Work Order: 0006097

QC Type: Laboratory Control Spike
Sample ID: LCS-3030
Run ID: HP-5_000615A

Analysis Date: 06/15/00 15:46
Prep Batch ID: 3030

Units: µg/L
Seq No: 99678

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	63.87		100	63.9	52	103			
4-Chloro-3-methylphenol	71.62		100	71.6	55	106			
2-Chlorophenol	62.01		100	62.0	48	94			
1,4-Dichlorobenzene	53.31		100	53.3	39	82			
2,4-Dinitrotoluene	74.94		100	74.9	57	113			
N-Nitrosodi-N-propylamine	63.93		100	63.9	48	97			
4-Nitrophenol	32.56		100	32.6	21	55			
Pentachlorophenol	53.27		100	53.3	49	122			
Phenol	29.36		100	29.4	18	52			
Pyrene	73.08		100	73.1	50	112			
1,2,4-Trichlorobenzene	53.33		100	53.3	41	86			
Surrogates									
2,4,6-Tribromophenol	159.8		200	79.9	1	141.25			
2-Fluorophenol	80.45		200	40.2	1	81.1			
2-Fluorobiphenyl	68.63		100	68.6	30.84	108.77			
Nitrobenzene-d5	69.03		100	69.0	32.75	105.37			
Phenol-d6	55.85		200	27.9	1	71.88			
Terphenyl-d14	79.95		100	79.9	25.98	134.37			

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

**Quality Control Summary****Client:** On Site Technologies, Ltd.**Project:** Water Analysis**Project ID:****Report Number:** 0006097-1**Date Reported:** 06/21/00**Work Order:** 0006097**QC Type:** Matrix Spike**Sample ID:** 0006033-01AMS**Run ID:** HP-5_000615A**Analysis Date:** 06/15/00 17:45**Prep Batch ID:** 3030**Units:** µg/L**Seq No:** 99680

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	226.8	U	400	56.7	52	103			
4-Chloro-3-methylphenol	70.59 JS(2m)	U	400	17.6	55	106			
2-Chlorophenol	236.8	U	400	59.2	48	94			
1,4-Dichlorobenzene	273.4	U	400	68.3	39	82			
2,4-Dinitrotoluene	178.2 S(2m)	U	400	44.5	57	113			
N-Nitrosodi-N-propylamine	276.1	U	400	69.0	48	97			
4-Nitrophenol	0 S(2m)	U	400	0	21	55			
Pentachlorophenol	0 S(2m)	U	400	0	49	122			
Phenol	84.19 J	U	400	21.0	18	52			
Pyrene	381.2	U	400	95.3	50	112			
1,2,4-Trichlorobenzene	480.2 S(2m)	U	400	120	41	86			
Surrogates									
2,4,6-Tribromophenol	102.4		800	12.8	1	141.25			
2-Fluorophenol	306.7		800	38.3	1	81.1			
2-Fluorobiphenyl	282.5		400	70.6	30.84	108.77			
Nitrobenzene-d5	255.1		400	63.8	32.75	105.37			
Phenol-d6	167		800	20.9	1	71.88			
Terphenyl-d14	446.9		400	112	25.98	134.37			

2m: MS/MSD are outside acceptable limits - LCS was within limits - matrix interference is suspected

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

4-09 / 05 / 00

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0006097-1

Date Reported: 06/21/00

Work Order: 0006097

QC Type: Matrix Spike Duplicate

Sample ID: 0006033-01AMSD

Run ID: HP-5_000615A

Analysis Date: 06/15/00 18:25

Prep Batch ID: 3030

Units: µg/L

Seq No: 99681

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	223.4	U	400	55.8	52	103	226.8	1.54	28
4-Chloro-3-methylphenol	82.59 JS(2m)	U	400	20.6	55	106	70.59	15.70	37
2-Chlorophenol	234.2	U	400	58.5	48	94	236.8	1.12	29
1,4-Dichlorobenzene	254.4	U	400	63.6	39	82	273.4	7.21	32
2,4-Dinitrotoluene	167.6 S(2m)	U	400	41.9	57	113	178.2	6.08	22
N-Nitrosodi-N-propylamine	271.2	U	400	67.8	48	97	276.1	1.79	55
4-Nitrophenol	0 S(2m)	U	400	0	21	55	U	NC	47
Pentachlorophenol	0 S(2m)	U	400	0	49	122	U	NC	49
Phenol	85.48 J	U	400	21.4	18	52	84.19	1.51	23
Pyrene	414.1	U	400	104	50	112	381.2	8.26	25
1,2,4-Trichlorobenzene	388.8 S(2m)	U	400	97.2	41	86	480.2	21.00	28
Surrogates									
2,4,6-Tribromophenol	78.74		800	9.84	1	141.25			
2-Fluorophenol	309.1		800	38.6	1	81.1			
2-Fluorobiphenyl	285.6		400	71.4	30.84	108.77			
Nitrobenzene-d5	258.1		400	64.5	32.75	105.37			
Phenol-d6	146.7		800	18.3	1	71.88			
Terphenyl-d14	485.3		400	121	25.98	134.37			

2m: MS/MSD are outside acceptable limits - LCS was within limits - matrix interference is suspected

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

**Quality Control Summary****Client:** On Site Technologies, Ltd.**Project:** Water Analysis**Project ID:****Report Number:** 0006097-1**Date Reported:** 06/21/00**Work Order:** 0006097**QC Type:** TCLP Blank**Sample ID:** TCLP-2953**Run ID:** HP-5_000615A**Analysis Date:** 06/15/00 19:04**Prep Batch ID:** 3030**Units:** µg/L**Seq No:** 99682

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
2,4-Dinitrotoluene	U					20			
Hexachlorobenzene	U					3			
Hexachlorobutadiene	U					4			
Hexachloroethane	U					8			
2-Methylphenol (o-Cresol)	U					6			
3 and 4- Methylphenol (m+p cresol)	U					3			
Nitrobenzene	U					3			
Pentachlorophenol	U					30			
Pyridine	U					2			
2,4,5-Trichlorophenol	U					7			
2,4,6-Trichlorophenol	U					7			
Surrogates									
2,4,6-Tribromophenol	49.51		800	6.19	1	141.25			
2-Fluorophenol	175.4		800	21.9	1	81.1			
2-Fluorobiphenyl	202		400	50.5	30.84	108.77			
Nitrobenzene-d5	173.2		400	43.3	32.75	105.37			
Phenol-d6	135.6		800	17.0	1	71.88			
Terphenyl-d14	407.4		400	102	25.98	134.37			

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

RECEIVED JUN 26 2006

CHAIN-OF-CUSTODY RECORD

On Site Technologies, LTD.
 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 #:

06-Jun-00

Sample ID	Matrix	Collection Date	Bottle Type	E300	Requested Tests		
					SW6010B	SW7470	SW8270C
0006013-03C	Aqueous	6/5/2000 2:35:00 PM	250HDPE	2			
0006013-03D	Aqueous	6/5/2000 2:35:00 PM	1LAMGU				1
0006013-03E	Aqueous	6/5/2000 2:35:00 PM	500HDPEHNO3		7	1	
0006013-04C	Aqueous	6/5/2000 2:45:00 PM	250HDPE	2			
0006013-04D	Aqueous	6/5/2000 2:45:00 PM	1LAMGU				1
0006013-04E	Aqueous	6/5/2000 2:45:00 PM	500HDPEHNO3		7	1	

Comments:

Please analyze water samples 6013-03C & 04C for Bromide and Fluoride(EPA Method 300), 6013-03D & 04D for PAH (EPA Method 8270), and 6013-03E & 04E for Metals

Date/Time

Date/Time

Relinquished by: *David D. Martin*

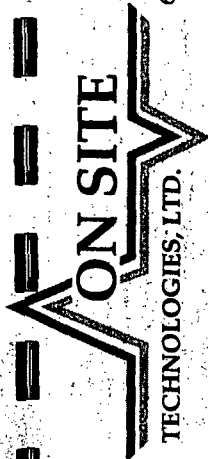
Received by: *Ram Olesen (mssai)*

6/6/00 1545

6/7/00 10:00

Relinquished by:

Received by:



657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Purchase Order No.:		Job No.	
Name: Jane			
Company:		Dept.:	
Address:			
City, State, Zip:			
Sampling Location: Thru Hwy Retention 626 Rd 5502 Blountfield, AL 37401			
Sampler: Ken Smith			
SAMPLE IDENTIFICATION		PRES.	
DATE		TIME	
6/1/00		1135	
6/2/00		1359	
6/3/00		1435	
6/4/00		1445	
6/5/00		1530	
6/6/00		1620	
Travel Blank			
Mud-13			
Stripper Influent			
Stripper Effluent			
Mw-05			
Mw-04			
Relinquished by: Ken Smith		Date/Time: 6/1/00 1545	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Method of Shipment:		Date: 6/15/00	
Authorized by: Ken Smith		(Client Signature Must Accompany Request)	

Distribution:	White – On Site	Yellow – LAB	Pink – Sampler	Goldenrod – Client
---------------	-----------------	--------------	----------------	--------------------

BioTECH REMEDIATION INC.

710 East 20th Street, Suite 400 • Farmington, NM 87401 • (505) 632-3365 • Fax (505) 632-9850

**2000 ANNUAL GROUNDWATER MONITOR REPORT
THRIFTWAY REFINERY
626 ROAD 5500
BLOOMFIELD, NEW MEXICO**

RECEIVED

MAR 27 2001

**Environmental Bureau
Oil Conservation Division**

RECEIVED

MAR 27 2001

**Environmental Bureau
Oil Conservation Division**

RECEIVED

MAR 27 2001

**Environmental Bureau
Oil Conservation Division**

prepared for the

**NEW MEXICO OIL CONSERVATION DIVISION
Mr. Wayne Price, Project Manager, Santa Fe Office
and
Mr. Denny Foust, Aztec Office**

2 of 2

February 7, 2001

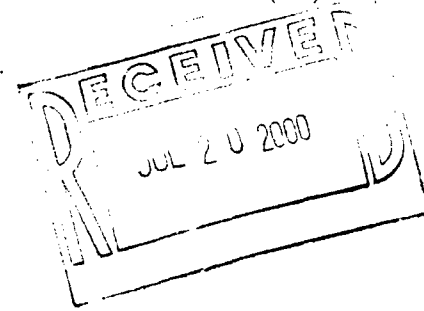
OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

July 12, 2000

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.: 0006067

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 6/29/2000 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".

David Cox

RECEIVED
MAR 27 2001
Environmental Bureau
Oil Conservation Division

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 12-Jul-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 0006067

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 12-Jul-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	0006067	Client Sample ID:	Travel Blank
Lab ID:	0006067-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	6/29/2000 8:50:00 AM
		COC Record:	10761

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	6/30/2000
Benzene	ND	0.5		µg/L	1	6/30/2000
Toluene	ND	0.5		µg/L	1	6/30/2000
Ethylbenzene	ND	0.5		µg/L	1	6/30/2000
m,p-Xylene	ND	1		µg/L	1	6/30/2000
o-Xylene	ND	0.5		µg/L	1	6/30/2000

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 3

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 12-Jul-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	0006067	Client Sample ID:	Stripper Influent
Lab ID:	0006067-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	6/29/2000 9:40:00 AM
		COC Record:	10761

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	190	100		µg/L	100	6/30/2000
Benzene	2200	50		µg/L	100	6/30/2000
Toluene	2300	50		µg/L	100	6/30/2000
Ethylbenzene	760	50		µg/L	100	6/30/2000
m,p-Xylene	2500	100		µg/L	100	6/30/2000
o-Xylene	480	50		µg/L	100	6/30/2000

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

2 of 3

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 12-Jul-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery Air Stripper
Work Order:	0006067	Client Sample ID:	Stripper Effluent
Lab ID:	0006067-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	6/29/2000 9:50:00 AM
		COC Record:	10761

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	6/30/2000
Benzene	1.5	0.5		µg/L	1	6/30/2000
Toluene	1.8	0.5		µg/L	1	6/30/2000
Ethylbenzene	ND	0.5		µg/L	1	6/30/2000
m,p-Xylene	2.6	1		µg/L	1	6/30/2000
o-Xylene	0.8	0.5		µg/L	1	6/30/2000

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

3 of 3

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 12-Jul-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006067

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000630	Test Code: SW8021B	Units: µg/L	Analysis Date 6/30/2000	Prep Date:
Client ID:	0006067	Run ID: GC-1_000630A		SeqNo: 29660	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0662	0.5			J
Ethylbenzene	.0926	0.5			J
m,p-Xylene	.1955	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.1915	0.5			J
Toluene	.2052	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-Jul-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006067

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006067-02AMS		Batch ID: GC-1_000630	Test Code: SW8021B	Units: µg/L	Analysis Date 6/30/2000		Prep Date:	
Client ID: Stripper Influent		Run ID: 0006067	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	6142		50	4000	2160	99.6%	73	126
Ethylbenzene	4770		50	4000	761.2	100.2%	88	113
m,p-Xylene	10130		100	8000	2541	94.9%	83	112
Methyl tert-Butyl Ether	4269		100	4000	192.6	101.9%	81	125
o-Xylene	4523		50	4000	475	101.2%	93	110
Toluene	6361		50	4000	2326	100.9%	76	126

Sample ID: 0006067-02AMS		Batch ID: GC-1_000630	Test Code: SW8021B	Units: µg/L	Analysis Date 6/30/2000		Prep Date:	
Client ID: Stripper Influent		Run ID: 0006067	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	6030		50	4000	2160	96.7%	73	126
Ethylbenzene	4686		50	4000	761.2	98.1%	88	113
m,p-Xylene	9959		100	8000	2541	92.7%	83	112
Methyl tert-Butyl Ether	4256		100	4000	192.6	101.6%	81	125
o-Xylene	4455		50	4000	475	99.5%	93	110
Toluene	6245		50	4000	2326	98.0%	76	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.

Date: 12-Jul-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006067

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID:	LCS WATER	Batch ID:	GC-1_000630	Test Code:	SW8021B	Units:	µg/L	Analysis Date	6/30/2000	Prep Date:
Client ID:	0006067	Run ID:	GC-1_000630A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 29659
Analyte	Result									
Benzene	40.35			0.5	40	0.0662	100.7%	89	112	
Ethylbenzene	40.86			0.5	40	0.0926	101.9%	93	112	
m,p-Xylene	77.5			1	80	0.1955	96.6%	88	108	
Methyl tert-Butyl Ether	40.23			1	40	0	100.6%	87	115	
o-Xylene	41.16			0.5	40	0.1915	102.4%	93	112	
Toluene	41.01			0.5	40	0.2052	102.0%	92	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-Jul-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0006067

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID:	CCV1 BTEX_0004	Batch ID:	GC-1_000630	Test Code:	SW8021B	Units:	µg/L	Analysis Date	6/30/2000	Prep Date:
Client ID:	0006067	Run ID:	GC-1_000630A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 29656
Analyte	Result									
Benzene	20.74			0.5	20	0	103.7%	85	115	
Ethylbenzene	21			0.5	20	0	105.0%	85	115	
m,p-Xylene	39.95			1	40	0	99.9%	85	115	
Methyl tert-Butyl Ether	20.49			1	20	0	102.5%	85	115	
o-Xylene	21.27			0.5	20	0	106.4%	85	115	
Toluene	21.05			0.5	20	0	105.3%	85	115	
1,4-Difluorobenzene	89.85			0	100	0	89.9%	80	105	
4-Bromochlorobenzene	84.68			0	100	0	84.7%	78	108	
Fluorobenzene	88.46			0	100	0	88.5%	78	108	

Sample ID:	CCV2 BTEX_0004	Batch ID:	GC-1_000630	Test Code:	SW8021B	Units:	µg/L	Analysis Date	6/30/2000	Prep Date:
Client ID:	0006067	Run ID:	GC-1_000630A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 29657
Analyte	Result									
Benzene	20.07			0.5	20	0	100.4%	85	115	
Ethylbenzene	20.26			0.5	20	0	101.3%	85	115	
m,p-Xylene	38.7			1	40	0	96.7%	85	115	
Methyl tert-Butyl Ether	20.64			1	20	0	103.2%	85	115	
o-Xylene	20.52			0.5	20	0	102.6%	85	115	
Toluene	20.42			0.5	20	0	102.1%	85	115	
1,4-Difluorobenzene	90.15			0	100	0	90.1%	80	105	
4-Bromochlorobenzene	85.09			0	100	0	85.1%	78	108	
Fluorobenzene	88.6			0	100	0	88.6%	78	108	

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: 0006067

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0004	Batch ID: GC-1_000630	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/30/2000	Prep Date:
Client ID: 0006067	Run ID: GC-1_000630A	PQL	SPK value	SeqNo: 29658	
Analyte	Result	%REC	LowLimit	HighLimit	RPD Ref Val
Benzene	40.36	100.9%	85	115	
Ethylbenzene	40.66	101.7%	85	115	
m,p-Xylene	77.16	96.4%	85	115	
Methyl tert-Butyl Ether	41.35	103.4%	85	115	
o-Xylene	41.21	103.0%	85	115	
Toluene	40.98	102.4%	85	115	
1,4-Difluorobenzene	89.84	89.8%	80	105	
4-Bromochlorobenzene	85.42	85.4%	78	108	
Fluorobenzene	87.99	88.0%	78	108	

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-Jul-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0006067
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0006050-18A	90.2	82.4	89.6
0006054-02A	90.3	85	89.2
0006055-01A	90.7	83.9	89.4
0006055-02A	90.5	85	89.2
0006056-01A	90.3	85.5	89.2
0006056-02A	87.4	83	86.9
0006056-03A	90.4	85	89.4
0006061-01A	91	85.2	89.2
0006061-02A	88.8	84	87
0006061-03A	90	85	88.2
0006061-04A	90.6	85	89.2
0006061-05A	90.6	84.7	89.1
0006067-01A	90.4	83.8	89.1
0006067-02A	89.6	85	88.6
0006067-02AMS	89.5	85.6	87.8
0006067-02AMSD	89.5	85.7	87.7
0006067-03A	89.8	84.6	89.2
0006068-02A	89.3	85.2	87.3
0006068-03A	84.3	80.2	83.1
0006071-01A	90.7	83.4	89.1
CCV1 BTEX_00040	89.8	84.7	88.4
CCV2 BTEX_00040	90.1	85.1	88.6
CCV3 BTEX_00040	89.8	85.4	88
LCS WATER	89.4	85.5	88.1
MB1	90	84.3	89

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

[illegible]

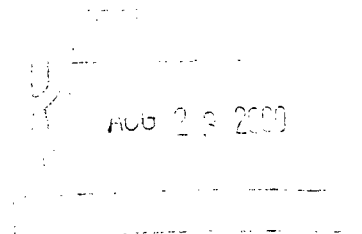
OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

August 21, 2000

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



RE: Thifway Refinery Air Stripper

Order No.: 0008002

Dear Terry Griffin,

On Site Technologies, LTD. received 2 samples on 8/4/2000 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 of David Cox, is written in ink.

David Cox

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 21-Aug-00

CLIENT: BioTech Remediation, Inc.
Project: Thiftway Refinery Air Stripper
Lab Order: 0008002

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 21-Aug-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0008002	Client Sample ID:	Stripper Influent
Lab ID:	0008002-01A	Matrix:	AQUEOUS
Project:	Thiftway Refinery Air Stripper	Collection Date:	8/3/2000 11:55:00 AM
		COC Record:	10843

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	ND	100		µg/L	100	8/15/2000
Benzene	1600	50		µg/L	100	8/15/2000
Toluene	740	50		µg/L	100	8/15/2000
Ethylbenzene	610	50		µg/L	100	8/15/2000
m,p-Xylene	1600	100		µg/L	100	8/15/2000
o-Xylene	270	50		µg/L	100	8/15/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 21-Aug-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0008002	Client Sample ID:	Stripper Effluent
Lab ID:	0008002-02A	Matrix:	AQUEOUS
Project:	Thiftway Refinery Air Stripper	Collection Date:	8/3/2000 12:00:00 PM
		COC Record:	10843

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	16	1		µg/L	1	8/15/2000
Benzene	0.8	0.5		µg/L	1	8/15/2000
Toluene	0.6	0.5		µg/L	1	8/15/2000
Ethylbenzene	ND	0.5		µg/L	1	8/15/2000
m,p-Xylene	1.6	1		µg/L	1	8/15/2000
o-Xylene	ND	0.5		µg/L	1	8/15/2000

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 -

On Site Technologies, LTD.

Date: 21-Aug-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0008002

Project: Thifftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000815	Test Code: SW8021B	Units: µg/L	Analysis Date 8/15/2000	Prep Date:
Client ID:	0008002	Run ID: GC-1_000815A		SeqNo: 30536	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0381	0.5			J
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.0925	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-Aug-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0008002

Project: Thifitway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0008002-01AMS	Batch ID: GC-1_000815	Test Code: SW8021B	Units: µg/L	Analysis Date 8/15/2000	Prep Date:
Client ID: Stripper Influent	0008002	Run ID: GC-1_000815A		SeqNo: 30537	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	5587	50	4000	1626	99.0% 88 112
Ethylbenzene	4575	50	4000	606.5	99.2% 86 113
m,p-Xylene	9359	100	8000	1601	97.0% 85 108
Methyl tert-Butyl Ether	3920	100	4000	0	98.0% 86 117
o-Xylene	4280	50	4000	274.2	100.1% 92 110
Toluene	4727	50	4000	740.6	99.7% 88 116

Sample ID: 0008002-01AMSD	Batch ID: GC-1_000815	Test Code: SW8021B	Units: µg/L	Analysis Date 8/15/2000	Prep Date:
Client ID: Stripper Influent	0008002	Run ID: GC-1_000815A		SeqNo: 30538	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	5543	50	4000	1626	97.9% 88 112 5587 0.8% 6
Ethylbenzene	4546	50	4000	606.5	98.5% 86 113 4575 0.7% 6
m,p-Xylene	9298	100	8000	1601	96.2% 85 108 9359 0.7% 6
Methyl tert-Butyl Ether	3923	100	4000	0	98.1% 86 117 3920 0.1% 7
o-Xylene	4254	50	4000	274.2	99.5% 92 110 4280 0.6% 6
Toluene	4686	50	4000	740.6	98.6% 88 116 4727 0.9% 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-Aug-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0008002

Project: Thiftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000815		Test Code: SW8021B		Units: µg/L		Analysis Date 8/15/2000		Prep Date:	
Client ID:		0008002		Run ID: GC-1_000815A				SeqNo: 30535			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.78	0.5	40	0.04	101.9%	96	111				
Ethylbenzene	41.35	0.5	40	0	103.4%	96	111				
m,p-Xylene	81.02	1	80	0	101.3%	92	105				
Methyl tert-Butyl Ether	37.72	1	40	0	94.3%	93	113				
o-Xylene	41.54	0.5	40	0	103.8%	97	110				
Toluene	40.95	0.5	40	0.09	102.2%	97	109				

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-Aug-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0008002

Project: Thifway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0007		Batch ID: GC-1_000815	Test Code: SW8021B	Units: µg/L		Analysis Date 8/15/2000		Prep Date:						
Client ID:		0008002	Run ID:	GC-1_000815A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result													
Benzene	20.78			0.5	20		0	103.9%	85	115				
Ethylbenzene	21.14			0.5	20		0	105.7%	85	115				
m,p-Xylene	41.4			1	40		0	103.5%	85	115				
Methyl tert-Butyl Ether	18.26			1	20		0	91.3%	85	115				
o-Xylene	21.24			0.5	20		0	106.2%	85	115				
Toluene	20.94			0.5	20		0	104.7%	85	115				
1,4-Difluorobenzene	84			0	100		0	84.0%	79	101				
4-Bromochlorobenzene	82.29			0	100		0	82.3%	78	99				
Fluorobenzene	82.13			0	100		0	82.1%	76	103				

Sample ID: CCV2 BTEX_0007		Batch ID: GC-1_000815	Test Code: SW8021B	Units: µg/L		Analysis Date 8/15/2000		Prep Date:						
Client ID:		0008002	Run ID:	GC-1_000815A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result													
Benzene	20.8			0.5	20		0	104.0%	85	115				
Ethylbenzene	20.98			0.5	20		0	104.9%	85	115				
m,p-Xylene	41.03			1	40		0	102.6%	85	115				
Methyl tert-Butyl Ether	18.02			1	20		0	90.1%	85	115				
o-Xylene	21.04			0.5	20		0	105.2%	85	115				
Toluene	20.86			0.5	20		0	104.3%	85	115				
1,4-Difluorobenzene	83.98			0	100		0	84.0%	79	101				
4-Bromochlorobenzene	81.27			0	100		0	81.3%	78	99				
Fluorobenzene	81.9			0	100		0	81.9%	76	103				

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: 0008002
Project: Thiftway Refinery Air Stripper
Test No: SW8021B

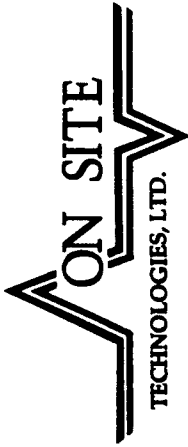
QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0008002-01A	83	82.2	82.2
0008002-01AMS	82.8	83.4	81.4
0008002-01AMSD	82.8	83.4	81.2
0008002-02A	83.6	83.3	83
0008004-01A	84.5	82.2	82.7
0008004-02A	82.9	81.5	81.7
0008004-03A	76.3 *	73.6 *	73.7 *
CCV1 BTEX_00070	84	82.3	82.1
CCV2 BTEX_00070	84	81.3	81.9
LCS WATER	82.9	82.4	81.7
MBI	84.3	82.4	83

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	79-101
4BCBZ	= 4-Bromochlorobenzene	78-99
FLBZ	= Fluorobenzene	76-103

* Surrogate recovery outside acceptance limits



CHAIN OF CUSTODY RECORD

10043

Date: 9/3/2000

Page: 1 of 1

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Purchase Order No.:		Project No.		REPORT RESULTS TO		Name Terry Griffin		Title	
SEND INVOICE TO		Name Sane		Company Botech Remediation		Mailing Address 710 E. 20th Santa Fe		City, State, Zip Farmington, NM 87451	
PROJECT LOCATION: Thornton Refinery Area Steppen 626 Rd 5500 Bloomfield, NM 87413		Dept.		Telephone No.		Telefax No.		ANALYSIS REQUESTED	
SAMPLER'S SIGNATURE: Ken Sinker		City, State, Zip		Number of Containers		LAB ID			
SAMPLE IDENTIFICATION		DATE		TIME		MATRIX		PRES.	
STEPPEN Influent		9/3		1155		H ₂ O		gm	
STEPPEN Effluent		9/3		1200		H ₂ O		gm	
Relinquished by: Ken Sinker		Date/Time 9/3/2000 1450		Received by: [Signature]		Date/Time 9/3/2000 1450			
Relinquished by:		Date/Time		Received by:		Date/Time			
Relinquished by:		Date/Time		Received by:		Date/Time			
Method of Shipment:		Rush		24-48 Hours		10 Working Days		By Date	
Authorized by: [Signature]		Date 9/3/2000		Special Instructions / Remarks:					
Client Signature Must Accompany Request									

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September 19, 2000

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

SEP 20 2000

RE: Thriftway Refinery

Order No.: 0009008

Dear Terry Griffin,

On Site Technologies, LTD. received 16 samples on 9/6/2000 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", with a long horizontal line extending to the right.

David Cox

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On Site Technologies, LTD.

Date: 19-Sep-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery
Lab Order: 0009008

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-13
Lab ID:	0009008-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/5/2000 12:15:00 PM
		COC Record:	10899

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	9/8/2000
Benzene	ND	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	ND	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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 16

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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-5
Lab ID:	0009008-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/5/2000 2:05:00 PM
		COC Record:	10899

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	59	1		µg/L	1	9/8/2000
Benzene	11	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	0.6	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	Trip Blank
Lab ID:	0009008-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/5/2000
		COC Record:	10899

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	9/8/2000
Benzene	ND	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	ND	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-4
Lab ID:	0009008-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/5/2000 2:40:00 PM
		COC Record:	10899

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	20	1		µg/L	1	9/8/2000
Benzene	22	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	3.6	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	0.6	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-6
Lab ID:	0009008-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/5/2000 3:30:00 PM
		COC Record:	10899

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	59	1		µg/L	1	9/8/2000
Benzene	10	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	2.7	0.5		µg/L	1	9/8/2000
m,p-Xylene	1.3	1		µg/L	1	9/8/2000
o-Xylene	0.6	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-9
Lab ID:	0009008-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/5/2000 4:00:00 PM
		COC Record:	10899

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	9	1		µg/L	1	9/8/2000
Benzene	ND	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	ND	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-10
Lab ID:	0009008-07A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/5/2000 4:30:00 PM
		COC Record:	10899

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	9/8/2000
Benzene	ND	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	ND	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-11
Lab ID:	0009008-08A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/6/2000 9:30:00 AM
		COC Record:	10899

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	9/8/2000
Benzene	ND	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	ND	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	Trip Blank
Lab ID:	0009008-09A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/6/2000 8:30:00 AM
		COC Record:	10899

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	9/8/2000
Benzene	ND	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	ND	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-8
Lab ID:	0009008-10A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/6/2000 10:30:00 AM
		COC Record:	10899

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	250	5		µg/L	5	9/11/2000
Benzene	1.1	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	ND	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-15
Lab ID:	0009008-11A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/6/2000 11:12:00 AM
		COC Record:	10899

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	9/8/2000
Benzene	ND	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	ND	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-20
Lab ID:	0009008-12A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/6/2000 11:39:00 AM
		COC Record:	10899

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	59	1		µg/L	1	9/8/2000
Benzene	2.6	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	16	0.5		µg/L	1	9/8/2000
m,p-Xylene	7.6	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-21
Lab ID:	0009008-13A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/6/2000 12:32:00 PM
		COC Record:	10899

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	36	1		µg/L	1	9/8/2000
Benzene	ND	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	ND	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-22
Lab ID:	0009008-14A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/6/2000 1:09:00 PM
		COC Record:	10899

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	5.3	1		µg/L	1	9/8/2000
Benzene	ND	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	ND	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-19
Lab ID:	0009008-15A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/6/2000 1:56:00 PM
		COC Record:	10899

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	74	1		µg/L	1	9/8/2000
Benzene	1.1	0.5		µg/L	1	9/8/2000
Toluene	ND	0.5		µg/L	1	9/8/2000
Ethylbenzene	1.8	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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ANALYTICAL REPORT

Date: 19-Sep-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0009008	Client Sample ID:	MW-18
Lab ID:	0009008-16A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	9/6/2000 2:35:00 PM
		COC Record:	10899

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	18	1		µg/L	1	9/8/2000
Benzene	12	0.5		µg/L	1	9/8/2000
Toluene	0.6	0.5		µg/L	1	9/8/2000
Ethylbenzene	0.5	0.5		µg/L	1	9/8/2000
m,p-Xylene	ND	1		µg/L	1	9/8/2000
o-Xylene	ND	0.5		µg/L	1	9/8/2000

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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On Site Technologies, LTD.

Date: 19-Sep-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0009008

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB1		Batch ID: GC-1_000908		Test Code: SW8021B		Units: µg/L		Analysis Date 9/8/2000		Prep Date:	
Client ID:		0009008		Run ID: GC-1_000908A				SeqNo: 31103			
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	.0816	0.5									J

Sample ID: MB1	Batch ID: GC-1_000911	Test Code: SW8021B	Units: µg/L	Analysis Date 9/11/2000		Prep Date:					
Client ID:	0009008	Run ID: GC-1_000911A		SeqNo: 31222							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.063	0.5									J
Ethylbenzene	.0932	0.5									J
m,p-Xylene	.1753	1									J
Methyl tert-Butyl Ether	ND	1									
o-Xylene	.087	0.5									J
Toluene	.1631	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-Sep-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0009008
Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0009006-01AMS		Batch ID: GC-1_000908	Test Code: SW8021B		Units: µg/L		Analysis Date 9/8/2000		Prep Date:					
Client ID:		0009008	Run ID:	GC-1_000908A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result												
Benzene		48.83			0.5	40	9.907	97.3%	88	112				
Ethylbenzene		82.24			0.5	40	41.56	101.7%	86	113				
m,p-Xylene		99.1			1	80	18.78	100.4%	85	108				
Methyl tert-Butyl Ether		40.02			1	40	0	100.1%	86	117				
o-Xylene		61.4			0.5	40	20.71	101.7%	92	110				
Toluene		50.22			0.5	40	10.19	100.1%	88	116				

Sample ID: 0009006-01AMSD		Batch ID: GC-1_000908	Test Code: SW8021B	Units: µg/L	Analysis Date 9/8/2000		Prep Date:				
Client ID:		0009008	Run ID:	GC-1_000908A	SeqNo:	31105					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	46.44	0.5	40	9.907	91.3%	88	112	48.83	5.0%	6	
Ethylbenzene	78.34	0.5	40	41.56	92.0%	86	113	82.24	4.9%	6	
m,p-Xylene	94.57	1	80	18.78	94.7%	85	108	99.1	4.7%	6	
Methyl tert-Butyl Ether	38.66	1	40	0	96.7%	86	117	40.02	3.5%	7	
o-Xylene	58.71	0.5	40	20.71	95.0%	92	110	61.4	4.5%	6	
Toluene	47.82	0.5	40	10.19	94.1%	88	116	50.22	4.9%	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: 0009008

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0009006-01AMS		Batch ID: GC-1_000911		Test Code: SW8021B		Units: µg/L		Analysis Date 9/11/2000		Prep Date:	
Client ID: 0009008		Run ID: GC-1_000911A		SeqNo: 31223							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	51.19	0.5	40	9.907	103.2%	88	112				
Ethylbenzene	82.12	0.5	40	41.56	101.4%	86	113				
m,p-Xylene	99.14	1	80	18.78	100.5%	85	108				
Methyl tert-Butyl Ether	43.01	1	40	0	107.5%	86	117				
o-Xylene	61.24	0.5	40	20.71	101.3%	92	110				
Toluene	50.85	0.5	40	10.19	101.6%	88	116				

Sample ID: 0009006-01AMSD		Batch ID: GC-1_000911		Test Code: SW8021B		Units: µg/L		Analysis Date 9/11/2000		Prep Date:	
Client ID: 0009008		Run ID: GC-1_000911A		SeqNo: 31224							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	50.21	0.5	40	9.907	100.8%	88	112	48.83	2.8%	6	
Ethylbenzene	80.65	0.5	40	41.56	97.7%	86	113	82.24	1.9%	6	
m,p-Xylene	97.51	1	80	18.78	98.4%	85	108	99.1	1.6%	6	
Methyl tert-Butyl Ether	42.77	1	40	0	106.9%	86	117	40.02	6.6%	7	
o-Xylene	60.2	0.5	40	20.71	98.7%	92	110	61.4	2.0%	6	
Toluene	49.9	0.5	40	10.19	99.3%	88	116	50.22	0.6%	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: 19-Sep-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0009008

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000908	Test Code: SW8021B	Units: µg/L	Analysis Date 9/8/2000		Prep Date:				
Client ID:	0009008	Run ID:	GC-1_000908A		SeqNo:	31102					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.9	0.5	40	0	97.2%	96	111				
Ethylbenzene	41.82	0.5	40	0	104.6%	96	111				
m,p-Xylene	81.35	1	80	0	101.7%	92	105				
Methyl tert-Butyl Ether	38.91	1	40	0	97.3%	93	113				
o-Xylene	40.68	0.5	40	0	101.7%	97	110				
Toluene	39.86	0.5	40	0.0816	99.5%	97	109				

Sample ID: LCS WATER	Batch ID: GC-1_000911	Test Code: SW8021B	Units: µg/L	Analysis Date 9/11/2000		Prep Date:					
Client ID:	0009008	Run ID:	GC-1_000911A	SeqNo:	31220						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.61	0.5	40	0.063	103.9%	96	111				
Ethylbenzene	41.84	0.5	40	0.0932	104.4%	96	111				
m,p-Xylene	82.06	1	80	0.1753	102.4%	92	105				
Methyl tert-Butyl Ether	41.7	1	40	0	104.2%	93	113				
o-Xylene	40.98	0.5	40	0.087	102.2%	97	110				
Toluene	40.9	0.5	40	0.1631	101.8%	97	109				

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-Sep-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0009008

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0007		Batch ID: GC-1_000908		Test Code: SW8021B		Units: µg/L		Analysis Date 9/8/2000		Prep Date:	
Client ID:		0009008		Run ID: GC-1_000908A				SeqNo: 31099			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.28	0.5	20	0	96.4%	85	115				
Ethylbenzene	20.78	0.5	20	0	103.9%	85	115				
m,p-Xylene	40.96	1	40	0	102.4%	85	115				
Methyl tert-Butyl Ether	19.43	1	20	0	97.2%	85	115				
o-Xylene	20.4	0.5	20	0	102.0%	85	115				
Toluene	19.89	0.5	20	0	99.5%	85	115				
1,4-Difluorobenzene	86.71	0	100	0	86.7%	79	101				
4-Bromochlorobenzene	89.22	0	100	0	89.2%	78	99				
Fluorobenzene	85.56	0	100	0	85.6%	76	103				

Sample ID: CCV2 BTEX_0007		Batch ID: GC-1_000908		Test Code: SW8021B		Units: µg/L		Analysis Date 9/8/2000		Prep Date:	
Client ID:		0009008		Run ID: GC-1_000908A				SeqNo: 31100			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.22	0.5	20	0	96.1%	85	115				
Ethylbenzene	20.19	0.5	20	0	101.0%	85	115				
m,p-Xylene	40.06	1	40	0	100.1%	85	115				
Methyl tert-Butyl Ether	20.22	1	20	0	101.1%	85	115				
o-Xylene	20.23	0.5	20	0	101.2%	85	115				
Toluene	19.65	0.5	20	0	98.3%	85	115				
1,4-Difluorobenzene	87.42	0	100	0	87.4%	79	101				
4-Bromochlorobenzene	88.42	0	100	0	88.4%	78	99				
Fluorobenzene	85.55	0	100	0	85.5%	76	103				

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: 0009008

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0007		Batch ID: GC-1_000908	Test Code: SW8021B	Units: µg/L	Analysis Date 9/8/2000		Prep Date:
Client ID: 0009008		Run ID: GC-1_000908A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 31101
Analyte	Result						
Benzene	37.91		0.5	40	0	94.8%	85 115
Ethylbenzene	40.16		0.5	40	0	100.4%	85 115
m,p-Xylene	79.39		1	80	0	99.2%	85 115
Methyl tert-Butyl Ether	40.34		1	40	0	100.8%	85 115
o-Xylene	39.75		0.5	40	0	99.4%	85 115
Toluene	39.12		0.5	40	0	97.8%	85 115
1,4-Difluorobenzene	86.5		0	100	0	86.5%	79 101
4-Bromochlorobenzene	88.4		0	100	0	88.4%	78 99
Fluorobenzene	85.26		0	100	0	85.3%	76 103

Sample ID: CCV1 BTEX_0007		Batch ID: GC-1_000911	Test Code: SW8021B	Units: µg/L	Analysis Date 9/11/2000		Prep Date:
Client ID: 0009008		Run ID: GC-1_000911A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 31218
Analyte	Result						
Benzene	21.66		0.5	20	0	108.3%	85 115
Ethylbenzene	22.24		0.5	20	0	111.2%	85 115
m,p-Xylene	43.81		1	40	0	109.5%	85 115
Methyl tert-Butyl Ether	21.74		1	20	0	108.7%	85 115
o-Xylene	22.03		0.5	20	0	110.2%	85 115
Toluene	21.5		0.5	20	0	107.5%	85 115
1,4-Difluorobenzene	87.18		0	100	0	87.2%	79 101
4-Bromochlorobenzene	90.32		0	100	0	90.3%	78 99
Fluorobenzene	85.67		0	100	0	85.7%	76 103

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: 0009008

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0007		Batch ID: GC-1_000911		Test Code: SW8021B		Units: µg/L		Analysis Date 9/11/2000		Prep Date:	
Client ID:		0009008		Run ID: GC-1_000911A				SeqNo: 31219			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.01	0.5	20	0	105.0%	85	115				
Ethylbenzene	21.4	0.5	20	0	107.0%	85	115				
m,p-Xylene	42.24	1	40	0	105.6%	85	115				
Methyl tert-Butyl Ether	21.75	1	20	0	108.7%	85	115				
o-Xylene	21.18	0.5	20	0	105.9%	85	115				
Toluene	20.84	0.5	20	0	104.2%	85	115				
1,4-Difluorobenzene	87.34	0	100	0	87.3%	79	101				
4-Bromochlorobenzene	89.74	0	100	0	89.7%	78	99				
Fluorobenzene	85.47	0	100	0	85.5%	76	103				

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: 0009008
Project: Thriftway Refinery
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0009006-01A	87	90.6	86
0009006-01AMS	86.3	89.1	84.8
0009006-01AMSD	86.5	89.4	85
0009008-01A	87.8	89	86.1
0009008-02A	87.2	89.2	86.3
0009008-03A	87.4	89.1	86.1
0009008-04A	83	87.4	83
0009008-05A	85.9	88.4	84.8
0009008-06A	87.5	88.3	86.4
0009008-07A	87	88.5	86.4
0009008-08A	86.9	88.8	86.5
0009008-09A	87.9	89	86.6
0009008-10A	87.1	89.6	86.2
0009008-11A	88.2	88.2	86.6
0009008-12A	85.9	89.2	85.1
0009008-13A	86.9	89.1	86.6
0009008-14A	86.6	88	86.4
0009008-15A	86.6	87.8	85.4
0009008-16A	86.8	88.4	85.7
0009011-02A	87.4	88.8	85.8
0009016-01A	85.4	87.4	85.6
0009016-02A	86.3	89.4	85.9
0009016-04A	87.9	89.5	86.1
CCV1 BTEX_00070	87.2	90.3	85.7
CCV2 BTEX_00070	87.3	89.7	85.5
CCV3 BTEX_00070	86.5	88.4	85.2
LCS WATER	86.4	91.2	85.4

Acronym

Surrogate

QC Limits

14FBZ

= 1,4-Difluorobenzene

79-101

4BCBZ

= 4-Bromochlorobenzene

78-99

FLBZ

= Fluorobenzene

76-103

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 0009008
Project: Thriftway Refinery
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
MB1	87.4	90.3	86.6

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	79-101
4BCBZ	= 4-Bromochlorobenzene	78-99
FLBZ	= Fluorobenzene	76-103

* Surrogate recovery outside acceptance limits



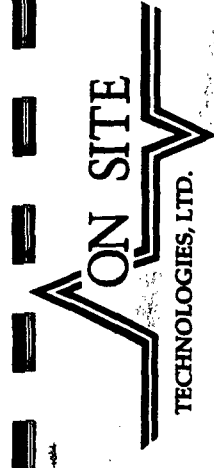
612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 9/5/2000
Page: 1 of 3

Purchase Order No.: Site 810		Project No.	
Name: Same		Dept.	
Company: Same			
Address:			
City, State, Zip:			
SEND INVOICE TO		RESULTS TO	
Name: Terry Gallina		Title:	
Company: Biotech Remediation			
Mailing Address: 710 E. 1st St. Suite 400			
City, State, Zip: Farmington, NM 87401		Telephone No.: 505-327-4465	
City, State, Zip:		Telefax No.:	
PROJECT LOCATION: The Henry Battery 626 Rd 5500 Blumenfeld, NM 87413		ANALYSIS REQUESTED	
SAMPLER'S SIGNATURE: [Signature]			
SAMPLE IDENTIFICATION		LAB ID	
DATE	TIME	MATRIX	PRES.
9/5	1215	1420	8#
9/5	1435	✓	✓
✓	✓	✓	✓
✓	1440	✓	✓
✓	1530	✓	✓
✓	1600	✓	✓
✓	1630	✓	✓
9/6	0930	✓	✓
9/6	0930	✓	✓
9/6	1130	✓	✓
9/6	1112	✓	✓
9/6	1139	✓	✓
Relinquished by: [Signature]		Received by: [Signature]	
Date/Time: 9/6/2000, 1640		Date/Time: 9/6/2000, 1100	
Relinquished by:		Received by:	
Date/Time:		Date/Time:	
Relinquished by:		Received by:	
Date/Time:		Date/Time:	
Method of Shipment:		Rush	
		24-48 Hours	
		10 Working Days	
		By Date	
Authorized by: [Signature]		Special Instructions / Remarks: CCEM TAMP: 0.5°C THERM ID # 3446	
Date: 9/6/2000			

CHAIN OF CUSTODY RECORD

109008



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Date: 9/6/2000
Page: 2 of 2

Purchase Order No.: <u>SITE 810</u>		Project No.	
Name: <u>Same</u>		Dept.	
Company: <u>Same</u>			
Address: <u>626 Rd 3500</u>			
City, State, Zip: <u>Normfield, NM 87413</u>			
PROJECT LOCATION: <u>Thriftway Refinery</u>			
SAMPLER'S SIGNATURE: <u>Ken Sinks</u>			
REPORT TO		RESULTS TO	
Name: <u>Terry Gaffin</u>		Name: <u>Terry Gaffin</u>	
Company: <u>BioTech Remediation</u>		Company: <u>BioTech Remediation</u>	
Mailing Address: <u>710 E. 20th Street, Suite 400</u>		Mailing Address: <u>710 E. 20th Street, Suite 400</u>	
City, State, Zip: <u>Farmington, NM 87401</u>		City, State, Zip: <u>Farmington, NM 87401</u>	
Telephone No.: <u>505-327-4968</u>		Telephone No.: <u>505-327-4968</u>	
Title:		Title:	
ANALYSIS REQUESTED		ANALYSIS REQUESTED	
Number of Containers		Number of Containers	
DATE		DATE	
TIME		TIME	
MATRIX		MATRIX	
PRES.		PRES.	
MW-21		MW-21	
MW-22		MW-22	
MW-19		MW-19	
MW-18		MW-18	
Relinquished by: <u>Ken Sinks</u>		Relinquished by: <u>Ken Sinks</u>	
Relinquished by: <u>Ken Sinks</u>		Relinquished by: <u>Ken Sinks</u>	
Relinquished by: <u>Ken Sinks</u>		Relinquished by: <u>Ken Sinks</u>	
Method of Shipment:		Method of Shipment:	
Authorized by: <u>Ken Sinks</u>		Authorized by: <u>Ken Sinks</u>	
Date: <u>9/6/2000</u>		Date: <u>9/6/2000</u>	
Special Instructions / Remarks: <u>See site file for details</u>		Special Instructions / Remarks: <u>See site file for details</u>	

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

October 27, 2000

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

RE: Thriftway Refinery

Order No.: 0010033

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 10/9/2000 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 "D. Cox", written in a cursive style.

David Cox

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 27-Oct-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery
Lab Order: 0010033

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

OFF: (505) 325-5667
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LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 27-Oct-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0010033	Client Sample ID:	Travel Blank
Lab ID:	0010033-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	10/9/2000 1:26:00 PM
		COC Record:	10974

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	10/14/2000
Benzene	ND	0.5		µg/L	1	10/14/2000
Toluene	ND	0.5		µg/L	1	10/14/2000
Ethylbenzene	ND	0.5		µg/L	1	10/14/2000
m,p-Xylene	ND	1		µg/L	1	10/14/2000
o-Xylene	ND	0.5		µg/L	1	10/14/2000

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
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ANALYTICAL REPORT

Date: 27-Oct-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0010033	Client Sample ID:	Stripper Influent
Lab ID:	0010033-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	10/9/2000 2:30:00 PM
		COC Record:	10974

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	210	20		µg/L	20	10/19/2000
Benzene	1600	10		µg/L	20	10/19/2000
Toluene	280	10		µg/L	20	10/19/2000
Ethylbenzene	610	10		µg/L	20	10/19/2000
m,p-Xylene	2000	20		µg/L	20	10/19/2000
o-Xylene	220	10		µg/L	20	10/19/2000

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 -

2 3
Loft

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 27-Oct-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0010033	Client Sample ID:	Stripper Effluent
Lab ID:	0010033-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	10/9/2000 2:37:00 PM
		COC Record:	10974

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	22	1		µg/L	1	10/18/2000
Benzene	0.7	0.5		µg/L	1	10/18/2000
Toluene	ND	0.5		µg/L	1	10/18/2000
Ethylbenzene	ND	0.5		µg/L	1	10/18/2000
m,p-Xylene	1.5	1		µg/L	1	10/18/2000
o-Xylene	ND	0.5		µg/L	1	10/18/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

3 of 3

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 30-Oct-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0010033

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_001014	Test Code: SW8021B	Units: µg/L	Analysis Date 10/14/2000	Prep Date:
Client ID:	0010033	Run ID: GC-1_001014A		SeqNo: 31848	
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	.1563	0.5			J

Sample ID: MB1	Batch ID: GC-1_001018	Test Code: SW8021B	Units: µg/L	Analysis Date 10/18/2000	Prep Date:
Client ID:	0010033	Run ID: GC-1_001018A		SeqNo: 32083	
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	ND	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

Method Blank

2 of 2

On Site Technologies, LTD.

Date: 30-Oct-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0010033

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0010016-12AMS		Batch ID: GC-1_001014		Test Code: SW8021B		Units: µg/L		Analysis Date 10/14/2000		Prep Date:	
Client ID: 0010033		Run ID: GC-1_001014A		SeqNo: 31849							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	10120	50	4000	5921	104.9%	88	112				
Ethylbenzene	4818	50	4000	718.2	102.5%	86	113				
m,p-Xylene	8262	100	8000	196.8	100.8%	85	108				
Methyl tert-Butyl Ether	15410	100	4000	11350	101.5%	86	117				
o-Xylene	4049	50	4000	26.55	100.6%	92	110				
Toluene	4115	50	4000	93.25	100.5%	88	116				

Sample ID: 0010016-12AMSD		Batch ID: GC-1_001014		Test Code: SW8021B		Units: µg/L		Analysis Date 10/14/2000		Prep Date:	
Client ID: 0010033		Run ID: GC-1_001014A		SeqNo: 31850							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	9823	50	4000	5921	97.5%	88	112	10120	2.9%	6	
Ethylbenzene	4694	50	4000	718.2	99.4%	86	113	4818	2.6%	6	
m,p-Xylene	8062	100	8000	196.8	98.3%	85	108	8262	2.5%	6	
Methyl tert-Butyl Ether	15260	100	4000	11350	97.8%	86	117	15410	1.0%	7	
o-Xylene	3967	50	4000	26.55	98.5%	92	110	4049	2.0%	6	
Toluene	4039	50	4000	93.25	98.7%	88	116	4115	1.9%	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: 0010033

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0010033-02AMS		Batch ID: GC-1_001018		Test Code: SW8021B		Units: µg/L		Analysis Date 10/18/2000		Prep Date:	
Client ID: Stripper Influent		0010033		Run ID: GC-1_001018A				SeqNo: 32085			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	5736	50	4000	1700	100.9%	88	112				
Ethylbenzene	4778	50	4000	830	98.7%	86	113				
m,p-Xylene	10050	100	8000	2200	98.1%	85	108				
Methyl tert-Butyl Ether	4340	100	4000	170	104.3%	86	117				
o-Xylene	4305	50	4000	240	101.6%	92	110				
Toluene	4341	50	4000	290	101.3%	88	116				

Sample ID: 0010033-02AMSD		Batch ID: GC-1_001018		Test Code: SW8021B		Units: µg/L		Analysis Date 10/18/2000		Prep Date:	
Client ID: Stripper Influent		0010033		Run ID: GC-1_001018A				SeqNo: 32084			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	5545	50	4000	1700	96.1%	88	112	5736	3.4%	6	
Ethylbenzene	4642	50	4000	830	95.3%	86	113	4778	2.9%	6	
m,p-Xylene	9785	100	8000	2200	94.8%	85	108	10050	2.7%	6	
Methyl tert-Butyl Ether	4254	100	4000	170	102.1%	86	117	4340	2.0%	7	
o-Xylene	4180	50	4000	240	98.5%	92	110	4305	2.9%	6	
Toluene	4215	50	4000	290	98.1%	88	116	4341	2.9%	6	

Sample ID: 0010041-13AMS		Batch ID: GC-1_001019		Test Code: SW8021B		Units: µg/L		Analysis Date 10/19/2000		Prep Date:	
Client ID:		0010033		Run ID: GC-1_001019A				SeqNo: 32111			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41860	500	40000	214.7	104.1%	88	112				
Ethylbenzene	42380	500	40000	0	106.0%	86	113				
m,p-Xylene	82180	1000	80000	0	102.7%	85	108				
Methyl tert-Butyl Ether	46960	1000	40000	3472	108.7%	86	117				
o-Xylene	41590	500	40000	0	104.0%	92	110				
Toluene	41400	500	40000	211.6	103.0%	88	116				

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

QC SUMMARY REPORT

Sample Matrix Spike Duplicate

CLIENT: BioTech Remediation, Inc.

Work Order: 0010033

Project: 'Thriftway Refinery

Sample ID: 0010041-13AMSD		Batch ID: GC-1_001019	Test Code: SW8021B	Units: µg/L	Analysis Date 10/19/2000				Prep Date:			
Client ID:	Analyte	Run ID: 0010033	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 32112		RPD Ref Val	%RPD	RPDLimit	Qual
							LowLimit	HighLimit				
	Benzene		500	40000	214.7	98.3%	88	112	41860	5.7%		6
	Ethylbenzene		500	40000	0	100.1%	86	113	42380	5.7%		6
	m,p-Xylene		1000	80000	0	97.1%	85	108	82180	5.7%		6
	Methyl tert-Butyl Ether		1000	40000	3472	105.1%	86	117	46960	3.1%		7
	o-Xylene		500	40000	0	99.0%	92	110	41590	4.9%		6
	Toluene		500	40000	211.6	97.2%	88	116	41400	5.7%		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: 30-Oct-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0010033

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_001014	Test Code: SW8021B	Units: µg/L	Analysis Date 10/14/2000	Prep Date:
Client ID: 0010033	Run ID: GC-1_001014A			SeqNo: 31847	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	40.69	0.5	40	0	101.7% 96 111
Ethylbenzene	40.84	0.5	40	0	102.1% 96 111
m,p-Xylene	79.86	1	80	0	99.8% 92 105
Methyl tert-Butyl Ether	42.52	1	40	0	106.3% 93 113
o-Xylene	39.76	0.5	40	0	99.4% 97 110
Toluene	40.02	0.5	40	0.1563	99.7% 97 109

Sample ID: LCS WATER	Batch ID: GC-1_001018	Test Code: SW8021B	Units: µg/L	Analysis Date 10/16/2000	Prep Date:
Client ID: 0010033	Run ID: GC-1_001018A			SeqNo: 32082	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	40.87	0.5	40	0	102.2% 96 111
Ethylbenzene	41.9	0.5	40	0	104.7% 96 111
m,p-Xylene	81.6	1	80	0	102.0% 92 105
Methyl tert-Butyl Ether	43.59	1	40	0	109.0% 93 113
o-Xylene	41.34	0.5	40	0	103.4% 97 110
Toluene	40.74	0.5	40	0	101.9% 97 109

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: 0010033

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_001019	Test Code: SW8021B	Units: µg/L	Analysis Date 10/19/2000		Prep Date:				
Client ID:	0010033	Run ID: GC-1_001019A			SeqNo: 32109						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.75	0.5	40	0	101.9%	96	111				
Ethylbenzene	42.01	0.5	40	0	105.0%	96	111				
m,p-Xylene	81.5	1	80	0	101.9%	92	105				
Methyl tert-Butyl Ether	42.89	1	40	0	107.2%	93	113				
o-Xylene	41.13	0.5	40	0	102.8%	97	110				
Toluene	40.62	0.5	40	0.1645	101.1%	97	109				

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-Oct-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0010033

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0010		Batch ID: GC-1_001014	Test Code: SW8021B	Units: µg/L		Analysis Date 10/14/2000		Prep Date:			
Client ID:		0010033	Run ID: GC-1_001014A			SeqNo: 31844					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.47	0.5	20	0	107.3%	85	115				
Ethylbenzene	21.65	0.5	20	0	108.3%	85	115				
m,p-Xylene	42.01	1	40	0	105.0%	85	115				
Methyl tert-Butyl Ether	22.03	1	20	0	110.1%	85	115				
o-Xylene	20.97	0.5	20	0	104.9%	85	115				
Toluene	21.05	0.5	20	0	105.2%	85	115				
1,4-Difluorobenzene	87.97	0	100	0	88.0%	79	101				
4-Bromochlorobenzene	86.28	0	100	0	86.3%	78	99				
Fluorobenzene	87.33	0	100	0	87.3%	76	103				

Sample ID: CCV2 BTEX_0010		Batch ID: GC-1_001014	Test Code: SW8021B		Units: µg/L		Analysis Date 10/14/2000				Prep Date:			
Client ID:		0010033	Run ID:	GC-1_001014A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result												
Benzene		21.03			0.5	20	0	105.1%	85	115				
Ethylbenzene		21.28			0.5	20	0	106.4%	85	115				
m,p-Xylene		41.26			1	40	0	103.1%	85	115				
Methyl tert-Butyl Ether		22.26			1	20	0	111.3%	85	115				
o-Xylene		20.68			0.5	20	0	103.4%	85	115				
Toluene		20.72			0.5	20	0	103.6%	85	115				
1,4-Difluorobenzene		88.46			0	100	0	88.5%	79	101				
4-Bromochlorobenzene		87.4			0	100	0	87.4%	78	99				
Fluorobenzene		86.72			0	100	0	86.7%	76	103				

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: 0010033

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0010		Batch ID: GC-1_001014		Test Code: SW8021B		Units: µg/L		Analysis Date 10/14/2000		Prep Date:	
Client ID: 0010033		Run ID: GC-1_001014A		SeqNo: 31846							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.02	0.5	40	0	102.6%	85	115				
Ethylbenzene	41.07	0.5	40	0	102.7%	85	115				
m,p-Xylene	79.94	1	80	0	99.9%	85	115				
Methyl tert-Butyl Ether	42.48	1	40	0	106.2%	85	115				
o-Xylene	39.84	0.5	40	0	99.6%	85	115				
Toluene	40.15	0.5	40	0	100.4%	85	115				
1,4-Difluorobenzene	88.12	0	100	0	88.1%	79	101				
4-Bromochlorobenzene	87.67	0	100	0	87.7%	78	99				
Fluorobenzene	86.58	0	100	0	86.6%	76	103				

Sample ID: CCV1 BTEX_0010		Batch ID: GC-1_001018		Test Code: SW8021B		Units: µg/L		Analysis Date 10/18/2000		Prep Date:	
Client ID: 0010033		Run ID: GC-1_001018A		SeqNo: 32079							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.39	0.5	20	0	106.9%	85	115				
Ethylbenzene	22.06	0.5	20	0	110.3%	85	115				
m,p-Xylene	42.89	1	40	0	107.2%	85	115				
Methyl tert-Butyl Ether	22.37	1	20	0	111.9%	85	115				
o-Xylene	21.59	0.5	20	0	107.9%	85	115				
Toluene	21.33	0.5	20	0	106.6%	85	115				
1,4-Difluorobenzene	87.33	0	100	0	87.3%	79	101				
4-Bromochlorobenzene	78.26	0	100	0	78.3%	78	99				
Fluorobenzene	86.2	0	100	0	86.2%	76	103				

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: 0010033

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0010		Batch ID: GC-1_001018	Test Code: SW8021B	Units: µg/L		Analysis Date 10/18/2000				Prep Date:	
Client ID:		Run ID:	GC-1_001018A			SeqNo:	32080				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.58	0.5	20	0	107.9%	85	115				
Ethylbenzene	22.09	0.5	20	0	110.5%	85	115				
m,p-Xylene	42.64	1	40	0	106.6%	85	115				
Methyl tert-Butyl Ether	21.72	1	20	0	108.6%	85	115				
o-Xylene	21.54	0.5	20	0	107.7%	85	115				
Toluene	21.36	0.5	20	0	106.8%	85	115				
1,4-Difluorobenzene	88.51	0	100	0	88.5%	79	101				
4-Bromochlorobenzene	86.51	0	100	0	86.5%	78	99				
Fluorobenzene	86.36	0	100	0	86.4%	76	103				

Sample ID: CCV3 BTEX_0010		Batch ID: GC-1_001018	Test Code: SW8021B	Units: µg/L		Analysis Date 10/18/2000				Prep Date:	
Client ID:		Run ID:	GC-1_001018A			SeqNo:	32081				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.63	0.5	40	0	101.6%	85	115				
Ethylbenzene	41.57	0.5	40	0	103.9%	85	115				
m,p-Xylene	80.92	1	80	0	101.2%	85	115				
Methyl tert-Butyl Ether	41.14	1	40	0	102.8%	85	115				
o-Xylene	40.92	0.5	40	0	102.3%	85	115				
Toluene	40.27	0.5	40	0	100.7%	85	115				
1,4-Difluorobenzene	87.83	0	100	0	87.8%	79	101				
4-Bromochlorobenzene	81.75	0	100	0	81.8%	78	99				
Fluorobenzene	85.87	0	100	0	85.9%	76	103				

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: 0010033

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0010		Batch ID: GC-1_001019	Test Code: SW8021B	Units: µg/L	Analysis Date 10/19/2000		Prep Date:				
Client ID:		0010033	Run ID: GC-1_001019A		SeqNo: 32106						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.65	0.5	20	0	103.3%	85	115				
Ethylbenzene	21.41	0.5	20	0	107.0%	85	115				
m,p-Xylene	41.6	1	40	0	104.0%	85	115				
Methyl tert-Butyl Ether	21.13	1	20	0	105.6%	85	115				
o-Xylene	21.17	0.5	20	0	105.8%	85	115				
Toluene	20.77	0.5	20	0	103.9%	85	115				
1,4-Difluorobenzene	87.73	0	100	0	87.7%	79	101				
4-Bromochlorobenzene	82.84	0	100	0	82.8%	78	99				
Fluorobenzene	85.93	0	100	0	85.9%	76	103				

Sample ID: CCV2 BTEX_0010		Batch ID: GC-1_001019		Test Code: SW8021B		Units: µg/L		Analysis Date 10/19/2000		Prep Date:	
Client ID: 0010033		Run ID: GC-1_001019A						SeqNo: 32107			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.57	0.5	20	0	107.8%	85	115				
Ethylbenzene	22.1	0.5	20	0	110.5%	85	115				
m,p-Xylene	42.69	1	40	0	106.7%	85	115				
Methyl tert-Butyl Ether	22.18	1	20	0	110.9%	85	115				
o-Xylene	21.72	0.5	20	0	108.6%	85	115				
Toluene	21.42	0.5	20	0	107.1%	85	115				
1,4-Difluorobenzene	87.84	0	100	0	87.8%	79	101				
4-Bromochlorobenzene	85.91	0	100	0	85.9%	78	99				
Fluorobenzene	85.56	0	100	0	85.6%	76	103				

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: 0010033

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0010		Batch ID: GC-1_001019	Test Code: SW8021B	Units: µg/L		Analysis Date 10/19/2000		Prep Date:				
Client ID: 0010033		Run ID: GC-1_001019A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	40.56		0.5	40	0	101.4%	85	115				
Ethylbenzene	41.14		0.5	40	0	102.9%	85	115				
m,p-Xylene	79.87		1	80	0	99.8%	85	115				
Methyl tert-Butyl Ether	42.72		1	40	0	106.8%	85	115				
o-Xylene	40.4		0.5	40	0	101.0%	85	115				
Toluene	40.16		0.5	40	0	100.4%	85	115				
1,4-Difluorobenzene	87.14		0	100	0	87.1%	79	101				
4-Bromochlorobenzene	82.98		0	100	0	83.0%	78	99				
Fluorobenzene	85.94		0	100	0	85.9%	76	103				

Qualifiers:

N/D - 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: 0010033

Project: Thriftway Refinery

Test No: SW8021B

**QC SUMMARY REPORT
SURROGATE RECOVERIES****Aromatic Volatiles by GC/PID**

Sample ID	14FBZ	4BCBZ	FLBZ
0010011-01A	88	85.8	87.4
0010016-12A	87.6	87.4	86
0010016-12AMS	88.6	88.2	87.2
0010016-12AMSD	88.4	88	87.4
0010016-13A	89.3	87.5	87.3
0010016-14A	88.8	87.4	87.6
0010016-15A	89.1	86.8	88
0010016-16A	87.9	87.4	87.6
0010016-19A	88.3	86.9	86.1
0010016-20A	88.2	87.5	87.6
0010016-21A	93	88.8	94.8
0010016-22A	92.4	88.9	95.6
0010016-23A	88.2	87.3	87.8
0010016-24A	87	89	85.8
0010016-26A	89	87.5	88.2
0010016-27A	87.9	87.8	87.3
0010016-28A	88.1	87.2	87.7
0010016-29A	88.4	86.4	87.5
0010018-01A	85.6	80.9	84.4
0010019-01A	88.6	82.5	88.2
0010022-01A	88.6	88	86.6
0010023-01A	87.6	87.7	88.8
0010024-01A	88.3	88.5	88.8
0010027-02A	87.7	84.8	87.4
0010027-09A	87.4	83.9	87.2
0010031-01A	86.8	82.1	84.5
0010031-02A	88.8	78.1	86.5

Acronym**Surrogate****QC Limits**

14FBZ

= 1,4-Difluorobenzene

79-101

4BCBZ

= 4-Bromochlorobenzene

78-99

FLBZ

= Fluorobenzene

76-103

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 0010033
Project: Thriftway Refinery
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0010032-01A	88.7	78.6	86.8
0010032-02A	88.4	86.3	86.8
0010032-03A	88.1	79.3	86.5
0010032-04A	87.9	86.2	86.9
0010032-05A	96.3	85	87.5
0010032-06A	88.4	79	86.8
0010032-07A	88.4	79.1	86.9
0010032-08A	88.5	86.1	86.6
0010033-01A	88.3	87.6	87.5
0010033-02A	87.9	86.6	84.5
0010033-02AMS	87.7	86.5	85.7
0010033-02AMSD	87.8	87	85.4
0010033-03A	89.2	87.6	87.4
0010034-01A	88.1	86.2	86.9
0010035-01A	82.6	81.3	84.7
0010036-01A	87.8	84.5	89.1
0010037-01A	85	82.3	85.8
0010038-01A	87.3	86.2	85.2
0010039-01A	89.2	85.8	87.4
0010039-02A	88.7	87	85.9
0010041-01A	88.8	87.5	85.8
0010041-02A	87.4	85.1	86
0010041-03A	89.2	85.5	86.8
0010041-04A	88.7	83.8	87.2
0010041-05A	88.6	81.7	85.7
0010041-06A	88.3	87.9	86.2
0010041-07A	88.8	87.8	86.1
0010041-08A	88.4	87.7	86.1

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	79-101
4BCBZ	= 4-Bromochlorobenzene	78-99
FLBZ	= Fluorobenzene	76-103

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 0010033
Project: Thriftway Refinery
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0010041-10A	88.4	83.6	87.3
0010041-11A	88.3	83.5	85.3
0010041-13AMS	87.5	83.6	85.8
0010041-13AMSD	88.5	83.3	85.5
CCV1 BTEX_00100	87.7	82.8	85.9
CCV2 BTEX_00100	87.8	85.9	85.6
CCV3 BTEX_00100	87.1	83	85.9
LCS WATER	87.4	87.3	85.8
MB1	87.6	86.4	86.5

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	79-101
4BCBZ	= 4-Bromochlorobenzene	78-99
FLBZ	= Fluorobenzene	76-103

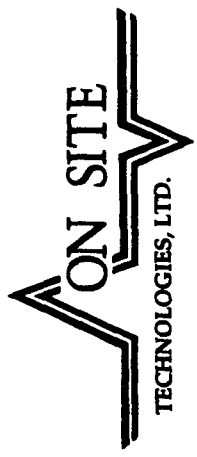
* Surrogate recovery outside acceptance limits

CHAIN OF CUSTODY RECORD

Date: 10-9-00

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

October 30, 2000

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: Quarterly

Order No.: 0009023

Dear Terry Griffin,

On Site Technologies, LTD. received 2 samples on 9/13/2000 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

- Alkalinity, Total (M2320 B)
- 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)
- Hardness, Total (M2340 B)
- Lead, Total (SW6010B)
- Magnesium, Dissolved (E242.1)
- Mercury, Total (SW7470)
- pH (E150.1)
- Potassium, Dissolved (E258.1)
- Selenium, Total (SW6010B)
- Silver, Total (SW6010B)
- Sodium, Dissolved (E273.1)
- Sulfate (M4500-SO4 D)
- Total Dissolved Solids (CALC)
- Total Dissolved Solids (E160.1)

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

October 30, 2000

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: Quarterly

Order No.: 0009023

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 30-Oct-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper: Quarterly
Lab Order: 0009023

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.

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

Cation-Anion Balance 0009023-01A: Influent to Air Stripper

Total Cation-Anion = 102.95 meq/L

Difference Cation-Anion = 4.30 meq/L

% Difference = 4.2 %

Cation-Anion Balance 0009023-02A: Effluent from Air Stripper

Total Cation-Anion = 86.61 meq/L

Difference Cation-Anion = 1.79 meq/L

% Difference = 2.1 %

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 30-Oct-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0009023	Client Sample ID:	Influent to Air Stripper
Lab ID:	0009023-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper: Quarterly	Collection Date:	9/13/2000 1:15:00 PM
		COC Record:	10901

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CALCIUM, DISSOLVED	E215.1					Analyst: HR
Calcium	320	25		mg/L	100	9/27/2000
POTASSIUM, DISSOLVED	E258.1					Analyst: HR
Potassium	8.45	1.25		mg/L	5	9/27/2000
MAGNESIUM, DISSOLVED	E242.1					Analyst: HR
Magnesium	43	5		mg/L	20	9/27/2000
SODIUM, DISSOLVED	E273.1					Analyst: HR
Sodium	780	100		mg/L	400	9/28/2000
ALKALINITY, TOTAL	M2320 B					Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	1000	5		mg/L CaCO ₃	1	9/18/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	9/18/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	9/18/2000
Alkalinity, Total (As CaCO ₃)	1000	5		mg/L CaCO ₃	1	9/18/2000
CHLORIDE	E325.3					Analyst: HR
Chloride	170	1		mg/L	1	9/25/2000
CONDUCTIVITY @ 25C	E120.1					Analyst: HR
Specific Conductance	3100	2		uS/cm	1	9/20/100
HARDNESS, TOTAL	M2340 B					Analyst: HR
Hardness (As CaCO ₃)	980	1		mg/L	1	9/27/2000
PH	E150.1					Analyst: HR
pH	7.18	2		pH units	1	9/14/2000
SULFATE	M4500-SO4 D					Analyst: HR
Sulfate	1320	5		mg/L	1	9/21/2000
TOTAL DISSOLVED SOLIDS	E160.1					Analyst: HR
Total Dissolved Solids (Residue, Filterable)	3370	40		mg/L	1	9/20/2000
TOTAL DISSOLVED SOLIDS	CALC					Analyst: HR
Total Dissolved Solids (Calculated)	3260	40		mg/L	1	9/27/2000

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

Sur: - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 30-Oct-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0009023	Client Sample ID:	Effluent from Air Stripper
Lab ID:	0009023-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper: Quarterly	Collection Date:	9/13/2000 1:25:00 PM
		COC Record:	10901

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CALCIUM, DISSOLVED	E215.1					Analyst: HR
Calcium	160	25		mg/L	100	9/27/2000
POTASSIUM, DISSOLVED	E258.1					Analyst: HR
Potassium	8.8	1.25		mg/L	5	9/27/2000
MAGNESIUM, DISSOLVED	E242.1					Analyst: HR
Magnesium	42	5		mg/L	20	9/27/2000
SODIUM, DISSOLVED	E273.1					Analyst: HR
Sodium	700	100		mg/L	400	9/28/2000
ALKALINITY, TOTAL	M2320 B					Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	680	5		mg/L CaCO ₃	1	9/18/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	9/18/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	9/18/2000
Alkalinity, Total (As CaCO ₃)	680	5		mg/L CaCO ₃	1	9/18/2000
CHLORIDE	E325.3					Analyst: HR
Chloride	200	1		mg/L	1	9/25/2000
CONDUCTIVITY @ 25C	E120.1					Analyst: HR
Specific Conductance	2600	2		uS/cm	1	9/20/100
HARDNESS, TOTAL	M2340 B					Analyst: HR
Hardness (As CaCO ₃)	590	1		mg/L	1	9/27/2000
PH	E150.1					Analyst: HR
pH	7.89	2		pH units	1	9/14/2000
SULFATE	M4500-SO4 D					Analyst: HR
Sulfate	1320	5		mg/L	1	9/21/2000
TOTAL DISSOLVED SOLIDS	E160.1					Analyst: HR
Total Dissolved Solids (Residue, Filterable)	2980	40		mg/L	1	9/20/2000
TOTAL DISSOLVED SOLIDS	CALC					Analyst: HR
Total Dissolved Solids (Calculated)	2840	40		mg/L	1	9/27/2000

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 -

On Site Technologies, LTD.

Date: 30-Oct-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0009023

Project: Thriftway Refinery Air Stripper: Quarterly

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0009006-06AMS	Batch ID: AA_9/28/2000	Test Code: E215.1	Units: mg/L	Analysis Date 9/27/2000	Prep Date:
Client ID: 0009023	Run ID: AA_000927B			SeqNo: 31383	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	37.6	2.5	20	17.1	102.5% 82 121
Sample ID: 0009006-06AMS	Batch ID: AA_9/28/2000	Test Code: E242.1	Units: mg/L	Analysis Date 9/27/2000	Prep Date:
Client ID: 0009023	Run ID: AA_000927C			SeqNo: 31391	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	38.8	2.5	20	20	94.0% 96 111 S
Sample ID: 0009006-06AMS	Batch ID: AA_9/28/2000	Test Code: E258.1	Units: mg/L	Analysis Date 9/27/2000	Prep Date:
Client ID: 0009023	Run ID: AA_000927D			SeqNo: 31399	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	68.6	2.5	50	19.2	98.8% 51 167
Sample ID: 0009023-02AMS	Batch ID: AA_9/28/2000	Test Code: E273.1	Units: mg/L	Analysis Date 9/28/2000	Prep Date:
Client ID: Effluent from Air	Run ID: AA_000927A			SeqNo: 31377	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	1512	100	800	700	101.5% 85 115

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-Oct-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0009023

Project: Thriftway Refinery Air Stripper: Quarterly

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1	Batch ID: AA_9/28/2000	Test Code: E273.1	Units: mg/L	Analysis Date 9/28/2000	Prep Date:
Client ID: 0009023	Run ID: AA_000927A			SeqNo: 31372	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	2.6	0.25	2.82	0	92.2% 90 110
Sample ID: CCV1	Batch ID: AA_9/28/2000	Test Code: E215.1	Units: mg/L	Analysis Date 9/27/2000	Prep Date:
Client ID: 0009023	Run ID: AA_000927B			SeqNo: 31380	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	3.1	0.25	3.28	0	94.5% 90 110
Sample ID: CCV1	Batch ID: AA_9/28/2000	Test Code: E242.1	Units: mg/L	Analysis Date 9/27/2000	Prep Date:
Client ID: 0009023	Run ID: AA_000927C			SeqNo: 31388	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	2.09	0.25	2.08	0	100.5% 90 110
Sample ID: CCV1	Batch ID: AA_9/28/2000	Test Code: E258.1	Units: mg/L	Analysis Date 9/27/2000	Prep Date:
Client ID: 0009023	Run ID: AA_000927D			SeqNo: 31396	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	1.62	0.25	1.68	0	96.4% 90 110
Sample ID: CCV2	Batch ID: AA_9/28/2000	Test Code: E273.1	Units: mg/L	Analysis Date 9/28/2000	Prep Date:
Client ID: 0009023	Run ID: AA_000927A			SeqNo: 31378	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	2.61	0.25	2.82	0	92.6% 90 110

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: 0009023

Project: Thriftway Refinery Air Stripper: Quarterly

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2	Batch ID: AA_9/28/2000	Test Code: E215.1	Units: mg/L	Analysis Date 9/27/2000	Prep Date:
Client ID:	0009023	Run ID: AA_000927B		SeqNo: 31386	
Analyte	Result	PQL	SPK value	LowLimit HighLimit	%REC RPD Ref Val RPDLimit Qual
Calcium	3.05	0.25	3.28	0 90	93.0% 110
Sample ID: CCV2	Batch ID: AA_9/28/2000	Test Code: E242.1	Units: mg/L	Analysis Date 9/27/2000	Prep Date:
Client ID:	0009023	Run ID: AA_000927C		SeqNo: 31394	
Analyte	Result	PQL	SPK value	LowLimit HighLimit	%REC RPD Ref Val RPDLimit Qual
Magnesium	2.02	0.25	2.08	0 90	97.1% 110
Sample ID: CCV2	Batch ID: AA_9/28/2000	Test Code: E258.1	Units: mg/L	Analysis Date 9/27/2000	Prep Date:
Client ID:	0009023	Run ID: AA_000927D		SeqNo: 31402	
Analyte	Result	PQL	SPK value	LowLimit HighLimit	%REC RPD Ref Val RPDLimit Qual
Potassium	1.68	0.25	1.68	0 90	100.0% 110

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: 30-Oct-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0009023

Project: Thriftway Refinery Air Stripper: Quarterly

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: API_000914	Test Code: E120.1	Units: uS/cm	Analysis Date 9/20/100	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914B			SeqNo: 31279	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	ND	2			
Sample ID: MBlank	Batch ID: API_000914	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 9/18/2000	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914D			SeqNo: 31290	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	3	5			J
Alkalinity, Carbonate (As CaCO3)	ND	5			
Alkalinity, Hydroxide	ND	5			
Alkalinity, Total (As CaCO3)	3	5			J
Sample ID: MBlank	Batch ID: API_000914	Test Code: E160.1	Units: mg/L	Analysis Date 9/20/2000	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914E			SeqNo: 31306	
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: MBlank	Batch ID: API_000914	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 9/21/2000	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914F			SeqNo: 31315	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	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: 0009023
Project: Thriftway Refinery Air Stripper: Quarterly

QC SUMMARY REPORT
 Method Blank

Sample ID: MBlank	Batch ID: API_000914	Test Code: E325.3	Units: mg/L	Analysis Date: 9/25/2000	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914G	SeqNo: 31322			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	ND	1			

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: 0009023

Project: Thriftway Refinery Air Stripper: Quarterly

Date: 30-Oct-00

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0009006-05AD	Batch ID: API_000914	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 9/18/2000	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914D			SeqNo: 31293	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	53	5	0	0	0.0% 0 52.6 0.8% 3
Alkalinity, Carbonate (As CaCO3)	ND	5	0	0	0.0% 0 0 0.0% 3
Alkalinity, Hydroxide	ND	5	0	0	0.0% 0 0 0.0% 3
Alkalinity, Total (As CaCO3)	53	5	0	0	0.0% 0 52.6 0.8% 3

Sample ID: 0009006-05AD	Batch ID: API_000914	Test Code: E325.3	Units: mg/L	Analysis Date 9/25/2000	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914G			SeqNo: 31325	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	105	1	0	0	0.0% 0 109 3.7% 10

Sample ID: 0009006-06AD	Batch ID: API_000914	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 9/18/2000	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914D			SeqNo: 31295	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	51	5	0	0	0.0% 0 51.6 1.2% 3
Alkalinity, Carbonate (As CaCO3)	ND	5	0	0	0.0% 0 0 0.0% 3
Alkalinity, Hydroxide	ND	5	0	0	0.0% 0 0 0.0% 3
Alkalinity, Total (As CaCO3)	51	5	0	0	0.0% 0 51.6 1.2% 3

Sample ID: 0009006-06AD	Batch ID: API_000914	Test Code: E160.1	Units: mg/L	Analysis Date 9/20/2000	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914E			SeqNo: 31312	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtration)	400	40	0	0	0.0% 0 402 0.5% 8

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: 0009023

Project: Thriftway Refinery Air Stripper: Quarterly

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0009006-06AD	Batch ID: API_000914	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 9/21/2000	Prep Date:						
Client ID:	0009023	Run ID: WET CHEM_000914F		SeqNo: 31319							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	28.8	5	0	0	0.0%	0	0	32.1	10.8%	12	

Sample ID: 0009006-06AD	Batch ID: API_000914	Test Code: E325.3	Units: mg/L	Analysis Date 9/25/2000	Prep Date:						
Client ID:	0009023	Run ID: WET CHEM_000914G		SeqNo: 31327							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	132	1	0	0	0.0%	0	0	137	3.7%	10	

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-Oct-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0009023

Project: Thriftway Refinery Air Stripper: Quarterly

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3023	Batch ID: API_000914	Test Code: E150.1	Units: pH units	Analysis Date 9/14/2000	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914A			SeqNo: 31274	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
pH	9.17	2	9.09	0	100.9% 80 120

Sample ID: LCS 3023	Batch ID: API_000914	Test Code: E150.1	Units: pH units	Analysis Date 9/14/2000	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914A			SeqNo: 31278	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
pH	9.159	2	9.09	0	100.8% 80 120

Sample ID: LCS 3023	Batch ID: API_000914	Test Code: E120.1	Units: uS/cm	Analysis Date 9/20/100	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914B			SeqNo: 31280	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	820	2	780	0	105.1% 96 108

Sample ID: LCS 3023	Batch ID: API_000914	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 9/18/2000	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914D			SeqNo: 31291	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Total (As CaCO3)	225	5	219	3	101.4% 96 104

Sample ID: LCS 3023	Batch ID: API_000914	Test Code: E160.1	Units: mg/L	Analysis Date 9/20/2000	Prep Date:
Client ID: 0009023	Run ID: WET CHEM_000914E			SeqNo: 31307	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	766	40	781	0	98.1% 86 110

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: 0009023

Project: Thriftway Refinery Air Stripper: Quarterly

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3023	Batch ID: API_000914	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 9/21/2000	Prep Date:					
Client ID: 0009023	Run ID: WET CHEM_000914F			SeqNo: 31316						
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	54.5	5	55	0	99.1%	86	111			

Sample ID: LCS 3030	Batch ID: API_000914	Test Code: E325.3	Units: mg/L	Analysis Date: 9/25/2000	Prep Date:					
Client ID: 0009023	Run ID: WET CHEM_000914G			SeqNo: 31323						
Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	175	1	200	0	87.5%	79	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



Mountain States Analytical, Inc.

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

RECEIVED OCT 23 2000
Analytical Report

October 16, 2000

Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-1556 Fax: (505) 325-6256

Project: Metals & Anion Analysis

Work Order: 0009162

Dear Mr. David Cox,

Thank you for using Mountain States Analytical, Inc. (MSAI) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0009162-3 and contains 19 pages of information for the 2 samples submitted to MSAI on Friday, September 15, 2000. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached " are included by reference as attachments following page 19. For regulatory compliance reporting, individual pages or portions of this report may not be separated.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msailabs.com.

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

Analytical Report

Sample Summary

Client: On Site Technologies, Ltd.

Project: Metals & Anion Analysis

Project ID:

Report Number: 0009162-3

Date Reported: 10/16/00

Work Order: 0009162

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0009162-01A	009023-01B		Water	09/13/00
0009162-01B	009023-01C		Water	09/13/00
0009162-02A	0009023-02B		Water	09/13/00
0009162-02B	0009023-02C		Water	09/13/00



Mountain States Analytical, Inc.

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

Analysis Report

Holding Time Summary

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

Report Number: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162

Sample ID	Client Sample ID	Date Collected						
0009162-01A	009023-01B	09/13/00 13:15						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA				09/27/00 15:58		09/28/00 10:36	28	
Metals by ICP				09/21/00 14:19		09/26/00 13:37	180	
Metals by ICP				09/21/00 14:19		09/25/00 15:48	180	
0009162-01B	009023-01C	09/13/00 13:15						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (Br, Cl, F, SO4)						09/21/00 16:40	28	
0009162-02A	0009023-02B	09/13/00 13:25						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA				09/27/00 15:58		09/28/00 10:37	28	
Metals by ICP				09/21/00 14:19		09/26/00 13:42	180	
Metals by ICP				09/21/00 14:19		09/25/00 15:52	180	
0009162-02B	0009023-02C	09/13/00 13:25						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (Br, Cl, F, SO4)						09/21/00 16:58	28	

* - The recommended holding time was exceeded



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

Analytical Report

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

Report Number: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162
Lab Sample ID: 0009162-01A
Client Sample ID: 009023-01B
Date Collected: 09/13/00
Date Received: 09/15/00 10:15
Matrix: Water
COC ID:

Project: Metals & Anion Analysis
Project ID: _____
Purchase Order: Influent to Air Stripper

10/30/00

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/hrICP Prep, Water							
Prep Batch ID: 3964						09/21/00 14:19	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	09/28/00 10:36	MM
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4023						09/27/00 15:58	MM
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	09/25/00 15:48	DJK
Barium	0.0910	0.002	0.01	mg/L	1	09/25/00 15:48	DJK
Cadmium	U	0.003	0.015	mg/L	1	09/25/00 15:48	DJK
Chromium	U	0.01	0.05	mg/L	1	09/25/00 15:48	DJK
Lead	U	0.03	0.15	mg/L	1	09/25/00 15:48	DJK
Selenium	U	0.08	0.4	mg/L	1	09/25/00 15:48	DJK
Silver	U	0.01	0.05	mg/L	1	09/25/00 15:48	DJK

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

* - Result is greater than the associated action level



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Analytical Report

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(505) 325-5667 Fax: (505) 327-1496

Report Number: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162
Lab Sample ID: 0009162-01B
Client Sample ID: 009023-01C
Date Collected: 09/13/00
Date Received: 09/15/00 10:15
Matrix: Water
COC ID:

Project: Metals & Anion Analysis

Project ID:

Purchase Order: Influent to Air Stripper

10/26/00

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.2	1	mg/L	10	09/21/00 16:40	NWL
Fluoride	0.825	0.1	0.5	mg/L	10	09/21/00 16:40	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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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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: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162
Lab Sample ID: 0009162-02A
Client Sample ID: 0009023-02B
Date Collected: 09/13/00
Date Received: 09/15/00 10:15
Matrix: Water
COC ID:

Project: Metals & Anion Analysis

Project ID:

Purchase Order: **Effluent from Air Stripper**

10/20/00

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/hrICP Prep, Water							
Prep Batch ID: 3964						09/21/00 14:19	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	09/28/00 10:37	MM
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4023						09/27/00 15:58	MM
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	09/25/00 15:52	DJK
Barium	0.0835	0.002	0.01	mg/L	1	09/25/00 15:52	DJK
Cadmium	U	0.003	0.015	mg/L	1	09/25/00 15:52	DJK
Chromium	U	0.01	0.05	mg/L	1	09/25/00 15:52	DJK
Lead	U	0.03	0.15	mg/L	1	09/25/00 15:52	DJK
Selenium	U	0.08	0.4	mg/L	1	09/25/00 15:52	DJK
Silver	U	0.01	0.05	mg/L	1	09/25/00 15:52	DJK

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

* - Result is greater than the associated action level



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Analytical Report

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

Report Number: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162
Lab Sample ID: 0009162-02B
Client Sample ID: 0009023-02C
Date Collected: 09/13/00
Date Received: 09/15/00 10:15
Matrix: Water
COC ID:

Project: Metals & Anion Analysis

Project ID:

Purchase Order: Effluent from Air Stripper

10/30/00

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.2	1	mg/L	10	09/21/00 16:58	NWL
Fluoride	0.682	0.1	0.5	mg/L	10	09/21/00 16:58	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

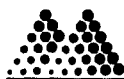
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Quality Control Summary

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

Report Number: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162

EPA 300.0: Anions by I. C. (Br, Cl, F, SO₄), Water

QC Type: Laboratory Reagent Blank
Sample ID: LRB 1
Run ID: IC 1_000921A

Analysis Date: 09/21/00 13:02
Prep Batch ID: R8015

Units: mg/L
Seq No: 138846

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		0.05			

QC Type: Laboratory Fortified Blank
Sample ID: LFB IC-000905-01
Run ID: IC 1_000921A

Analysis Date: 09/21/00 13:20
Prep Batch ID: R8015

Units: mg/L
Seq No: 138847

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	390	U	400	97.4	90	110			
Fluoride	98.2	U	100	98.2	90	110			

QC Type: Laboratory Reagent Blank
Sample ID: LRB 2
Run ID: IC 1_000921A

Analysis Date: 09/21/00 15:06
Prep Batch ID: R8015

Units: mg/L
Seq No: 138853

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		0.05			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

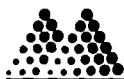
S - Results outside normal recovery limits

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

**Quality Control Summary**

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

Report Number: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162

QC Type: Laboratory Reagent Blank
Sample ID: LRB 3
Run ID: IC 1_000921A

Analysis Date: 09/21/00 18:08
Prep Batch ID: R8015

Units: mg/L
Seq No: 138860

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		0.05			

QC Type: Laboratory Reagent Blank
Sample ID: LRB 4
Run ID: IC 1_000921A

Analysis Date: 09/21/00 21:04
Prep Batch ID: R8015

Units: mg/L
Seq No: 138873

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		0.05			

QC Type: Matrix Spike
Sample ID: 0009102-01B MS
Run ID: IC 1_000921A

Analysis Date: 09/21/00 14:31
Prep Batch ID: R8015

Units: mg/L
Seq No: 139275

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	3790	7.9 J	4000	94.5	80	120			
Fluoride	944	3.2 J	1000	94.1	80	120			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

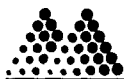
S - Results outside normal recovery limits

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



Mountain States Analytical, Inc.

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

Analytical Report

Quality Control Summary

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

Report Number: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162

QC Type: Matrix Spike Duplicate
Sample ID: 0009102-01B MSD
Run ID: IC 1_000921A

Analysis Date: 09/21/00 14:48
Prep Batch ID: R8015

Units: mg/L
Seq No: 139276

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	3820	7.9 J	4000	95.4	80	120	3790	0.91	20
Fluoride	952	3.2 J	1000	94.8	80	120	944	0.76	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

**Quality Control Summary**

Client: On Site Technologies, Ltd.

Project: Metals & Anion Analysis

Project ID:

Report Number: 0009162-3

Date Reported: 10/16/00

Work Order: 0009162

SW-846 6010B: Metals by ICP, Water

QC Type: Method Blank

Sample ID: PBW-3964

Run ID: TJA61E_000925A

Analysis Date: 09/25/00 14:42

Prep Batch ID: 3964

Units: µg/L

Seq No: 141919

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.8	0	0	0	-40	80			
Barium	0.32	0	0	0	-4	100			
Cadmium	-1.5	0	0	0	-6	10			
Chromium	0.010	0	0	0	-20	20			
Lead	-19	0	0	0	-60	60			
Selenium	28	0	0	0	-200	100			
Silver	-2.8	0	0	0	-20	10			

QC Type: Laboratory Control Sample (Water)

Sample ID: LCSW-3964

Run ID: TJA61E_000925A

Analysis Date: 09/25/00 14:44

Prep Batch ID: 3964

Units: µg/L

Seq No: 141920

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1020		1000	102	75	125			
Barium	200		200	100	75	125			
Cadmium	99.4		100	99.4	75	125			
Chromium	403		400	101	75	125			
Lead	1010		1000	101	75	125			
Selenium	970		1000	97.0	75	125			
Silver	97.7		100	97.7	75	125			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

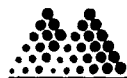
S - Results outside normal recovery limits

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

**Quality Control Summary**

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

Report Number: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162

QC Type: Sample Duplicate
Sample ID: 0009103-04A D
Run ID: TJA61E_000925A

Analysis Date: 09/25/00 14:52
Prep Batch ID: 3964

Units: µg/L
Seq No: 141922

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	20
Barium	541						526	2.8	20
Cadmium	U						U	NC	20
Chromium	U						U	NC	20
Lead	U						U	NC	20
Selenium	150J						U	NC	20
Silver	U						U	NC	20

QC Type: Matrix Spike
Sample ID: 0009103-04A MS
Run ID: TJA61E_000925A

Analysis Date: 09/25/00 14:57
Prep Batch ID: 3964

Units: µg/L
Seq No: 141922

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1070	U	1000	107	75	125			
Barium	749	526	200	112	75	125			
Cadmium	86.5	U	100	86.5	75	125			
Chromium	339	U	400	84.7	75	125			
Lead	851	U	1000	85.1	75	125			
Selenium	1140	U	1000	114	75	125			
Silver	105	U	100	105	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



Mountain States Analytical, Inc.

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Analytical Report

Quality Control Summary

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

Report Number: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162

QC Type: Matrix Spike Duplicate
Sample ID: 0009103-04A MSD
Run ID: TJA61E_000925A

Analysis Date: 09/25/00 15:01
Prep Batch ID: 3964

Units: µg/L
Seq No: 141924

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1100	U	1000	110	75	125	1070	2.2	20
Barium	750	526	200	112	75	125	749	0.017	20
Cadmium	88.5	U	100	88.5	75	125	86.5	2.3	20
Chromium	349	U	400	87.4	75	125	339	3.1	20
Lead	864	U	1000	86.4	75	125	851	1.5	20
Selenium	1230	U	1000	123	75	125	1140	7.6	20
Silver	110	U	100	110	75	125	105	5.2	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0009103-04A A
Run ID: TJA61E_000925A

Analysis Date: 09/25/00 15:16
Prep Batch ID: 3964

Units: µg/L
Seq No: 141925

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1050	U	1000	105	75	125			
Barium	736	526	200	105	75	125			
Cadmium	84.7	U	100	84.7	75	125			
Chromium	326	U	400	81.5	75	125			
Lead	789	U	1000	78.9	75	125			
Selenium	1160	U	1000	116	75	125			
Silver	103	U	100	103	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: Metals & Anion Analysis
Project ID:

Report Number: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162

QC Type: Serial Dilution
Sample ID: 0009103-04A L
Run ID: TJA61E_000925A

Analysis Date: 09/25/00 15:21
Prep Batch ID: 3964

Units: µg/L
Seq No: 141926

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	10
Barium	U						530 J	NC	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

QC Type: Method Blank
Sample ID: PBW-3964
Run ID: TJA61E_000925B

Analysis Date: 09/25/00 14:42
Prep Batch ID: 3964

Units: mg/L
Seq No: 141951

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	0.0018	0	0	0	-0.04	0.02			
Barium	0.00032	0	0	0	-0.004	0.002			
Cadmium	-0.0015	0	0	0	-0.006	0.003			
Chromium	0.000010	0	0	0	-0.02	0.01			
Lead	-0.019	0	0	0	-0.06	0.03			
Selenium	0.028	0	0	0	-0.2	0.1			
Silver	-0.0028	0	0	0	-0.02	0.01			

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: Metals & Anion Analysis

Project ID:

Report Number: 0009162-3

Date Reported: 10/16/00

Work Order: 0009162

QC Type: Laboratory Control Sample (Water)

Sample ID: LCSW-3964

Run ID: TJA61E_000925B

Analysis Date: 09/25/00 14:44

Prep Batch ID: 3964

Units: mg/L

Seq No: 141953

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.02		1.00	102	75	125			
Barium	0.200		0.200	100	75	125			
Cadmium	0.0994		0.100	99.4	75	125			
Chromium	0.403		0.400	101	75	125			
Lead	1.01		1.00	101	75	125			
Selenium	0.970		1.00	97.0	75	125			
Silver	0.0977		0.100	97.7	75	125			

QC Type: Sample Duplicate

Sample ID: 0009103-04A D

Run ID: TJA61E_000925B

Analysis Date: 09/25/00 14:52

Prep Batch ID: 3964

Units: mg/L

Seq No: 141957

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	20
Barium	0.541						0.526	2.8	20
Cadmium	0.0036J						U	NC	20
Chromium	U						U	NC	20
Lead	U						U	NC	20
Selenium	0.15J						U	NC	20
Silver	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

**Quality Control Summary**

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

Report Number: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162

QC Type: Matrix Spike
Sample ID: 0009103-04A MS
Run ID: TJA61E_000925B

Analysis Date: 09/25/00 14:57
Prep Batch ID: 3964

Units: mg/L
Seq No: 141959

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.07	U	1.00	107	75	125			
Barium	0.749	0.526	0.200	112	75	125			
Cadmium	0.0865	U	0.100	86.5	75	125			
Chromium	0.339	U	0.400	84.7	75	125			
Lead	0.851	U	1.00	85.1	75	125			
Selenium	1.14	U	1.00	114	75	125			
Silver	0.105	U	0.100	105	75	125			

QC Type: Matrix Spike Duplicate
Sample ID: 0009103-04A MSD
Run ID: TJA61E_000925B

Analysis Date: 09/25/00 15:01
Prep Batch ID: 3964

Units: mg/L
Seq No: 141961

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.10	U	1.00	110	75	125	1.07	2.2	20
Barium	0.750	0.526	0.200	112	75	125	0.749	0.017	20
Cadmium	0.0885	U	0.100	88.5	75	125	0.0865	2.3	20
Chromium	0.349	U	0.400	87.4	75	125	0.339	3.1	20
Lead	0.864	U	1.00	86.4	75	125	0.851	1.5	20
Selenium	1.23	U	1.00	123	75	125	1.14	7.6	20
Silver	0.110	U	0.100	110	75	125	0.105	5.2	20

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

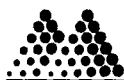
S - Results outside normal recovery limits

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

**Quality Control Summary**

Client: On Site Technologies, Ltd.

Project: Metals & Anion Analysis

Project ID:

Report Number: 0009162-3

Date Reported: 10/16/00

Work Order: 0009162

QC Type: Post Digestion/Distillation Spike

Sample ID: 0009103-04A A

Run ID: TJA61E_000925B

Analysis Date: 09/25/00 15:16

Prep Batch ID: 3964

Units: mg/L

Seq No: 141963

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.05	U	1.00	105	75	125			
Barium	0.736	0.526	0.200	105	75	125			
Cadmium	0.0847	U	0.100	84.7	75	125			
Chromium	0.326	U	0.400	81.5	75	125			
Lead	0.789	U	1.00	78.9	75	125			
Selenium	1.16	U	1.00	116	75	125			
Silver	0.103	U	0.100	103	75	125			

QC Type: Serial Dilution

Sample ID: 0009103-04A L

Run ID: TJA61E_000925B

Analysis Date: 09/25/00 15:21

Prep Batch ID: 3964

Units: mg/L

Seq No: 141965

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	10
Barium	0.482						0.526	8.7	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

**Quality Control Summary**

Client: On Site Technologies, Ltd.

Project: Metals & Anion Analysis

Project ID:

Report Number: 0009162-3

Date Reported: 10/16/00

Work Order: 0009162

SW-846 7470A: Mercury by CVAA, Water

QC Type: Method Blank

Sample ID: PBW-4023

Run ID: FIMS_000928B

Analysis Date: 09/28/00 10:16

Prep Batch ID: 4023

Units: µg/L

Seq No: 142431

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	-0.078	0	0	0	-0.1	0.1			

QC Type: Laboratory Control Sample (Water)

Sample ID: LCSW-4023

Run ID: FIMS_000928B

Analysis Date: 09/28/00 10:18

Prep Batch ID: 4023

Units: µg/L

Seq No: 142432

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.19		5.00	104	80	120			

QC Type: Sample Duplicate

Sample ID: 0009263-01F D

Run ID: FIMS_000928B

Analysis Date: 09/28/00 10:21

Prep Batch ID: 4023

Units: µg/L

Seq No: 142434

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

**Quality Control Summary**

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

Report Number: 0009162-3
Date Reported: 10/16/00
Work Order: 0009162

QC Type: Matrix Spike
Sample ID: 0009263-01F MS
Run ID: FIMS_000928B

Analysis Date: 09/28/00 10:22
Prep Batch ID: 4023

Units: µg/L
Seq No: 142435

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.25	U	5.00	105	80	120			

QC Type: Matrix Spike Duplicate
Sample ID: 0009263-01F MSD
Run ID: FIMS_000928B

Analysis Date: 09/28/00 10:24
Prep Batch ID: 4023

Units: µg/L
Seq No: 142436

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.40	U	5.00	108	80	120	5.25	2.8	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0009263-01F A
Run ID: FIMS_000928B

Analysis Date: 09/28/00 10:25
Prep Batch ID: 4023

Units: µg/L
Seq No: 142437

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.59	U	5.00	112	85	115			

QC Type: Serial Dilution
Sample ID: 0009263-01F L
Run ID: FIMS_000928B

Analysis Date: 09/28/00 10:27
Prep Batch ID: 4023

Units: µg/L
Seq No: 142438

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	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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On Site Technologies, LTD.

612 E. Murray Drive
Farmington, NM 87401
(505) 325-2432

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Subcontractor:

Mountain States Analytical, Inc.
1645 West 2200 South

TEL: (800) 973-6724
FAX: (801) 972-6278

Salt Lake City, UT 84119

Acct #:

14-Sep-00

Sample ID	Matrix	Collection Date	Bottle Type	Requested Tests				
				E300	SW6010B	SW7470		
0009023-01B	Aqueous	8/13/2000 1:15:00 PM	500HDPEHNO3		7	1		
0008023-01C	Aqueous	8/13/2000 1:15:00 PM	250HDPE	2				
0009023-02B	Aqueous	8/13/2000 1:25:00 PM	500HDPEHNO3		7	1		
0009023-02C	Aqueous	8/13/2000 1:25:00 PM	250HDPE	2				

Comments:

Please analyze water samples 9023-01B & 02B for Metals and 9023-01C & 02C for Bromide and Fluoride (EPA Method 300). Use same parameters as per MSAI work order # 0006097.

Relinquished by: <i>David D. Martin</i>	Date/Time	Received by: <i>Janella Davis</i>	Date/Time
Relinquished by:	9/14/00 1600	Received by:	9/15/00 10/15

Mountain States Analytical, Inc.

Sample Receipt Checklist

Client Name On Site Technologies
Carrier: UPS

Work Order No. 0009162
Carrier Number: 1766 E SPS 01 1001 6221

Cooler Information:

Cooler Number/ID: Blue / WH

Condition of Shipping Container: Good Fair Damaged

(If damaged, explain) _____

Cooler Sealed: Yes No Not Applicable

Custody Seals Present: Yes No Not Applicable

Intact Broken

Seal Number: _____

Coolant: Ice Blue Ice None Other: _____

Temperature: 0°C Thermometer ID: 4013 Correction Factor: 0

Packing material Bags of Ice / Bubble wrap / Foam containers

Surface Radioactivity Reading (If required) _____ mR/hr Ludlum Model 3 Serial # _____

Chain-Of-Custody Information:

COC Present: Yes No Other: _____

COC signed (relinquished and received): Yes No Not Applicable

COC agrees with sample labels: Yes No

Notes: _____

Sample Information:

Samples included in cooler: 009023-01B 0009022-02A -04A
-01C 0009025-01A -05A
-02B -02A -06A
-02C -03A 0009026-02B -03B

Custody Seals Present: Yes No Not Applicable Other: _____

Intact Broken Seal Number(s) _____

Sample containers intact: Yes No Notes: _____

Samples in proper containers: Yes No _____

Sufficient sample volume: Yes No _____

All samples received in hold time: Yes No _____

Water - Volatiles zero headspace: Yes No Not Applicable Pre-preserved with HCL: YES NO

Notes: _____

Water - pH acceptable upon receipt: Yes Adjusted (see comments below) Not Applicable

HNO₃ = L2 H₂SO₄ = _____ NaOH = _____ ZnAC / NaOH = _____

Water - pH adjusted: (MSAI Tracking No.)

HNO₃ _____ H₂SO₄ _____ NaOH _____

ZnAC _____ Na₂SO₄ _____ Other _____

Notes: _____

Cooler Contents Inspected & Verified By:

Janelle Smith

Date: 9/15/00 Time: 1050

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

October 30, 2000

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.: 0009026

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 9/14/2000 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

Aromatic Volatiles by GC/PID (SW8021B)
Polynuclear Aromatic Hydrocarbons (SW8270C)

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 "D. Cox", written over a horizontal line.

David Cox

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 30-Oct-00

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery Air Stripper
Lab Order: 0009026

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 30-Oct-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0009026	Client Sample ID:	Travel Blank
Lab ID:	0009026-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	9/14/2000 2:30:00 PM
		COC Record:	10922

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	9/18/2000
Benzene	ND	0.5		µg/L	1	9/18/2000
Toluene	ND	0.5		µg/L	1	9/18/2000
Ethylbenzene	ND	0.5		µg/L	1	9/18/2000
m,p-Xylene	ND	1		µg/L	1	9/18/2000
o-Xylene	ND	0.5		µg/L	1	9/18/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 30-Oct-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0009026	Client Sample ID:	Air Stripper Influent
Lab ID:	0009026-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	9/14/2000 1:40:00 PM
		COC Record:	10922

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	140	10		µg/L	10	9/18/2000
Benzene	1100	5		µg/L	10	9/18/2000
Toluene	290	5		µg/L	10	9/18/2000
Ethylbenzene	530	5		µg/L	10	9/18/2000
m,p-Xylene	1300	10		µg/L	10	9/18/2000
o-Xylene	160	5		µg/L	10	9/18/2000

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
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 30-Oct-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0009026	Client Sample ID:	Air Stripper Effluent
Lab ID:	0009026-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	9/14/2000 1:50:00 PM
		COC Record:	10922

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	9/18/2000
Benzene	ND	0.5		µg/L	1	9/18/2000
Toluene	ND	0.5		µg/L	1	9/18/2000
Ethylbenzene	ND	0.5		µg/L	1	9/18/2000
m,p-Xylene	1.7	1		µg/L	1	9/18/2000
o-Xylene	ND	0.5		µg/L	1	9/18/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 30-Oct-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0009026

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000918	Test Code: SW8021B	Units: µg/L	Analysis Date 9/18/2000	Prep Date:
Client ID:	0009026	Run ID: GC-1_000918A		SeqNo: 31258	
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	.0826	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: 30-Oct-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0009026

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0009019-04AMS		Batch ID: GC-1_000918		Test Code: SW8021B		Units: µg/L		Analysis Date 9/18/2000		Prep Date:	
Client ID: 0009026		Run ID: GC-1_000918A		SeqNo: 31259							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	437	5	400	46.21	97.7%	88	112				
Ethylbenzene	425.2	5	400	19.04	101.6%	86	113				
m,p-Xylene	1386	10	800	604.1	97.7%	85	108				
Methyl tert-Butyl Ether	430.5	10	400	0	107.6%	86	117				
o-Xylene	439.2	5	400	1.64	109.4%	92	110				
Toluene	414.6	5	400	11.6	100.8%	88	116				

Sample ID: 0009019-04AMSD		Batch ID: GC-1_000918		Test Code: SW8021B		Units: µg/L		Analysis Date 9/18/2000		Prep Date:	
Client ID: 0009026		Run ID: GC-1_000918A						SeqNo: 31260			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	433.4	5	400	46.21	96.8%	88	112	437	0.8%	6	
Ethylbenzene	422.3	5	400	19.04	100.8%	86	113	425.2	0.7%	6	
m,p-Xylene	1380	10	800	604.1	97.0%	85	108	1386	0.4%	6	
Methyl tert-Butyl Ether	434.2	10	400	0	108.6%	86	117	430.5	0.9%	7	
o-Xylene	426.5	5	400	1.64	106.2%	92	110	439.2	2.9%	6	
Toluene	410.6	5	400	11.6	99.7%	88	116	414.6	1.0%	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: 30-Oct-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0009026
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID:	LCS WATER	Batch ID:	GC-1_000918	Test Code:	SW8021B	Units:	µg/L	Analysis Date	9/18/2000	Prep Date:
Client ID:	0009026	Run ID:	GC-1_000918A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo:
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit
Benzene	39.98	0.5	40	0	99.9%	96	111			
Ethylbenzene	40.95	0.5	40	0	102.4%	96	111			
m,p-Xylene	80.24	1	80	0	100.3%	92	105			
Methyl tert-Butyl Ether	42.47	1	40	0	106.2%	93	113			
o-Xylene	40.15	0.5	40	0	100.4%	97	110			
Toluene	39.83	0.5	40	0.0826	99.4%	97	109			

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: 0009026
 Project: Thriftway Refinery Air Stripper

Date: 30-Oct-00

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0007		Batch ID: GC-1_000918		Test Code: SW8021B		Units: µg/L		Analysis Date 9/18/2000		Prep Date:	
Client ID: 0009026		Run ID: GC-1_000918A		SeqNo: 31254							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.06	0.5	20	0	105.3%	85	115				
Ethylbenzene	21.53	0.5	20	0	107.7%	85	115				
m,p-Xylene	42.36	1	40	0	105.9%	85	115				
Methyl tert-Butyl Ether	22.51	1	20	0	112.5%	85	115				
o-Xylene	21.37	0.5	20	0	106.9%	85	115				
Toluene	20.98	0.5	20	0	104.9%	85	115				
1,4-Difluorobenzene	86.05	0	100	0	86.0%	79	101				
4-Bromochlorobenzene	91.15	0	100	0	91.2%	78	99				
Fluorobenzene	84.39	0	100	0	84.4%	76	103				

Sample ID: CCV2 BTEX_0007		Batch ID: GC-1_000918		Test Code: SW8021B		Units: µg/L		Analysis Date 9/18/2000		Prep Date:	
Client ID: 0009026		Run ID: GC-1_000918A		SeqNo: 31255							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.19	0.5	20	0	100.9%	85	115				
Ethylbenzene	20.48	0.5	20	0	102.4%	85	115				
m,p-Xylene	40.61	1	40	0	101.5%	85	115				
Methyl tert-Butyl Ether	22.19	1	20	0	111.0%	85	115				
o-Xylene	20.32	0.5	20	0	101.6%	85	115				
Toluene	20.12	0.5	20	0	100.6%	85	115				
1,4-Difluorobenzene	85.97	0	100	0	86.0%	79	101				
4-Bromochlorobenzene	89.68	0	100	0	89.7%	78	99				
Fluorobenzene	84.58	0	100	0	84.6%	76	103				

Qualifiers:

N/D - 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: 0009026
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0007		Batch ID: GC-1_000918	Test Code: SW8021B	Units: µg/L	Analysis Date 9/18/2000		Prep Date:				
Client ID:		0009026	Run ID:	GC-1_000918A	SeqNo: 31256						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.84	0.5	40	0	97.1%	85	115				
Ethylbenzene	39.44	0.5	40	0	98.6%	85	115				
m,p-Xylene	77.84	1	80	0	97.3%	85	115				
Methyl tert-Butyl Ether	42.93	1	40	0	107.3%	85	115				
o-Xylene	38.89	0.5	40	0	97.2%	85	115				
Toluene	38.87	0.5	40	0	97.2%	85	115				
1,4-Difluorobenzene	86.1	0	100	0	86.1%	79	101				
4-Bromochlorobenzene	90	0	100	0	90.0%	78	99				
Fluorobenzene	84.12	0	100	0	84.1%	76	103				

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: 0009026
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

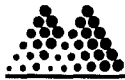
QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0009016-03A	83.8	88	86.2
0009017-01A	85.9	88.3	84.3
0009019-01A	86.3	94.2	84.8
0009019-03A	85.8	90.1	85.6
0009019-04A	85.6	89.6	84.4
0009019-04AMS	84.6	91.1	83
0009019-04AMSD	85.6	91.2	84.4
0009021-01A	86.3	91.4	84.8
0009021-02A	87	89.4	84.8
0009021-03A	86.3	91	85.3
0009021-04A	87.1	89.8	85.1
0009021-05A	86.4	89.7	85.3
0009021-06A	86.3	90.8	84.2
0009021-07A	85.8	89.2	84.1
0009024-01A	85.7	89	84.4
0009024-03A	85	89.2	83
0009026-01A	86.4	91.9	84.8
0009026-02A	85.4	90.2	83.2
0009026-03A	87.5	88.3	85.2
CCV1 BTEX_00070	86	91.2	84.4
CCV2 BTEX_00070	86	89.7	84.6
CCV3 BTEX_00070	86.1	90	84.1
LCS WATER	86.4	91.8	83.6
MBI	86.8	90.8	84.7

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	79-101
4BCBZ	= 4-Bromochlorobenzene	78-99
FLBZ	= Fluorobenzene	76-103

* Surrogate recovery outside acceptance limits



Mountain States Analytical, Inc.

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

RECEIVED OCT 2 2000
Analytical Report

September 28, 2000

Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-1556 Fax: (505) 325-6256

Project: Semi-Volatile Analysis

Work Order: 0009164

Dear Mr. David Cox,

Thank you for using Mountain States Analytical, Inc. (MSAI) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0009164-1 and contains 12 pages of information for the 2 samples submitted to MSAI on Friday, September 15, 2000. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached" are included by reference as attachments following page 12. For regulatory compliance reporting, individual pages or portions of this report may not be separated.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msailabs.com.

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

RECEIVED OCT 02 2000
Analytical Report

Sample Summary

Client: On Site Technologies, Ltd.

Project: Semi-Volatile Analysis

Project ID:

Report Number: 0009164-1

Date Reported: 09/28/00

Work Order: 0009164

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0009164-01A	009026-02B		Water	09/14/00
0009164-02A	0009026-03B		Water	09/14/00



Holding Time Summary

Client: On Site Technologies, Ltd.
Project: Semi-Volatile Analysis
Project ID:

Report Number: 0009164-1
Date Reported: 09/28/00
Work Order: 0009164

Sample ID	Client Sample ID	Date Collected						
0009164-01A	009026-02B	09/14/00 13:40						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				09/19/00 18:57	7	09/26/00 23:57		40
Semi-Volatiles				09/19/00 18:57	7	09/26/00 14:02		40
0009164-02A	0009026-03B	09/14/00 13:50						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				09/19/00 18:57	7	09/26/00 14:41		40

* - The recommended holding time was exceeded

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

Report Number: 0009164-1
Date Reported: 09/28/00
Work Order: 0009164
Lab Sample ID: 0009164-01A
Client Sample ID: 009026-02B
Date Collected: 09/14/00
Date Received: 09/15/00 10:15
Matrix: Water
COC ID:

Project: Semi-Volatile Analysis

Project ID:

Purchase Order: Thriftway Refinery Air Stripper Influent

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.8	9.52	µg/L	1	09/26/00 14:02	KPF
Acenaphthylene	U	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
Anthracene	U	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
Benz(a)anthracene	U	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
Benzo(a)pyrene	U	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
Benzo(b)fluoranthene	U	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
Benzo(ghi)perylene	U	4.8	9.52	µg/L	1	09/26/00 14:02	KPF
Benzo(k)fluoranthene	U	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
Chrysene	U	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
Dibenz(a,h)acridine	U	1.9	9.52	µg/L	1	09/26/00 14:02	KPF
Dibenz(a,h)anthracene	U	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
Fluoranthene	U	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
Fluorene	25.8	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
Indene	U	4.8	9.52	µg/L	1	09/26/00 14:02	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
2-Methylnaphthalene	285	48	95.2	µg/L	10	09/26/00 23:57	KPF
Naphthalene	96.1	4.8	9.52	µg/L	1	09/26/00 14:02	KPF
Phenanthrene	39.2	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
Pyrene	U	5.7	9.52	µg/L	1	09/26/00 14:02	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	76.2	1-141.25		% Recovery	1	09/26/00 14:02	KPF
2,4,6-Tribromophenol	80.7	1-141.25		% Recovery	10	09/26/00 23:57	KPF
2-Fluorophenol	41.9	1-81.1		% Recovery	1	09/26/00 14:02	KPF
2-Fluorophenol	40.2	1-81.1		% Recovery	10	09/26/00 23:57	KPF
2-Fluorobiphenyl	52.9	30.84-108.77		% Recovery	1	09/26/00 14:02	KPF
2-Fluorobiphenyl	57.4	30.84-108.77		% Recovery	10	09/26/00 23:57	KPF
Nitrobenzene-d5	74.7	32.75-105.37		% Recovery	10	09/26/00 23:57	KPF
Nitrobenzene-d5	84.6	32.75-105.37		% Recovery	1	09/26/00 14:02	KPF
Phenol-d6	29.5	1-71.88		% Recovery	1	09/26/00 14:02	KPF
Phenol-d6	30.2	1-71.88		% Recovery	10	09/26/00 23:57	KPF
Terphenyl-d14	49.9	25.98-134.37		% Recovery	1	09/26/00 14:02	KPF
Terphenyl-d14	54.3	25.98-134.37		% Recovery	10	09/26/00 23:57	KPF

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

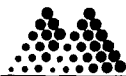
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical Report

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

Report Number: 0009164-1
Date Reported: 09/28/00
Work Order: 0009164
Lab Sample ID: 0009164-01A
Client Sample ID: 009026-02B
Date Collected: 09/14/00
Date Received: 09/15/00 10:15
Matrix: Water
COC ID:

Project: Semi-Volatile Analysis

Project ID:

Purchase Order: Thriftway Refinery Air Stripper Influent

45 0130100

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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Note for 09/26/00 23:57 analysis: Sample diluted due to high levels of target compounds.

SW-846 3510C: Separatory Funnel Liq/Liq Ext., SV, Extract

Prep Batch ID: 3991

0.95 09/19/00 18:57 GAV

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

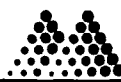
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical Report

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

Report Number: 0009164-1
Date Reported: 09/28/00
Work Order: 0009164
Lab Sample ID: 0009164-02A
Client Sample ID: 0009026-03B
Date Collected: 09/14/00
Date Received: 09/15/00 10:15
Matrix: Water
COC ID:

Project: Semi-Volatile Analysis
Project ID: 10/30/00
Purchase Order: Thriftway Refinery Air Stripper Effluent

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.8	9.52	µg/L	1	09/26/00 14:41	KPF
Acenaphthylene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
Anthracene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
Benz(a)anthracene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
Benzo(a)pyrene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
Benzo(b)fluoranthene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
Benzo(ghi)perylene	U	4.8	9.52	µg/L	1	09/26/00 14:41	KPF
Benzo(k)fluoranthene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
Chrysene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
Dibenz(a,h)acridine	U	1.9	9.52	µg/L	1	09/26/00 14:41	KPF
Dibenz(a,h)anthracene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
Fluoranthene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
Fluorene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
Indene	U	4.8	9.52	µg/L	1	09/26/00 14:41	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
2-Methylnaphthalene	U	4.8	9.52	µg/L	1	09/26/00 14:41	KPF
Naphthalene	U	4.8	9.52	µg/L	1	09/26/00 14:41	KPF
Phenanthrene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
Pyrene	U	5.7	9.52	µg/L	1	09/26/00 14:41	KPF
Surrogates		Recovery Range					
2,4,6-Tribromophenol	86.4	1-141.25		% Recovery	1	09/26/00 14:41	KPF
2-Fluorophenol	49.3	1-81.1		% Recovery	1	09/26/00 14:41	KPF
2-Fluorobiphenyl	59.0	30.84-108.77		% Recovery	1	09/26/00 14:41	KPF
Nitrobenzene-d5	76.9	32.75-105.37		% Recovery	1	09/26/00 14:41	KPF
Phenol-d6	33.3	1-71.88		% Recovery	1	09/26/00 14:41	KPF
Terphenyl-d14	71.7	25.98-134.37		% Recovery	1	09/26/00 14:41	KPF

SW-846 3510C: Separatory Funnel Liq/Liq Ext., SV, Extract

Prep Batch ID: 3991 0.95 09/19/00 18:57 GAV

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

* - Result is greater than the associated action level



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Semi-Volatile Analysis
Project ID:

Report Number: 0009164-1
Date Reported: 09/28/00
Work Order: 0009164

SW-846 8270C: Semi-Volatiles, Extract

QC Type: Matrix Spike
Sample ID: 0009076-01BMS
Run ID: HP-5_000925B

Analysis Date: 09/26/00 02:39
Prep Batch ID: 3991

Units: µg/L
Seq No: 141249

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	317	U	400	79.2	53	109			
4-Chloro-3-methylphenol	318	U	400	79.5	50	117			
2-Chlorophenol	299	U	400	74.8	43	100			
1,4-Dichlorobenzene	218	U	400	54.4	28	95			
2,4-Dinitrotoluene	326	U	400	81.5	59	120			
N-Nitrosodi-N-propylamine	301	U	400	75.3	46	106			
4-Nitrophenol	188	U	400	46.9	14	59			
Pentachlorophenol	293	U	400	73.3	46	130			
Phenol	227S(8a)	U	400	56.8	15	56			
Pyrene	352	U	400	87.9	55	116			
1,2,4-Trichlorobenzene	242	U	400	60.6	34	99			
Surrogates									
2,4,6-Tribromophenol	617	0	800	77.1	1	141.25			
2-Fluorophenol	524	0	800	65.5	1	81.1			
2-Fluorobiphenyl	285	0	400	71.2	30.84	108.77			
Nitrobenzene-d5	336	0	400	83.9	32.75	105.37			
Phenol-d6	450	0	800	56.3	1	71.88			
Terphenyl-d14	246	0	400	61.5	25.98	134.37			

8a: See sample comments

Sample Comments: Some spike recoveries slightly higher than QC limits. LCS recoveries acceptable.

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

**Quality Control Summary**

Client: On Site Technologies, Ltd.

Project: Semi-Volatile Analysis

Project ID:

Report Number: 0009164-1

Date Reported: 09/28/00

Work Order: 0009164

QC Type: Matrix Spike Duplicate

Sample ID: 0009076-01BMDS

Run ID: HP-5_000925B

Analysis Date: 09/26/00 03:13

Prep Batch ID: 3991

Units: µg/L

Seq No: 141250

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	341	U	400	85.1	53	109	317	7.2	28
4-Chloro-3-methylphenol	332	U	400	83.0	50	117	318	4.3	37
2-Chlorophenol	306	U	400	76.4	43	100	299	2.1	29
1,4-Dichlorobenzene	224	U	400	55.9	28	95	218	2.6	32
2,4-Dinitrotoluene	371	U	400	92.8	59	120	326	13	22
N-Nitrosodi-N-propylamine	303	U	400	75.7	46	106	301	0.44	55
4-Nitrophenol	239 S(8a)	U	400	59.7	14	59	188	24	47
Pentachlorophenol	288	U	400	72.1	46	130	293	1.6	49
Phenol	249 S(8a)	U	400	62.3	15	56	227	9.2	23
Pyrene	370	U	400	92.6	55	116	352	5.1	25
1,2,4-Trichlorobenzene	252	U	400	63.0	34	99	242	3.9	28
Surrogates									
2,4,6-Tribromophenol	678	0	800	84.7	1	141.25			
2-Fluorophenol	533	0	800	66.6	1	81.1			
2-Fluorobiphenyl	292	0	400	73.1	30.84	108.77			
Nitrobenzene-d5	342	0	400	85.5	32.75	105.37			
Phenol-d6	473	0	800	59.2	1	71.88			
Terphenyl-d14	274	0	400	68.4	25.98	134.37			

8a: See sample comments

Sample Comments: Some spike recoveries slightly higher than QC limits. LCS recoveries acceptable.

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

**Quality Control Summary**

Client: On Site Technologies, Ltd.

Project: Semi-Volatile Analysis

Project ID:

Report Number: 0009164-1

Date Reported: 09/28/00

Work Order: 0009164

QC Type: Method Blank

Sample ID: MB-3991

Run ID: HP-5_000926A

Analysis Date: 09/26/00 06:58

Prep Batch ID: 3991

Units: µg/L

Seq No: 141430

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	U	0	0	0		4			
Acenaphthylene	U	0	0	0		4			
Anthracene	U	0	0	0		2			
Benz(a)anthracene	U	0	0	0		2			
Benzo(a)pyrene	U	0	0	0		2			
Benzo(b)fluoranthene	U	0	0	0		3			
Benzo(ghi)perylene	U	0	0	0		2			
Benzo(k)fluoranthene	U	0	0	0		3			
Chrysene	U	0	0	0		2			
Dibenz(a,h)acridine	U	0	0	0		2			
Dibenz(a,h)anthracene	U	0	0	0		2			
Fluoranthene	U	0	0	0		2			
Fluorene	U	0	0	0		3			
Indene	U	0	0	0		5			
Indeno(1,2,3-cd)pyrene	U	0	0	0		2			
2-Methylnaphthalene	U	0	0	0		6			
Naphthalene	U	0	0	0		5			
Phenanthrene	U	0	0	0		2			
Pyrene	U	0	0	0		2			
Surrogates									
2,4,6-Tribromophenol	141	0	200	70.6	1	141.25			
2-Fluorophenol	84.3	0	200	42.2	1	81.1			
2-Fluorobiphenyl	42.3	0	100	42.3	30.84	108.77			
Nitrobenzene-d5	64.7	0	100	64.7	32.75	105.37			
Phenol-d6	56.3	0	200	28.1	1	71.88			
Terphenyl-d14	79.1	0	100	79.1	25.98	134.37			

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Semi-Volatile Analysis
Project ID:

Report Number: 0009164-1
Date Reported: 09/28/00
Work Order: 0009164

QC Type: Laboratory Control Spike
Sample ID: LCS-3991
Run ID: HP-5_000926A

Analysis Date: 09/26/00 07:34
Prep Batch ID: 3991

Units: µg/L
Seq No: 141431

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	61.4		100	61.4	53	109			
4-Chloro-3-methylphenol	76.4		100	76.4	50	117			
2-Chlorophenol	57.6		100	57.6	43	100			
1,4-Dichlorobenzene	33.6		100	33.6	28	95			
2,4-Dinitrotoluene	89.7		100	89.7	59	120			
N-Nitrosodi-N-propylamine	68.2		100	68.2	46	106			
4-Nitrophenol	27.5		100	27.5	14	59			
Pentachlorophenol	78.0		100	78.0	46	130			
Phenol	30.3		100	30.3	15	56			
Pyrene	87.7		100	87.7	55	116			
1,2,4-Trichlorobenzene	37.7		100	37.7	34	99			
Surrogates									
2,4,6-Tribromophenol	170		200	84.9	1	141.25			
2-Fluorophenol	73.9		200	37.0	1	81.1			
2-Fluorobiphenyl	59.1		100	59.1	30.84	108.77			
Nitrobenzene-d5	69.5		100	69.5	32.75	105.37			
Phenol-d6	53.3		200	26.7	1	71.88			
Terphenyl-d14	78.7		100	78.7	25.98	134.37			

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

10



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Semi-Volatile Analysis
Project ID:

Report Number: 0009164-1
Date Reported: 09/28/00
Work Order: 0009164

QC Type: Matrix Spike
Sample ID: 0009103-02BMS
Run ID: HP-5_000926A

Analysis Date: 09/26/00 12:52
Prep Batch ID: 3991

Units: µg/L
Seq No: 141440

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	82.7	U	104	79.4	53	109			
4-Chloro-3-methylphenol	84.6	U	104	81.2	50	117			
2-Chlorophenol	73.9	U	104	71.0	43	100			
1,4-Dichlorobenzene	47.9	U	104	46.0	28	95			
2,4-Dinitrotoluene	92.6	U	104	88.9	59	120			
N-Nitrosodi-N-propylamine	76.2	U	104	73.2	46	106			
4-Nitrophenol	46.4	U	104	44.6	14	59			
Pentachlorophenol	0 S(2m)	U	104	0	46	130			
Phenol	67.5 S(2m)	U	104	64.8	15	56			
Pyrene	90.5	U	104	86.9	55	116			
1,2,4-Trichlorobenzene	57.4	U	104	55.1	34	99			
Surrogates									
2,4,6-Tribromophenol	140	0	208	67.4	1	141.25			
2-Fluorophenol	119	0	208	56.9	1	81.1			
2-Fluorobiphenyl	70.0	0	104	67.2	30.84	108.77			
Nitrobenzene-d5	83.1	0	104	79.8	32.75	105.37			
Phenol-d6	118	0	208	56.7	1	71.88			
Terphenyl-d14	68.4	0	104	65.6	25.98	134.37			

2m: MS/MSD are outside acceptable limits - LCS was within limits - matrix interference is suspected

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

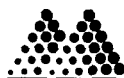
S - Results outside normal recovery limits

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

**Quality Control Summary**

Client: On Site Technologies, Ltd.

Project: Semi-Volatile Analysis

Project ID:

Report Number: 0009164-1

Date Reported: 09/28/00

Work Order: 0009164

QC Type: Matrix Spike Duplicate

Sample ID: 0009103-02BMSD

Run ID: HP-5_000926A

Analysis Date: 09/26/00 13:27

Prep Batch ID: 3991

Units: µg/L

Seq No: 141441

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	35.5 SR(8a)	U	104	34.1	53	109	82.7	80	28
4-Chloro-3-methylphenol	31.1 SR(8a)	U	104	29.9	50	117	84.6	92	37
2-Chlorophenol	47.4 R(8a)	U	104	45.5	43	100	73.9	44	29
1,4-Dichlorobenzene	19.3 SR(8a)	U	104	18.5	28	95	47.9	85	32
2,4-Dinitrotoluene	32.2 SR(8a)	U	104	31.0	59	120	92.6	97	22
N-Nitrosodi-N-propylamine	27.3 SR(8a)	U	104	26.2	46	106	76.2	94	55
4-Nitrophenol	47.1	U	104	45.2	14	59	46.4	1.4	47
Pentachlorophenol	62.2	U	104	59.7	46	130	U	NC	49
Phenol	39.7 R(8a)	U	104	38.1	15	56	67.5	52	23
Pyrene	41.7 SR(8a)	U	104	40.0	55	116	90.5	74	25
1,2,4-Trichlorobenzene	25.2 SR(8a)	U	104	24.2	34	99	57.4	78	28
Surrogates									
2,4,6-Tribromophenol	100	0	208	48.2	1	141.25			
2-Fluorophenol	92.6	0	208	44.5	1	81.1			
2-Fluorobiphenyl	29.4 S(8a)	0	104	28.3	30.84	108.77			
Nitrobenzene-d5	29.5 S(8a)	0	104	28.3	32.75	105.37			
Phenol-d6	72.4	0	208	34.8	1	71.88			
Terphenyl-d14	35.4	0	104	34.0	25.98	134.37			

8a: See sample comments

Sample Comments: Some of this sample was spilled during the extraction process. The LCS was acceptable.

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

1061

On Site Technologies, L.TD.

612 E. Murray Drive
Farmington, NM 87401
(505) 325-2432

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Subcontractor:

Mountain States Analytical, Inc.
1645 West 2200 South

TEL: (800) 973-6724
FAX: (801) 972-6278

Salt Lake City, UT 84119

Acct #:

14-Sep-00

Sample ID	Matrix	Collection Date	Bottle Type	Requested Tests							
				SW6270C							
0009028-02B	Aqueous	9/14/2000 1:40:00 PM	1LAMGU	1							
0009028-03B	Aqueous	9/14/2000 1:50:00 PM	1LAMGU	1							

Comments:

Please analyze two (2) water samples for PAH (EPA Method 8270). Use use parameters as per MSAL work order # 0006097.
PM

Date/Time

Relinquished by: David Martin 9/14/00 1600

Received by: Jonella Smith
Received by:

Date/Time

9/15/00 1015

Mountain States Analytical, Inc.

Sample Receipt Checklist

Client Name On Site Technologies
Carrier: UPS

Work Order No. 0009164
Carrier Number: 1766 E SPS 01 1001 6221

Cooler Information:

Cooler Number/ID: Blue / WH

Condition of Shipping Container: Good Fair Damaged

(If damaged, explain) _____

Cooler Sealed: Yes No Not Applicable

Custody Seals Present: Yes No Not Applicable

Intact Broken

Seal Number: _____

Coolant: Ice Blue Ice None Other: _____

Temperature: 0°C Thermometer ID: 4013 Correction Factor: 0

Packing material Bags of Ice / Bubble wrap / Foam containers

Surface Radioactivity Reading (if required) _____ mR/hr Ludlum Model 3 Serial # _____

Chain-Of-Custody Information:

COC Present: Yes No Other: _____

COC signed (relinquished and received): Yes No Not Applicable

COC agrees with sample labels: Yes No

Notes: _____

Sample Information:

Samples included in cooler: 009023-01B 0009022-02A -04A
-01C 0009025-01A -05A
-02B -02A -06A
-02C -03A 0009026-02B -03B

Custody Seals Present: Yes No Not Applicable Other _____
Intact Broken Seal Number(s) _____

Sample containers intact: Yes No Notes: _____

Samples in proper containers: Yes No _____

Sufficient sample volume: Yes No _____

All samples received in hold time: Yes No _____

Water - Volatiles zero headspace: Yes No Not Applicable Pre-preserved with HCL: YES NO

Notes: _____

Water - pH acceptable upon receipt: Yes Adjusted (see comments below) Not Applicable
HNO₃ = 2.2 H₂SO₄ = _____ NaOH = _____ ZnAC / NaOH = _____

Water - pH adjusted: (MSAI Tracking No.)

HNO₃ _____ H₂SO₄ _____ NaOH _____
ZnAC _____ Na₂SO₃ _____ Other _____

Notes: _____

Cooler Contents Inspected & Verified By:

Janelle Smith

Date: 9/15/00 Time: 1050

CHAIN OF CUSTODY RECORD

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

[illegible]

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

November 28, 2000

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.: 0011012

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 11/8/2000 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

P.O. BOX 2606 • FARMINGTON, NM 87499
EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 28-Nov-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0011012	Client Sample ID:	Travel Blank
Lab ID:	0011012-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	11/7/2000
		COC Record:	11001

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	11/17/2000
Benzene	ND	0.5		µg/L	1	11/17/2000
Toluene	ND	0.5		µg/L	1	11/17/2000
Ethylbenzene	ND	0.5		µg/L	1	11/17/2000
m,p-Xylene	ND	1		µg/L	1	11/17/2000
o-Xylene	ND	0.5		µg/L	1	11/17/2000

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 3

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EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 28-Nov-00

Client:	BioTech Remediation, Inc.	Client Sample Info:	Refinery Air Stripper
Work Order:	0011012	Client Sample ID:	Stripper Influent
Lab ID:	0011012-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery Air Stripper	Collection Date:	11/8/2000 10:25:00 AM
		COC Record:	11001

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Methyl tert-Butyl Ether	180	100		µg/L	100	11/17/2000
Benzene	840	50		µg/L	100	11/17/2000
Toluene	170	50		µg/L	100	11/17/2000
Ethylbenzene	520	50		µg/L	100	11/17/2000
m,p-Xylene	1600	100		µg/L	100	11/17/2000
o-Xylene	190	50		µg/L	100	11/17/2000

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

2 of 3

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 28-Nov-00

CLIENT: BioTech Remediation, Inc.
 Work Order: 0011012
 Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0011012-02AMS		Batch ID: GC-1_001117		Test Code: SW8021B		Units: µg/L		Analysis Date 11/17/2000		Prep Date:		
Client ID: Stripper Influent		0011012		Run ID: GC-1_001117A				SeqNo: 32930				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		4722	50	4000	841.1	97.0%	88	112				
Ethylbenzene		4308	50	4000	515.4	94.8%	86	113				
m,p-Xylene		9158	100	8000	1605	94.4%	85	108				
Methyl tert-Butyl Ether		4208	100	4000	182	100.7%	86	117				
o-Xylene		4060	50	4000	190.1	96.7%	92	110				
Toluene		4066	50	4000	171.8	97.4%	88	116				

Sample ID: 0011012-02AMSD	Batch ID: GC-1_001117	Test Code: SW8021B	Units: µg/L	Analysis Date 11/17/2000		Prep Date:					
Client ID: Stripper Influent	0011012	Run ID: GC-1_001117A		SeqNo: 32931							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	4677	50	4000	841.1	95.9%	88	112	4722	1.0%	6	
Ethylbenzene	4288	50	4000	515.4	94.3%	86	113	4308	0.4%	6	
m,p-Xylene	9124	100	8000	1605	94.0%	85	108	9158	0.4%	6	
Methyl tert-Butyl Ether	4185	100	4000	182	100.1%	86	117	4208	0.5%	7	
o-Xylene	4059	50	4000	190.1	96.7%	92	110	4060	0.0%	6	
Toluene	4040	50	4000	171.8	96.7%	88	116	4066	0.7%	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: 28-Nov-00

CLIENT: BioTech Remediation, Inc.

Work Order: 0011012

Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_001117	Test Code: SW8021B	Units: µg/L	Analysis Date 11/17/2000				Prep Date:					
Client ID:	0011012	Run ID:	GC-1_001117A <th>PQL</th> <th>SPK value</th> <th>SPK Ref Val</th> <th>%REC</th> <th>LowLimit</th> <th>HighLimit</th> <th>RPD Ref Val</th> <th>%RPD</th> <th>RPDLimit</th> <th>Qual</th>	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	39.83			0.5	40	0	99.6%	96	111				
Ethylbenzene	39.27			0.5	40	0	98.2%	96	111				
m,p-Xylene	78.43			1	80	0	98.0%	92	105				
Methyl tert-Butyl Ether	40.09			1	40	0	100.2%	93	113				
o-Xylene	39.69			0.5	40	0	99.2%	97	110				
Toluene	39.88			0.5	40	0	99.7%	97	109				

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: 28-Nov-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0011012
Project: Thriftway Refinery Air Stripper

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0011	Batch ID: GC-1_001117	Test Code: SW8021B	Units: µg/L	Analysis Date 11/17/2000				Prep Date:					
Client ID:	0011012	Run ID:	GC-1_001117A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	19.96			0.5	20	0	99.8%	85	115				
Ethylbenzene	19.95			0.5	20	0	99.8%	85	115				
m,p-Xylene	39.9			1	40	0	99.8%	85	115				
Methyl tert-Butyl Ether	19.82			1	20	0	99.1%	85	115				
o-Xylene	20.18			0.5	20	0	100.9%	85	115				
Toluene	19.98			0.5	20	0	99.9%	85	115				
1,4-Difluorobenzene	75.97			0	80	0	95.0%	70	130				
4-Bromochlorobenzene	80.37			0	80	0	100.5%	70	130				
Fluorobenzene	76.87			0	80	0	96.1%	70	130				

Sample ID: CCV2 BTEX_0011	Batch ID: GC-1_001117	Test Code: SW8021B	Units: µg/L	Analysis Date 11/17/2000				Prep Date:					
Client ID:	0011012	Run ID:	GC-1_001117A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	19.75			0.5	20	0	98.8%	85	115				
Ethylbenzene	19.67			0.5	20	0	98.4%	85	115				
m,p-Xylene	39.34			1	40	0	98.3%	85	115				
Methyl tert-Butyl Ether	20.52			1	20	0	102.6%	85	115				
o-Xylene	20.02			0.5	20	0	100.1%	85	115				
Toluene	19.79			0.5	20	0	99.0%	85	115				
1,4-Difluorobenzene	75.29			0	80	0	94.1%	70	130				
4-Bromochlorobenzene	81			0	80	0	101.3%	70	130				
Fluorobenzene	76.95			0	80	0	96.2%	70	130				

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: 0011012
Project: Thriftway Refinery Air Stripper
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0011010-02A	92.4	100	96.1
0011012-01A	95.4	100	96.8
0011012-02A	93.6	101	96.7
0011012-02AMS	93.2	101	95
0011012-02AMSD	93.8	103	94.7
0011012-03A	95.2	98.8	97
0011036-01A	94.9	100	97
CCV1 BTEX_00110	95	100	96.1
CCV2 BTEX_00110	94.1	101	96.2
LCS WATER	94.1	101	95.1
MB1	94.5	98.8	97.8

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* 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

Purchase Order No: 5176 812

Project No.

SEND INVOICE TO		Name
		Company
		Address
		City, State

Name	Sam
Company	
Address	
City, State, Zip	

Dept.

PROJECT LOCATION: A-1A STA. 31.00 PM
Thriftway Refinery
626 Rd 3500
Blountfield, AL

SAMPLER'S SIGNATURE:

John S. Galt

SAMPLE IDENTIFICATION

SAMPLE

DATE	TIME	MATRIX	PRES.
------	------	--------	-------

Test Bank

ST. Louis 7 1/2 (h)

[illegible]

2/11	2301	2/11
2/11	2301	2/11
2/11	2301	2/11

Relinquished by:

Ken Smith

[illegible]

Relinquished by:

Date/Time

Belinquished by:

Date/Time

Method of Shipment:

Rush	24-48 Hours	10 Working Days
------	-------------	-----------------

Special Instructions / Remarks: Dist cooler temp 0.6°C S/N: 3151

Authorized by:

52

Date 11-9-00

(Client Signature Must Accompany Request)

ANALYSIS REQUESTED

Number of Containers

LABID

0011012 - 01A

629

1000

Received by Will Martin

Date/Time 1/1/00 11:40

Received by:

Date/Time

Received by:

Date/Time

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

January 25, 2001

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

RE: Thriftway Refinery

Order No.: 0012011

Dear Terry Griffin,

On Site Technologies, LTD. received 6 samples on 12/7/2000 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)
- Hardness, Total (M2340 B)
- 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 (CALC)
- Total Dissolved Solids (E160.1)

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

January 25, 2001

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

RE: Thriftway Refinery

Order No.: 0012011

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

P.O. BOX 2606 • FARMINGTON, NM 87499
EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
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LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 25-Jan-01

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery
Lab Order: 0012011

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

Cation-Anion Balance 0012011-02C Thriftway Refinery; MW-5
Total Cation-Anion = 109.9 meq/L
Difference Cation-Anion = 0.68 meq/L
% Difference = 0.6 %

Cation-Anion Balance 0012011-03C Thriftway Refinery; MW-4
Total Cation-Anion = 82.47 meq/L
Difference Cation-Anion = 3.17 meq/L
% Difference = 3.8 %

Cation-Anion Balance 0012011-04C Thriftway Refinery; MW-6
Total Cation-Anion = 85.09 meq/L
Difference Cation-Anion = 0.09 meq/L
% Difference = 0.1 %

Cation-Anion Balance 0012011-05C Thriftway Refinery; MW-18
Total Cation-Anion = 51.27 meq/L
Difference Cation-Anion = 1.47 meq/L
% Difference = 2.9 %

Cation-Anion Balance 0012011-06C Thriftway Refinery; MW-19
Total Cation-Anion = 162.88 meq/L
Difference Cation-Anion = 2.14 meq/L
% Difference = 1.3 %

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery
Lab Order: 0012011

CASE NARRATIVE

Analytical Comments for METHOD BTEX_W 12/12/2000, LCS WATER: Two parameters exceeded historical limits; Benzene %R=94.9 (Limit 96%-111%) and Toluene %R=96.6% (Limit 97%-109%). Determined that working standard utilized for LCS WATER was in error by preparing new working standard and confirming recoveries with additional Laboratory Control Sample, LCS2 WATER. Initial LCS WATER is reported in quality control summary with appropriate qualifier for Benzene and Toluene, S - Spike recovery outside accepted recovery limit.

OFF: (505) 325-5667
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LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 25-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012011	Client Sample ID:	Travel Blank
Lab ID:	0012011-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	12/6/2000
		COC Record:	11056

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	12/13/2000
Benzene	ND	0.5		µg/L	1	12/13/2000
Toluene	ND	0.5		µg/L	1	12/13/2000
Ethylbenzene	ND	0.5		µg/L	1	12/13/2000
m,p-Xylene	ND	1		µg/L	1	12/13/2000
o-Xylene	ND	0.5		µg/L	1	12/13/2000

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

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 25-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012011	Client Sample ID:	MW-5
Lab ID:	0012011-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	12/6/2000 12:20:00 PM
		COC Record:	11056

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	44	1		µg/L	1	12/13/2000
Benzene	8.4	0.5		µg/L	1	12/13/2000
Toluene	ND	0.5		µg/L	1	12/13/2000
Ethylbenzene	ND	0.5		µg/L	1	12/13/2000
m,p-Xylene	ND	1		µg/L	1	12/13/2000
o-Xylene	ND	0.5		µg/L	1	12/13/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	40	12		mg/L	50	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	5.6	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	14	2.5		mg/L	10	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1180	125		mg/L	500	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO3)	820	5		mg/L CaCO3	1	12/12/2000
Alkalinity, Carbonate (As CaCO3)	ND	5		mg/L CaCO3	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO3	1	12/12/2000
Alkalinity, Total (As CaCO3)	820	5		mg/L CaCO3	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	200	1		mg/L	1	12/18/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	3940	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO3)	157	1		mg/L	1	12/20/2000
PH						
		E150.1				Analyst: HR
pH	8.02	2		pH units	1	12/7/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	1730	5		mg/L	1	12/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	3680	40		mg/L	1	12/8/2000

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 2

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LAB: (505) 325-1556
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ANALYTICAL REPORT

Date: 25-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012011	Client Sample ID:	MW-5
Lab ID:	0012011-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	12/6/2000 12:20:00 PM
		COC Record:	11056

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	3670	40		mg/L	1	12/20/2000

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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ANALYTICAL REPORT

Date: 25-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012011	Client Sample ID:	MW-4
Lab ID:	0012011-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	12/6/2000 1:12:00 PM
		COC Record:	11056

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	36	1		µg/L	1	12/13/2000
Benzene	9.3	0.5		µg/L	1	12/13/2000
Toluene	ND	0.5		µg/L	1	12/13/2000
Ethylbenzene	ND	0.5		µg/L	1	12/13/2000
m,p-Xylene	ND	1		µg/L	1	12/13/2000
o-Xylene	ND	0.5		µg/L	1	12/13/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	180	12		mg/L	50	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	6.5	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	23	5		mg/L	20	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	660	50		mg/L	200	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	880	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	880	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	150	1		mg/L	1	12/18/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	2700	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	539	1		mg/L	1	12/20/2000
PH						
		E150.1				Analyst: HR
pH	7.26	2		pH units	1	12/7/2000
SULFATE						
		M4500-SO₄ D				Analyst: HR
Sulfate	1160	5		mg/L	1	12/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	2870	40		mg/L	1	12/8/2000

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	Sur: - Surrogate

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ANALYTICAL REPORT

Date: 25-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012011	Client Sample ID:	MW-4
Lab ID:	0012011-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	12/6/2000 1:12:00 PM
		COC Record:	11056

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	2710		40	mg/L	1	12/20/2000

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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ANALYTICAL REPORT

Date: 25-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012011	Client Sample ID:	MW-6
Lab ID:	0012011-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	12/6/2000 2:18:00 PM
		COC Record:	11056

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Methyl tert-Butyl Ether	1.8	1		µg/L	1	12/13/2000
Benzene	ND	0.5		µg/L	1	12/13/2000
Toluene	ND	0.5		µg/L	1	12/13/2000
Ethylbenzene	ND	0.5		µg/L	1	12/13/2000
m,p-Xylene	ND	1		µg/L	1	12/13/2000
o-Xylene	ND	0.5		µg/L	1	12/13/2000
CALCIUM, DISSOLVED		E215.1		Analyst: HR		
Calcium	170	12		mg/L	50	12/20/2000
POTASSIUM, DISSOLVED		E258.1		Analyst: HR		
Potassium	6.7	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED		E242.1		Analyst: HR		
Magnesium	27	5		mg/L	20	12/20/2000
SODIUM, DISSOLVED		E273.1		Analyst: HR		
Sodium	730	50		mg/L	200	12/19/2000
ALKALINITY, TOTAL		M2320 B		Analyst: HR		
Alkalinity, Bicarbonate (As CaCO ₃)	850	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	850	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE		E325.3		Analyst: HR		
Chloride	76	1		mg/L	1	12/29/2000
CONDUCTIVITY @ 25C		E120.1		Analyst: HR		
Specific Conductance	2660	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL		M2340 B		Analyst: HR		
Hardness (As CaCO ₃)	540	1		mg/L	1	12/29/2000
PH		E150.1		Analyst: HR		
pH	7.56	2		pH units	1	12/7/2000
SULFATE		M4500-SO4 D		Analyst: HR		
Sulfate	1270	5		mg/L	1	12/12/2000
TOTAL DISSOLVED SOLIDS		E160.1		Analyst: HR		
Total Dissolved Solids (Residue, Filterable)	2890	40		mg/L	1	12/8/2000

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	Sur: - Surrogate

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ANALYTICAL REPORT

Date: 25-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012011	Client Sample ID:	MW-6
Lab ID:	0012011-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	12/6/2000 2:18:00 PM
		COC Record:	11056

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	2790		40	mg/L	1	12/29/2000

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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ANALYTICAL REPORT

Date: 25-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012011	Client Sample ID:	MW-18
Lab ID:	0012011-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	12/6/2000 3:01:00 PM
		COC Record:	11056

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	16	2		µg/L	2	12/13/2000
Benzene	4	1		µg/L	2	12/13/2000
Toluene	ND	1		µg/L	2	12/13/2000
Ethylbenzene	ND	1		µg/L	2	12/13/2000
m,p-Xylene	ND	2		µg/L	2	12/13/2000
o-Xylene	ND	1		µg/L	2	12/13/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	55	12		mg/L	50	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	5.1	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	12	2.5		mg/L	10	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	520	50		mg/L	200	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	710	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	710	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	97	1		mg/L	1	12/18/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	1920	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	186	1		mg/L	1	12/20/2000
PH						
		E150.1				Analyst: HR
pH	7.53	2		pH units	1	12/7/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	500	5		mg/L	1	12/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	1650	40		mg/L	1	12/8/2000

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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ANALYTICAL REPORT

Date: 25-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012011	Client Sample ID:	MW-18
Lab ID:	0012011-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	12/6/2000 3:01:00 PM
		COC Record:	11056

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	1620		40	mg/L	1	12/20/2000

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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ANALYTICAL REPORT

Date: 25-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012011	Client Sample ID:	MW-19
Lab ID:	0012011-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	12/6/2000 3:52:00 PM
		COC Record:	11056

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	110	1		µg/L	1	12/12/2000
Benzene	4.4	0.5		µg/L	1	12/12/2000
Toluene	ND	0.5		µg/L	1	12/12/2000
Ethylbenzene	10	0.5		µg/L	1	12/12/2000
m,p-Xylene	6.3	1		µg/L	1	12/12/2000
o-Xylene	ND	0.5		µg/L	1	12/12/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	420	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	7.8	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	96	10		mg/L	40	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1180	125		mg/L	500	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	840	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	840	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	170	1		mg/L	1	12/18/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	3930	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	1430	1		mg/L	1	12/20/2000
PH						
		E150.1				Analyst: HR
pH	7.32	2		pH units	1	12/7/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	3060	5		mg/L	1	12/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	5480	40		mg/L	1	12/8/2000

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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ANALYTICAL REPORT

Date: 25-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012011	Client Sample ID:	MW-19
Lab ID:	0012011-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery	Collection Date:	12/6/2000 3:52:00 PM
		COC Record:	11056

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	5450		40	mg/L	1	12/20/2000

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

2 of 2

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 25-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000	Prep Date:						
Client ID:	0012011	Run ID: GC-1_001212A		SeqNo: 33349							
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	ND		0.5								

Sample ID: MB1	Batch ID: GC-1_001213	Test Code: SW8021B	Units: µg/L	Analysis Date 12/13/2000	Prep Date:						
Client ID:	0012011	Run ID: GC-1_001213A		SeqNo: 33377							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND		0.5								J
Ethylbenzene	.1164		0.5								J
m,p-Xylene	.2034		1								J
Methyl tert-Butyl Ether	ND		1								J
o-Xylene	.0837		0.5								
Toluene	ND		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: 25-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0012014-05AMS		Batch ID: GC-1_001212		Test Code: SW8021B		Units: µg/L		Analysis Date 12/12/2000		SeqNo: 33350		Prep Date:	
Client ID: 0012011		Run ID: GC-1_001212A											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Benzene	184.8	2.5	200	0.172	92.3%	88	112						
Ethylbenzene	186.2	2.5	200	0	93.1%	86	113						
m,p-Xylene	370.5	5	400	0	92.6%	85	108						
Methyl tert-Butyl Ether	423.9	5	200	236.8	93.6%	86	117						
o-Xylene	188.6	2.5	200	0.3305	94.1%	92	110						
Toluene	186.8	2.5	200	0	93.4%	88	116						

Sample ID: 0012014-05AMSD		Batch ID: GC-1_001212		Test Code: SW8021B		Units: µg/L		Analysis Date 12/12/2000		SeqNo: 33351		Prep Date:	
Client ID: 0012011		Run ID: GC-1_001212A											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Benzene	183.2	2.5	200	0.172	91.5%	88	112	184.8	0.9%	6			
Ethylbenzene	184.8	2.5	200	0	92.4%	86	113	186.2	0.7%	6			
m,p-Xylene	368	5	400	0	92.0%	85	108	370.5	0.7%	6			
Methyl tert-Butyl Ether	427	5	200	236.8	95.1%	86	117	423.9	0.7%	7			
o-Xylene	187.7	2.5	200	0.3305	93.7%	92	110	188.6	0.5%	6			
Toluene	185.2	2.5	200	0	92.6%	88	116	186.8	0.8%	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: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0012014-03AMS		Batch ID: GC-1_001213		Test Code: SW8021B		Units: µg/L		Analysis Date 12/13/2000				Prep Date:	
Client ID:		0012011		Run ID:		GC-1_001213A		SeqNo:		33378			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene		2530	10	800	1745	98.1%	88	112					
Ethylbenzene		1316	10	800	557	94.9%	86	113					
m,p-Xylene		3542	20	1600	2039	93.9%	85	108					
Methyl tert-Butyl Ether		2082	20	800	1387	86.9%	86	117					
o-Xylene		993.6	10	800	225.1	96.1%	92	110					
Toluene		1665	10	800	889.1	97.0%	88	116					

Sample ID: 0012014-03AMSD		Batch ID: GC-1_001213	Test Code: SW8021B	Units: µg/L	Analysis Date 12/13/2000				Prep Date:		
Client ID:		0012011	Run ID: GC-1_001213A		SeqNo: 33379						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2459	10	800	1745	89.3%	88	112	2530	2.8%	6	
Ethylbenzene	1279	10	800	557	90.2%	86	113	1316	2.9%	6	
m,p-Xylene	3441	20	1600	2039	87.6%	85	108	3542	2.9%	6	
Methyl tert-Butyl Ether	2106	20	800	1387	89.9%	86	117	2082	1.1%	7	
o-Xylene	968.2	10	800	225.1	92.9%	92	110	993.6	2.6%	6	
Toluene	1616	10	800	889.1	90.8%	88	116	1665	3.0%	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: 25-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS2 WATER	Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000	Prep Date:
Client ID: 0012011	Run ID: GC-1_001212A	PQL	SPK value	SeqNo: 33347	
Analyte	Result	%REC	SPK Ref Val	LowLimit	HighLimit
Benzene	37.95	0.5	40	96	111
Ethylbenzene	38.62	0.5	40	96	111
m,p-Xylene	76.99	1	80	92	105
Methyl tert-Butyl Ether	38.23	1	40	93	113
o-Xylene	39.04	0.5	40	97	110
Toluene	38.65	0.5	40	97	109
				%RPD	RPDLimit
					Qual
					S

Sample ID: LCS2 WATER	Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000	Prep Date:
Client ID: 0012011	Run ID: GC-1_001212A	PQL	SPK value	SeqNo: 33348	
Analyte	Result	%REC	SPK Ref Val	LowLimit	HighLimit
Benzene	39.68	0.5	40	96	111
Ethylbenzene	38.82	0.5	40	96	111
m,p-Xylene	77.39	1	80	92	105
Methyl tert-Butyl Ether	39.87	1	40	93	113
o-Xylene	38.99	0.5	40	97	110
Toluene	39.28	0.5	40	97	109
				%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

CLIENT: BioTech Remediation, Inc.

Work Order: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_001213	Test Code: SW8021B	Units: µg/L	Analysis Date 12/13/2000		Prep Date:				
Client ID:	0012011	Run ID:	GC-1_001213A		SeqNo:	33376					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.67	0.5	40	0	99.2%	96	111				
Ethylbenzene	38.58	0.5	40	0.1164	96.2%	96	111				
m,p-Xylene	76.97	1	80	0.2034	96.0%	92	105				
Methyl tert-Butyl Ether	39.07	1	40	0	97.7%	93	113				
o-Xylene	39	0.5	40	0.0837	97.3%	97	110				
Toluene	39.19	0.5	40	0	98.0%	97	109				

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: 25-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0010		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L		Analysis Date 12/12/2000		Prep Date:					
Client ID:		0012011	Run ID: GC-1_001212A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result											
Benzene		19.1		0.5	20	0	95.5%	85	115				
Ethylbenzene		19.58		0.5	20	0	97.9%	85	115				
m,p-Xylene		39.08		1	40	0	97.7%	85	115				
Methyl tert-Butyl Ether		18.7		1	20	0	93.5%	85	115				
o-Xylene		19.77		0.5	20	0	98.8%	85	115				
Toluene		19.37		0.5	20	0	96.9%	85	115				
1,4-Difluorobenzene		74.23		0	80	0	92.8%	70	130				
4-Bromochlorobenzene		82.41		0	80	0	103.0%	70	130				
Fluorobenzene		74.67		0	80	0	93.3%	70	130				

Sample ID: CCV2 BTEX_0010		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L		Analysis Date 12/12/2000		Prep Date:					
Client ID:		0012011	Run ID: GC-1_001212A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	18.51			0.5	20	0	92.5%	85	115				
Ethylbenzene	19.03			0.5	20	0	95.1%	85	115				
m,p-Xylene	37.95			1	40	0	94.9%	85	115				
Methyl tert-Butyl Ether	19.19			1	20	0	96.0%	85	115				
o-Xylene	19.37			0.5	20	0	96.9%	85	115				
Toluene	18.84			0.5	20	0	94.2%	85	115				
1,4-Difluorobenzene	74.39			0	80	0	93.0%	70	130				
4-Bromochlorobenzene	82.58			0	80	0	103.2%	70	130				
Fluorobenzene	74.19			0	80	0	92.7%	70	130				

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: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0010		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000		Prep Date:				
Client ID:		0012011	Run ID:	GC-1_001212A	SeqNo:	33344					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	36.68	0.5	40	0	91.7%	85	115				
Ethylbenzene	37.39	0.5	40	0	93.5%	85	115				
m,p-Xylene	74.7	1	80	0	93.4%	85	115				
Methyl tert-Butyl Ether	36.96	1	40	0	92.4%	85	115				
o-Xylene	38	0.5	40	0	95.0%	85	115				
Toluene	37.47	0.5	40	0	93.7%	85	115				
1,4-Difluorobenzene	73.63	0	80	0	92.0%	70	130				
4-Bromochlorobenzene	80.04	0	80	0	100.1%	70	130				
Fluorobenzene	74.3	0	80	0	92.9%	70	130				

Sample ID: CCV4 BTEX_0012		Batch ID: GC-1_001212		Test Code: SW8021B		Units: µg/L		Analysis Date 12/12/2000		Prep Date:	
Client ID:		0012011		Run ID:		GC-1_001212A		SeqNo: 33345			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.98	0.5	20	0	99.9%	85	115				
Ethylbenzene	19.72	0.5	20	0	98.6%	85	115				
m,p-Xylene	39.38	1	40	0	98.5%	85	115				
Methyl tert-Butyl Ether	19.15	1	20	0	95.7%	85	115				
o-Xylene	19.82	0.5	20	0	99.1%	85	115				
Toluene	19.72	0.5	20	0	98.6%	85	115				
1,4-Difluorobenzene	73.77	0	80	0	92.2%	70	130				
4-Bromochlorobenzene	84.97	0	80	0	106.2%	70	130				
Fluorobenzene	74.9	0	80	0	93.6%	70	130				

Qualifiers:

N/D - 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: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV5 BTEX_0012		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L		Analysis Date 12/12/2000		Prep Date:	
Client ID:		0012011	Run ID: GC-1_001212A			SeqNo: 33346			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit Qual
Benzene	19.44	0.5	20	0	97.2%	85	115		
Ethylbenzene	19.19	0.5	20	0	95.9%	85	115		
m,p-Xylene	38.33	1	40	0	95.8%	85	115		
Methyl tert-Butyl Ether	19.96	1	20	0	99.8%	85	115		
o-Xylene	19.34	0.5	20	0	96.7%	85	115		
Toluene	19.22	0.5	20	0	96.1%	85	115		
1,4-Difluorobenzene	73.58	0	80	0	92.0%	70	130		
4-Bromochlorobenzene	82.38	0	80	0	103.0%	70	130		
Fluorobenzene	75.02	0	80	0	93.8%	70	130		

Sample ID: CCV1 BTEX_0012		Batch ID: GC-1_001213	Test Code: SW8021B	Units: µg/L		Analysis Date 12/13/2000		Prep Date:	
Client ID:		0012011	Run ID: GC-1_001213A			SeqNo: 33373			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit Qual
Benzene	20.19	0.5	20	0	100.9%	85	115		
Ethylbenzene	19.91	0.5	20	0	99.5%	85	115		
m,p-Xylene	39.65	1	40	0	99.1%	85	115		
Methyl tert-Butyl Ether	19.82	1	20	0	99.1%	85	115		
o-Xylene	19.96	0.5	20	0	99.8%	85	115		
Toluene	19.94	0.5	20	0	99.7%	85	115		
1,4-Difluorobenzene	74.08	0	80	0	92.6%	70	130		
4-Bromochlorobenzene	82.53	0	80	0	103.2%	70	130		
Fluorobenzene	74.74	0	80	0	93.4%	70	130		

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: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0012		Batch ID: GC-1_001213		Test Code: SW8021B		Units: µg/L		Analysis Date 12/13/2000		Prep Date:	
Client ID:		0012011		Run ID: GC-1_001213A				SeqNo: 33374			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.58	0.5	20	0	97.9%	85	115				
Ethylbenzene	19.29	0.5	20	0	96.5%	85	115				
m,p-Xylene	38.59	1	40	0	96.5%	85	115				
Methyl tert-Butyl Ether	19.41	1	20	0	97.0%	85	115				
o-Xylene	19.51	0.5	20	0	97.6%	85	115				
Toluene	19.42	0.5	20	0	97.1%	85	115				
1,4-Difluorobenzene	74.88	0	80	0	93.6%	70	130				
4-Bromochlorobenzene	80.82	0	80	0	101.0%	70	130				
Fluorobenzene	76.8	0	80	0	96.0%	70	130				

Sample ID: CCV3 BTEX_0012		Batch ID: GC-1_001213		Test Code: SW8021B		Units: µg/L		Analysis Date 12/13/2000		Prep Date:	
Client ID:		0012011		Run ID: GC-1_001213A				SeqNo: 33375			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.44	0.5	40	0	96.1%	85	115				
Ethylbenzene	37.27	0.5	40	0	93.2%	85	115				
m,p-Xylene	74.24	1	80	0	92.8%	85	115				
Methyl tert-Butyl Ether	38.56	1	40	0	96.4%	85	115				
o-Xylene	37.86	0.5	40	0	94.7%	85	115				
Toluene	37.98	0.5	40	0	94.9%	85	115				
1,4-Difluorobenzene	75.12	0	80	0	93.9%	70	130				
4-Bromochlorobenzene	81.04	0	80	0	101.3%	70	130				
Fluorobenzene	76.31	0	80	0	95.4%	70	130				

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: 25-Jan-01

CLIENT: BioTech Remediation, Inc.
Work Order: 0012011
Project: Thriftway Refinery
Test No: SW8021B

**QC SUMMARY REPORT
SURROGATE RECOVERIES**

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0012002-01A	92.2	97	95.9
0012002-03A	91.9	98.1	95.1
0012007-01A	90.3	96.7	92.5
0012007-02A	93.8	98.3	96.2
0012007-03A	88.2	94.7	90.2
0012007-04A	90.5	95	93.5
0012007-05A	95.3	99.6	96.6
0012008-01A	94.9	99.5	97.3
0012011-01A	95.2	100	97.4
0012011-02A	93.6	101	96.7
0012011-03A	96.1	104	99
0012011-04A	94.2	100	97.5
0012011-05A	94.3	100	96.3
0012011-06A	90.3	103	91.9
0012014-01A	94	98.4	97.5
0012014-02A	94.9	100	97.1
0012014-03A	92.1	101	94
0012014-03AMS	92	101	93.8
0012014-03AMSD	92.4	101	93.2
0012014-04A	93.6	100	96.3
0012014-05A	92.2	103	93.5
0012014-05AMS	91.5	104	92.7
0012014-05AMSD	91.5	104	92.8
0012014-06A	93.8	103	94
0012014-07A	93.4	103	94.7
0012014-08A	93	101	94.6
0012016-01A	93	102	94.5

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

CLIENT: BioTech Remediation, Inc.
Work Order: 0012011
Project: Thriftway Refinery
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0012016-02A	93.7	103	94.4
0012016-03A	92.1	104	92.5
0012016-04A	91.5	104	93.5
0012016-05A	93.4	104	94
0012016-06A	93.5	104	94.5
0012016-07A	91.8	109	93.4
0012019-01A	94.3	100	97.3
0012019-02A	91	97.2	93.6
0012019-03A	84.4	88.3	87.1
CCV1 BTEX_00100	92.8	103	93.3
CCV1 BTEX_00121	92.6	103	93.4
CCV2 BTEX_00100	93	103	92.7
CCV2 BTEX_00121	93.6	101	96
CCV3 BTEX_00100	92	100	92.9
CCV3 BTEX_00121	93.9	101	95.4
CCV4 BTEX_00121	92.2	106	93.6
CCV5 BTEX_00121	92	103	93.8
LCS WATER	93.2	103	95.6
LCS2 WATER	92.7	104	92.5
MB1	93.5	104	94.6

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits

On Site Technologies, LTD.

Date: 25-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBLank	Batch ID: API_001207	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207C		SeqNo: 33433	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	2.6	5			J
Alkalinity, Carbonate (As CaCO3)	ND	5			
Alkalinity, Hydroxide	ND	5			
Alkalinity, Total (As CaCO3)	2.6	5			J
Sample ID: MBLank	Batch ID: API_001207	Test Code: E120.1	Units: uS/cm	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207D		SeqNo: 33456	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	ND	2			
Sample ID: MBLank	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/8/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207E		SeqNo: 33482	
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: MBLank	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207E		SeqNo: 33495	
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

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: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/15/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207E		SeqNo: 33507	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filter)	24	40			J

Sample ID: MBlank	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207F		SeqNo: 33547	
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_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207G		SeqNo: 33565	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	5			

Sample ID: MBlank	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207G		SeqNo: 33578	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	5			

Sample ID: MBlank	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/29/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207I		SeqNo: 33937	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	ND	1			

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: 25-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0012011-02CD	Batch ID: API_001207	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 12/12/2000	Prep Date:
Client ID: MW-5	0012011	Run ID: WET CHEM_001207C		SeqNo: 33436	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	827	5	0	0	0.0% 0 820 0.9% 3
Alkalinity, Carbonate (As CaCO3)	ND	5	0	0	0.0% 0 0 0.0% 3
Alkalinity, Hydroxide	ND	5	0	0	0.0% 0 0 0.0% 3
Alkalinity, Total (As CaCO3)	827	5	0	0	0.0% 0 820 0.9% 3

Sample ID: 0012011-02CD	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID: MW-5	0012011	Run ID: WET CHEM_001207E		SeqNo: 33486	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	3650	40	0	0	0.0% 0 3684 0.9% 8

Sample ID: 0012011-02CD	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/12/2000	Prep Date:
Client ID: MW-5	0012011	Run ID: WET CHEM_001207G		SeqNo: 33568	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	1714	5	0	0	0.0% 0 1731 1.0% 12

Sample ID: 0012014-04CD	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207F		SeqNo: 33556	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	305	1	0	0	0.0% 0 299 2.0% 10

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: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0012014-06CD	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:
Client ID:	0012011	Run ID:	WET CHEM_001207E	SeqNo: 33498	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	6094	40	0	0	6086 0.1% 8

Sample ID: 0012014-06CD	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/29/2000	Prep Date:
Client ID:	0012011	Run ID:	WET CHEM_001207I	SeqNo: 33942	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	55	1	0	0	56 1.8% 10

Sample ID: 0012016-02CD	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012011	Run ID:	WET CHEM_001207G	SeqNo: 33584	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	3535	5	0	0	3527 0.2% 12

Sample ID: 0012016-07CD	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/15/2000	Prep Date:
Client ID:	0012011	Run ID:	WET CHEM_001207E	SeqNo: 33510	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	6242	40	0	0	6276 0.5% 8

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: 25-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3030	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207F		SeqNo: 33548	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	206	1	200	0 103.0%	79 109
Sample ID: LCS 3030	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207F		SeqNo: 33560	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	201	1	200	0 100.5%	79 109
Sample ID: LCS 3031	Batch ID: API_001207	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207C		SeqNo: 33434	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Total (As CaCO3)	77.2	5	73	2.6 102.2%	96 104
Sample ID: LCS 3031	Batch ID: API_001207	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207C		SeqNo: 33445	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Total (As CaCO3)	76.6	5	73	2.6 101.4%	96 104
Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E120.1	Units: uS/cm	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207D		SeqNo: 33457	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	447	2	442	0 101.1%	96 103

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: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E120.1	Units: uS/cm	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207D		SeqNo: 33467	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	449	2	442	0	101.6% 96 103

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E120.1	Units: uS/cm	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207D		SeqNo: 33477	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	440	2	442	0	99.5% 96 103

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: M2510 C	Units: ohm-m	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001212A		SeqNo: 33479	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Resistivity	22.37	0.001	22.62	0	98.9% 80 120

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: M2510 C	Units: ohm-m	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001212A		SeqNo: 33481	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Resistivity	22.73	0.001	22.62	0	100.5% 80 120

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207E		SeqNo: 33483	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	358	40	337	0	106.2% 86 110

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: 0012011
 Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207E		SeqNo: 33496	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	312	40	337	0	92.6% 86 110
Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/15/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207E		SeqNo: 33508	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	318	40	337	24	87.2% 86 110
Sample ID: LCS 3031	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207G		SeqNo: 33566	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	21.4	5	19.6	0	109.2% 86 111
Sample ID: LCS 3031	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207G		SeqNo: 33579	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	19.8	5	19.6	0	101.0% 86 111
Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/29/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207I		SeqNo: 33938	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	75.1	1	73	0	102.9% 79 109

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: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3033	Batch ID: API_001207	Test Code: E150.1	Units: pH units	Analysis Date 12/7/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207B		SeqNo: 33409	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val
pH	7.939	2	7.95	0 99.9%	80 120

Sample ID: LCS 3033	Batch ID: API_001207	Test Code: E150.1	Units: pH units	Analysis Date 12/7/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207B		SeqNo: 33422	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val
pH	7.955	2	7.95	0 100.1%	80 120

Sample ID: LCS 3033	Batch ID: API_001207	Test Code: E150.1	Units: pH units	Analysis Date 12/8/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207B		SeqNo: 33423	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val
pH	7.96	2	7.95	0 100.1%	80 120

Sample ID: LCS 3033	Batch ID: API_001207	Test Code: E150.1	Units: pH units	Analysis Date 12/8/2000	Prep Date:
Client ID:	0012011	Run ID: WET CHEM_001207B		SeqNo: 33431	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val
pH	7.952	2	7.95	0 100.0%	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

On Site Technologies, LTD.

Date: 25-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Method Blank

Sample ID: MBLank	Batch ID: AA_12/20/200	Test Code: E273.1	Units: mg/L	Analysis Date: 12/19/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220A		SeqNo: 33635	
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_12/20/200	Test Code: E215.1	Units: mg/L	Analysis Date: 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220B		SeqNo: 33660	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	.02	0.25			
Sample ID: MBLank	Batch ID: AA_12/20/200	Test Code: E242.1	Units: mg/L	Analysis Date: 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220C		SeqNo: 33685	
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_12/20/200	Test Code: E258.1	Units: mg/L	Analysis Date: 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220D		SeqNo: 33710	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	ND	0.25			

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

On Site Technologies, LTD.

Date: 25-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0012014-05CMS	Batch ID: AA_12/20/2000	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220A		SeqNo: 33647	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val
Sodium	2720	125	2000	98.8%	85 115
Sample ID: 0012014-05CMS	Batch ID: AA_12/20/2000	Test Code: E215.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220B		SeqNo: 33672	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val
Calcium	1120	50	800	90.0%	82 121
Sample ID: 0012014-05CMS	Batch ID: AA_12/20/2000	Test Code: E258.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220D		SeqNo: 33722	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val
Potassium	35.2	1.2	25	112.0%	51 167
Sample ID: 0012014-06CMS	Batch ID: AA_12/20/2000	Test Code: E242.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220C		SeqNo: 33699	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val
Magnesium	168	6.2	100	106.0%	96 111

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: 25-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1	Batch ID: AA_12/20/200	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220A		SeqNo: 33636	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	3.04	0.25	3.24	0	93.8% 90 110
Sample ID: CCV1	Batch ID: AA_12/20/200	Test Code: E215.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220B		SeqNo: 33661	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	3.12	0.25	3.28	0	95.1% 90 110
Sample ID: CCV1	Batch ID: AA_12/20/200	Test Code: E242.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220C		SeqNo: 33686	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	2.2	0.25	2.08	0	105.8% 90 110
Sample ID: CCV1	Batch ID: AA_12/20/200	Test Code: E258.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220D		SeqNo: 33711	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	2.12	0.25	2.07	0	102.4% 90 110
Sample ID: CCV2	Batch ID: AA_12/20/200	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220A		SeqNo: 33648	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	2.98	0.25	3.24	0	92.0% 90 110

Qualifiers:

NID - 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: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2	Batch ID: AA_12/20/200	Test Code: E215.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220B		SeqNo: 33673	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	3.05	0.25	3.28	0	93.0% 90 110
Sample ID: CCV2	Batch ID: AA_12/20/200	Test Code: E242.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220C		SeqNo: 33697	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	1.09	0.25	1.04	0	104.8% 90 110
Sample ID: CCV2	Batch ID: AA_12/20/200	Test Code: E258.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220D		SeqNo: 33723	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	2.08	0.25	2.07	0	100.5% 90 110
Sample ID: CCV3	Batch ID: AA_12/20/200	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220A		SeqNo: 33659	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	2.96	0.25	3.24	0	91.4% 90 110
Sample ID: CCV3	Batch ID: AA_12/20/200	Test Code: E215.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012011	Run ID: AA_001220B		SeqNo: 33684	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	3.06	0.25	3.28	0	93.3% 90 110

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: 0012011

Project: Thriftway Refinery

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3	Batch ID: AA_12/20/200	Test Code: E242.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:						
Client ID:	0012011	Run ID: AA_001220C		SeqNo: 33709							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	2.17	0.25	2.08	0	104.3%	90	110				

Sample ID: CCV3	Batch ID: AA_12/20/200	Test Code: E258.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:						
Client ID:	0012011	Run ID: AA_001220D		SeqNo: 33734							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	2.04	0.25	2.07	0	98.6%	90	110				

Qualifiers:

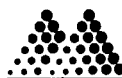
NID - Not Detected at the Reporting Limit

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



Mountain States Analytical, Inc.

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RECEIVED JAN 16 2001

Final Report

January 04, 2001

Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-1556 Fax: (505) 325-6256

Project: Water Analysis

Work Order: 0012164

Dear Mr. David Cox,

Thank you for using Mountain States Analytical, Inc. (MSAI) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0012164-1 and contains 34 pages of information for the 5 samples submitted to MSAI on Tuesday, December 12, 2000. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached" are included by reference as attachments following page 34. For regulatory compliance reporting, individual pages or portions of this report may not be separated.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msailabs.com.

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

RECEIVED 001216 2001

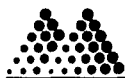
Analytical Report

Sample Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0012164-01A	0012011-02B		Water	12/06/00
0012164-01B	0012011-02D		Water	12/06/00
0012164-01C	0012011-02E		Water	12/06/00
0012164-02A	0012011-03B		Water	12/06/00
0012164-02B	0012011-03D		Water	12/06/00
0012164-02C	0012011-03E		Water	12/06/00
0012164-03A	0012011-04B		Water	12/06/00
0012164-03B	0012011-04D		Water	12/06/00
0012164-03C	0012011-04E		Water	12/06/00
0012164-04A	0012011-05B		Water	12/06/00
0012164-04B	0012011-05D		Water	12/06/00
0012164-04C	0012011-05E		Water	12/06/00
0012164-05A	0012011-06B		Water	12/06/00
0012164-05B	0012011-06D		Water	12/06/00
0012164-05C	0012011-06E		Water	12/06/00



Mountain States Analytical, Inc.

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

Analysis Report

Holding Time Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

Sample ID	Client Sample ID	Date Collected						
0012164-01A	0012011-02B	12/06/00 12:20						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Semi-Volatiles					12/13/00 10:00	7	12/19/00 05:04	40
		12/06/00 12:20						
0012164-01B	0012011-02D	12/06/00 12:20						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CVAA					12/20/00 13:58		12/20/00 17:34	28
Metals by ICP					12/14/00 12:54		12/18/00 13:44	180
		12/06/00 12:20						
0012164-01C	0012011-02E	12/06/00 12:20						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Anions by I. C. (Br, Cl, F, SO4)							12/15/00 23:17	28
		12/06/00 13:12						
0012164-02A	0012011-03B	12/06/00 13:12						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Semi-Volatiles					12/13/00 10:00	7	12/19/00 05:45	40
		12/06/00 13:12						
0012164-02B	0012011-03D	12/06/00 13:12						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CVAA					12/20/00 13:58		12/20/00 17:36	28
Metals by ICP					12/14/00 12:54		12/18/00 13:47	180
		12/06/00 13:12						
0012164-02C	0012011-03E	12/06/00 13:12						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Anions by I. C. (Br, Cl, F, SO4)							12/15/00 23:37	28
		12/06/00 14:18						
0012164-03A	0012011-04B	12/06/00 14:18						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Semi-Volatiles					12/13/00 10:00	7	12/19/00 06:27	40

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

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Holding Time Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

Sample ID	Client Sample ID	Date Collected						
0012164-03B	0012011-04D	12/06/00 14:18						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA				12/20/00 13:58		12/20/00 17:37		28
Metals by ICP				12/14/00 12:54		12/18/00 13:50		180
0012164-03C	0012011-04E	12/06/00 14:18						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (Br, Cl, F, SO4)						12/15/00 23:56		28
0012164-04A	0012011-05B	12/06/00 15:01						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				12/13/00 10:00	7	12/20/00 02:00		40
0012164-04B	0012011-05D	12/06/00 15:01						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA				12/20/00 13:58		12/20/00 17:39		28
Metals by ICP				12/14/00 12:54		12/18/00 13:53		180
0012164-04C	0012011-05E	12/06/00 15:01						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (Br, Cl, F, SO4)						12/16/00 00:16		28
0012164-05A	0012011-06B	12/06/00 15:52						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				12/13/00 10:00	7	12/20/00 01:19		40
0012164-05B	0012011-06D	12/06/00 15:52						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	

* - The recommended holding time was exceeded



Holding Time Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

Sample ID	Client Sample ID	Date Collected		
Mercury by CVAA		12/20/00 13:58	12/20/00 17:40	28
Metals by ICP		12/14/00 12:54	12/18/00 13:56	180

0012164-05C	0012011-06E							12/06/00 15:52
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Anions by I. C. (Br, Cl, F, SO4)							12/16/00 01:34	28

* - 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: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-01A
Client Sample ID: 0012011-02B
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-5

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

Acenaphthene	U	4.7	9.43	µg/L	1	12/19/00 05:04	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/19/00 05:04	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/19/00 05:04	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/19/00 05:04	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	121	14-125.16	% Recovery	1	12/19/00 05:04	KPF
2-Fluorophenol	56.2	4.41-76.9	% Recovery	1	12/19/00 05:04	KPF
2-Fluorobiphenyl	64.8	13.06-102.75	% Recovery	1	12/19/00 05:04	KPF
Nitrobenzene-d5	62.7	22.24-110.09	% Recovery	1	12/19/00 05:04	KPF
Phenol-d6	40.4	5.1-62.14	% Recovery	1	12/19/00 05:04	KPF
Terphenyl-d14	61.5	7.15-120.66	% Recovery	1	12/19/00 05:04	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

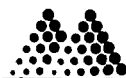
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

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Mountain States Analytical, Inc.

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

Final Report

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

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-01A
Client Sample ID: 0012011-02B
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-5

125101

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

Acenaphthene	U	4.7	9.43	µg/L	1	12/19/00 05:04	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/19/00 05:04	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/19/00 05:04	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/19/00 05:04	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/19/00 05:04	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	121	14-125.16	% Recovery	1	12/19/00 05:04	KPF
2-Fluorophenol	56.2	4.41-76.9	% Recovery	1	12/19/00 05:04	KPF
2-Fluorobiphenyl	64.8	13.06-102.75	% Recovery	1	12/19/00 05:04	KPF
Nitrobenzene-d5	62.7	22.24-110.09	% Recovery	1	12/19/00 05:04	KPF
Phenol-d6	40.4	5.1-62.14	% Recovery	1	12/19/00 05:04	KPF
Terphenyl-d14	61.5	7.15-120.66	% Recovery	1	12/19/00 05:04	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level



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: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-01B
Client Sample ID: 0012011-02D
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-5

11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4680						12/14/00 12:54	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:34	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.03	0.1	mg/L	1	12/18/00 13:44	MM
Barium	0.0410	0.003	0.01	mg/L	1	12/18/00 13:44	MM
Cadmium	U	0.004	0.02	mg/L	1	12/18/00 13:44	MM
Chromium	U	0.01	0.05	mg/L	1	12/18/00 13:44	MM
Lead	U	0.03	0.15	mg/L	1	12/18/00 13:44	MM
Selenium	U	0.08	0.4	mg/L	1	12/18/00 13:44	MM
Silver	U	0.01	0.05	mg/L	1	12/18/00 13:44	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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analysis Report

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

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-01C
Client Sample ID: 0012011-02E
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-5 11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/15/00 23:17	NWL
Fluoride	1.72	0.25	1.25	mg/L	25	12/15/00 23:17	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

* - Result is greater than the associated action level

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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: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-02A
Client Sample ID: 0012011-03B
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-4

HB
11/25/01

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

Acenaphthene	U	4.7	9.43	µg/L	1	12/19/00 05:45	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/19/00 05:45	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/19/00 05:45	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/19/00 05:45	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/19/00 05:45	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	122	14-125.16	% Recovery	1	12/19/00 05:45	KPF
2-Fluorophenol	55.4	4.41-76.9	% Recovery	1	12/19/00 05:45	KPF
2-Fluorobiphenyl	67.3	13.06-102.75	% Recovery	1	12/19/00 05:45	KPF
Nitrobenzene-d5	64.4	22.24-110.09	% Recovery	1	12/19/00 05:45	KPF
Phenol-d6	40.6	5.1-62.14	% Recovery	1	12/19/00 05:45	KPF
Terphenyl-d14	61.7	7.15-120.66	% Recovery	1	12/19/00 05:45	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level

9



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: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-02B
Client Sample ID: 0012011-03D
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-4

1125/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4680						12/14/00 12:54	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:36	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by ICP, Water							
Arsenic	0.032 J	0.03	0.1	mg/L	1	12/18/00 13:47	MM
Barium	0.141	0.003	0.01	mg/L	1	12/18/00 13:47	MM
Cadmium	U	0.004	0.02	mg/L	1	12/18/00 13:47	MM
Chromium	U	0.01	0.05	mg/L	1	12/18/00 13:47	MM
Lead	U	0.03	0.15	mg/L	1	12/18/00 13:47	MM
Selenium	U	0.08	0.4	mg/L	1	12/18/00 13:47	MM
Silver	U	0.01	0.05	mg/L	1	12/18/00 13:47	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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analysis Report

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

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-02C
Client Sample ID: 0012011-03E
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-4

12/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/15/00 23:37	NWL
Fluoride	1.57	0.25	1.25	mg/L	25	12/15/00 23:37	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

* - Result is greater than the associated action level

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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: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-03A
Client Sample ID: 0012011-04B
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-6

11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.7	9.43	µg/L	1	12/19/00 06:27	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/19/00 06:27	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/19/00 06:27	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/19/00 06:27	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/19/00 06:27	KPF
Surrogates							
		Recovery Range					
2,4,6-Tribromophenol	107	14-125.16		% Recovery	1	12/19/00 06:27	KPF
2-Fluorophenol	54.3	4.41-76.9		% Recovery	1	12/19/00 06:27	KPF
2-Fluorobiphenyl	59.2	13.06-102.75		% Recovery	1	12/19/00 06:27	KPF
Nitrobenzene-d5	61.2	22.24-110.09		% Recovery	1	12/19/00 06:27	KPF
Phenol-d6	40.1	5.1-62.14		% Recovery	1	12/19/00 06:27	KPF
Terphenyl-d14	59.0	7.15-120.66		% Recovery	1	12/19/00 06:27	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level

12



Mountain States Analytical, Inc.

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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: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-03B
Client Sample ID: 0012011-04D
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-6

#B
1/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4680						12/14/00 12:54	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:37	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.03	0.1	mg/L	1	12/18/00 13:50	MM
Barium	0.0206	0.003	0.01	mg/L	1	12/18/00 13:50	MM
Cadmium	U	0.004	0.02	mg/L	1	12/18/00 13:50	MM
Chromium	U	0.01	0.05	mg/L	1	12/18/00 13:50	MM
Lead	U	0.03	0.15	mg/L	1	12/18/00 13:50	MM
Selenium	U	0.08	0.4	mg/L	1	12/18/00 13:50	MM
Silver	U	0.01	0.05	mg/L	1	12/18/00 13:50	MM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

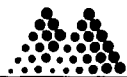
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

13



Mountain States Analytical, Inc.

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

Analysis Report

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

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-03C
Client Sample ID: 0012011-04E
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-6

11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/15/00 23:56	NWL
Fluoride	1.58	0.25	1.25	mg/L	25	12/15/00 23:56	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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Report 0012164-1

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

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-04A
Client Sample ID: 0012011-05B
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-18

1/25/01

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

Acenaphthene	U	4.7	9.43	µg/L	1	12/20/00 02:00	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/20/00 02:00	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/20/00 02:00	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/20/00 02:00	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/20/00 02:00	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	76.9	14-125.16	% Recovery	1	12/20/00 02:00	KPF
2-Fluorophenol	45.7	4.41-76.9	% Recovery	1	12/20/00 02:00	KPF
2-Fluorobiphenyl	57.4	13.06-102.75	% Recovery	1	12/20/00 02:00	KPF
Nitrobenzene-d5	67.3	22.24-110.09	% Recovery	1	12/20/00 02:00	KPF
Phenol-d6	37.2	5.1-62.14	% Recovery	1	12/20/00 02:00	KPF
Terphenyl-d14	54.5	7.15-120.66	% Recovery	1	12/20/00 02:00	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level

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Mountain States Analytical, Inc.

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

Final Report

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

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-04B
Client Sample ID: 0012011-05D
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-18

12/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4680						12/14/00 12:54	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:39	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by ICP, Water							
Arsenic	0.108	0.03	0.1	mg/L	1	12/18/00 13:53	MM
Barium	0.268	0.003	0.01	mg/L	1	12/18/00 13:53	MM
Cadmium	U	0.004	0.02	mg/L	1	12/18/00 13:53	MM
Chromium	U	0.01	0.05	mg/L	1	12/18/00 13:53	MM
Lead	0.035 J	0.03	0.15	mg/L	1	12/18/00 13:53	MM
Selenium	U	0.08	0.4	mg/L	1	12/18/00 13:53	MM
Silver	U	0.01	0.05	mg/L	1	12/18/00 13:53	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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analysis Report

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

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-04C
Client Sample ID: 0012011-05E
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-18

1/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/16/00 00:16	NWL
Fluoride	1.39	0.25	1.25	mg/L	25	12/16/00 00:16	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

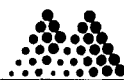
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



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Final Report

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(505) 325-5667 Fax: (505) 327-1496

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-05A
Client Sample ID: 0012011-06B
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-19

11/25/01

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

Acenaphthene	U	4.7	9.43	µg/L	1	12/20/00 01:19	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/20/00 01:19	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/20/00 01:19	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/20/00 01:19	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/20/00 01:19	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	74.2	14-125.16	% Recovery	1	12/20/00 01:19	KPF
2-Fluorophenol	46.8	4.41-76.9	% Recovery	1	12/20/00 01:19	KPF
2-Fluorobiphenyl	56.3	13.06-102.75	% Recovery	1	12/20/00 01:19	KPF
Nitrobenzene-d5	65.3	22.24-110.09	% Recovery	1	12/20/00 01:19	KPF
Phenol-d6	37.4	5.1-62.14	% Recovery	1	12/20/00 01:19	KPF
Terphenyl-d14	56.6	7.15-120.66	% Recovery	1	12/20/00 01:19	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level

18



Mountain States Analytical, Inc.

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

Final Report

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

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-05B
Client Sample ID: 0012011-06D
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-19

11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4680						12/14/00 12:54	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:40	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.03	0.1	mg/L	1	12/18/00 13:56	MM
Barium	0.0601	0.003	0.01	mg/L	1	12/18/00 13:56	MM
Cadmium	U	0.004	0.02	mg/L	1	12/18/00 13:56	MM
Chromium	U	0.01	0.05	mg/L	1	12/18/00 13:56	MM
Lead	U	0.03	0.15	mg/L	1	12/18/00 13:56	MM
Selenium	U	0.08	0.4	mg/L	1	12/18/00 13:56	MM
Silver	U	0.01	0.05	mg/L	1	12/18/00 13:56	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

* - Result is greater than the associated action level

19



Mountain States Analytical, Inc.

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

ANALYTICAL REPORT

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

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164
Lab Sample ID: 0012164-05C
Client Sample ID: 0012011-06E
Date Collected: 12/06/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-19

12/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/16/00 01:34	NWL
Fluoride	1.58	0.25	1.25	mg/L	25	12/16/00 01:34	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

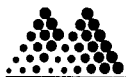
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Quality Control Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

EPA 300.0: Anions by I. C. (Br, Cl, F, SO₄), Water

QC Type: Laboratory Reagent Blank
Sample ID: LRB 1
Run ID: IC 1_001215B

Analysis Date: 12/15/00 12:31
Prep Batch ID: R9994

Units: mg/L
Seq No: 179942

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		0.05			

QC Type: Laboratory Fortified Blank
Sample ID: LFB IC-000905-01
Run ID: IC 1_001215B

Analysis Date: 12/15/00 12:50
Prep Batch ID: R9994

Units: mg/L
Seq No: 179943

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	428	U	400	107	90	110			
Fluoride	97.3	U	100	97.3	90	110			

QC Type: Matrix Spike
Sample ID: 0012154-11A MS
Run ID: IC 1_001215B

Analysis Date: 12/15/00 14:09
Prep Batch ID: R9994

Units: mg/L
Seq No: 179947

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	10900	U	10000	109	80	120			
Fluoride	2580	U	2500	103	80	120			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

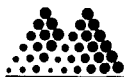
J - Analyte detected below the PQL

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.

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

Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

QC Type: Matrix Spike Duplicate
Sample ID: 0012154-11A MSD
Run ID: IC 1_001215B

Analysis Date: 12/15/00 14:28
Prep Batch ID: R9994

Units: mg/L
Seq No: 179948

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	10600	U	10000	106	80	120	10900	3.0	20
Fluoride	2570	U	2500	103	80	120	2580	0.41	20

QC Type: Laboratory Reagent Blank
Sample ID: LRB 2
Run ID: IC 1_001215B

Analysis Date: 12/15/00 14:48
Prep Batch ID: R9994

Units: mg/L
Seq No: 179949

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		0.05			

QC Type: Laboratory Reagent Blank
Sample ID: LRB 3
Run ID: IC 1_001215B

Analysis Date: 12/15/00 18:04
Prep Batch ID: R9994

Units: mg/L
Seq No: 179959

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		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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Mountain States Analytical, Inc.

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

QC Type: Laboratory Reagent Blank
Sample ID: LRB 4
Run ID: IC 1_001215B

Analysis Date: 12/15/00 21:20
Prep Batch ID: R9994

Units: mg/L
Seq No: 179969

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		0.05			

QC Type: Laboratory Reagent Blank
Sample ID: LRB 5
Run ID: IC 1_001215B

Analysis Date: 12/16/00 00:35
Prep Batch ID: R9994

Units: mg/L
Seq No: 179979

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		0.05			

QC Type: Laboratory Reagent Blank
Sample ID: LRB 6
Run ID: IC 1_001215B

Analysis Date: 12/16/00 03:51
Prep Batch ID: R9994

Units: mg/L
Seq No: 179989

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		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.

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

Final Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

QC Type: Laboratory Fortified Blank
Sample ID: LFB IC-000905-01
Run ID: IC 1_001215B

Analysis Date: 12/16/00 06:47
Prep Batch ID: R9994

Units: mg/L
Seq No: 179998

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Fluoride	102	U	100	102	90	110			

QC Type: Laboratory Reagent Blank
Sample ID: LRB 7
Run ID: IC 1_001215B

Analysis Date: 12/16/00 07:07
Prep Batch ID: R9994

Units: mg/L
Seq No: 179999

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		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.

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

Analytical Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

SW-846 6010B: Metals by ICP, Water

QC Type: Method Blank
Sample ID: PBW-4680
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:36
Prep Batch ID: 4680

Units: mg/L
Seq No: 180597

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	-0.010	0	0	0	-0.06	0.03			
Barium	0.00085	0	0	0	-0.006	0.003			
Cadmium	0.00029	0	0	0	-0.008	0.004			
Chromium	-0.0027	0	0	0	-0.02	0.01			
Lead	-0.0073	0	0	0	-0.06	0.03			
Selenium	-0.015	0	0	0	-0.16	0.08			
Silver	0.00021	0	0	0	-0.02	0.01			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-4680
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:38
Prep Batch ID: 4680

Units: mg/L
Seq No: 180598

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.03		1.00	103	75	125			
Barium	0.203		0.200	101	75	125			
Cadmium	0.101		0.100	101	75	125			
Chromium	0.401		0.400	100	75	125			
Lead	1.01		1.00	101	75	125			
Selenium	1.06		1.00	106	75	125			
Silver	0.102		0.100	102	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



Mountain States Analytical, Inc.

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Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

QC Type: Sample Duplicate
Sample ID: 0012058-01G D
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:43
Prep Batch ID: 4680

Units: mg/L
Seq No: 180600

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	20
Barium	0.0685						0.0626	9.1	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: 0012058-01G MS
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:45
Prep Batch ID: 4680

Units: mg/L
Seq No: 180601

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.08	U	1.00	108	75	125			
Barium	0.267	0.0626	0.200	102	75	125			
Cadmium	0.0953	U	0.100	95.3	75	125			
Chromium	0.388	U	0.400	97.1	75	125			
Lead	0.930	U	1.00	93.0	75	125			
Selenium	1.05	U	1.00	105	75	125			
Silver	0.0968	U	0.100	96.8	75	125			

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

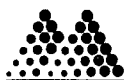
J - Analyte detected below the PQL

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.

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

Lab Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

QC Type: Matrix Spike Duplicate
Sample ID: 0012058-01G MSD
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:47
Prep Batch ID: 4680

Units: mg/L
Seq No: 180602

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.09	U	1.00	109	75	125	1.08	0.41	20
Barium	0.267	0.0626	0.200	102	75	125	0.267	0.13	20
Cadmium	0.0967	U	0.100	96.7	75	125	0.0953	1.4	20
Chromium	0.387	U	0.400	96.6	75	125	0.388	0.45	20
Lead	0.915	U	1.00	91.5	75	125	0.930	1.5	20
Selenium	1.07	U	1.00	107	75	125	1.05	1.8	20
Silver	0.0962	U	0.100	96.1	75	125	0.0968	0.66	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0012058-01G A
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:49
Prep Batch ID: 4680

Units: mg/L
Seq No: 180603

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	1.04	U	1.00	104	75	125			
Barium	0.256	0.0626	0.200	96.7	75	125			
Cadmium	0.0925	U	0.100	92.5	75	125			
Chromium	0.367	U	0.400	91.8	75	125			
Lead	0.882	U	1.00	88.2	75	125			
Selenium	1.02	U	1.00	102	75	125			
Silver	0.0914	U	0.100	91.4	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



Mountain States Analytical, Inc.

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0012164-1

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

QC Type: Serial Dilution
Sample ID: 0012058-01G L
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:52
Prep Batch ID: 4680

Units: mg/L
Seq No: 180604

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	10
Barium	0.0637						0.0626	1.8	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

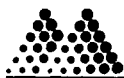
S - Results outside normal recovery limits

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



Mountain States Analytical, Inc.

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

SW-846 7470A: Mercury by CVAA, Water

QC Type: Method Blank
Sample ID: PBW-4726
Run ID: FIMS_001220B

Analysis Date: 12/20/00 16:53
Prep Batch ID: 4726

Units: µg/L
Seq No: 182894

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	0.047	0	0	0	-0.1	0.1			

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-4726
Run ID: FIMS_001220B

Analysis Date: 12/20/00 16:55
Prep Batch ID: 4726

Units: µg/L
Seq No: 182895

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	5.46		5.00	109	80	120			

QC Type: Sample Duplicate
Sample ID: 0011332-01C D
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:12
Prep Batch ID: 4726

Units: µg/L
Seq No: 182961

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	0.35JR(3a)						0.22 J	45	20

3a: Duplicates not evaluated - matrix sample <10x the detection limit

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: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

QC Type: Matrix Spike
Sample ID: 0011332-01C MS
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:13
Prep Batch ID: 4726

Units: µg/L
Seq No: 182962

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.29	0.22 J	5.00	81.4	80	120			

QC Type: Matrix Spike Duplicate
Sample ID: 0011332-01C MSD
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:15
Prep Batch ID: 4726

Units: µg/L
Seq No: 182963

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	4.13 S(2b)	0.22 J	5.00	78.1	80	120	4.29	3.9	20

2b: MS/MSD are outside acceptable limit - RPD and PDS were within acceptable limits

QC Type: Serial Dilution
Sample ID: 0011332-01C L
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:18
Prep Batch ID: 4726

Units: µg/L
Seq No: 182964

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	U						0.22 J	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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Report

Quality Control Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

Report Number: 0012164-1

Date Reported: 01/04/01

Work Order: 0012164

QC Type: Post Digestion/Distillation Spike

Sample ID: 0011332-01C A

Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:28

Prep Batch ID: 4726

Units: µg/L

Seq No: 182965

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Mercury	11.4	0.22 J	10.0	112	85	115			

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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Final Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

SW-846 8270C: Semi-Volatiles, Water

QC Type: Method Blank
Sample ID: MB-4679
Run ID: HP-1_001215A

Analysis Date: 12/15/00 18:35
Prep Batch ID: 4679

Units: µg/L
Seq No: 180225

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	U	0	0	0		4			
Acenaphthylene	U	0	0	0		4			
Anthracene	U	0	0	0		2			
Benz(a)anthracene	U	0	0	0		2			
Benzo(a)pyrene	U	0	0	0		2			
Benzo(b)fluoranthene	U	0	0	0		3			
Benzo(ghi)perylene	U	0	0	0		2			
Benzo(k)fluoranthene	U	0	0	0		3			
Chrysene	U	0	0	0		2			
Dibenz(a,h)anthracene	U	0	0	0		2			
Fluoranthene	U	0	0	0		2			
Fluorene	U	0	0	0		3			
Indeno(1,2,3-cd)pyrene	U	0	0	0		2			
2-Methylnaphthalene	U	0	0	0		6			
Naphthalene	U	0	0	0		5			
Phenanthrene	U	0	0	0		2			
Pyrene	U	0	0	0		2			
Surrogates									
2,4,6-Tribromophenol	157	0	200	78.7	14	125.16			
2-Fluorophenol	113	0	200	56.3	4.41	76.9			
2-Fluorobiphenyl	66.1	0	100	66.1	13.06	102.75			
Nitrobenzene-d5	74.4	0	100	74.4	22.24	110.09			
Phenol-d6	76.7	0	200	38.4	5.1	62.14			
Terphenyl-d14	93.4	0	100	93.4	7.15	120.66			

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: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

QC Type: Laboratory Control Spike
Sample ID: LCS-4679
Run ID: HP-1_001215A

Analysis Date: 12/15/00 19:16
Prep Batch ID: 4679

Units: µg/L
Seq No: 180227

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	87.8		100	87.8	53	109			
4-Chloro-3-methylphenol	77.7		100	77.7	50	117			
2-Chlorophenol	74.3		100	74.3	43	100			
1,4-Dichlorobenzene	54.5		100	54.5	28	95			
2,4-Dinitrotoluene	83.0		100	83.0	59	120			
N-Nitrosodi-N-propylamine	77.4		100	77.4	46	106			
4-Nitrophenol	36.9		100	36.9	14	59			
Pentachlorophenol	77.6		100	77.6	46	130			
Phenol	38.0		100	38.0	15	56			
Pyrene	89.2		100	89.2	55	116			
1,2,4-Trichlorobenzene	55.5		100	55.5	34	99			
Surrogates									
2,4,6-Tribromophenol	180		200	89.9	14	125.16			
2-Fluorophenol	96.3		200	48.1	4.41	76.9			
2-Fluorobiphenyl	77.0		100	77.0	13.06	102.75			
Nitrobenzene-d5	72.8		100	72.8	22.24	110.09			
Phenol-d6	61.2		200	30.6	5.1	62.14			
Terphenyl-d14	83.0		100	83.0	7.15	120.66			

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

Anal. Lab. Report

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012164-1
Date Reported: 01/04/01
Work Order: 0012164

QC Type: Laboratory Control Spike Duplicate
Sample ID: LCSD-4679
Run ID: HP-1_001215A

Analysis Date: 12/15/00 19:57
Prep Batch ID: 4679

Units: µg/L
Seq No: 180230

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	86.1		100	86.1	53	109	87.8	2.0	28
4-Chloro-3-methylphenol	79.9		100	79.9	50	117	77.7	2.8	37
2-Chlorophenol	74.9		100	74.9	43	100	74.3	0.84	29
1,4-Dichlorobenzene	51.7		100	51.7	28	95	54.5	5.3	32
2,4-Dinitrotoluene	82.3		100	82.3	59	120	83.0	0.80	22
N-Nitrosodi-N-propylamine	79.0		100	79.0	46	106	77.4	2.0	55
4-Nitrophenol	36.2		100	36.2	14	59	36.9	2.1	47
Pentachlorophenol	81.5		100	81.5	46	130	77.6	4.9	49
Phenol	38.8		100	38.8	15	56	38.0	2.3	23
Pyrene	82.6		100	82.6	55	116	89.2	7.6	25
1,2,4-Trichlorobenzene	58.7		100	58.7	34	99	55.5	5.7	28
Surrogates									
2,4,6-Tribromophenol	176		200	88.0	14	125.16			
2-Fluorophenol	96.3		200	48.2	4.41	76.9			
2-Fluorobiphenyl	78.4		100	78.4	13.06	102.75			
Nitrobenzene-d5	73.7		100	73.7	22.24	110.09			
Phenol-d6	62.1		200	31.0	5.1	62.14			
Terphenyl-d14	81.5		100	81.5	7.15	120.66			

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

34

1612

On Site Technologies, LTD.

612 E. Murray Drive
Farmington, NM 87401
(505) 325-2432

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Subcontractor:

Mountain States Analytical, Inc.
1645 West 2200 South

TEL: (800) 973-6724
FAX: (801) 972-6278

Salt Lake City, UT 84119

Acct #:

07-Dec-00

Sample ID	Matrix	Collection Date	Bottle Type	Requested Tests				
				E300	SW6010B	SW7470	SW8270C	
0012011-02B	Aqueous	12/6/2000 12:20:00 PM	1LAMGU				1	
0012011-02D	Aqueous	12/6/2000 12:20:00 PM	500-IDPE		7		1	
0012011-02E	Aqueous	12/6/2000 12:20:00 PM	250-IDPE	2				
0012011-03B	Aqueous	12/6/2000 1:12:00 PM	1LAMGU				1	
0012011-03D	Aqueous	12/6/2000 1:12:00 PM	500-IDPE		7		1	
0012011-03E	Aqueous	12/6/2000 1:12:00 PM	250-IDPE	2				
0012011-04B	Aqueous	12/6/2000 2:18:00 PM	1LAMGU				1	
0012011-04D	Aqueous	12/6/2000 2:18:00 PM	500-IDPE		7			
0012011-04E	Aqueous	12/6/2000 2:18:00 PM	250-IDPE	2				
0012011-05B	Aqueous	12/6/2000 3:01:00 PM	1LAMGU				1	
0012011-05D	Aqueous	12/6/2000 3:01:00 PM	500-IDPE		7			
0012011-05E	Aqueous	12/6/2000 3:01:00 PM	250-IDPE	2				
0012011-06B	Aqueous	12/6/2000 3:52:00 PM	1LAMGU				1	
0012011-06D	Aqueous	12/6/2000 3:52:00 PM	500-IDPE		7			
0012011-06E	Aqueous	12/6/2000 3:52:00 PM	250-IDPE	2				

Comments:

Please analyze submitted water samples for (B) PAH by SW8270, (D) Total Metals: Cr, Pb, As, Se, Ag, Ba, Cd and Hg by SW6010B, (E) Fluoride and Bromide. Refer to prior MSAI work order #0001009.

Date/Time		Date/Time	
Relinquished by: <u>Heidi Rose</u>	Relinquished by: <u>Heidi Rose</u>	Received by: <u>Matthew J. Edna</u>	Received by: <u>Matthew J. Edna</u>
Relinquished by: <u>Heidi Rose</u>	Relinquished by: <u>Heidi Rose</u>	Received by: <u>Matthew J. Edna</u>	Received by: <u>Matthew J. Edna</u>

Mountain States Analytical, Inc.

Sample Receipt Checklist

Client Name On Site Technologies
Carrier: UPS

Work Order No. 0012164
Carrier Number: 1Z 66E 585 01 1001 702 4

Cooler Information:

Cooler Number/ID: OST F

Condition of Shipping Container: ☒ Good ☐ Fair ☐ Damaged

(If damaged, explain) _____

Cooler Sealed: ☒ Yes ☐ No ☐ Not Applicable

Custody Seals Present: ☒ Yes ☐ No ☐ Not Applicable

☒ Intact

☐ Broken

Seal Number: _____

Coolant:

☒ Ice

☐ Blue Ice

☐ None

☐ Other: _____

Temperature:

20C

Thermometer ID: 3910

Correction Factor: 0

Packing material paper, bubble wrap, ice

Surface Radioactivity Reading (if required) _____ mR/hr

Ludlum Model 3 Serial # _____

Chain-Of-Custody Information:

COC Present:

☒ Yes

☐ No

Other: _____

COC signed (relinquished and received):

☒ Yes

☐ No

Not Applicable

COC agrees with sample labels:

☒ Yes

☐ No

Notes: Chain - 0012016 label 12016

Sample Information:

Samples included in cooler: 0012014 - (02D, 03D, 04D, 05D, 06D, 06E, 07E, 08D, 08E)
0012016 - (02B, 03B, 04B, 05B, 05E, 06B, 06E, 07B, 07E)

Custody Seals Present:

Yes

☒ No

Not Applicable

Other: _____

Intact

☐ Broken

Seal Number(s) _____

Sample containers intact:

☒ Yes

☐ No

Notes: _____

Samples in proper containers:

☒ Yes

☐ No

Sufficient sample volume:

☒ Yes

☐ No

All samples received in hold time:

☒ Yes

☐ No

Water - Volatiles zero headspace:

Yes

☐ No

☒ Not Applicable

Pre-preserved with HCL: YES NO

Notes: _____

Water - pH acceptable upon receipt:

☒ Yes

Adjusted (see comments below)

Not Applicable

HNO₃ = < 2

H₂SO₄ = _____

NaOH = _____

ZnAC / NaOH = _____

Water - pH adjusted: (MSAI Tracking No.)

HNO₃ _____

H₂SO₄ _____

NaOH _____

ZnAC _____

Na₂SO₃ _____

Other _____

Notes: _____

Cooler Contents Inspected & Verified By:

Matthew J. Eden

Date: 12/12/00

Time: 1706

Mountain States Analytical, Inc.

Sample Receipt Checklist

Client Name On Site Technologies
Carrier: UPS

Work Order No. 0012164
Carrier Number: 17 66E 585 01 1001 700 6

Cooler Information:

Cooler Number/ID: OST D

Condition of Shipping Container: ☒ Good ☐ Fair ☐ Damaged

(If damaged, explain) _____

Cooler Sealed: ☒ Yes ☐ No ☐ Not Applicable

Custody Seals Present: ☒ Yes ☐ No ☐ Not Applicable

☒ Intact

☐ Broken

Seal Number: _____

Coolant: ☒ Ice ☐ Blue Ice ☐ None ☐ Other: _____

Temperature: 3.5°C Thermometer ID: 3365 Correction Factor: 0

Packing material ice, bubble wrap, paper

Surface Radioactivity Reading (if required) _____ mR/hr Ludlum Model 3 Serial # _____

Chain-Of-Custody Information:

COC Present: ☒ Yes ☐ No ☐ Other: _____

COC signed (relinquished and received): ☒ Yes ☐ No ☐ Not Applicable

COC agrees with sample labels: ☒ Yes ☐ No

Notes: _____

Sample Information:

Samples included in cooler: 0012011 - (02B, 02D, 02E, 03B, 03D, 03E, 04B, 04D, 04E, 04F, 05B, 05D, 05E, 06B, 06D, 06E)
001201A - (02B, 02E, 03E, 04E, 05E)

Custody Seals Present: Yes ☒ No ☐ Not Applicable ☐ Other _____
Intact ☐ Broken ☐ Seal Number(s) _____

Sample containers intact: ☒ Yes ☐ No Notes: _____

Samples in proper containers: ☒ Yes ☐ No _____

Sufficient sample volume: ☒ Yes ☐ No _____

All samples received in hold time: ☒ Yes ☐ No _____

Water - Volatiles zero headspace: Yes ☐ No ☒ Not Applicable Pre-preserved with HCL: YES ☐ NO ☐

Notes: _____

Water - pH acceptable upon receipt: ☒ Yes ☐ Adjusted (see comments below) ☐ Not Applicable
HNO₃ = <2 H₂SO₄ = _____ NaOH = _____ ZnAC / NaOH = _____

Water - pH adjusted: (MSAI Tracking No.)

HNO₃ _____ H₂SO₄ _____ NaOH _____

ZnAC _____ Na₂SO₃ _____ Other _____

Notes: _____

Cooler Contents Inspected & Verified By:

Matthew J. Eden

Date: 12/13/00

Time: 1229

Mountain States Analytical, Inc.

Sample Receipt Checklist

Client Name On Site Technologies
Carrier: UPS

Work Order No. 0012164
Carrier Number: 1Z 66E 585 01 1001 701 5

Cooler Information:

Cooler Number/ID: OST G

Condition of Shipping Container: Good Fair Damaged

(If damaged, explain) _____

Cooler Sealed: Yes No Not Applicable

Custody Seals Present: Yes No Not Applicable

Intact

Broken

Seal Number: _____

Coolant:

Ice

Blue Ice

None

Other: _____

Temperature:

4.5°C

Thermometer ID: 3365

Correction Factor: 0

Packing material ice, bubble wrap, paper

Surface Radioactivity Reading (If required) _____ mR/hr

Ludlum Model 3 Serial # _____

Chain-Of-Custody Information:

COC Present:

Yes

No

Other: _____

COC signed (relinquished and received):

Yes

No

Not Applicable

COC agrees with sample labels:

Yes

No

Notes: Chain - 0012016 label - 12016

Sample Information:

Samples Included in cooler: 0012014 - (03B, 04B, 05B, 06B, 07B, 08B) ME
0012016 - (02D, 02E, 03D, 03E, 04D, 04E, 05D, 06D, 07D)

Custody Seals Present:

Yes

No

Not Applicable

Other: _____

Intact

Broken

Seal Number(s) _____

Sample containers intact:

Yes

No

Notes: _____

Samples in proper containers:

Yes

No

Sufficient sample volume:

Yes

No

All samples received in hold time:

Yes

No

Water - Volatiles zero headspace:

Yes

No

Not Applicable

Pre-preserved with HCL: YES NO

Notes: _____

Water - pH acceptable upon receipt:

Yes

Adjusted (see comments below)

Not Applicable

HNO₃ = < 2

H₂SO₄ = _____

NaOH = _____

ZnAC / NaOH = _____

Water - pH adjusted: (MSAI Tracking No.)

HNO₃ _____

H₂SO₄ _____

NaOH _____

ZnAC _____

Na₂SO₃ _____

Other _____

Notes: _____

Cooler Contents Inspected & Verified By:

Matthew L. Eden

Date: 12/12/00

Time: 1251

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

January 26, 2001

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

RE: Thriftway Refinery, Site 810

Order No.: 0012016

Dear Terry Griffin,

On Site Technologies, LTD. received 7 samples on 12/8/2000 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)
- Hardness, Total (M2340 B)
- 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 (CALC)
- Total Dissolved Solids (E160.1)

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EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

January 26, 2001

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

RE: Thriftway Refinery, Site 810

Order No.: 0012016

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

P.O. BOX 2606 • FARMINGTON, NM 87499
EMAIL: ONSITE@ONSITELTD.COM

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On Site Technologies, LTD.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery, Site 810
Lab Order: 0012016

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

Cation-Anion Balance 0012016-02C Thriftway Refinery; MW-15
Total Cation-Anion = 161.32 meq/L
Difference Cation-Anion = 3.90 meq/L
% Difference = 2.4 %

Cation-Anion Balance 0012016-03C Thriftway Refinery; MW-20
Total Cation-Anion = 146.68 meq/L
Difference Cation-Anion = 1.95 meq/L
% Difference = 1.3 %

Cation-Anion Balance 0012016-04C Thriftway Refinery; MW-20 Duplicate
Total Cation-Anion = 142.73 meq/L
Difference Cation-Anion = 0.76 meq/L
% Difference = 0.5 %

Cation-Anion Balance 0012016-05C Thriftway Refinery; MW-21
Total Cation-Anion = 258.28 meq/L
Difference Cation-Anion = 15.92 meq/L
% Difference = 6.2 %

Cation-Anion Balance 0012016-06C Thriftway Refinery; MW-22
Total Cation-Anion = 184.77 meq/L
Difference Cation-Anion = 6.74 meq/L
% Difference = 3.6 %

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery, Site 810
Lab Order: 0012016

CASE NARRATIVE

Cation-Anion Balance 0012016-07C Thriftway Refinery; MW-12

Total Cation-Anion = 189.09 meq/L

Difference Cation-Anion = 9.05 meq/L

% Difference = 4.8 %

Analytical Comments for METHOD BTEX_W 12/12/2000, LCS WATER: Two parameters exceeded historical limits; Benzene %R=94.9 (Limit 96%-111%) and Toluene %R=96.6% (Limit 97%-109%). Determined that working standard utilized for LCS WATER was in error by preparing new working standard and confirming recoveries with additional Laboratory Control Sample, LCS2 WATER. Initial LCS WATER is reported in quality control summary with appropriate qualifier for Benzene and Toluene, S - Spike recovery outside accepted recovery limit.

OFF: (505) 325-5667
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LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	Travel Blank
Lab ID:	0012016-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 9:20:00 AM
		COC Record:	11058

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	12/12/2000
Benzene	ND	0.5		µg/L	1	12/12/2000
Toluene	ND	0.5		µg/L	1	12/12/2000
Ethylbenzene	ND	0.5		µg/L	1	12/12/2000
m,p-Xylene	ND	1		µg/L	1	12/12/2000
o-Xylene	ND	0.5		µg/L	1	12/12/2000

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 13

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OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	MW-15
Lab ID:	0012016-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 9:40:00 AM
		COC Record:	11058

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	12/12/2000
Benzene	ND	0.5		µg/L	1	12/12/2000
Toluene	ND	0.5		µg/L	1	12/12/2000
Ethylbenzene	ND	0.5		µg/L	1	12/12/2000
m,p-Xylene	ND	1		µg/L	1	12/12/2000
o-Xylene	ND	0.5		µg/L	1	12/12/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	410	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	4.2	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	59	5		mg/L	20	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1220	125		mg/L	500	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO3)	220	5		mg/L CaCO3	1	12/12/2000
Alkalinity, Carbonate (As CaCO3)	ND	5		mg/L CaCO3	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO3	1	12/12/2000
Alkalinity, Total (As CaCO3)	220	5		mg/L CaCO3	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	200	1		mg/L	1	12/18/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	4510	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO3)	1270	1		mg/L	1	12/20/2000
PH						
		E150.1				Analyst: HR
pH	7.33	2		pH units	1	12/8/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	3530	5		mg/L	1	12/18/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	5840	40		mg/L	1	12/13/2000

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 2

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LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	MW-15
Lab ID:	0012016-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 9:40:00 AM
		COC Record:	11058

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	5560		40	mg/L	1	12/20/2000

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

2 of 2

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LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	MW-20
Lab ID:	0012016-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 10:39:00 AM
		COC Record:	11058

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	120	1		µg/L	1	12/12/2000
Benzene	0.7	0.5		µg/L	1	12/12/2000
Toluene	ND	0.5		µg/L	1	12/12/2000
Ethylbenzene	ND	0.5		µg/L	1	12/12/2000
m,p-Xylene	ND	1		µg/L	1	12/12/2000
o-Xylene	ND	0.5		µg/L	1	12/12/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	480	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	5.4	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	75	12		mg/L	50	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1020	125		mg/L	500	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	1020	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	1020	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	130	1		mg/L	1	12/18/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	4010	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	1500	1		mg/L	1	12/20/2000
PH						
		E150.1				Analyst: HR
pH	7.18	2		pH units	1	12/8/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	2500	5		mg/L	1	12/18/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	4940	40		mg/L	1	12/13/2000

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 2

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	MW-20
Lab ID:	0012016-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 10:39:00 AM
		COC Record:	11058

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	4810		40	mg/L	1	12/20/2000

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

2 of 2

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
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LAB: (505) 325-1556
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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	MW-20 Duplicate
Lab ID:	0012016-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 11:00:00 AM
		COC Record:	11058

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	110	1		µg/L	1	12/12/2000
Benzene	0.6	0.5		µg/L	1	12/12/2000
Toluene	ND	0.5		µg/L	1	12/12/2000
Ethylbenzene	ND	0.5		µg/L	1	12/12/2000
m,p-Xylene	ND	1		µg/L	1	12/12/2000
o-Xylene	ND	0.5		µg/L	1	12/12/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	470	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	5.2	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	75	12		mg/L	50	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	950	125		mg/L	500	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	1090	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	1090	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	120	1		mg/L	1	12/18/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	3940	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	1480	1		mg/L	1	12/20/2000
PH						
		E150.1				Analyst: HR
pH	7.20	2		pH units	1	12/8/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	2420	5		mg/L	1	12/18/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	4820	40		mg/L	1	12/13/2000

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

Sur: - Surrogate

1 of 2

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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	MW-20 Duplicate
Lab ID:	0012016-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 11:00:00 AM
		COC Record:	11058

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	4700		40	mg/L	1	12/20/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	MW-21
Lab ID:	0012016-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 11:49:00 AM
		COC Record:	11058

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	32	1		µg/L	1	12/12/2000
Benzene	ND	0.5		µg/L	1	12/12/2000
Toluene	ND	0.5		µg/L	1	12/12/2000
Ethylbenzene	ND	0.5		µg/L	1	12/12/2000
m,p-Xylene	ND	1		µg/L	1	12/12/2000
o-Xylene	ND	0.5		µg/L	1	12/12/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	420	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	8.8	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	84	12		mg/L	50	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	2140	250		mg/L	1000	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	790	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	790	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	180	1		mg/L	1	12/18/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	10270	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	1400	1		mg/L	1	12/20/2000
PH						
		E150.1				Analyst: HR
pH	7.18	2		pH units	1	12/8/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	5720	5		mg/L	1	12/18/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	9580	40		mg/L	1	12/13/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	MW-21
Lab ID:	0012016-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 11:49:00 AM
		COC Record:	11058

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	9020		40	mg/L	1	12/20/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	MW-22
Lab ID:	0012016-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 12:31:00 PM
		COC Record:	11058

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	5.4	1		µg/L	1	12/12/2000
Benzene	ND	0.5		µg/L	1	12/12/2000
Toluene	ND	0.5		µg/L	1	12/12/2000
Ethylbenzene	ND	0.5		µg/L	1	12/12/2000
m,p-Xylene	ND	1		µg/L	1	12/12/2000
o-Xylene	ND	0.5		µg/L	1	12/12/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	240	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	8	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	48	12		mg/L	50	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1670	250		mg/L	1000	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	330	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	330	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	210	1		mg/L	1	12/18/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	7630	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	809	1		mg/L	1	12/20/2000
PH						
		E150.1				Analyst: HR
pH	7.26	2		pH units	1	12/8/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	4060	5		mg/L	1	12/18/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	6640	40		mg/L	1	12/13/2000

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 2

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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	MW-22
Lab ID:	0012016-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 12:31:00 PM
		COC Record:	11058

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS	CALC					Analyst: HR
Total Dissolved Solids (Calculated)	6440	40		mg/L	1	12/20/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	MW-12
Lab ID:	0012016-07A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 1:20:00 PM
		COC Record:	11058

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	150	1		µg/L	1	12/12/2000
Benzene	20	0.5		µg/L	1	12/12/2000
Toluene	1	0.5		µg/L	1	12/12/2000
Ethylbenzene	35	0.5		µg/L	1	12/12/2000
m,p-Xylene	69	1		µg/L	1	12/12/2000
o-Xylene	3.4	0.5		µg/L	1	12/12/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	380	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	5.7	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	78	12		mg/L	50	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1480	125		mg/L	500	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	1140	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	1140	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	360	1		mg/L	1	12/18/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	6100	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	1260	1		mg/L	1	12/20/2000
PH						
		E150.1				Analyst: HR
pH	6.59	2		pH units	1	12/8/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	3380	5		mg/L	1	12/18/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	6280	40		mg/L	1	12/15/2000

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 2

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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012016	Client Sample ID:	MW-12
Lab ID:	0012016-07A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/8/2000 1:20:00 PM
		COC Record:	11058

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS	CALC					Analyst: HR
Total Dissolved Solids (Calculated)	6360	40		mg/L	1	12/20/2000

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 -

On Site Technologies, LTD.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012016	Run ID: GC-1_001212A		SeqNo: 33349	
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	ND	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

1 of 1

On Site Technologies, LTD.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0012014-05AMS			Batch ID: GC-1_001212		Test Code: SW8021B		Units: µg/L		Analysis Date 12/12/2000		Prep Date:	
Client ID:			0012016		Run ID: GC-1_001212A				SeqNo: 33350			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	184.8	2.5	200	0.172	92.3%	88	112					
Ethylbenzene	186.2	2.5	200	0	93.1%	86	113					
m,p-Xylene	370.5	5	400	0	92.6%	85	108					
Methyl tert-Butyl Ether	423.9	5	200	236.8	93.6%	86	117					
o-Xylene	188.6	2.5	200	0.3305	94.1%	92	110					
Toluene	186.8	2.5	200	0	93.4%	88	116					

Sample ID: 0012014-05AMS		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000		Prep Date:				
Client ID:		0012016	Run ID:	GC-1_001212A	SeqNo: 33351						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	183.2	2.5	200	0.172	91.5%	88	112	184.8	0.9%		6
Ethylbenzene	184.8	2.5	200	0	92.4%	86	113	186.2	0.7%		6
m,p-Xylene	368	5	400	0	92.0%	85	108	370.5	0.7%		6
Methyl tert-Butyl Ether	427	5	200	236.8	95.1%	86	117	423.9	0.7%		7
o-Xylene	187.7	2.5	200	0.3305	93.7%	92	110	188.6	0.5%		6
Toluene	185.2	2.5	200	0	92.6%	88	116	186.8	0.8%		6

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: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000		Prep Date:				
Client ID:		0012016	Run ID: GC-1_001212A		SeqNo: 33347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	37.95	0.5	40	0	94.9%	96	111				S
Ethylbenzene	38.62	0.5	40	0	96.5%	96	111				
m,p-Xylene	76.99	1	80	0	96.2%	92	105				
Methyl tert-Butyl Ether	38.23	1	40	0	95.6%	93	113				
o-Xylene	39.04	0.5	40	0	97.6%	97	110				
Toluene	38.65	0.5	40	0	96.6%	97	109				S

Sample ID: LCS2 WATER	Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000	Prep Date:						
Client ID:	0012016	Run ID: GC-1_001212A		SeqNo: 33348							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.68	0.5	40	0	99.2%	96	111				
Ethylbenzene	38.82	0.5	40	0	97.0%	96	111				
m,p-Xylene	77.39	1	80	0	96.7%	92	105				
Methyl tert-Butyl Ether	39.87	1	40	0	99.7%	93	113				
o-Xylene	38.99	0.5	40	0	97.5%	97	110				
Toluene	39.28	0.5	40	0	98.2%	97	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

On Site Technologies, LTD.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0010		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000				Prep Date:			
Client ID: 0012016		Run ID: GC-1_001212A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	19.1		0.5	20	0	95.5%	85	115				
Ethylbenzene	19.58		0.5	20	0	97.9%	85	115				
m,p-Xylene	39.08		1	40	0	97.7%	85	115				
Methyl tert-Butyl Ether	18.7		1	20	0	93.5%	85	115				
o-Xylene	19.77		0.5	20	0	98.8%	85	115				
Toluene	19.37		0.5	20	0	96.9%	85	115				
1,4-Difluorobenzene	74.23		0	80	0	92.8%	70	130				
4-Bromochlorobenzene	82.41		0	80	0	103.0%	70	130				
Fluorobenzene	74.67		0	80	0	93.3%	70	130				

Sample ID: CCV2 BTEX_0010		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000				Prep Date:			
Client ID: 0012016		Run ID: GC-1_001212A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Benzene	18.51	0.5	20	0	92.5%	85	115					
Ethylbenzene	19.03	0.5	20	0	95.1%	85	115					
m,p-Xylene	37.95	1	40	0	94.9%	85	115					
Methyl tert-Butyl Ether	19.19	1	20	0	96.0%	85	115					
o-Xylene	19.37	0.5	20	0	96.9%	85	115					
Toluene	18.84	0.5	20	0	94.2%	85	115					
1,4-Difluorobenzene	74.39	0	80	0	93.0%	70	130					
t-Bromochlorobenzene	82.58	0	80	0	103.2%	70	130					
Fluorobenzene	74.19	0	80	0	92.7%	70	130					

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: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0010		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000			Prep Date:		
Client ID: 0012016		Run ID: GC-1_001212A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 33344	%RPD	RPDLimit	Qual
Analyte	Result						LowLimit	HighLimit	RPD Ref Val	
Benzene	36.68		0.5	40	0	91.7%	85	115		
Ethylbenzene	37.39		0.5	40	0	93.5%	85	115		
m,p-Xylene	74.7		1	80	0	93.4%	85	115		
Methyl tert-Butyl Ether	36.96		1	40	0	92.4%	85	115		
o-Xylene	38		0.5	40	0	95.0%	85	115		
Toluene	37.47		0.5	40	0	93.7%	85	115		
1,4-Difluorobenzene	73.63		0	80	0	92.0%	70	130		
4-Bromochlorobenzene	80.04		0	80	0	100.1%	70	130		
Fluorobenzene	74.3		0	80	0	92.9%	70	130		

Sample ID: CCV4 BTEX_0012		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L		Analysis Date 12/12/2000			Prep Date:				
Client ID:		Run ID:	GC-1_001212A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	19.98			0.5	20	0	99.9%	85	115				
Ethylbenzene	19.72			0.5	20	0	98.6%	85	115				
m,p-Xylene	39.38			1	40	0	98.5%	85	115				
Methyl tert-Butyl Ether	19.15			1	20	0	95.7%	85	115				
o-Xylene	19.82			0.5	20	0	99.1%	85	115				
Toluene	19.72			0.5	20	0	98.6%	85	115				
1,4-Difluorobenzene	73.77			0	80	0	92.2%	70	130				
4-Bromochlorobenzene	84.97			0	80	0	106.2%	70	130				
Fluorobenzene	74.9			0	80	0	93.6%	70	130				

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: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV5 BTEX_0012		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000				Prep Date:		
Client ID: 0012016		Run ID: GC-1_001212A			SeqNo: 33346						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.44	0.5	20	0	97.2%	85	115				
Ethylbenzene	19.19	0.5	20	0	95.9%	85	115				
m,p-Xylene	38.33	1	40	0	95.8%	85	115				
Methyl tert-Butyl Ether	19.96	1	20	0	99.8%	85	115				
o-Xylene	19.34	0.5	20	0	96.7%	85	115				
Toluene	19.22	0.5	20	0	96.1%	85	115				
1,4-Difluorobenzene	73.58	0	80	0	92.0%	70	130				
4-Bromochlorobenzene	82.38	0	80	0	103.0%	70	130				
Fluorobenzene	75.02	0	80	0	93.8%	70	130				

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: 0012016
Project: Thriftway Refinery, Site 810
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0012011-06A	90.3	103	91.9
0012014-05A	92.2	103	93.5
0012014-05AMS	91.5	104	92.7
0012014-05AMSD	91.5	104	92.8
0012014-06A	93.8	103	94
0012014-07A	93.4	103	94.7
0012014-08A	93	101	94.6
0012016-01A	93	102	94.5
0012016-02A	93.7	103	94.4
0012016-03A	92.1	104	92.5
0012016-04A	91.5	104	93.5
0012016-05A	93.4	104	94
0012016-06A	93.5	104	94.5
0012016-07A	91.8	109	93.4
CCV1 BTEX_00100	92.8	103	93.3
CCV2 BTEX_00100	93	103	92.7
CCV3 BTEX_00100	92	100	92.9
CCV4 BTEX_00121	92.2	106	93.6
CCV5 BTEX_00121	92	103	93.8
LCS WATER	92	103	93
LCS2 WATER	92.7	104	92.5
MB1	93.1	102	94.7

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits

On Site Technologies, LTD.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001213B		SeqNo: 33325	
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: MBlank	Batch ID: API_001207	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207C		SeqNo: 33433	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	2.6	5			J
Alkalinity, Carbonate (As CaCO3)	ND	5			
Alkalinity, Hydroxide	ND	5			
Alkalinity, Total (As CaCO3)	2.6	5			J

Sample ID: MBlank	Batch ID: API_001207	Test Code: E120.1	Units: uS/cm	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207D		SeqNo: 33456	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	ND	2			

Sample ID: MBlank	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/8/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207E		SeqNo: 33482	
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

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: 0012016
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date: 12/13/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207E		SeqNo: 33495	
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: MBlank	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date: 12/15/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207E		SeqNo: 33507	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera) 24 40 J					
Sample ID: MBlank	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date: 12/18/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207F		SeqNo: 33547	
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_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 12/12/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207G		SeqNo: 33565	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate ND 5					
Sample ID: MBlank	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date: 12/18/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207G		SeqNo: 33578	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate ND 5					

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

CLIENT: BioTech Remediation, Inc.

Work Order: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/29/2000	Prep Date:						
Client ID:	0012016	Run ID: WET CHEM_0012071		SeqNo: 33937							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND										

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

3 of 3

On Site Technologies, LTD.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0012011-02CD	Batch ID: API_001207	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 12/12/2000	Prep Date:
Client ID: 0012016	Run ID: WET CHEM_001207C			SeqNo: 33436	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	827	5	0	0	0.0% 0 820 0.9% 3
Alkalinity, Carbonate (As CaCO3)	ND	5	0	0	0.0% 0 0 0.0% 3
Alkalinity, Hydroxide	ND	5	0	0	0.0% 0 0 0.0% 3
Alkalinity, Total (As CaCO3)	827	5	0	0	0.0% 0 820 0.9% 3

Sample ID: 0012011-02CD	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID: 0012016	Run ID: WET CHEM_001207E			SeqNo: 33486	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	3650	40	0	0	0.0% 0 3684 0.9% 8

Sample ID: 0012011-02CD	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/12/2000	Prep Date:
Client ID: 0012016	Run ID: WET CHEM_001207G			SeqNo: 33568	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	1714	5	0	0	0.0% 0 1731 1.0% 12

Sample ID: 0012014-04CD	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID: 0012016	Run ID: WET CHEM_001207F			SeqNo: 33556	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	305	1	0	0	0.0% 0 299 2.0% 10

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: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0012014-06CD	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:
Client ID: 0012016	Run ID: WET CHEM_001213B			SeqNo: 33329	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	6094	40	0	0	6086 0.1% 8

Sample ID: 0012014-06CD	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:
Client ID: 0012016	Run ID: WET CHEM_001207E			SeqNo: 33498	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	6094	40	0	0	6086 0.1% 8

Sample ID: 0012014-06CD	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/29/2000	Prep Date:
Client ID: 0012016	Run ID: WET CHEM_001207I			SeqNo: 33942	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	55	1	0	0	56 1.8% 10

Sample ID: 0012016-02CD	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID: MW-15	Run ID: WET CHEM_001207G			SeqNo: 33584	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	3535	5	0	0	3527 0.2% 12

Sample ID: 0012016-07CD	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/15/2000	Prep Date:
Client ID: MW-12	Run ID: WET CHEM_001207E			SeqNo: 33510	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	6242	40	0	0	6276 0.5% 8

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: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3030	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207F		SeqNo: 33548	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	206	1	200	0	103.0% 79 109

Sample ID: LCS 3030	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207F		SeqNo: 33560	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	201	1	200	0	100.5% 79 109

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001213B		SeqNo: 33326	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filter)	312	40	337	0	92.6% 86 110

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207C		SeqNo: 33434	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Total (As CaCO3)	77.2	5	73	2.6	102.2% 96 104

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207C		SeqNo: 33445	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Total (As CaCO3)	76.6	5	73	2.6	101.4% 96 104

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: 0012016
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E120.1	Units: uS/cm	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207D		SeqNo: 33457	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	447	2	442	0	101.1% 96 103

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E120.1	Units: uS/cm	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207D		SeqNo: 33467	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	449	2	442	0	101.6% 96 103

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E120.1	Units: uS/cm	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207D		SeqNo: 33477	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	440	2	442	0	99.5% 96 103

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/8/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207E		SeqNo: 33483	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	358	40	337	0	106.2% 86 110

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:
Client ID:	0012016	Run ID: WET CHEM_001207E		SeqNo: 33496	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	312	40	337	0	92.6% 86 110

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: 0012016
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3031 Batch ID: API_001207 Test Code: E160.1 Units: mg/L Analysis Date 12/15/2000 Prep Date:
Client ID: 0012016 Run ID: WET CHEM_001207E SeqNo: 33508

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera 318 40 337 24 87.2% 86 110

Sample ID: LCS 3031 Batch ID: API_001207 Test Code: M4500-SO4 D Units: mg/L Analysis Date 12/12/2000 Prep Date:
Client ID: 0012016 Run ID: WET CHEM_001207G SeqNo: 33566

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate 21.4 5 19.6 0 109.2% 86 111

Sample ID: LCS 3031 Batch ID: API_001207 Test Code: M4500-SO4 D Units: mg/L Analysis Date 12/18/2000 Prep Date:
Client ID: 0012016 Run ID: WET CHEM_001207G SeqNo: 33579

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate 19.8 5 19.6 0 101.0% 86 111

Sample ID: LCS 3031 Batch ID: API_001207 Test Code: E325.3 Units: mg/L Analysis Date 12/29/2000 Prep Date:
Client ID: 0012016 Run ID: WET CHEM_001207I SeqNo: 33938

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride 75.1 1 73 0 102.9% 79 109

Sample ID: LCS 3033 Batch ID: API_001207 Test Code: E150.1 Units: pH units Analysis Date 12/7/2000 Prep Date:
Client ID: 0012016 Run ID: WET CHEM_001207B SeqNo: 33409

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
pH 7.939 2 7.95 0 99.9% 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

CLIENT: BioTech Remediation, Inc.
Work Order: 0012016
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3033		Batch ID: API_001207		Test Code: E150.1		Units: pH units		Analysis Date 12/7/2000		Prep Date:	
Client ID:		0012016		Run ID:		WET CHEM_001207B		SeqNo: 33422			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
pH		7.955		2	7.95	0	100.1%	80	120		

Sample ID: LCS 3033		Batch ID: API_001207		Test Code: E150.1		Units: pH units		Analysis Date 12/8/2000		Prep Date:	
Client ID:		0012016		Run ID:		WET CHEM_001207B		SeqNo: 33423			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
pH		7.96		2	7.95	0	100.1%	80	120		

Sample ID: LCS 3033		Batch ID: API_001207		Test Code: E150.1		Units: pH units		Analysis Date 12/8/2000		Prep Date:	
Client ID:		0012016		Run ID:		WET CHEM_001207B		SeqNo: 33431			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
pH		7.952		2	7.95	0	100.0%	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

On Site Technologies, LTD.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: AA_12/20/200	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220A		SeqNo: 33635	
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_12/20/200	Test Code: E215.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220B		SeqNo: 33660	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	.02	0.25			
Sample ID: MBlank	Batch ID: AA_12/20/200	Test Code: E242.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220C		SeqNo: 33685	
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_12/20/200	Test Code: E258.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220D		SeqNo: 33710	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	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.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0012014-05CMS	Batch ID: AA_12/20/2000	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID: 0012016	Run ID: AA_001220A	SeqNo: 33647			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	2720	125	2000	745	98.8% 85 115
Sample ID: 0012014-05CMS	Batch ID: AA_12/20/2000	Test Code: E215.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID: 0012016	Run ID: AA_001220B	SeqNo: 33672			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	1120	50	800	400	90.0% 82 121
Sample ID: 0012014-05CMS	Batch ID: AA_12/20/2000	Test Code: E258.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID: 0012016	Run ID: AA_001220D	SeqNo: 33722			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	35.2	1.2	25	7.2	112.0% 51 167
Sample ID: 0012014-06CMS	Batch ID: AA_12/20/2000	Test Code: E242.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID: 0012016	Run ID: AA_001220C	SeqNo: 33699			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	168	6.2	100	62	106.0% 96 111

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: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012016

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1	Batch ID: AA_12/20/2000	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220A		SeqNo: 33636	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	3.04	0.25	3.24	0	93.8% 90 110
Sample ID: CCV1	Batch ID: AA_12/20/2000	Test Code: E215.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220B		SeqNo: 33661	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	3.12	0.25	3.28	0	95.1% 90 110
Sample ID: CCV1	Batch ID: AA_12/20/2000	Test Code: E242.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220C		SeqNo: 33686	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	2.2	0.25	2.08	0	105.8% 90 110
Sample ID: CCV1	Batch ID: AA_12/20/2000	Test Code: E258.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220D		SeqNo: 33711	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	2.12	0.25	2.07	0	102.4% 90 110
Sample ID: CCV2	Batch ID: AA_12/20/2000	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220A		SeqNo: 33648	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	2.98	0.25	3.24	0	92.0% 90 110

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: 0012016
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2	Batch ID: AA_12/20/200	Test Code: E215.1	Units: mg/L	Analysis Date: 12/20/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220B		SeqNo: 33673	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	3.05	0.25	3.28	93.0%	90 110

Sample ID: CCV2	Batch ID: AA_12/20/200	Test Code: E242.1	Units: mg/L	Analysis Date: 12/20/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220C		SeqNo: 33697	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	1.09	0.25	1.04	104.8%	90 110

Sample ID: CCV2	Batch ID: AA_12/20/200	Test Code: E258.1	Units: mg/L	Analysis Date: 12/20/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220D		SeqNo: 33723	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	2.08	0.25	2.07	100.5%	90 110

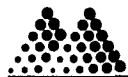
Sample ID: CCV3	Batch ID: AA_12/20/200	Test Code: E273.1	Units: mg/L	Analysis Date: 12/19/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220A		SeqNo: 33659	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	2.96	0.25	3.24	91.4%	90 110

Sample ID: CCV3	Batch ID: AA_12/20/200	Test Code: E215.1	Units: mg/L	Analysis Date: 12/20/2000	Prep Date:
Client ID:	0012016	Run ID: AA_001220B		SeqNo: 33684	
Analyte	Result	PQL	SPK value	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	3.06	0.25	3.28	93.3%	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



Mountain States Analytical, Inc.

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Analytical Report 15 Years

January 19, 2001

Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-1556 Fax: (505) 325-6256

Project: Water Analysis

Work Order: 0012160

Dear Mr. David Cox,

Thank you for using Mountain States Analytical, Inc. (MSAI) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

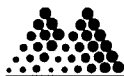
This is Report Number 0012160-3 and contains 36 pages of information for the 6 samples submitted to MSAI on Tuesday, December 12, 2000. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached" are included by reference as attachments following page 36. For regulatory compliance reporting, individual pages or portions of this report may not be separated.

Dibenz(a,h)acridine could not be reported for the semivolatile organic list of analytes as it was not present in the standard mix used for the control.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msailabs.com.

Mountain States Analytical, Inc.

Rolf E. Larsen
Project Manager



Mountain States Analytical, Inc.

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Sample Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0012160-01A	0012016-02B		Water	12/08/00
0012160-01B	0012016-02D		Water	12/08/00
0012160-01C	0012016-02E		Water	12/08/00
0012160-02A	0012016-03B		Water	12/08/00
0012160-02B	0012016-03D		Water	12/08/00
0012160-02C	0012016-03E		Water	12/08/00
0012160-03A	0012016-04B		Water	12/08/00
0012160-03B	0012016-04D		Water	12/08/00
0012160-03C	0012016-04E		Water	12/08/00
0012160-04A	0012016-05B		Water	12/08/00
0012160-04B	0012016-05D		Water	12/08/00
0012160-04C	0012016-05E		Water	12/08/00
0012160-05A	0012016-06B		Water	12/08/00
0012160-05B	0012016-06D		Water	12/08/00
0012160-05C	0012016-06E		Water	12/08/00
0012160-06A	0012016-07B		Water	12/08/00
0012160-06B	0012016-07D		Water	12/08/00
0012160-06C	0012016-07E		Water	12/08/00



Mountain States Analytical, Inc.

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Holding Time Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

Sample ID	Client Sample ID	Date Collected						
0012160-01A	0012016-02B	12/08/00 09:40						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Semi-Volatiles					12/13/00 10:00	7	12/15/00 20:39	40
0012160-01B	0012016-02D	12/08/00 09:40						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CVAA					12/20/00 13:58		12/20/00 17:11	28
Metals by ICP					12/14/00 12:54		12/18/00 13:20	180
0012160-01C	0012016-02E	12/08/00 09:40						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Anions by I. C. (Br, Cl, F, SO4)							12/14/00 20:48	28
0012160-02A	0012016-03B	12/08/00 10:39						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Semi-Volatiles					12/13/00 10:00	7	12/15/00 21:20	40
0012160-02B	0012016-03D	12/08/00 10:39						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CVAA					12/20/00 13:58		12/20/00 17:13	28
Metals by ICP					12/14/00 12:54		12/18/00 13:23	180
0012160-02C	0012016-03E	12/08/00 10:39						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Anions by I. C. (Br, Cl, F, SO4)							12/14/00 21:27	28
0012160-03A	0012016-04B	12/08/00 11:00						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Semi-Volatiles					12/13/00 10:00	7	12/15/00 22:01	40

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

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Holding Time Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

Sample ID	Client Sample ID	Date Collected						
0012160-03B	0012016-04D	12/08/00 11:00						
Parameter	Leachate	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CVAA					12/20/00 13:58		12/20/00 17:14	28
Metals by ICP					12/14/00 12:54		12/18/00 13:31	180
0012160-03C	0012016-04E	12/08/00 11:00						
Parameter	Leachate	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Anions by I. C. (Br, Cl, F, SO4)							12/14/00 23:05	28
0012160-04A	0012016-05B	12/08/00 11:49						
Parameter	Leachate	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Semi-Volatiles					12/13/00 10:00	7	12/15/00 22:43	40
0012160-04B	0012016-05D	12/08/00 11:49						
Parameter	Leachate	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CVAA					12/20/00 13:58		12/20/00 17:16	28
Metals by ICP					12/14/00 12:54		12/18/00 13:34	180
0012160-04C	0012016-05E	12/08/00 11:49						
Parameter	Leachate	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Anions by I. C. (Br, Cl, F, SO4)							12/14/00 23:44	28
0012160-05A	0012016-06B	12/08/00 12:31						
Parameter	Leachate	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Semi-Volatiles					12/13/00 10:00	7	12/15/00 23:24	40
0012160-05B	0012016-06D	12/08/00 12:31						
Parameter	Leachate	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

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Analysis for



Holding Time Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

Sample ID	Client Sample ID	Date Collected						
Mercury by CVAA		12/20/00 13:58	12/20/00 17:17	28				
Metals by ICP		12/14/00 12:54	12/18/00 13:37	180				
0012160-05C	0012016-06E	12/08/00 12:31						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Anions by I. C. (Br, Cl, F, SO ₄)							12/15/00 00:24	28
0012160-06A	0012016-07B	12/08/00 13:20						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Semi-Volatiles					12/13/00 10:00	7	12/16/00 00:05	40
0012160-06B	0012016-07D	12/08/00 13:20						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Mercury by CVAA					12/20/00 13:58		12/20/00 17:19	28
Metals by ICP					12/14/00 12:54		12/18/00 13:40	180
0012160-06C	0012016-07E	12/08/00 13:20						
		Leachate						
Parameter		Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT
Anions by I. C. (Br, Cl, F, SO ₄)							12/15/00 02:01	28

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

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Analytical



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

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-01A
Client Sample ID: 0012016-02B
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-15

1/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.7	9.43	µg/L	1	12/15/00 20:39	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/15/00 20:39	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
Indene	U	4.7	9.43	µg/L	1	12/15/00 20:39	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/15/00 20:39	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/15/00 20:39	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/15/00 20:39	KPF
Quinoline	U	3.8	9.43	µg/L	1	12/15/00 20:39	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	69.9	1-152	% Recovery	1	12/15/00 20:39	KPF
2-Fluorophenol	50.6	7-77	% Recovery	1	12/15/00 20:39	KPF
2-Fluorobiphenyl	65.5	23-104	% Recovery	1	12/15/00 20:39	KPF
Nitrobenzene-d5	68.9	30-119	% Recovery	1	12/15/00 20:39	KPF
Phenol-d6	35.3	2-68	% Recovery	1	12/15/00 20:39	KPF
Terphenyl-d14	57.2	7-133	% Recovery	1	12/15/00 20:39	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level

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Mountain States Analytical, Inc.

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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: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-01B
Client Sample ID: 0012016-02D
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-15

12/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4680						12/14/00 12:54	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:11	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.03	0.1	mg/L	1	12/18/00 13:20	MM
Barium	0.169	0.003	0.01	mg/L	1	12/18/00 13:20	MM
Cadmium	U	0.004	0.02	mg/L	1	12/18/00 13:20	MM
Chromium	U	0.01	0.05	mg/L	1	12/18/00 13:20	MM
Lead	U	0.03	0.15	mg/L	1	12/18/00 13:20	MM
Selenium	U	0.08	0.4	mg/L	1	12/18/00 13:20	MM
Silver	U	0.01	0.05	mg/L	1	12/18/00 13:20	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

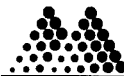
E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

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REC'D, Jan 12, 2001



Mountain States Analytical, Inc.

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

Analytical Services
Celebrating 15 Years

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

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-01C
Client Sample ID: 0012016-02E
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-15

12/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
-----------	--------	-----	-----	-------	----	---------------	---------

EPA 300.0: Anions by I. C. (Br, Cl, F, SO4), Water

Bromide	U	0.5	2.5	mg/L	25	12/14/00 20:48	NWL
Fluoride	1.95	0.25	1.25	mg/L	25	12/14/00 20:48	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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Anal. No.



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

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-02A
Client Sample ID: 0012016-03B
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-20

125101

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.7	9.43	µg/L	1	12/15/00 21:20	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/15/00 21:20	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
Indene	U	4.7	9.43	µg/L	1	12/15/00 21:20	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/15/00 21:20	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/15/00 21:20	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/15/00 21:20	KPF
Quinoline	U	3.8	9.43	µg/L	1	12/15/00 21:20	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	64.4	1-152	% Recovery	1	12/15/00 21:20	KPF
2-Fluorophenol	49.3	7-77	% Recovery	1	12/15/00 21:20	KPF
2-Fluorobiphenyl	64.9	23-104	% Recovery	1	12/15/00 21:20	KPF
Nitrobenzene-d5	66.5	30-119	% Recovery	1	12/15/00 21:20	KPF
Phenol-d6	39.8	2-68	% Recovery	1	12/15/00 21:20	KPF
Terphenyl-d14	54.6	7-133	% Recovery	1	12/15/00 21:20	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level

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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: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-02B
Client Sample ID: 0012016-03D
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-20

12/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4680						12/14/00 12:54	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:13	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.03	0.1	mg/L	1	12/18/00 13:23	MM
Barium	0.0500	0.003	0.01	mg/L	1	12/18/00 13:23	MM
Cadmium	U	0.004	0.02	mg/L	1	12/18/00 13:23	MM
Chromium	U	0.01	0.05	mg/L	1	12/18/00 13:23	MM
Lead	U	0.03	0.15	mg/L	1	12/18/00 13:23	MM
Selenium	U	0.08	0.4	mg/L	1	12/18/00 13:23	MM
Silver	U	0.01	0.05	mg/L	1	12/18/00 13:23	MM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

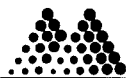
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical Report



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

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-02C
Client Sample ID: 0012016-03E
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-20

1125/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/14/00 21:27	NWL
Fluoride	1.74	0.25	1.25	mg/L	25	12/14/00 21:27	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

* - Result is greater than the associated action level



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: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-03A
Client Sample ID: 0012016-04B
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis
Project ID: *125/01*
Purchase Order: **Thriftway Refinery; MW-20 Duplicate**

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.7	9.43	µg/L	1	12/15/00 22:01	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/15/00 22:01	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
Indene	U	4.7	9.43	µg/L	1	12/15/00 22:01	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/15/00 22:01	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/15/00 22:01	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/15/00 22:01	KPF
Quinoline	U	3.8	9.43	µg/L	1	12/15/00 22:01	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	43.8	1-152	% Recovery	1	12/15/00 22:01	KPF
2-Fluorophenol	52.7	7-77	% Recovery	1	12/15/00 22:01	KPF
2-Fluorobiphenyl	59.0	23-104	% Recovery	1	12/15/00 22:01	KPF
Nitrobenzene-d5	84.5	30-119	% Recovery	1	12/15/00 22:01	KPF
Phenol-d6	46.8	2-68	% Recovery	1	12/15/00 22:01	KPF
Terphenyl-d14	47.5	7-133	% Recovery	1	12/15/00 22:01	KPF

Note for 12/15/00 22:01 analysis: Sample had internal standards which were confirmed by reanalysis. Matrix interferences are suspected.

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level

12



Mountain States Analytical, Inc.

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

Analytical Report



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

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-03B
Client Sample ID: 0012016-04D
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis
Project ID:
Purchase Order: **Thriftway Refinery; MW-20 Duplicate**

12/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4680						12/14/00 12:54	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:14	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.03	0.1	mg/L	1	12/18/00 13:31	MM
Barium	0.0504	0.003	0.01	mg/L	1	12/18/00 13:31	MM
Cadmium	U	0.004	0.02	mg/L	1	12/18/00 13:31	MM
Chromium	U	0.01	0.05	mg/L	1	12/18/00 13:31	MM
Lead	U	0.03	0.15	mg/L	1	12/18/00 13:31	MM
Selenium	U	0.08	0.4	mg/L	1	12/18/00 13:31	MM
Silver	U	0.01	0.05	mg/L	1	12/18/00 13:31	MM

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

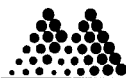
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

13



Mountain States Analytical, Inc.

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

Analytical Report



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

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-03C
Client Sample ID: 0012016-04E
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis
Project ID:
Purchase Order: Thriftway Refinery; MW-20 Duplicate

12/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/14/00 23:05	NWL
Fluoride	1.72	0.25	1.25	mg/L	25	12/14/00 23:05	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

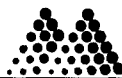
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical



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

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-04A
Client Sample ID: 0012016-05B
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-21

11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.7	9.43	µg/L	1	12/15/00 22:43	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/15/00 22:43	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
Indene	U	4.7	9.43	µg/L	1	12/15/00 22:43	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/15/00 22:43	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/15/00 22:43	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/15/00 22:43	KPF
Quinoline	U	3.8	9.43	µg/L	1	12/15/00 22:43	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	5.10	1-152	% Recovery	1	12/15/00 22:43	KPF
2-Fluorophenol	6.34 S(8a)	7-77	% Recovery	1	12/15/00 22:43	KPF
2-Fluorobiphenyl	52.1	23-104	% Recovery	1	12/15/00 22:43	KPF
Nitrobenzene-d5	102	30-119	% Recovery	1	12/15/00 22:43	KPF
Phenol-d6	4.67	2-68	% Recovery	1	12/15/00 22:43	KPF
Terphenyl-d14	84.7	7-133	% Recovery	1	12/15/00 22:43	KPF

Note for 12/15/00 22:43 analysis: Surrogate failures are acids, which are not target compounds.

8a: See sample comments

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level

15



Mountain States Analytical, Inc.

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

RECEIVED JAN 24 2001
Analytical Report

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

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-04B
Client Sample ID: 0012016-05D
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-21

43
1/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4680						12/14/00 12:54	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:16	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.03	0.1	mg/L	1	12/18/00 13:34	MM
Barium	0.0101	0.003	0.01	mg/L	1	12/18/00 13:34	MM
Cadmium	U	0.004	0.02	mg/L	1	12/18/00 13:34	MM
Chromium	U	0.01	0.05	mg/L	1	12/18/00 13:34	MM
Lead	U	0.03	0.15	mg/L	1	12/18/00 13:34	MM
Selenium	U	0.08	0.4	mg/L	1	12/18/00 13:34	MM
Silver	U	0.01	0.05	mg/L	1	12/18/00 13:34	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

* - Result is greater than the associated action level

16



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: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-04C
Client Sample ID: 0012016-05E
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-21

11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/14/00 23:44	NWL
Fluoride	1.57	0.25	1.25	mg/L	25	12/14/00 23:44	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

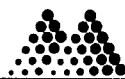
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical Services



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

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-05A
Client Sample ID: 0012016-06B
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-22

1/25/01

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

Acenaphthene	U	4.7	9.43	µg/L	1	12/15/00 23:24	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/15/00 23:24	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
Indene	U	4.7	9.43	µg/L	1	12/15/00 23:24	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/15/00 23:24	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/15/00 23:24	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/15/00 23:24	KPF
Quinoline	U	3.8	9.43	µg/L	1	12/15/00 23:24	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	36.3	1-152	% Recovery	1	12/15/00 23:24	KPF
2-Fluorophenol	32.0	7-77	% Recovery	1	12/15/00 23:24	KPF
2-Fluorobiphenyl	47.1	23-104	% Recovery	1	12/15/00 23:24	KPF
Nitrobenzene-d5	85.0	30-119	% Recovery	1	12/15/00 23:24	KPF
Phenol-d6	32.0	2-68	% Recovery	1	12/15/00 23:24	KPF
Terphenyl-d14	84.4	7-133	% Recovery	1	12/15/00 23:24	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

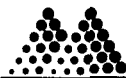
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

18



Mountain States Analytical, Inc.

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Sample #



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

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-05B
Client Sample ID: 0012016-06D
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-22

1125101

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4680						12/14/00 12:54	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:17	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by ICP, Water							
Arsenic	U	0.03	0.1	mg/L	1	12/18/00 13:37	MM
Barium	0.0178	0.003	0.01	mg/L	1	12/18/00 13:37	MM
Cadmium	U	0.004	0.02	mg/L	1	12/18/00 13:37	MM
Chromium	U	0.01	0.05	mg/L	1	12/18/00 13:37	MM
Lead	0.521	0.03	0.15	mg/L	1	12/18/00 13:37	MM
Selenium	U	0.08	0.4	mg/L	1	12/18/00 13:37	MM
Silver	U	0.01	0.05	mg/L	1	12/18/00 13:37	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

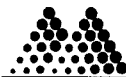
E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

19

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Mountain States Analytical, Inc.

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Analytical Report



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

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-05C
Client Sample ID: 0012016-06E
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-22

NR
1/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	0.94 J	0.5	2.5	mg/L	25	12/15/00 00:24	NWL
Fluoride	1.52	0.25	1.25	mg/L	25	12/15/00 00:24	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

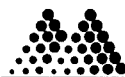
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

20



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: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-06A
Client Sample ID: 0012016-07B
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-12

THU
1/25/01

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

Acenaphthene	U	47	94.3	µg/L	10	12/16/00 00:05	KPF
Acenaphthylene	U	57	94.3	µg/L	10	12/16/00 00:05	KPF
Anthracene	U	57	94.3	µg/L	10	12/16/00 00:05	KPF
Benz(a)anthracene	U	57	94.3	µg/L	10	12/16/00 00:05	KPF
Benzo(a)pyrene	U	57	94.3	µg/L	10	12/16/00 00:05	KPF
Benzo(b)fluoranthene	U	57	94.3	µg/L	10	12/16/00 00:05	KPF
Benzo(ghi)perylene	U	47	94.3	µg/L	10	12/16/00 00:05	KPF
Benzo(k)fluoranthene	U	57	94.3	µg/L	10	12/16/00 00:05	KPF
Chrysene	U	57	94.3	µg/L	10	12/16/00 00:05	KPF
Dibenz(a,h)anthracene	U	57	94.3	µg/L	10	12/16/00 00:05	KPF
Fluoranthene	U	57	94.3	µg/L	10	12/16/00 00:05	KPF
Fluorene	108	57	94.3	µg/L	10	12/16/00 00:05	KPF
Indene	U	47	94.3	µg/L	10	12/16/00 00:05	KPF
Indeno(1,2,3-cd)pyrene	U	57	94.3	µg/L	10	12/16/00 00:05	KPF
2-Methylnaphthalene	685	47	94.3	µg/L	10	12/16/00 00:05	KPF
Naphthalene	178	47	94.3	µg/L	10	12/16/00 00:05	KPF
Phenanthrene	123	57	94.3	µg/L	10	12/16/00 00:05	KPF
Pyrene	U	57	94.3	µg/L	10	12/16/00 00:05	KPF
Quinoline	U	38	94.3	µg/L	10	12/16/00 00:05	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	52.7	1-152	% Recovery	10	12/16/00 00:05	KPF
2-Fluorophenol	37.1	7-77	% Recovery	10	12/16/00 00:05	KPF
2-Fluorobiphenyl	77.8	23-104	% Recovery	10	12/16/00 00:05	KPF
Nitrobenzene-d5	102	30-119	% Recovery	10	12/16/00 00:05	KPF
Phenol-d6	36.1	2-68	% Recovery	10	12/16/00 00:05	KPF
Terphenyl-d14	65.5	7-133	% Recovery	10	12/16/00 00:05	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level

21



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: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-06B
Client Sample ID: 0012016-07D
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-12

HS
1/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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SW-846 3005A: Flame/ICP Prep, Water

Prep Batch ID: 4680

12/14/00 12:54 LC

SW-846 7470A: Mercury by CVAA, Water

Mercury

U

0.1

0.5

µg/L

1

12/20/00 17:19

DGW

SW-846 7470A: Mercury Prep CVAA, Water

Prep Batch ID: 4726

12/20/00 13:58

DGW

SW-846 6010B: Metals by ICP, Water

Arsenic	U	0.03	0.1	mg/L	1	12/18/00 13:40	MM
Barium	0.169	0.003	0.01	mg/L	1	12/18/00 13:40	MM
Cadmium	U	0.004	0.02	mg/L	1	12/18/00 13:40	MM
Chromium	0.024 J	0.01	0.05	mg/L	1	12/18/00 13:40	MM
Lead	U	0.03	0.15	mg/L	1	12/18/00 13:40	MM
Selenium	U	0.08	0.4	mg/L	1	12/18/00 13:40	MM
Silver	U	0.01	0.05	mg/L	1	12/18/00 13:40	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

* - Result is greater than the associated action level

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Mountain States Analytical, Inc.

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

A 2/19/01 12:00 PM



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

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160
Lab Sample ID: 0012160-06C
Client Sample ID: 0012016-07E
Date Collected: 12/08/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-12

128
1/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA.300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/15/00 02:01	NWL
Fluoride	2.69	0.25	1.25	mg/L	25	12/15/00 02:01	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

* - Result is greater than the associated action level

23



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: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

EPA 300.0: Anions by I. C. (Br, Cl, F, SO₄), Water

QC Type: Laboratory Reagent Blank
Sample ID: LRB 1
Run ID: IC 1_001214B

Analysis Date: 12/14/00 12:58
Prep Batch ID: R10028

Units: mg/L
Seq No: 181119

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Bromide	U	0	0	0		0.1		
Fluoride	U	0	0	0		0.05		

QC Type: Laboratory Fortified Blank
Sample ID: LFB 1 IC-000905-01
Run ID: IC 1_001214B

Analysis Date: 12/14/00 13:17
Prep Batch ID: R10028

Units: mg/L
Seq No: 181120

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Bromide	432	U	400	108	90	110		
Fluoride	99.6	U	100	99.6	90	110		

QC Type: Matrix Spike
Sample ID: 0012154-06A MS
Run ID: IC 1_001214B

Analysis Date: 12/14/00 14:36
Prep Batch ID: R10028

Units: mg/L
Seq No: 181124

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Bromide	10200	U	10000	102	80	120		
Fluoride	2530	U	2500	101	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



Mountain States Analytical, Inc.

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

Analysis 12



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

QC Type: Matrix Spike Duplicate
Sample ID: 0012154-06A MSD
Run ID: IC 1_001214B

Analysis Date: 12/14/00 14:55
Prep Batch ID: R10028

Units: mg/L
Seq No: 181125

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	10500	U	10000	105	80	120	10200	2.6	20
Fluoride	2550	U	2500	102	80	120	2530	0.98	20

QC Type: Laboratory Reagent Blank
Sample ID: LRB 2
Run ID: IC 1_001214B

Analysis Date: 12/14/00 15:15
Prep Batch ID: R10028

Units: mg/L
Seq No: 181126

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		0.05			

QC Type: Laboratory Reagent Blank
Sample ID: LRB 3
Run ID: IC 1_001214B

Analysis Date: 12/14/00 18:31
Prep Batch ID: R10028

Units: mg/L
Seq No: 181136

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Bromide	U	0	0	0		0.1			
Fluoride	U	0	0	0		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.

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



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

QC Type: Laboratory Reagent Blank
Sample ID: LRB 4
Run ID: IC 1_001214B

Analysis Date: 12/14/00 21:47
Prep Batch ID: R10028

Units: mg/L
Seq No: 181146

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Bromide	U	0	0	0		0.1		
Fluoride	U	0	0	0		0.05		

QC Type: Laboratory Reagent Blank
Sample ID: LRB 5
Run ID: IC 1_001214B

Analysis Date: 12/15/00 01:03
Prep Batch ID: R10028

Units: mg/L
Seq No: 181156

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Bromide	U	0	0	0		0.1		
Fluoride	U	0	0	0		0.05		

QC Type: Laboratory Reagent Blank
Sample ID: LRB 6
Run ID: IC 1_001214B

Analysis Date: 12/15/00 03:59
Prep Batch ID: R10028

Units: mg/L
Seq No: 181165

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Bromide	U	0	0	0		0.1		
Fluoride	U	0	0	0		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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1645 West 2200 South · Salt Lake City, Utah 84119 · 800-973-6724

RECEIVED JAN 24 2001
COLUMBIA RIVER
LABORATORY

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

SW-846 6010B: Metals by ICP, Water

QC Type: Method Blank
Sample ID: PBW-4680
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:36
Prep Batch ID: 4680

Units: mg/L
Seq No: 180597

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	-0.010	0	0	0	-0.06	0.03		
Barium	0.00085	0	0	0	-0.006	0.003		
Cadmium	0.00029	0	0	0	-0.008	0.004		
Chromium	-0.0027	0	0	0	-0.02	0.01		
Lead	-0.0073	0	0	0	-0.06	0.03		
Selenium	-0.015	0	0	0	-0.16	0.08		
Silver	0.00021	0	0	0	-0.02	0.01		

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-4680
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:38
Prep Batch ID: 4680

Units: mg/L
Seq No: 180598

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	1.03		1.00	103	75	125		
Barium	0.203		0.200	101	75	125		
Cadmium	0.101		0.100	101	75	125		
Chromium	0.401		0.400	100	75	125		
Lead	1.01		1.00	101	75	125		
Selenium	1.06		1.00	106	75	125		
Silver	0.102		0.100	102	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

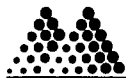
E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

RECEIVED JAN 4 2001

ANALYST: [illegible] 15



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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: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

QC Type: Sample Duplicate
Sample ID: 0012058-01G D
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:43
Prep Batch ID: 4680

Units: mg/L
Seq No: 180600

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	U						U	NC 20
Barium	0.0685						0.0626	9.1 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: 0012058-01G MS
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:45
Prep Batch ID: 4680

Units: mg/L
Seq No: 180601

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	1.08	U	1.00	108	75	125		
Barium	0.267	0.0626	0.200	102	75	125		
Cadmium	0.0953	U	0.100	95.3	75	125		
Chromium	0.388	U	0.400	97.1	75	125		
Lead	0.930	U	1.00	93.0	75	125		
Selenium	1.05	U	1.00	105	75	125		
Silver	0.0968	U	0.100	96.8	75	125		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

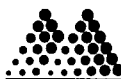
S - Results outside normal recovery limits

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



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: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

QC Type: Matrix Spike Duplicate
Sample ID: 0012058-01G MSD
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:47
Prep Batch ID: 4680

Units: mg/L
Seq No: 180602

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit	RPD
Arsenic	1.09	U	1.00	109	75	125	1.08	0.41	20
Barium	0.267	0.0626	0.200	102	75	125	0.267	0.13	20
Cadmium	0.0967	U	0.100	96.7	75	125	0.0953	1.4	20
Chromium	0.387	U	0.400	96.6	75	125	0.388	0.45	20
Lead	0.915	U	1.00	91.5	75	125	0.930	1.5	20
Selenium	1.07	U	1.00	107	75	125	1.05	1.8	20
Silver	0.0962	U	0.100	96.1	75	125	0.0968	0.66	20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0012058-01G A
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:49
Prep Batch ID: 4680

Units: mg/L
Seq No: 180603

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit	RPD
Arsenic	1.04	U	1.00	104	75	125			
Barium	0.256	0.0626	0.200	96.7	75	125			
Cadmium	0.0925	U	0.100	92.5	75	125			
Chromium	0.367	U	0.400	91.8	75	125			
Lead	0.882	U	1.00	88.2	75	125			
Selenium	1.02	U	1.00	102	75	125			
Silver	0.0914	U	0.100	91.4	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



Mountain States Analytical, Inc.

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Analysis Report



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

QC Type: Serial Dilution
Sample ID: 0012058-01G L
Run ID: TJA61E_001218A

Analysis Date: 12/18/00 12:52
Prep Batch ID: 4680

Units: mg/L
Seq No: 180604

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Arsenic	U						U	NC	10
Barium	0.0637						0.0626	1.8	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

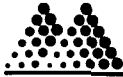
E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Mountain States Analytical, Inc.

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

SW-846 7470A: Mercury by CVAA, Water

QC Type: Method Blank
Sample ID: PBW-4726
Run ID: FIMS_001220B

Analysis Date: 12/20/00 16:53
Prep Batch ID: 4726

Units: µg/L
Seq No: 182894

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	0.047	0	0	0	-0.1	0.1		

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-4726
Run ID: FIMS_001220B

Analysis Date: 12/20/00 16:55
Prep Batch ID: 4726

Units: µg/L
Seq No: 182895

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	5.46		5.00	109	80	120		

QC Type: Sample Duplicate
Sample ID: 0011332-01C D
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:12
Prep Batch ID: 4726

Units: µg/L
Seq No: 182961

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	0.35JR(3a)						0.22 J	45 20

3a: Duplicates not evaluated - matrix sample <10x the detection limit

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

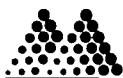
J - Analyte detected below the PQL

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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ANALYTICAL
LABORATORY
Analytical
15 Years

Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

QC Type: Matrix Spike
Sample ID: 0011332-01C MS
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:13
Prep Batch ID: 4726

Units: µg/L
Seq No: 182962

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	4.29	0.22 J	5.00	81.4	80	120		

QC Type: Matrix Spike Duplicate
Sample ID: 0011332-01C MSD
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:15
Prep Batch ID: 4726

Units: µg/L
Seq No: 182963

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	4.13 S(2b)	0.22 J	5.00	78.1	80	120	4.29	3.9 20

2b: MS/MSD are outside acceptable limit - RPD and PDS were within acceptable limits

QC Type: Serial Dilution
Sample ID: 0011332-01C L
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:18
Prep Batch ID: 4726

Units: µg/L
Seq No: 182964

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	U						0.22 J	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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Analytical Report



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

QC Type: Post Digestion/Distillation Spike

Sample ID: 0011332-01C A

Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:28

Prep Batch ID: 4726

Units: µg/L

Seq No: 182965

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Mercury	11.4	0.22 J	10.0	112	85	115		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

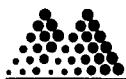
S - Results outside normal recovery limits

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

ANALYTICAL REPORT



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

SW-846 8270C: Semi-Volatiles, Water

QC Type: Method Blank
Sample ID: MB-4679
Run ID: HP-1_001215A

Analysis Date: 12/15/00 18:35
Prep Batch ID: 4679

Units: µg/L
Seq No: 192471

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	U	0	0	0		4		
Acenaphthylene	U	0	0	0		4		
Anthracene	U	0	0	0		2		
Benz(a)anthracene	U	0	0	0		2		
Benzo(a)pyrene	U	0	0	0		2		
Benzo(b)fluoranthene	U	0	0	0		3		
Benzo(ghi)perylene	U	0	0	0		2		
Benzo(k)fluoranthene	U	0	0	0		3		
Chrysene	U	0	0	0		2		
Dibenz(a,h)anthracene	U	0	0	0		2		
Fluoranthene	U	0	0	0		2		
Fluorene	U	0	0	0		3		
Indene	U	0	0	0		5		
Indeno(1,2,3-cd)pyrene	U	0	0	0		2		
2-Methylnaphthalene	U	0	0	0		6		
Naphthalene	U	0	0	0		5		
Phenanthrene	U	0	0	0		2		
Pyrene	U	0	0	0		2		
Quinoline	U	0	0	0		4		
Surrogates								
2,4,6-Tribromophenol	157	0	200	78.7	1	152		
2-Fluorophenol	113	0	200	56.3	7	77		
2-Fluorobiphenyl	66.1	0	100	66.1	23	104		
Nitrobenzene-d5	74.4	0	100	74.4	30	119		
Phenol-d6	76.7	0	200	38.4	2	68		
Terphenyl-d14	93.4	0	100	93.4	7	133		

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

RECEIVED JAN 24 2001



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

QC Type: Laboratory Control Spike
Sample ID: LCS-4679
Run ID: HP-1_001215A

Analysis Date: 12/15/00 19:16
Prep Batch ID: 4679

Units: µg/L
Seq No: 192472

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Acenaphthene	87.8		100	87.8	53	109		
4-Chloro-3-methylphenol	77.7		100	77.7	50	117		
2-Chlorophenol	74.3		100	74.3	43	100		
1,4-Dichlorobenzene	54.5		100	54.5	28	95		
2,4-Dinitrotoluene	83.0		100	83.0	59	120		
N-Nitrosodi-N-propylamine	77.4		100	77.4	46	106		
4-Nitrophenol	36.9		100	36.9	14	59		
Pentachlorophenol	77.6		100	77.6	46	130		
Phenol	38.0		100	38.0	15	56		
Pyrene	89.2		100	89.2	55	116		
1,2,4-Trichlorobenzene	55.5		100	55.5	34	99		
Surrogates								
2,4,6-Tribromophenol	180		200	89.9	1	152		
2-Fluorophenol	96.3		200	48.1	7	77		
2-Fluorobiphenyl	77.0		100	77.0	23	104		
Nitrobenzene-d5	72.8		100	72.8	30	119		
Phenol-d6	61.2		200	30.6	2	68		
Terphenyl-d14	83.0		100	83.0	7	133		

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

RECEIVED JAN 24 2001



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012160-3
Date Reported: 01/19/01
Work Order: 0012160

QC Type: Laboratory Control Spike Duplicate
Sample ID: LCSD-4679
Run ID: HP-1_001215A

Analysis Date: 12/15/00 19:57
Prep Batch ID: 4679

Units: µg/L
Seq No: 192473

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD	RPD Limit
Acenaphthene	86.1		100	86.1	53	109	87.8	2.0	28
4-Chloro-3-methylphenol	79.9		100	79.9	50	117	77.7	2.8	37
2-Chlorophenol	74.9		100	74.9	43	100	74.3	0.84	29
1,4-Dichlorobenzene	51.7		100	51.7	28	95	54.5	5.3	32
2,4-Dinitrotoluene	82.3		100	82.3	59	120	83.0	0.80	22
N-Nitrosodi-N-propylamine	79.0		100	79.0	46	106	77.4	2.0	55
4-Nitrophenol	36.2		100	36.2	14	59	36.9	2.1	47
Pentachlorophenol	81.5		100	81.5	46	130	77.6	4.9	49
Phenol	38.8		100	38.8	15	56	38.0	2.3	23
Pyrene	82.6		100	82.6	55	116	89.2	7.6	25
1,2,4-Trichlorobenzene	58.7		100	58.7	34	99	55.5	5.7	28
Surrogates									
2,4,6-Tribromophenol	176		200	88.0	1	152			
2-Fluorophenol	96.3		200	48.2	7	77			
2-Fluorobiphenyl	78.4		100	78.4	23	104			
Nitrobenzene-d5	73.7		100	73.7	30	119			
Phenol-d6	62.1		200	31.0	2	68			
Terphenyl-d14	81.5		100	81.5	7	133			

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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1092

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 #:

11-Dec-00

Sample ID	Matrix	Collection Date	Bottle Type	Requested Tests			
				E300	SW6010B	SW7470	SW8270C
0012016-02B	Aqueous	12/8/2000 9:40:00 AM	1LAMGU				1
0012016-02D	Aqueous	12/8/2000 9:40:00 AM	500HDPEHNO3		7	1	
0012016-02E	Aqueous	12/8/2000 9:40:00 AM	250HDPE	2			
0012016-03B	Aqueous	12/8/2000 10:36:00 AM	1LAMGU				1
0012016-03D	Aqueous	12/8/2000 10:36:00 AM	500HDPEHNO3		7	1	
0012016-03E	Aqueous	12/8/2000 10:36:00 AM	250HDPE	2			
0012016-04B	Aqueous	12/8/2000 11:00:00 AM	1LAMGU				1
0012016-04D	Aqueous	12/8/2000 11:00:00 AM	500HDPEHNO3		7	1	
0012016-04E	Aqueous	12/8/2000 11:00:00 AM	250HDPE	2			
0012016-05B	Aqueous	12/8/2000 11:48:00 AM	1LAMGU				1
0012016-05D	Aqueous	12/8/2000 11:48:00 AM	500HDPEHNO3		7	1	
0012016-05E	Aqueous	12/8/2000 11:48:00 AM	250HDPE	2			
0012016-06B	Aqueous	12/8/2000 12:31:00 PM	1LAMGU				1
0012016-06D	Aqueous	12/8/2000 12:31:00 PM	500HDPEHNO3		7	1	
0012016-06E	Aqueous	12/8/2000 12:31:00 PM	250HDPE	2			
0012016-07B	Aqueous	12/8/2000 1:20:00 PM	1LAMGU				1
0012016-07D	Aqueous	12/8/2000 1:20:00 PM	500HDPEHNO3		7	1	
0012016-07E	Aqueous	12/8/2000 1:20:00 PM	250HDPE	2			

Comments: Please analyze submitted water samples for (B) PAH by SW8270, (D) Total Metals: Cr, Pb, As, Se, Ag, Ba, Cd and Hg by SW6010B, (E) Fluoride and Bromide. Refer to prior MSA work order #0001009.

Relinquished by: Heidi Rene	Date/Time
Relinquished by:	
Received by: Matthew J. Edson	Date/Time
Received by:	

12/16/00 1530

12/12/00 0951

Mountain States Analytical, Inc.

Sample Receipt Checklist

Client Name On Site Technologies
Carrier: UPS

Work Order No. 0012160
Carrier Number: 17 66E 585 01 1001 702 4

Cooler Information:

Cooler Number/ID: OST F
Condition of Shipping Container: Good Fair Damaged
(If damaged, explain) _____

Cooler Sealed: Yes No Not Applicable

Custody Seals Present: Yes No Not Applicable

Intac Broken Seal Number: _____

Coolant: Ice Blue Ice None Other: _____

Temperature: 20C Thermometer ID: 3910 Correction Factor: 0

Packing material paper, bubble wrap, ice

Surface Radioactivity Reading (if required) _____ mR/hr Ludlum Model 3 Serial # _____

Chain-Of-Custody Information:

COC Present: Yes No Other: _____

COC signed (relinquished and received): Yes No Not Applicable

COC agrees with sample labels: Yes No

Notes: Chain - 0012016 label 12016

Sample Information:

Samples included in cooler: 0012014 - (02D, 03D, 04D, 05D, 06D, 06E, 07E, 08D, 08E)
0012016 - (02B, 03B, 04B, 05B, 05E, 06B, 06E, 07B, 07E)

Custody Seals Present: Yes No Not Applicable Other _____
Intact Broken Seal Number(s) _____

Sample containers intact: Yes No Notes: _____

Samples in proper containers: Yes No _____

Sufficient sample volume: Yes No _____

All samples received in hold time: Yes No _____

Water - Volatiles zero headspace: Yes No Not Applicable Pre-preserved with HCL: YES NO

Notes: _____

Water - pH acceptable upon receipt: Yes Adjusted (see comments below) Not Applicable
HNO₃ = <2 H₂SO₄ = _____ NaOH = _____ ZnAC /NaOH = _____

Water - pH adjusted: (MSAI Tracking No.)

HNO₃ _____ H₂SO₄ _____ NaOH _____

ZnAC _____ Na₂SO₃ _____ Other _____

Notes: _____

Cooler Contents Inspected & Verified By:

Matthew J. Edens

Date: 12/12/06

Time: 1206

Mountain States Analytical, Inc.

Sample Receipt Checklist

Client Name On Site Technologies
Carrier: UPS

Work Order No. 0012160
Carrier Number: 17 66E 585 01 1001 700 6

Cooler Information:

Cooler Number/ID: OST-D
Condition of Shipping Container: Good Fair Damaged

(If damaged, explain)

Cooler Sealed: Yes No Not Applicable

Custody Seals Present: Yes No Not Applicable

Intact Broken Seal Number: _____

Coolant: Ice Blue Ice None Other: _____

Temperature: 3.5°C Thermometer ID: 3365 Correction Factor: 0

Packing material ice, bubble wrap, paper

Surface Radioactivity Reading (if required) _____ mR/hr Ludlum Model 3 Serial # _____

Chain-Of-Custody Information:

COC Present: Yes No Other: _____

COC signed (relinquished and received): Yes No Not Applicable

COC agrees with sample labels: Yes No

Notes: _____

Sample Information:

Samples included in cooler: 0012011 - (02B, 02D, 02E, 03B, 03D, 03E, 04B, 04D, 04E, 04F, 05B, 05D, 05E, 06B, 06D, 06E)
001201A - (02B, 02E, 03E, 04E, 05E)

Custody Seals Present: Yes No Not Applicable Other _____
Intact Broken Seal Number(s) _____

Sample containers intact: Yes No Notes: _____

Samples in proper containers: Yes No _____

Sufficient sample volume: Yes No _____

All samples received in hold time: Yes No _____

Water - Volatiles zero headspace: Yes No Not Applicable Pre-preserved with HCL: YES NO

Notes: _____

Water - pH acceptable upon receipt: Yes Adjusted (see comments below) Not Applicable
HNO₃ = < 2 H₂SO₄ = _____ NaOH = _____ ZnAC / NaOH = _____

Water - pH adjusted: (MSAJ Tracking No.)

HNO₃ _____ H₂SO₄ _____ NaOH _____

ZnAC _____ Na₂SO₃ _____ Other _____

Notes: _____

Cooler Contents Inspected & Verified By:

Mathew J. Eden

Date: 12/12/00

Time: 1229

Mountain States Analytical, Inc.

Sample Receipt Checklist

Client Name On Site Technologies
Carrier: UPS

Work Order No. 0012160
Carrier Number: 1Z 66E 585 01 1001 701 5

Cooler Information:

Cooler Number/ID: DST G
Condition of Shipping Container: ☒ Good ☐ Fair ☐ Damaged

(If damaged, explain) _____

Cooler Sealed: ☒ Yes ☐ No ☐ Not Applicable

Custody Seals Present: ☒ Yes ☐ No ☐ Not Applicable

☒ Intact

☐ Broken

Seal Number: _____

Coolant:

☒ Ice

☐ Blue Ice

☐ None

☐ Other: _____

Temperature: 4.5°C

Thermometer ID: 3365

Correction Factor: 0

Packing material ice, bubble wrap, paper

Surface Radioactivity Reading (if required) _____ mR/hr

Ludlum Model 3 Serial # _____

Chain-Of-Custody Information:

COC Present: ☒ Yes ☐ No

Other: _____

COC signed (relinquished and received): ☒ Yes ☐ No

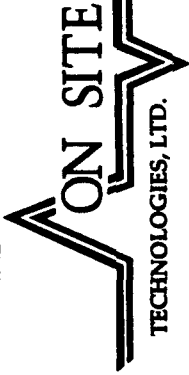
Not Applicable

COC agrees with sample labels: ☒ Yes ☐ No

Notes: Chain - 0012016 label - 12016

Sample Information:

Samples Included in cooler: 0012014 - (03B, 04B, 05B, 06B, 07B, 08B, 09B, 10B, 11B, 12B, 13B, 14B, 15B, 16B, 17B, 18B, 19B, 20B, 21B, 22B, 23B, 24B, 25B, 26B, 27B, 28B, 29B, 30B, 31B, 32B, 33B, 34B, 35B, 36B, 37B, 38B, 39B, 40B, 41B, 42B, 43B, 44B, 45B, 46B, 47B, 48B, 49B, 50B, 51B, 52B, 53B, 54B, 55B, 56B, 57B, 58B, 59B, 60B, 61B, 62B, 63B, 64B, 65B, 66B, 67B, 68B, 69B, 70B, 71B, 72B, 73B, 74B, 75B, 76B, 77B, 78B, 79B, 80B, 81B, 82B, 83B, 84B, 85B, 86B, 87B, 88B, 89B, 90B, 91B, 92B, 93B, 94B, 95B, 96B, 97B, 98B, 99B, 100B, 101B, 102B, 103B, 104B, 105B, 106B, 107B, 108B, 109B, 110B, 111B, 112B, 113B, 114B, 115B, 116B, 117B, 118B, 119B, 120B, 121B, 122B, 123B, 124B, 125B, 126B, 127B, 128B, 129B, 130B, 131B, 132B, 133B, 134B, 135B, 136B, 137B, 138B, 139B, 140B, 141B, 142B, 143B, 144B, 145B, 146B, 147B, 148B, 149B, 150B, 151B, 152B, 153B, 154B, 155B, 156B, 157B, 158B, 159B, 160B, 161B, 162B, 163B, 164B, 165B, 166B, 167B, 168B, 169B, 170B, 171B, 172B, 173B, 174B, 175B, 176B, 177B, 178B, 179B, 180B, 181B, 182B, 183B, 184B, 185B, 186B, 187B, 188B, 189B, 190B, 191B, 192B, 193B, 194B, 195B, 196B, 197B, 198B, 199B, 200B, 201B, 202B, 203B, 204B, 205B, 206B, 207B, 208B, 209B, 210B, 211B, 212B, 213B, 214B, 215B, 216B, 217B, 218B, 219B, 220B, 221B, 222B, 223B, 224B, 225B, 226B, 227B, 228B, 229B, 230B, 231B, 232B, 233B, 234B, 235B, 236B, 237B, 238B, 239B, 240B, 241B, 242B, 243B, 244B, 245B, 246B, 247B, 248B, 249B, 250B, 251B, 252B, 253B, 254B, 255B, 256B, 257B, 258B, 259B, 260B, 261B, 262B, 263B, 264B, 265B, 266B, 267B, 268B, 269B, 270B, 271B, 272B, 273B, 274B, 275B, 276B, 277B, 278B, 279B, 280B, 281B, 282B, 283B, 284B, 285B, 286B, 287B, 288B, 289B, 290B, 291B, 292B, 293B, 294B, 295B, 296B, 297B, 298B, 299B, 300B, 301B, 302B, 303B, 304B, 305B, 306B, 307B, 308B, 309B, 310B, 311B, 312B, 313B, 314B, 315B, 316B, 317B, 318B, 319B, 320B, 321B, 322B, 323B, 324B, 325B, 326B, 327B, 328B, 329B, 330B, 331B, 332B, 333B, 334B, 335B, 336B, 337B, 338B, 339B, 340B, 341B, 342B, 343B, 344B, 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677B, 678B, 679B, 680B, 681B, 682B, 683B, 684B, 685B, 686B, 687B, 688B, 689B, 690B, 691B, 692B, 693B, 694B, 695B, 696B, 697B, 698B, 699B, 700B, 701B, 702B, 703B, 704B, 705B, 706B, 707B, 708B, 709B, 710B, 711B, 712B, 713B, 714B, 715B, 716B, 717B, 718B, 719B, 720B, 721B, 722B, 723B, 724B, 725B, 726B, 727B, 728B, 729B, 730B, 731B, 732B, 733B, 734B, 735B, 736B, 737B, 738B, 739B, 740B, 741B, 742B, 743B, 744B, 745B, 746B, 747B, 748B, 749B, 750B, 751B, 752B, 753B, 754B, 755B, 756B, 757B, 758B, 759B, 760B, 761B, 762B, 763B, 764B, 765B, 766B, 767B, 768B, 769B, 770B, 771B, 772B, 773B, 774B, 775B, 776B, 777B, 778B, 779B, 780B, 781B, 782B, 783B, 784B, 785B, 786B, 787B, 788B, 789B, 790B, 791B, 792B, 793B, 794B, 795B, 796B, 797B, 798B, 799B, 800B, 801B, 802B, 803B, 804B, 805B, 806B, 807B, 808B, 809B, 810B, 811B, 812B, 813B, 814B, 815B, 816B, 817B, 818B, 819B, 820B, 821B, 822B, 823B, 824B, 825B, 826B, 827B, 828B, 829B, 830B, 831B, 832B, 833B, 834B, 835B, 836B, 837B, 838B, 839B, 840B, 841B, 842B, 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CHAIN OF CUSTODY RECORD

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 12-8-00

Page: 1 of 1

Purchase Order No.: Site #10		Project No.		Name Terry Grafton		Title								
SEND INVOICE TO		Name Same		Company BioTech Remediation, Inc.		Company								
		Address		Mailing Address 710 E. 20th Street, Suite 400		Mailing Address								
		City, State, Zip		City, State, Zip Farmington, NM 87401		City, State, Zip								
				Telephone No. 505-327-4965		Telephone No.								
PROJECT LOCATION: Thriftway Refinery 626 Rd. 5500 Bloomfield, NM 87413				ANALYSIS REQUESTED										
SAMPLER'S SIGNATURE:				RESULTS TO										
SAMPLE IDENTIFICATION				DATE		TIME		MATRIX		PRES.		Number of Containers		
Travel Blank				12-8	0920	1420	g	g	2	✓		✓		
MW-15				12-8	0940	✓	✓	✓	✓	6	✓		✓	
MW-20				12-8	1039	✓	✓	✓	✓	✓	✓		✓	
MW-20 Duplicate				12-8	1100	✓	✓	✓	✓	✓	✓		✓	
MW-21				12-8	1149	✓	✓	✓	✓	✓	✓		✓	
MW-22				12-8	1231	✓	✓	✓	✓	✓	✓		✓	
MW-12				12-8	1320	✓	✓	✓	✓	✓	✓		✓	
MW-17 Deleted				12-8	1400	✓	✓	✓	✓	✓	✓		✓	
Relinquished by: [Signature]				Date/Time 12-8-00		Received by: Heidi Ray		Date/Time 12-8-00		1520				
Relinquished by:				Date/Time		Received by:		Date/Time						
Relinquished by:				Date/Time		Received by:		Date/Time						
Method of Shipment:						Rush		24-48 Hours		10 Working Days		By Date		
Authorized by: [Signature]				Date 12-8-00		Special Instructions / Remarks:		505-327-4965						

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

January 26, 2001

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

RE: Thriftway Refinery, Site 810

Order No.: 0012014

Dear Terry Griffin,

On Site Technologies, LTD. received 8 samples on 12/7/2000 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)
- Hardness, Total (M2340 B)
- 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 (CALC)
- Total Dissolved Solids (E160.1)

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery, Site 810
Lab Order: 0012014

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.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

Cation-Anion Balance 0012014-02C Thriftway Refinery; MW-13

Total Cation-Anion = 158.11 meq/L
Difference Cation-Anion = 6.91 meq/L
% Difference = 4.4 %

Cation-Anion Balance 0012014-03C Thriftway Refinery; Air Stripper Influent

Total Cation-Anion = 105.92 meq/L
Difference Cation-Anion = 2.49 meq/L
% Difference = 2.4 %

Cation-Anion Balance 0012014-04C Thriftway Refinery; Air Stripper Effluent

Total Cation-Anion = 104.42 meq/L
Difference Cation-Anion = 4.26 meq/L
% Difference = 4.1 %

Cation-Anion Balance 0012014-05C Thriftway Refinery; MW-8

Total Cation-Anion = 114.45 meq/L
Difference Cation-Anion = 0.39 meq/L
% Difference = 0.3 %

Cation-Anion Balance 0012014-06C Thriftway Refinery; MW-9

Total Cation-Anion = 171.82 meq/L
Difference Cation-Anion = 3.22 meq/L
% Difference = 1.9 %

CLIENT: BioTech Remediation, Inc.
Project: Thriftway Refinery, Site 810
Lab Order: 0012014

CASE NARRATIVE

Cation-Anion Balance 0012014-07C Thriftway Refinery; MW-10
Total Cation-Anion = 157.34 meq/L
Difference Cation-Anion = 6.34 meq/L
% Difference = 4.0 %

Cation-Anion Balance 0012014-08C Thriftway Refinery; MW-11
Total Cation-Anion = 145.55 meq/L
Difference Cation-Anion = 5.89 meq/L
% Difference = 4.0 %

Analytical Comments for METHOD BTEX_W 12/12/2000, LCS WATER: Two parameters exceeded historical limits; Benzene %R=94.9 (Limit 96%-111%) and Toluene %R=96.6% (Limit 97%-109%). Determined that working standard utilized for LCS WATER was in error by preparing new working standard and confirming recoveries with additional Laboratory Control Sample, LCS2 WATER. Initial LCS WATER is reported in quality control summary with appropriate qualifier for Benzene and Toluene, S - Spike recovery outside accepted recovery limit.

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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	Travel Blank
Lab ID:	0012014-01A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 8:00:00 AM
		COC Record:	11057

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	12/13/2000
Benzene	ND	0.5		µg/L	1	12/13/2000
Toluene	ND	0.5		µg/L	1	12/13/2000
Ethylbenzene	ND	0.5		µg/L	1	12/13/2000
m,p-Xylene	ND	1		µg/L	1	12/13/2000
o-Xylene	ND	0.5		µg/L	1	12/13/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	MW-13
Lab ID:	0012014-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 9:30:00 AM
		COC Record:	11057

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	12/13/2000
Benzene	ND	0.5		µg/L	1	12/13/2000
Toluene	ND	0.5		µg/L	1	12/13/2000
Ethylbenzene	ND	0.5		µg/L	1	12/13/2000
m,p-Xylene	ND	1		µg/L	1	12/13/2000
o-Xylene	ND	0.5		µg/L	1	12/13/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	420	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	7.2	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	59	6.2		mg/L	25	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1140	125		mg/L	500	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	530	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	530	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	69	1		mg/L	1	12/29/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	4080	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	1290	1		mg/L	1	12/29/2000
PH						
		E150.1				Analyst: HR
pH	6.74	2		pH units	1	12/7/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	3460	5		mg/L	1	12/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	5540	40		mg/L	1	12/8/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	MW-13
Lab ID:	0012014-02A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 9:30:00 AM
		COC Record:	11057

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	5470		40	mg/L	1	12/29/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	Air Stripper Influent
Lab ID:	0012014-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 10:39:00 AM
		COC Record:	11057

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	1400	20		µg/L	20	12/13/2000
Benzene	1700	10		µg/L	20	12/13/2000
Toluene	890	10		µg/L	20	12/13/2000
Ethylbenzene	560	10		µg/L	20	12/13/2000
m,p-Xylene	2000	20		µg/L	20	12/13/2000
o-Xylene	220	10		µg/L	20	12/13/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	310	25		mg/L	100	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	6.1	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	48	5		mg/L	20	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	790	100		mg/L	400	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	960	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	960	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	200	1		mg/L	1	12/18/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	3080	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	981	1		mg/L	1	12/20/2000
PH						
		E150.1				Analyst: HR
pH	7.20	2		pH units	1	12/7/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	1460	5		mg/L	1	12/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	3500	40		mg/L	1	12/8/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	Air Stripper Influent
Lab ID:	0012014-03A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 10:39:00 AM
		COC Record:	11057

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	3390		40	mg/L	1	12/20/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	Air Stripper Effluent
Lab ID:	0012014-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 11:02:00 AM
		COC Record:	11057

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Methyl tert-Butyl Ether	31	1		µg/L	1	12/13/2000
Benzene	ND	0.5		µg/L	1	12/13/2000
Toluene	ND	0.5		µg/L	1	12/13/2000
Ethylbenzene	ND	0.5		µg/L	1	12/13/2000
m,p-Xylene	1.5	1		µg/L	1	12/13/2000
o-Xylene	ND	0.5		µg/L	1	12/13/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	240	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	6.3	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	48	5		mg/L	20	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	880	100		mg/L	400	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	680	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	680	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	300	1		mg/L	1	12/18/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	3240	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	787	1		mg/L	1	12/20/2000
PH						
		E150.1				Analyst: HR
pH	8.04	2		pH units	1	12/7/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	1460	5		mg/L	1	12/12/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	3400	40		mg/L	1	12/8/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	Air Stripper Effluent
Lab ID:	0012014-04A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 11:02:00 AM
		COC Record:	11057

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	3350		40	mg/L	1	12/20/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	MW-8
Lab ID:	0012014-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 12:15:00 PM
		COC Record:	11057

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
	SW8021B					Analyst: DM
Methyl tert-Butyl Ether	240	5		µg/L	5	12/12/2000
Benzene	1.9	0.5		µg/L	1	12/12/2000
Toluene	ND	0.5		µg/L	1	12/12/2000
Ethylbenzene	ND	0.5		µg/L	1	12/12/2000
m,p-Xylene	ND	1		µg/L	1	12/12/2000
o-Xylene	ND	0.5		µg/L	1	12/12/2000
CALCIUM, DISSOLVED						
	E215.1					Analyst: HR
Calcium	400	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
	E258.1					Analyst: HR
Potassium	7.2	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
	E242.1					Analyst: HR
Magnesium	54	5		mg/L	20	12/20/2000
SODIUM, DISSOLVED						
	E273.1					Analyst: HR
Sodium	740	125		mg/L	500	12/19/2000
ALKALINITY, TOTAL						
	M2320 B					Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	580	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	580	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
	E325.3					Analyst: HR
Chloride	98	1		mg/L	1	12/29/2000
CONDUCTIVITY @ 25C						
	E120.1					Analyst: HR
Specific Conductance	3190	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
	M2340 B					Analyst: HR
Hardness (As CaCO ₃)	1220	1		mg/L	1	12/29/2000
PH						
	E150.1					Analyst: HR
pH	7.15	2		pH units	1	12/7/2000
SULFATE						
	M4500-SO4 D					Analyst: HR
Sulfate	2170	5		mg/L	1	12/12/2000
TOTAL DISSOLVED SOLIDS						
	E160.1					Analyst: HR
Total Dissolved Solids (Residue, Filterable)	3950	40		mg/L	1	12/8/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	MW-8
Lab ID:	0012014-05A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 12:15:00 PM
		COC Record:	11057

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	3820		40	mg/L	1	12/29/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	MW-9
Lab ID:	0012014-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 1:30:00 PM
		COC Record:	11057

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	12/12/2000
Benzene	ND	0.5		µg/L	1	12/12/2000
Toluene	ND	0.5		µg/L	1	12/12/2000
Ethylbenzene	ND	0.5		µg/L	1	12/12/2000
m,p-Xylene	ND	1		µg/L	1	12/12/2000
o-Xylene	ND	0.5		µg/L	1	12/12/2000
CALCIUM, DISSOLVED						
		E215.1				Analyst: HR
Calcium	360	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
		E258.1				Analyst: HR
Potassium	5.2	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
		E242.1				Analyst: HR
Magnesium	62	6.2		mg/L	25	12/20/2000
SODIUM, DISSOLVED						
		E273.1				Analyst: HR
Sodium	1400	125		mg/L	500	12/19/2000
ALKALINITY, TOTAL						
		M2320 B				Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	340	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	340	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
		E325.3				Analyst: HR
Chloride	56	1		mg/L	1	12/29/2000
CONDUCTIVITY @ 25C						
		E120.1				Analyst: HR
Specific Conductance	4660	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
		M2340 B				Analyst: HR
Hardness (As CaCO ₃)	1160	1		mg/L	1	12/29/2000
PH						
		E150.1				Analyst: HR
pH	7.67	2		pH units	1	12/7/2000
SULFATE						
		M4500-SO4 D				Analyst: HR
Sulfate	3860	5		mg/L	1	12/18/2000
TOTAL DISSOLVED SOLIDS						
		E160.1				Analyst: HR
Total Dissolved Solids (Residue, Filterable)	6090	40		mg/L	1	12/13/2000

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 2

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EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	MW-9
Lab ID:	0012014-06A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 1:30:00 PM
		COC Record:	11057

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	5950		40	mg/L	1	12/29/2000

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

2 of 2

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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	MW-10
Lab ID:	0012014-07A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 2:30:00 PM
		COC Record:	11057

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	12/12/2000
Benzene	ND	0.5		µg/L	1	12/12/2000
Toluene	ND	0.5		µg/L	1	12/12/2000
Ethylbenzene	ND	0.5		µg/L	1	12/12/2000
m,p-Xylene	ND	1		µg/L	1	12/12/2000
o-Xylene	ND	0.5		µg/L	1	12/12/2000
CALCIUM, DISSOLVED						
	E215.1					Analyst: HR
Calcium	340	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
	E258.1					Analyst: HR
Potassium	5.2	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
	E242.1					Analyst: HR
Magnesium	55	5		mg/L	20	12/20/2000
SODIUM, DISSOLVED						
	E273.1					Analyst: HR
Sodium	1240	125		mg/L	500	12/19/2000
ALKALINITY, TOTAL						
	M2320 B					Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	300	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	300	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
	E325.3					Analyst: HR
Chloride	98	1		mg/L	1	12/29/2000
CONDUCTIVITY @ 25C						
	E120.1					Analyst: HR
Specific Conductance	4580	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
	M2340 B					Analyst: HR
Hardness (As CaCO ₃)	1070	1		mg/L	1	12/29/2000
PH						
	E150.1					Analyst: HR
pH	7.50	2		pH units	1	12/7/2000
SULFATE						
	M4500-SO₄ D					Analyst: HR
Sulfate	3560	5		mg/L	1	12/18/2000
TOTAL DISSOLVED SOLIDS						
	E160.1					Analyst: HR
Total Dissolved Solids (Residue, Filterable)	5690	40		mg/L	1	12/13/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	MW-10
Lab ID:	0012014-07A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 2:30:00 PM
		COC Record:	11057

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	5480		40	mg/L	1	12/29/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	MW-11
Lab ID:	0012014-08A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 3:39:00 PM
		COC Record:	11057

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	12/12/2000
Benzene	ND	0.5		µg/L	1	12/12/2000
Toluene	ND	0.5		µg/L	1	12/12/2000
Ethylbenzene	ND	0.5		µg/L	1	12/12/2000
m,p-Xylene	ND	1		µg/L	1	12/12/2000
o-Xylene	ND	0.5		µg/L	1	12/12/2000
CALCIUM, DISSOLVED						
	E215.1					Analyst: HR
Calcium	390	50		mg/L	200	12/20/2000
POTASSIUM, DISSOLVED						
	E258.1					Analyst: HR
Potassium	8.2	1.2		mg/L	5	12/20/2000
MAGNESIUM, DISSOLVED						
	E242.1					Analyst: HR
Magnesium	34	5		mg/L	20	12/20/2000
SODIUM, DISSOLVED						
	E273.1					Analyst: HR
Sodium	1080	125		mg/L	500	12/19/2000
ALKALINITY, TOTAL						
	M2320 B					Analyst: HR
Alkalinity, Bicarbonate (As CaCO ₃)	230	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	12/12/2000
Alkalinity, Total (As CaCO ₃)	230	5		mg/L CaCO ₃	1	12/12/2000
CHLORIDE						
	E325.3					Analyst: HR
Chloride	38	1		mg/L	1	12/29/2000
CONDUCTIVITY @ 25C						
	E120.1					Analyst: HR
Specific Conductance	4370	2		uS/cm	1	12/12/2000
HARDNESS, TOTAL						
	M2340 B					Analyst: HR
Hardness (As CaCO ₃)	1120	1		mg/L	1	12/29/2000
PH						
	E150.1					Analyst: HR
pH	7.43	2		pH units	1	12/7/2000
SULFATE						
	M4500-SO4 D					Analyst: HR
Sulfate	3400	5		mg/L	1	12/18/2000
TOTAL DISSOLVED SOLIDS						
	E160.1					Analyst: HR
Total Dissolved Solids (Residue, Filterable)	5290	40		mg/L	1	12/13/2000

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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ANALYTICAL REPORT

Date: 26-Jan-01

Client:	BioTech Remediation, Inc.	Client Sample Info:	Thriftway Refinery
Work Order:	0012014	Client Sample ID:	MW-11
Lab ID:	0012014-08A	Matrix:	AQUEOUS
Project:	Thriftway Refinery, Site 810	Collection Date:	12/7/2000 3:39:00 PM
		COC Record:	11057

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS		CALC				Analyst: HR
Total Dissolved Solids (Calculated)	5100		40	mg/L	1	12/29/2000

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

2 of 2

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EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012014

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000	Prep Date:
Client ID: 0012014	Run ID: GC-1_001212A			SeqNo: 33349	
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	ND	0.5			

Sample ID: MB1	Batch ID: GC-1_001213	Test Code: SW8021B	Units: µg/L	Analysis Date 12/13/2000	Prep Date:
Client ID: 0012014	Run ID: GC-1_001213A			SeqNo: 33377	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	.1164	0.5			J
m,p-Xylene	.2034	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	.0837	0.5			J
Toluene	ND	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: 26-Jan-01

CLIENT: BioTech Remediation, Inc.
Work Order: 0012014
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0012014-05AMS		Batch ID: GC-1_001212		Test Code: SW8021B		Units: µg/L		Analysis Date 12/12/2000		Prep Date:		
Client ID: MW-8		0012014		Run ID: GC-1_001212A				SeqNo: 33350				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		184.8	2.5	200	0.172	92.3%	88	112				
Ethylbenzene		186.2	2.5	200	0	93.1%	86	113				
m,p-Xylene		370.5	5	400	0	92.6%	85	108				
Methyl tert-Butyl Ether		423.9	5	200	236.8	93.6%	86	117				
o-Xylene		188.6	2.5	200	0.3305	94.1%	92	110				
Toluene		186.8	2.5	200	0	93.4%	88	116				

Sample ID: 0012014-05AMSD		Batch ID: GC-1_001212		Test Code: SW8021B		Units: µg/L		Analysis Date 12/12/2000		Prep Date:	
Client ID: MW-8		0012014		Run ID: GC-1_001212A				SeqNo: 33351			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	183.2	2.5	200	0.172	91.5%	88	112	184.8	0.9%	6	
Ethylbenzene	184.8	2.5	200	0	92.4%	86	113	186.2	0.7%	6	
m,p-Xylene	368	5	400	0	92.0%	85	108	370.5	0.7%	6	
Methyl tert-Butyl Ether	427	5	200	236.8	95.1%	86	117	423.9	0.7%	7	
o-Xylene	187.7	2.5	200	0.3305	93.7%	92	110	188.6	0.5%	6	
Toluene	185.2	2.5	200	0	92.6%	88	116	186.8	0.8%	6	

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

QC SUMMARY REPORT

Sample Matrix Spike

CLIENT: BioTech Remediation, Inc.
 Work Order: 0012014
 Project: Thriftway Refinery, Site 810

Sample ID: 0012014-03AMS		Batch ID: GC-1_001213		Test Code: SW8021B		Units: µg/L		Analysis Date 12/13/2000		Prep Date:	
Client ID: Air Stripper Influe		0012014		Run ID: GC-1_001213A				SeqNo: 33378			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2530	10	800	1745	98.1%	88	112				
Ethylbenzene	1316	10	800	557	94.9%	86	113				
m,p-Xylene	3542	20	1600	2039	93.9%	85	108				
Methyl tert-Butyl Ether	2082	20	800	1387	86.9%	86	117				
o-Xylene	993.6	10	800	225.1	96.1%	92	110				
Toluene	1665	10	800	889.1	97.0%	88	116				

Sample ID: 0012014-03AMSD		Batch ID: GC-1_001213		Test Code: SW8021B		Units: µg/L		Analysis Date 12/13/2000		Prep Date:		
Client ID: Air Stripper Influe		0012014		Run ID: GC-1_001213A				SeqNo: 33379				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		2459	10	800	1745	89.3%	88	112	2530	2.8%	6	
Ethylbenzene		1279	10	800	557	90.2%	86	113	1316	2.9%	6	
m,p-Xylene		3441	20	1600	2039	87.6%	85	108	3542	2.9%	6	
Methyl tert-Butyl Ether		2106	20	800	1387	89.9%	86	117	2082	1.1%	7	
o-Xylene		968.2	10	800	225.1	92.9%	92	110	993.6	2.6%	6	
Toluene		1616	10	800	889.1	90.8%	88	116	1665	3.0%	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: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012014

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000		Prep Date:				
Client ID:		0012014	Run ID: GC-1_001212A		SeqNo: 33347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	37.95	0.5	40	0	94.9%	96	111				S
Ethylbenzene	38.62	0.5	40	0	96.5%	96	111				
m,p-Xylene	76.99	1	80	0	96.2%	92	105				
Methyl tert-Butyl Ether	38.23	1	40	0	95.6%	93	113				
o-Xylene	39.04	0.5	40	0	97.6%	97	110				
Toluene	38.65	0.5	40	0	96.6%	97	109				S

Sample ID: LCS2 WATER		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000		Prep Date:				
Client ID:		0012014	Run ID: GC-1_001212A		SeqNo: 33348						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.68	0.5	40	0	99.2%	96	111				
Ethylbenzene	38.82	0.5	40	0	97.0%	96	111				
m,p-Xylene	77.39	1	80	0	96.7%	92	105				
Methyl tert-Butyl Ether	39.87	1	40	0	99.7%	93	113				
o-Xylene	38.99	0.5	40	0	97.5%	97	110				
Toluene	39.28	0.5	40	0	98.2%	97	109				

Qualifiers:

NIJ - 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

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: BioTech Remediation, Inc.
 Work Order: 0012014
 Project: Thriftway Refinery, Site 810

Sample ID: LCS WATER		Batch ID: GC-1_001213	Test Code: SW8021B	Units: µg/L	Analysis Date 12/13/2000		Prep Date:				
Client ID:	0012014	Run ID:	GC-1_001213A		SeqNo:	33376					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.67	0.5	40	0	99.2%	96	111				
Ethylbenzene	38.58	0.5	40	0.1164	96.2%	96	111				
m,p-Xylene	76.97	1	80	0.2034	96.0%	92	105				
Methyl tert-Butyl Ether	39.07	1	40	0	97.7%	93	113				
o-Xylene	39	0.5	40	0.0837	97.3%	97	110				
Toluene	39.19	0.5	40	0	98.0%	97	109				

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: 26-Jan-01

CLIENT: BioTech Remediation, Inc.
Work Order: 0012014
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0010		Batch ID: GC-1_001212		Test Code: SW8021B		Units: µg/L		Analysis Date 12/12/2000		Prep Date:	
Client ID:		0012014		Run ID: GC-1_001212A				SeqNo: 33342			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.1	0.5	20	0	95.5%	85	115				
Ethylbenzene	19.58	0.5	20	0	97.9%	85	115				
m,p-Xylene	39.08	1	40	0	97.7%	85	115				
Methyl tert-Butyl Ether	18.7	1	20	0	93.5%	85	115				
o-Xylene	19.77	0.5	20	0	98.8%	85	115				
Toluene	19.37	0.5	20	0	96.9%	85	115				
1,4-Difluorobenzene	74.23	0	80	0	92.8%	70	130				
4-Bromochlorobenzene	82.41	0	80	0	103.0%	70	130				
Fluorobenzene	74.67	0	80	0	93.3%	70	130				

Sample ID: CCV2 BTEX_0010		Batch ID: GC-1_001212		Test Code: SW8021B		Units: µg/L		Analysis Date 12/12/2000			Prep Date:	
Client ID:		0012014		Run ID:		GC-1_001212A		SeqNo: 33343				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	18.51	0.5	20	0	92.5%	85	115					
Ethylbenzene	19.03	0.5	20	0	95.1%	85	115					
m,p-Xylene	37.95	1	40	0	94.9%	85	115					
Methyl tert-Butyl Ether	19.19	1	20	0	96.0%	85	115					
o-Xylene	19.37	0.5	20	0	96.9%	85	115					
Toluene	18.84	0.5	20	0	94.2%	85	115					
1,4-Difluorobenzene	74.39	0	80	0	93.0%	70	130					
4-Bromochlorobenzene	82.58	0	80	0	103.2%	70	130					
Fluorobenzene	74.19	0	80	0	92.7%	70	130					

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: 0012014
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0010		Batch ID: GC-1_001212		Test Code: SW8021B		Units: µg/L		Analysis Date 12/12/2000			Prep Date:	
Client ID:		0012014		Run ID: GC-1_001212A				SeqNo: 33344				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	36.68	0.5	40	0	91.7%	85	115					
Ethylbenzene	37.39	0.5	40	0	93.5%	85	115					
m,p-Xylene	74.7	1	80	0	93.4%	85	115					
Methyl tert-Butyl Ether	36.96	1	40	0	92.4%	85	115					
o-Xylene	38	0.5	40	0	95.0%	85	115					
Toluene	37.47	0.5	40	0	93.7%	85	115					
1,4-Difluorobenzene	73.63	0	80	0	92.0%	70	130					
4-Bromochlorobenzene	80.04	0	80	0	100.1%	70	130					
Fluorobenzene	74.3	0	80	0	92.9%	70	130					

Sample ID: CCV4 BTEX_0012		Batch ID: GC-1_001212	Test Code: SW8021B	Units: µg/L	Analysis Date 12/12/2000		Prep Date:				
Client ID:		0012014	Run ID:	GC-1_001212A	SeqNo: 33345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.98	0.5	20	0	99.9%	85	115				
Ethylbenzene	19.72	0.5	20	0	98.6%	85	115				
m,p-Xylene	39.38	1	40	0	98.5%	85	115				
Methyl tert-Butyl Ether	19.15	1	20	0	95.7%	85	115				
o-Xylene	19.82	0.5	20	0	99.1%	85	115				
Toluene	19.72	0.5	20	0	98.6%	85	115				
1,4-Difluorobenzene	73.77	0	80	0	92.2%	70	130				
4-Bromochlorobenzene	84.97	0	80	0	106.2%	70	130				
Fluorobenzene	74.9	0	80	0	93.6%	70	130				

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

QC SUMMARY REPORT
Continuing Calibration Verification Standard

CLIENT: BioTech Remediation, Inc.
Work Order: 0012014
Project: Thriftway Refinery, Site 810

Sample ID: CCV5 BTEX_0012		Batch ID: GC-1_001212		Test Code: SW8021B		Units: µg/L		Analysis Date 12/12/2000		Prep Date:		
Client ID:		0012014		Run ID: GC-1_001212A				SeqNo: 33346				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		19.44	0.5	20	0	97.2%	85	115				
Ethylbenzene		19.19	0.5	20	0	95.9%	85	115				
m,p-Xylene		38.33	1	40	0	95.8%	85	115				
Methyl tert-Butyl Ether		19.96	1	20	0	99.8%	85	115				
o-Xylene		19.34	0.5	20	0	96.7%	85	115				
Toluene		19.22	0.5	20	0	96.1%	85	115				
1,4-Difluorobenzene		73.58	0	80	0	92.0%	70	130				
4-Bromochlorobenzene		82.38	0	80	0	103.0%	70	130				
Fluorobenzene		75.02	0	80	0	93.8%	70	130				

Sample ID: CCV1 BTEX_0012		Batch ID: GC-1_001213	Test Code: SW8021B	Units: µg/L	Analysis Date 12/13/2000		Prep Date:				
Client ID:		Run ID: 0012014	GC-1_001213A		SeqNo: 33373						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.19	0.5	20	0	100.9%	85	115				
Ethylbenzene	19.91	0.5	20	0	99.5%	85	115				
m,p-Xylene	39.65	1	40	0	99.1%	85	115				
Methyl tert-Butyl Ether	19.82	1	20	0	99.1%	85	115				
o-Xylene	19.96	0.5	20	0	99.8%	85	115				
Toluene	19.94	0.5	20	0	99.7%	85	115				
1,4-Difluorobenzene	74.08	0	80	0	92.6%	70	130				
4-Bromochlorobenzene	82.53	0	80	0	103.2%	70	130				
Fluorobenzene	74.74	0	80	0	93.4%	70	130				

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: 0012014
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0012		Batch ID: GC-1_001213	Test Code: SW8021B	Units: µg/L		Analysis Date 12/13/2000		Prep Date:	
Client ID:		0012014	Run ID: GC-1_001213A			SeqNo: 33374			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	Qual
Benzene	19.58	0.5	20	0	97.9%	85	115		
Ethylbenzene	19.29	0.5	20	0	96.5%	85	115		
m,p-Xylene	38.59	1	40	0	96.5%	85	115		
Methyl tert-Butyl Ether	19.41	1	20	0	97.0%	85	115		
o-Xylene	19.51	0.5	20	0	97.6%	85	115		
Toluene	19.42	0.5	20	0	97.1%	85	115		
1,4-Difluorobenzene	74.88	0	80	0	93.6%	70	130		
4-Bromochlorobenzene	80.82	0	80	0	101.0%	70	130		
Fluorobenzene	76.8	0	80	0	96.0%	70	130		

Sample ID: CCV3 BTEX_0012		Batch ID: GC-1_001213	Test Code: SW8021B	Units: µg/L		Analysis Date 12/13/2000		Prep Date:			
Client ID:		0012014	Run ID:	GC-1_001213A	SeqNo: 33375						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.44	0.5	40	0	96.1%	85	115				
Ethylbenzene	37.27	0.5	40	0	93.2%	85	115				
m,p-Xylene	74.24	1	80	0	92.8%	85	115				
Methyl tert-Butyl Ether	38.56	1	40	0	96.4%	85	115				
o-Xylene	37.86	0.5	40	0	94.7%	85	115				
Toluene	37.98	0.5	40	0	94.9%	85	115				
1,4-Difluorobenzene	75.12	0	80	0	93.9%	70	130				
4-Bromochlorobenzene	81.04	0	80	0	101.3%	70	130				
Fluorobenzene	76.31	0	80	0	95.4%	70	130				

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: 0012014
Project: Thriftway Refinery, Site 810
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0012002-01A	92.2	97	95.9
0012002-03A	91.9	98.1	95.1
0012007-01A	90.3	96.7	92.5
0012007-02A	93.8	98.3	96.2
0012007-03A	88.2	94.7	90.2
0012007-04A	90.5	95	93.5
0012007-05A	95.3	99.6	96.6
0012008-01A	94.9	99.5	97.3
0012011-01A	95.2	100	97.4
0012011-02A	93.6	101	96.7
0012011-03A	96.1	104	99
0012011-04A	94.2	100	97.5
0012011-05A	94.3	100	96.3
0012011-06A	90.3	103	91.9
0012014-01A	94	98.4	97.5
0012014-02A	94.9	100	97.1
0012014-03A	92.1	101	94
0012014-03AMS	92	101	93.8
0012014-03AMSD	92.4	101	93.2
0012014-04A	93.6	100	96.3
0012014-05A	92.2	103	93.5
0012014-05AMS	91.5	104	92.7
0012014-05AMSD	91.5	104	92.8
0012014-06A	93.8	103	94
0012014-07A	93.4	103	94.7
0012014-08A	93	101	94.6
0012016-01A	93	102	94.5

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits

CLIENT: BioTech Remediation, Inc.
Work Order: 0012014
Project: Thriftway Refinery, Site 810
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0012016-02A	93.7	103	94.4
0012016-03A	92.1	104	92.5
0012016-04A	91.5	104	93.5
0012016-05A	93.4	104	94
0012016-06A	93.5	104	94.5
0012016-07A	91.8	109	93.4
0012019-01A	94.3	100	97.3
0012019-02A	91	97.2	93.6
0012019-03A	84.4	88.3	87.1
CCV1 BTEX_00100	92.8	103	93.3
CCV1 BTEX_00121	92.6	103	93.4
CCV2 BTEX_00100	93	103	92.7
CCV2 BTEX_00121	93.6	101	96
CCV3 BTEX_00100	92	100	92.9
CCV3 BTEX_00121	93.9	101	95.4
CCV4 BTEX_00121	92.2	106	93.6
CCV5 BTEX_00121	92	103	93.8
LCS WATER	93.2	103	95.6
LCS2 WATER	92.7	104	92.5
MB1	93.5	104	94.6

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits

On Site Technologies, LTD.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012014

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date: 12/13/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001213B		SeqNo: 33325	
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: MBlank	Batch ID: API_001207	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date: 12/12/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207C		SeqNo: 33433	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	2.6	5			J
Alkalinity, Carbonate (As CaCO3)	ND	5			
Alkalinity, Hydroxide	ND	5			
Alkalinity, Total (As CaCO3)	2.6	5			J

Sample ID: MBlank	Batch ID: API_001207	Test Code: E120.1	Units: uS/cm	Analysis Date: 12/12/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207D		SeqNo: 33456	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	ND	2			

Sample ID: MBlank	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date: 12/18/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207E		SeqNo: 33482	
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

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: 0012014

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207E		SeqNo: 33495	
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: MBlank	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/15/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207E		SeqNo: 33507	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	24	40			J
Sample ID: MBlank	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207F		SeqNo: 33547	
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_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207G		SeqNo: 33565	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	5			
Sample ID: MBlank	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207G		SeqNo: 33578	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	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: 0012014
 The following information is for the use of the recipient.
 Project: The following information is for the use of the recipient. Site: 910
 Method Blank

Sample ID: MBlank	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/29/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_0012071		SeqNo: 33937	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	ND		1		

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

3 of 3

On Site Technologies, LTD.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.

Work Order: 0012014

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0012011-02CD	Batch ID: API_001207	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 12/12/2000	Prep Date:
Client ID: 0012014	Run ID: WET CHEM_001207C	SeqNo: 33436			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Bicarbonate (As CaCO3)	827	5	0	0	0.0% 0 820 0.9% 3
Alkalinity, Carbonate (As CaCO3)	ND	5	0	0	0.0% 0 0 0.0% 3
Alkalinity, Hydroxide	ND	5	0	0	0.0% 0 0 0.0% 3
Alkalinity, Total (As CaCO3)	827	5	0	0	0.0% 0 820 0.9% 3

Sample ID: 0012011-02CD	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID: 0012014	Run ID: WET CHEM_001207E	SeqNo: 33486			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	3650	40	0	0	0.0% 0 3684 0.9% 8

Sample ID: 0012011-02CD	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/12/2000	Prep Date:
Client ID: 0012014	Run ID: WET CHEM_001207G	SeqNo: 33568			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	1714	5	0	0	0.0% 0 1731 1.0% 12

Sample ID: 0012014-04CD	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID: Air Stripper Effluent	Run ID: WET CHEM_001207F	SeqNo: 33556			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	305	1	0	0	0.0% 0 299 2.0% 10

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: 0012014

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Sample Duplicate

Sample ID: 0012014-06CD	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:
Client ID: MW-9	0012014	Run ID: WET CHEM_001213B		SeqNo: 33329	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	6094	40	0	0	0.0% 0 6086 0.1% 8

Sample ID: 0012014-06CD	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:
Client ID: MW-9	0012014	Run ID: WET CHEM_001207E		SeqNo: 33498	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	6094	40	0	0	0.0% 0 6086 0.1% 8

Sample ID: 0012014-06CD	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/29/2000	Prep Date:
Client ID: MW-9	0012014	Run ID: WET CHEM_001207I		SeqNo: 33942	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	55	1	0	0	0.0% 0 56 1.8% 10

Sample ID: 0012016-02CD	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207G		SeqNo: 33584	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	3535	5	0	0	0.0% 0 3527 0.2% 12

Sample ID: 0012016-07CD	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/15/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207E		SeqNo: 33510	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	6242	40	0	0	0.0% 0 6276 0.5% 8

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: 0012014
Project: Thriftway Refinery, Site 810

Date: 26-Jan-01

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3030	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207F		SeqNo: 33548	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	206	1	200	0	103.0% 79 109

Sample ID: LCS 3030	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207F		SeqNo: 33560	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	201	1	200	0	100.5% 79 109

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001213B		SeqNo: 33326	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	312	40	337	0	92.6% 86 110

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207C		SeqNo: 33434	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Total (As CaCO3)	77.2	5	73	2.6	102.2% 96 104

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: M2320 B	Units: mg/L CaCO3	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207C		SeqNo: 33445	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Alkalinity, Total (As CaCO3)	76.6	5	73	2.6	101.4% 96 104

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: 0012014

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E120.1	Units: uS/cm	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207D		SeqNo: 33457	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	447	2	442	0 101.1% 96	103

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E120.1	Units: uS/cm	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207D		SeqNo: 33467	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	449	2	442	0 101.6% 96	103

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E120.1	Units: uS/cm	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207D		SeqNo: 33477	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Specific Conductance	440	2	442	0 99.5% 96	103

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/18/2000	Prep Date:						
Client ID:	0012014	Run ID: WET CHEM_001207E		SeqNo: 33483							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	358	40	337	0	106.2%	86	110				

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/13/2000	Prep Date:						
Client ID:	0012014	Run ID: WET CHEM_001207E		SeqNo: 33496							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtra	312	40	337	0	92.6%	86	110				

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: 0012014
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E160.1	Units: mg/L	Analysis Date 12/15/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207E		SeqNo: 33508	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	318	40	337	24	87.2% 86 110
Sample ID: LCS 3031	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/12/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207G		SeqNo: 33566	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	21.4	5	19.6	0	109.2% 86 111
Sample ID: LCS 3031	Batch ID: API_001207	Test Code: M4500-SO4 D	Units: mg/L	Analysis Date 12/18/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207G		SeqNo: 33579	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	19.8	5	19.6	0	101.0% 86 111
Sample ID: LCS 3031	Batch ID: API_001207	Test Code: E325.3	Units: mg/L	Analysis Date 12/29/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207I		SeqNo: 33938	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	75.1	1	73	0	102.9% 79 109
Sample ID: LCS 3033	Batch ID: API_001207	Test Code: E150.1	Units: pH units	Analysis Date 12/7/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207B		SeqNo: 33409	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
pH	7.939	2	7.95	0	99.9% 80 120

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

CLIENT: BioTech Remediation, Inc.
Work Order: 0012014
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID: LCS 3033	Batch ID: API_001207	Test Code: E150.1	Units: pH units	Analysis Date 12/7/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207B		SeqNo: 33422	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
pH	7.955	2	7.95	0	100.1% 80 120

Sample ID: LCS 3033	Batch ID: API_001207	Test Code: E150.1	Units: pH units	Analysis Date 12/8/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207B		SeqNo: 33423	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
pH	7.96	2	7.95	0	100.1% 80 120

Sample ID: LCS 3033	Batch ID: API_001207	Test Code: E150.1	Units: pH units	Analysis Date 12/8/2000	Prep Date:
Client ID:	0012014	Run ID: WET CHEM_001207B		SeqNo: 33431	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
pH	7.952	2	7.95	0	100.0% 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

On Site Technologies, LTD.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.
 Work Order: 0012014
 Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Method Blank

Sample ID: MBlank	Batch ID: AA_12/20/2000	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220A		SeqNo: 33635	
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_12/20/2000	Test Code: E215.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220B		SeqNo: 33660	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	.02	0.25			
Sample ID: MBlank	Batch ID: AA_12/20/2000	Test Code: E242.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220C		SeqNo: 33685	
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_12/20/2000	Test Code: E258.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220D		SeqNo: 33710	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	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.

Date: 26-Jan-01

CLIENT: BioTech Remediation, Inc.
Work Order: 0012014
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0012014-05CMS	Batch ID: AA_12/20/2000	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID: MW-8	0012014	Run ID: AA_001220A		SeqNo: 33647	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val RPDLimit Qual
Sodium	2720	125	2000	98.8% 85	115
Sample ID: 0012014-05CMS	Batch ID: AA_12/20/2000	Test Code: E215.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID: MW-8	0012014	Run ID: AA_001220B		SeqNo: 33672	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val RPDLimit Qual
Calcium	1120	50	800	90.0% 82	121
Sample ID: 0012014-05CMS	Batch ID: AA_12/20/2000	Test Code: E258.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID: MW-8	0012014	Run ID: AA_001220D		SeqNo: 33722	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val RPDLimit Qual
Potassium	35.2	1.2	25	112.0% 51	167
Sample ID: 0012014-06CMS	Batch ID: AA_12/20/2000	Test Code: E242.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID: MW-9	0012014	Run ID: AA_001220C		SeqNo: 33699	
Analyte	Result	PQL	SPK value	%REC LowLimit HighLimit	RPD Ref Val RPDLimit Qual
Magnesium	168	6.2	100	106.0% 96	111

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: 26-Jan-01

CLIENT: BioTech Remediation, Inc.
Work Order: 0012014
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1	Batch ID: AA_12/20/200	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220A		SeqNo: 33636	
Analyte	Result	PQL	SPK value	LowLimit HighLimit	%REC RPD RPDLimit Qual
Sodium	3.04	0.25	3.24	90 110	93.8% 110
Sample ID: CCV1	Batch ID: AA_12/20/200	Test Code: E215.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220B		SeqNo: 33661	
Analyte	Result	PQL	SPK value	LowLimit HighLimit	%REC RPD RPDLimit Qual
Calcium	3.12	0.25	3.28	90 110	95.1% 110
Sample ID: CCV1	Batch ID: AA_12/20/200	Test Code: E242.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220C		SeqNo: 33686	
Analyte	Result	PQL	SPK value	LowLimit HighLimit	%REC RPD RPDLimit Qual
Magnesium	2.2	0.25	2.08	90 110	105.8% 110
Sample ID: CCV1	Batch ID: AA_12/20/200	Test Code: E258.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220D		SeqNo: 33711	
Analyte	Result	PQL	SPK value	LowLimit HighLimit	%REC RPD RPDLimit Qual
Potassium	2.12	0.25	2.07	90 110	102.4% 110
Sample ID: CCV2	Batch ID: AA_12/20/200	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220A		SeqNo: 33648	
Analyte	Result	PQL	SPK value	LowLimit HighLimit	%REC RPD RPDLimit Qual
Sodium	2.98	0.25	3.24	90 110	92.0% 110

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: 0012014

Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2	Batch ID: AA_12/20/200	Test Code: E215.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220B		SeqNo: 33673	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	3.05	0.25	3.28	0	93.0% 90 110
Sample ID: CCV2	Batch ID: AA_12/20/200	Test Code: E242.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220C		SeqNo: 33697	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Magnesium	1.09	0.25	1.04	0	104.8% 90 110
Sample ID: CCV2	Batch ID: AA_12/20/200	Test Code: E258.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220D		SeqNo: 33723	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Potassium	2.08	0.25	2.07	0	100.5% 90 110
Sample ID: CCV3	Batch ID: AA_12/20/200	Test Code: E273.1	Units: mg/L	Analysis Date 12/19/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220A		SeqNo: 33659	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sodium	2.96	0.25	3.24	0	91.4% 90 110
Sample ID: CCV3	Batch ID: AA_12/20/200	Test Code: E215.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:
Client ID:	0012014	Run ID: AA_001220B		SeqNo: 33684	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Calcium	3.06	0.25	3.28	0	93.3% 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: 0012014
Project: Thriftway Refinery, Site 810

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3	Batch ID: AA_12/20/200	Test Code: E242.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:						
Client ID:	0012014	Run ID: AA_001220C		SeqNo: 33709							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	2.17	0.25	2.08	0	104.3%	90	110				

Sample ID: CCV3	Batch ID: AA_12/20/200	Test Code: E258.1	Units: mg/L	Analysis Date 12/20/2000	Prep Date:						
Client ID:	0012014	Run ID: AA_001220D		SeqNo: 33734							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	2.04	0.25	2.07	0	98.6%	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



Mountain States Analytical, Inc.

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

Environmental Laboratory



January 19, 2001

Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401
(505) 325-1556 Fax: (505) 325-6256

Project: Water Analysis

Work Order: 0012162

Dear Mr. David Cox,

Thank you for using Mountain States Analytical, Inc. (MSAI) as your environmental information resource. Our reports are designed to meet the Certified Laboratory Reporting Requirements of Utah Administrative Code R444-14-12(10) and the National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

This is Report Number 0012162-1 and contains 41 pages of information for the 7 samples submitted to MSAI on Tuesday, December 12, 2000. Any sample receipt documentation detailed in the Work Order Receipt Summary of this report (e.g., Chain-of-Custody, Work Order Authorization, etc.) and/or analytical results noted as "see attached" are included by reference as attachments following page 41. For regulatory compliance reporting, individual pages or portions of this report may not be separated.

Dibenz(a,h)acridine could not be reported for the semivolatile organic list of analytes as it was not present in the standard mix used for the control.

If you have any questions regarding the information contained in this report, please feel free to contact me at (800)973-6724 ext. 3026 or by e-mail at rlarsen@msailabs.com.

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

ANALYTICAL

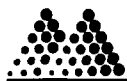


Sample Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

Lab Sample ID	Client Sample ID	Additional Sample Information	Matrix	Date Collected
0012162-01A	0012014-02B		Water	12/07/00
0012162-01B	0012014-02D		Water	12/07/00
0012162-01C	0012014-02E		Water	12/07/00
0012162-02A	0012014-03B		Water	12/07/00
0012162-02B	0012014-03D		Water	12/07/00
0012162-02C	0012014-03E		Water	12/07/00
0012162-03A	0012014-04B		Water	12/07/00
0012162-03B	0012014-04D		Water	12/07/00
0012162-03C	0012014-04E		Water	12/07/00
0012162-04A	0012014-05B		Water	12/07/00
0012162-04B	0012014-05D		Water	12/07/00
0012162-04C	0012014-05E		Water	12/07/00
0012162-05A	0012014-06B		Water	12/07/00
0012162-05B	0012014-06D		Water	12/07/00
0012162-05C	0012014-06E		Water	12/07/00
0012162-06A	0012014-07B		Water	12/07/00
0012162-06B	0012014-07D		Water	12/07/00
0012162-06C	0012014-07E		Water	12/07/00
0012162-07A	0012014-08B		Water	12/07/00
0012162-07B	0012014-08D		Water	12/07/00
0012162-07C	0012014-08E		Water	12/07/00



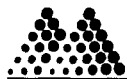
Holding Time Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

Sample ID	Client Sample ID	Date Collected						
0012162-01A	0012014-02B	12/07/00 09:30						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				12/13/00 10:00	7	12/16/00 00:45	40	
0012162-01B	0012014-02D	12/07/00 09:30						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA				12/20/00 13:58		12/20/00 17:20	28	
Metals by hrICP				12/21/00 13:48		01/08/01 23:59	180	
0012162-01C	0012014-02E	12/07/00 09:30						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (Br, Cl, F, SO4)						12/15/00 20:01	28	
0012162-02A	0012014-03B	12/07/00 10:39						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				12/13/00 10:00	7	12/16/00 01:26	40	
0012162-02B	0012014-03D	12/07/00 10:39						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA				12/20/00 13:58		12/20/00 17:22	28	
Metals by hrICP				12/21/00 13:48		01/09/01 00:03	180	
0012162-02C	0012014-03E	12/07/00 10:39						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (Br, Cl, F, SO4)						12/15/00 20:21	28	
0012162-03A	0012014-04B	12/07/00 11:02						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				12/13/00 10:00	7	12/16/00 02:07	40	

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

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

Analysis



Holding Time Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

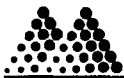
Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

Sample ID	Client Sample ID	Date Collected						
0012162-03B	0012014-04D	12/07/00 11:02						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA				12/20/00 13:58		12/20/00 17:23	28	
Metals by hrICP				12/21/00 13:48		01/09/01 00:07	180	
0012162-03C	0012014-04E	12/07/00 11:02						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (Br, Cl, F, SO4)						12/15/00 20:40	28	
0012162-04A	0012014-05B	12/07/00 12:15						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				12/13/00 10:00	7	12/16/00 02:48	40	
0012162-04B	0012014-05D	12/07/00 12:15						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Mercury by CVAA				12/20/00 13:58		12/20/00 17:28	28	
Metals by hrICP				12/21/00 13:48		01/09/01 00:10	180	
0012162-04C	0012014-05E	12/07/00 12:15						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (Br, Cl, F, SO4)						12/15/00 21:00	28	
0012162-05A	0012014-06B	12/07/00 13:30						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Semi-Volatiles				12/13/00 10:00	7	12/16/00 03:29	40	
0012162-05B	0012014-06D	12/07/00 13:30						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	

* - The recommended holding time was exceeded



Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162



Holding Time Summary

Client: On Site Technologies, Ltd.

Project: Water Analysis

Project ID:

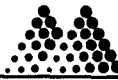
Report Number: 0012162-1

Date Reported: 01/19/01

Work Order: 0012162

Sample ID	Client Sample ID	Date Collected						
0012162-07C	0012014-08E	12/07/00 15:39						
Leachate								
Parameter	Start Date	End Date	HT	Prep Date	HT	Analysis Date	HT	
Anions by I. C. (Br, Cl, F, SO4)						12/15/00 22:57	28	

* - The recommended holding time was exceeded



Mountain States Analytical, Inc.

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

Analytical



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-01A
Client Sample ID: 0012014-02B
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-13

MS
1/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.7	9.43	µg/L	1	12/16/00 00:45	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/16/00 00:45	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
Indene	U	4.7	9.43	µg/L	1	12/16/00 00:45	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/16/00 00:45	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/16/00 00:45	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/16/00 00:45	KPF
Quinoline	U	3.8	9.43	µg/L	1	12/16/00 00:45	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	23.5	1-152	% Recovery	1	12/16/00 00:45	KPF
2-Fluorophenol	6.75 S (8a)	7-77	% Recovery	1	12/16/00 00:45	KPF
2-Fluorobiphenyl	52.1	23-104	% Recovery	1	12/16/00 00:45	KPF
Nitrobenzene-d5	79.0	30-119	% Recovery	1	12/16/00 00:45	KPF
Phenol-d6	3.74	2-68	% Recovery	1	12/16/00 00:45	KPF
Terphenyl-d14	94.1	7-133	% Recovery	1	12/16/00 00:45	KPF

Note for 12/16/00 00:45 analysis: Surrogate failures are acids, which are not target compounds.

8a: See sample comments

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

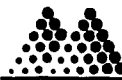
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

7



Mountain States Analytical, Inc.

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

Analytical Report



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-01B
Client Sample ID: 0012014-02D
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-13

MS
12/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4736						12/21/00 13:48	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:20	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by hrICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/08/01 23:59	DJK
Barium	0.0173	0.003	0.015	mg/L	1	01/08/01 23:59	DJK
Cadmium	U	0.003	0.015	mg/L	1	01/08/01 23:59	DJK
Chromium	U	0.01	0.05	mg/L	1	01/08/01 23:59	DJK
Lead	U	0.03	0.15	mg/L	1	01/08/01 23:59	DJK
Selenium	U	0.03	0.15	mg/L	1	01/08/01 23:59	DJK
Silver	U	0.004	0.02	mg/L	1	01/08/01 23:59	DJK

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

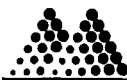
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical Report



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-01C
Client Sample ID: 0012014-02E
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-13

11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO4), Water							
Bromide	U	0.5	2.5	mg/L	25	12/15/00 20:01	NWL
Fluoride	1.96	0.25	1.25	mg/L	25	12/15/00 20:01	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

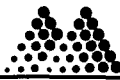
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



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: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-02A
Client Sample ID: 0012014-03B
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis
Project ID:
Purchase Order: Thriftway Refinery; Air Stripper Influent

1/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.7	9.43	µg/L	1	12/16/00 01:26	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/16/00 01:26	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
Indene	U	4.7	9.43	µg/L	1	12/16/00 01:26	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
2-Methylnaphthalene	56.2	4.7	9.43	µg/L	1	12/16/00 01:26	KPF
Naphthalene	76.2	4.7	9.43	µg/L	1	12/16/00 01:26	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/16/00 01:26	KPF
Quinoline	U	3.8	9.43	µg/L	1	12/16/00 01:26	KPF

Surrogates		Recovery Range				
2,4,6-Tribromophenol	39.7	1-152	% Recovery	1	12/16/00 01:26	KPF
2-Fluorophenol	59.4	7-77	% Recovery	1	12/16/00 01:26	KPF
2-Fluorobiphenyl	62.5	23-104	% Recovery	1	12/16/00 01:26	KPF
Nitrobenzene-d5	86.5	30-119	% Recovery	1	12/16/00 01:26	KPF
Phenol-d6	49.6	2-68	% Recovery	1	12/16/00 01:26	KPF
Terphenyl-d14	36.5	7-133	% Recovery	1	12/16/00 01:26	KPF

Note for 12/16/00 01:26 analysis: Sample had internal standards which were confirmed by reanalysis. Matrix interferences are suspected.

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

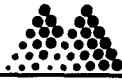
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

10



Mountain States Analytical, Inc.

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

Analysis Report



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-02B
Client Sample ID: 0012014-03D
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

⇒ 1/25/01

Project ID:

Purchase Order: Thriftway Refinery; Air Stripper Influent

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4736						12/21/00 13:48	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:22	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by hrICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/09/01 00:03	DJK
Barium	0.0535	0.003	0.015	mg/L	1	01/09/01 00:03	DJK
Cadmium	U	0.003	0.015	mg/L	1	01/09/01 00:03	DJK
Chromium	U	0.01	0.05	mg/L	1	01/09/01 00:03	DJK
Lead	U	0.03	0.15	mg/L	1	01/09/01 00:03	DJK
Selenium	U	0.03	0.15	mg/L	1	01/09/01 00:03	DJK
Silver	U	0.004	0.02	mg/L	1	01/09/01 00:03	DJK

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

* - Result is greater than the associated action level

11



Mountain States Analytical, Inc.

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

Analytical Report



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-02C
Client Sample ID: 0012014-03E
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

NO 1/25/01

Project ID:

Purchase Order: Thriftway Refinery; Air Stripper Influent

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/15/00 20:21	NWL
Fluoride	1.67	0.25	1.25	mg/L	25	12/15/00 20:21	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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analysis Report



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-03A
Client Sample ID: 0012014-04B
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

12/25/01

Project ID:

Purchase Order: Thriftway Refinery; Air Stripper Effluent

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.7	9.43	µg/L	1	12/16/00 02:07	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/16/00 02:07	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
Indene	U	4.7	9.43	µg/L	1	12/16/00 02:07	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/16/00 02:07	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/16/00 02:07	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/16/00 02:07	KPF
Quinoline	U	3.8	9.43	µg/L	1	12/16/00 02:07	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	41.1	1-152	% Recovery	1	12/16/00 02:07	KPF
2-Fluorophenol	55.1	7-77	% Recovery	1	12/16/00 02:07	KPF
2-Fluorobiphenyl	60.7	23-104	% Recovery	1	12/16/00 02:07	KPF
Nitrobenzene-d5	92.1	30-119	% Recovery	1	12/16/00 02:07	KPF
Phenol-d6	50.8	2-68	% Recovery	1	12/16/00 02:07	KPF
Terphenyl-d14	40.9	7-133	% Recovery	1	12/16/00 02:07	KPF

Note for 12/16/00 02:07 analysis: Sample had internal standards which were confirmed by reanalysis. Matrix interferences are suspected.

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical Services



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-03B
Client Sample ID: 0012014-04D
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; Air Stripper Effluent

1125101

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4736						12/21/00 13:48	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:23	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by hrICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/09/01 00:07	DJK
Barium	0.0524	0.003	0.015	mg/L	1	01/09/01 00:07	DJK
Cadmium	U	0.003	0.015	mg/L	1	01/09/01 00:07	DJK
Chromium	U	0.01	0.05	mg/L	1	01/09/01 00:07	DJK
Lead	U	0.03	0.15	mg/L	1	01/09/01 00:07	DJK
Selenium	U	0.03	0.15	mg/L	1	01/09/01 00:07	DJK
Silver	U	0.004	0.02	mg/L	1	01/09/01 00:07	DJK

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

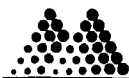
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

14



Mountain States Analytical, Inc.

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

ANALYTICAL



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-03C
Client Sample ID: 0012014-04E
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

NS 1/25/01

Project ID:

Purchase Order: Thriftway Refinery; Air Stripper Effluent

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO4), Water							
Bromide	U	0.5	2.5	mg/L	25	12/15/00 20:40	NWL
Fluoride	1.52	0.25	1.25	mg/L	25	12/15/00 20:40	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

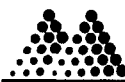
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

15



Mountain States Analytical, Inc.

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

Analysis



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-04A
Client Sample ID: 0012014-05B
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-8

11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.7	9.43	µg/L	1	12/16/00 02:48	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/16/00 02:48	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
Indene	U	4.7	9.43	µg/L	1	12/16/00 02:48	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/16/00 02:48	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/16/00 02:48	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/16/00 02:48	KPF
Quinoline	U	3.8	9.43	µg/L	1	12/16/00 02:48	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	35.1	1-152	% Recovery	1	12/16/00 02:48	KPF
2-Fluorophenol	42.8	7-77	% Recovery	1	12/16/00 02:48	KPF
2-Fluorobiphenyl	59.8	23-104	% Recovery	1	12/16/00 02:48	KPF
Nitrobenzene-d5	102	30-119	% Recovery	1	12/16/00 02:48	KPF
Phenol-d6	43.5	2-68	% Recovery	1	12/16/00 02:48	KPF
Terphenyl-d14	56.9	7-133	% Recovery	1	12/16/00 02:48	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level

16



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: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-04B
Client Sample ID: 0012014-05D
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-8

HB
11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4736						12/21/00 13:48	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:28	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by hrICP, Water							
Arsenic	0.110	0.02	0.1	mg/L	1	01/09/01 00:10	DJK
Barium	0.0727	0.003	0.015	mg/L	1	01/09/01 00:10	DJK
Cadmium	U	0.003	0.015	mg/L	1	01/09/01 00:10	DJK
Chromium	0.010 J	0.01	0.05	mg/L	1	01/09/01 00:10	DJK
Lead	U	0.03	0.15	mg/L	1	01/09/01 00:10	DJK
Selenium	U	0.03	0.15	mg/L	1	01/09/01 00:10	DJK
Silver	U	0.004	0.02	mg/L	1	01/09/01 00:10	DJK

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

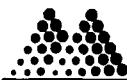
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical Report



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-04C
Client Sample ID: 0012014-05E
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-8

12/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/15/00 21:00	NWL
Fluoride	1.50	0.25	1.25	mg/L	25	12/15/00 21:00	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

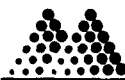
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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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: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-05A
Client Sample ID: 0012014-06B
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-9

1125/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.7	9.43	µg/L	1	12/16/00 03:29	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/16/00 03:29	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
Indene	U	4.7	9.43	µg/L	1	12/16/00 03:29	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/16/00 03:29	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/16/00 03:29	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/16/00 03:29	KPF
Quinoline	U	3.8	9.43	µg/L	1	12/16/00 03:29	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	45.2	1-152	% Recovery	1	12/16/00 03:29	KPF
2-Fluorophenol	52.9	7-77	% Recovery	1	12/16/00 03:29	KPF
2-Fluorobiphenyl	59.5	23-104	% Recovery	1	12/16/00 03:29	KPF
Nitrobenzene-d5	101	30-119	% Recovery	1	12/16/00 03:29	KPF
Phenol-d6	49.4	2-68	% Recovery	1	12/16/00 03:29	KPF
Terphenyl-d14	78.3	7-133	% Recovery	1	12/16/00 03:29	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level

19



Mountain States Analytical, Inc.

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

ANALYTICAL REPORT



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-05B
Client Sample ID: 0012014-06D
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-9

WB
1/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
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SW-846 3005A: Flame/ICP Prep, Water

Prep Batch ID: 4736

12/21/00 13:48 LC

SW-846 7470A: Mercury by CVAA, Water

Mercury

U

0.1

0.5

µg/L

1

12/20/00 17:30

DGW

SW-846 7470A: Mercury Prep CVAA, Water

Prep Batch ID: 4726

12/20/00 13:58

DGW

SW-846 6010B: Metals by hrICP, Water

Arsenic	U	0.02	0.1	mg/L	1	01/09/01 00:14	DJK
Barium	0.014 J	0.003	0.015	mg/L	1	01/09/01 00:14	DJK
Cadmium	U	0.003	0.015	mg/L	1	01/09/01 00:14	DJK
Chromium	U	0.01	0.05	mg/L	1	01/09/01 00:14	DJK
Lead	U	0.03	0.15	mg/L	1	01/09/01 00:14	DJK
Selenium	U	0.03	0.15	mg/L	1	01/09/01 00:14	DJK
Silver	U	0.004	0.02	mg/L	1	01/09/01 00:14	DJK

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

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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Analytical Report



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-05C
Client Sample ID: 0012014-06E
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-9

1/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/15/00 22:18	NWL
Fluoride	1.87	0.25	1.25	mg/L	25	12/15/00 22:18	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

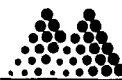
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



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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: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-06A
Client Sample ID: 0012014-07B
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-10

11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.7	9.43	µg/L	1	12/16/00 04:09	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/16/00 04:09	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
Indene	U	4.7	9.43	µg/L	1	12/16/00 04:09	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/16/00 04:09	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/16/00 04:09	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/16/00 04:09	KPF
Quinoline	U	3.8	9.43	µg/L	1	12/16/00 04:09	KPF
Surrogates							
		Recovery Range					
2,4,6-Tribromophenol	38.5	1-152		% Recovery	1	12/16/00 04:09	KPF
2-Fluorophenol	39.6	7-77		% Recovery	1	12/16/00 04:09	KPF
2-Fluorobiphenyl	55.5	23-104		% Recovery	1	12/16/00 04:09	KPF
Nitrobenzene-d5	92.7	30-119		% Recovery	1	12/16/00 04:09	KPF
Phenol-d6	35.8	2-68		% Recovery	1	12/16/00 04:09	KPF
Terphenyl-d14	62.6	7-133		% Recovery	1	12/16/00 04:09	KPF

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

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

* - Result is greater than the associated action level

22



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

Analysis



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-06B
Client Sample ID: 0012014-07D
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-10

NS
11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4736						12/21/00 13:48	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:31	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by hrICP, Water							
Arsenic	U	0.02	0.1	mg/L	1	01/09/01 00:18	DJK
Barium	0.0832	0.003	0.015	mg/L	1	01/09/01 00:18	DJK
Cadmium	U	0.003	0.015	mg/L	1	01/09/01 00:18	DJK
Chromium	U	0.01	0.05	mg/L	1	01/09/01 00:18	DJK
Lead	U	0.03	0.15	mg/L	1	01/09/01 00:18	DJK
Selenium	U	0.03	0.15	mg/L	1	01/09/01 00:18	DJK
Silver	U	0.004	0.02	mg/L	1	01/09/01 00:18	DJK

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

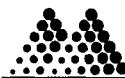
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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Farmington, NM 87401
(505) 325-5667 Fax: (505) 327-1496

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-06C
Client Sample ID: 0012014-07E
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-10

#3
11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/15/00 22:38	NWL
Fluoride	1.78	0.25	1.25	mg/L	25	12/15/00 22:38	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

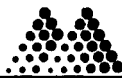
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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Analytical



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-07A
Client Sample ID: 0012014-08B
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-11

HB
1/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 8270C: Semi-Volatiles, Water							
Acenaphthene	U	4.7	9.43	µg/L	1	12/16/00 04:50	KPF
Acenaphthylene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
Anthracene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
Benz(a)anthracene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
Benzo(a)pyrene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
Benzo(b)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
Benzo(ghi)perylene	U	4.7	9.43	µg/L	1	12/16/00 04:50	KPF
Benzo(k)fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
Chrysene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
Dibenz(a,h)anthracene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
Fluoranthene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
Fluorene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
Indene	U	4.7	9.43	µg/L	1	12/16/00 04:50	KPF
Indeno(1,2,3-cd)pyrene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
2-Methylnaphthalene	U	4.7	9.43	µg/L	1	12/16/00 04:50	KPF
Naphthalene	U	4.7	9.43	µg/L	1	12/16/00 04:50	KPF
Phenanthrene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
Pyrene	U	5.7	9.43	µg/L	1	12/16/00 04:50	KPF
Quinoline	U	3.8	9.43	µg/L	1	12/16/00 04:50	KPF

Surrogates

Recovery Range

2,4,6-Tribromophenol	12.0	1-152	% Recovery	1	12/16/00 04:50	KPF
2-Fluorophenol	4.29 S (8a)	7-77	% Recovery	1	12/16/00 04:50	KPF
2-Fluorobiphenyl	54.7	23-104	% Recovery	1	12/16/00 04:50	KPF
Nitrobenzene-d5	92.6	30-119	% Recovery	1	12/16/00 04:50	KPF
Phenol-d6	2.31	2-68	% Recovery	1	12/16/00 04:50	KPF
Terphenyl-d14	56.2	7-133	% Recovery	1	12/16/00 04:50	KPF

Note for 12/16/00 04:50 analysis: Surrogate failures are acids, which are not target compounds.

8a: See sample comments

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

Prep Batch ID: 4679

0.94 12/13/00 10:00 BE

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

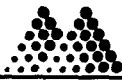
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

25



Mountain States Analytical, Inc.

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

Analytical Report



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-07B
Client Sample ID: 0012014-08D
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-11

11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
SW-846 3005A: Flame/ICP Prep, Water							
Prep Batch ID: 4736						12/21/00 13:48	LC
SW-846 7470A: Mercury by CVAA, Water							
Mercury	U	0.1	0.5	µg/L	1	12/20/00 17:33	DGW
SW-846 7470A: Mercury Prep CVAA, Water							
Prep Batch ID: 4726						12/20/00 13:58	DGW
SW-846 6010B: Metals by hrICP, Water							
Arsenic	0.023 J	0.02	0.1	mg/L	1	01/09/01 00:22	DJK
Barium	0.171	0.003	0.015	mg/L	1	01/09/01 00:22	DJK
Cadmium	U	0.003	0.015	mg/L	1	01/09/01 00:22	DJK
Chromium	0.017 J	0.01	0.05	mg/L	1	01/09/01 00:22	DJK
Lead	U	0.03	0.15	mg/L	1	01/09/01 00:22	DJK
Selenium	U	0.03	0.15	mg/L	1	01/09/01 00:22	DJK
Silver	U	0.004	0.02	mg/L	1	01/09/01 00:22	DJK

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

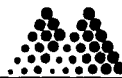
S - Results outside normal recovery limits

J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level



Mountain States Analytical, Inc.

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

Analytical Report



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

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162
Lab Sample ID: 0012162-07C
Client Sample ID: 0012014-08E
Date Collected: 12/07/00
Date Received: 12/12/00 09:51
Matrix: Water
COC ID:

Project: Water Analysis

Project ID:

Purchase Order: Thriftway Refinery; MW-11

11/25/01

Parameter	Result	MDL	PQL	Units	DF	Date Analyzed	Analyst
EPA 300.0: Anions by I. C. (Br, Cl, F, SO ₄), Water							
Bromide	U	0.5	2.5	mg/L	25	12/15/00 22:57	NWL
Fluoride	1.60	0.25	1.25	mg/L	25	12/15/00 22:57	NWL

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

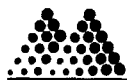
J - Analyte detected below the PQL

E - Result is outside of quantitation range

R - RPD outside normal precision limits

* - Result is greater than the associated action level

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

EPA 300.0: Anions by I. C. (Br, Cl, F, SO₄), Water

QC Type: Laboratory Reagent Blank
Sample ID: LRB 1
Run ID: IC 1_001215B

Analysis Date: 12/15/00 12:31
Prep Batch ID: R9994

Units: mg/L
Seq No: 179942

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Bromide	U	0	0	0		0.1		
Fluoride	U	0	0	0		0.05		

QC Type: Laboratory Fortified Blank
Sample ID: LFB IC-000905-01
Run ID: IC 1_001215B

Analysis Date: 12/15/00 12:50
Prep Batch ID: R9994

Units: mg/L
Seq No: 179943

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Bromide	428	U	400	107	90	110		
Fluoride	97.3	U	100	97.3	90	110		

QC Type: Matrix Spike
Sample ID: 0012154-11A MS
Run ID: IC 1_001215B

Analysis Date: 12/15/00 14:09
Prep Batch ID: R9994

Units: mg/L
Seq No: 179947

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Bromide	10900	U	10000	109	80	120		
Fluoride	2580	U	2500	103	80	120		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

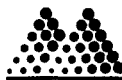
S - Results outside normal recovery limits

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



Mountain States Analytical, Inc.

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Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

QC Type: Matrix Spike Duplicate
Sample ID: 0012154-11A MSD
Run ID: IC 1_001215B

Analysis Date: 12/15/00 14:28
Prep Batch ID: R9994

Units: mg/L
Seq No: 179948

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Bromide	10600	U	10000	106	80	120	10900	3.0 20
Fluoride	2570	U	2500	103	80	120	2580	0.41 20

QC Type: Laboratory Reagent Blank
Sample ID: LRB 2
Run ID: IC 1_001215B

Analysis Date: 12/15/00 14:48
Prep Batch ID: R9994

Units: mg/L
Seq No: 179949

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Bromide	U	0	0	0		0.1		
Fluoride	U	0	0	0		0.05		

QC Type: Laboratory Reagent Blank
Sample ID: LRB 3
Run ID: IC 1_001215B

Analysis Date: 12/15/00 18:04
Prep Batch ID: R9994

Units: mg/L
Seq No: 179959

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Bromide	U	0	0	0		0.1		
Fluoride	U	0	0	0		0.05		

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

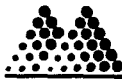
S - Results outside normal recovery limits

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.

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

Analysis Report



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

QC Type: Laboratory Reagent Blank
Sample ID: LRB 4
Run ID: IC 1_001215B

Analysis Date: 12/15/00 21:20
Prep Batch ID: R9994

Units: mg/L
Seq No: 179969

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Bromide	U	0	0	0		0.1		
Fluoride	U	0	0	0		0.05		

QC Type: Laboratory Reagent Blank
Sample ID: LRB 5
Run ID: IC 1_001215B

Analysis Date: 12/16/00 00:35
Prep Batch ID: R9994

Units: mg/L
Seq No: 179979

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Bromide	U	0	0	0		0.1		
Fluoride	U	0	0	0		0.05		

QC Type: Laboratory Reagent Blank
Sample ID: LRB 6
Run ID: IC 1_001215B

Analysis Date: 12/16/00 03:51
Prep Batch ID: R9994

Units: mg/L
Seq No: 179989

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Bromide	U	0	0	0		0.1		
Fluoride	U	0	0	0		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

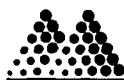
E - Result is outside of quantitation range

R - RPD outside normal precision limits

NC - Not Calculated: Duplicate value(s) are less than the MDL

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Individual pages or portions of this report may not be separated and presented for regulatory compliance.



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

QC Type: Laboratory Fortified Blank
Sample ID: LFB IC-000905-01
Run ID: IC 1_001215B

Analysis Date: 12/16/00 06:47
Prep Batch ID: R9994

Units: mg/L
Seq No: 179998

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Fluoride	102	U	100	102	90	110		

QC Type: Laboratory Reagent Blank
Sample ID: LRB 7
Run ID: IC 1_001215B

Analysis Date: 12/16/00 07:07
Prep Batch ID: R9994

Units: mg/L
Seq No: 179999

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Bromide	U	0	0	0		0.1		
Fluoride	U	0	0	0		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



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

SW-846 6010B: Metals by hrICP, Water

QC Type: Method Blank

Sample ID: PBW-4736

Run ID: TJA-IRIS_010108A

Analysis Date: 01/08/01 23:23

Prep Batch ID: 4736

Units: mg/L

Seq No: 190141

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	0.0079	0	0	0	-0.04	0.02		
Barium	0.00070	0	0	0	-0.006	0.003		
Cadmium	-0.00012	0	0	0	-0.006	0.003		
Chromium	0.0015	0	0	0	-0.02	0.01		
Lead	0.015	0	0	0	-0.06	0.03		
Selenium	-0.013	0	0	0	-0.06	0.03		
Silver	-0.00091	0	0	0	-0.008	0.004		

QC Type: Laboratory Control Sample (Water)

Sample ID: LCSW-4736

Run ID: TJA-IRIS_010108A

Analysis Date: 01/08/01 23:27

Prep Batch ID: 4736

Units: mg/L

Seq No: 190142

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Arsenic	1.06		1.00	106	75	125		
Barium	0.208		0.200	104	75	125		
Cadmium	0.101		0.100	101	75	125		
Chromium	0.409		0.400	102	75	125		
Lead	1.00		1.00	100	75	125		
Selenium	0.980		1.00	98.0	75	125		
Silver	0.0986		0.100	98.6	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



Mountain States Analytical, Inc.

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

Analytical Report



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

QC Type: Sample Duplicate
Sample ID: 0012179-01B D
Run ID: TJA-IRIS_010108A

Analysis Date: 01/08/01 23:33
Prep Batch ID: 4736

Units: mg/L
Seq No: 190144

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	0.048 JR(6a)						0.038 J	23 20
Barium	0.109						0.107	1.8 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

6a: Serial dilution not evaluated - result <10x the detection limit

QC Type: Matrix Spike
Sample ID: 0012179-01B MS
Run ID: TJA-IRIS_010108A

Analysis Date: 01/08/01 23:37
Prep Batch ID: 4736

Units: mg/L
Seq No: 190145

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	1.13	0.038 J	1.00	109	75	125		
Barium	0.312	0.107	0.200	103	75	125		
Cadmium	0.103	U	0.100	103	75	125		
Chromium	0.413	U	0.400	103	75	125		
Lead	0.986	U	1.00	98.6	75	125		
Selenium	1.06	U	1.00	106	75	125		
Silver	0.103	U	0.100	103	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: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

QC Type: Matrix Spike Duplicate
Sample ID: 0012179-01B MSD
Run ID: TJA-IRIS_010108A

Analysis Date: 01/08/01 23:40
Prep Batch ID: 4736

Units: mg/L
Seq No: 190146

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	1.15	0.038 J	1.00	111	75	125	1.13	1.9 20
Barium	0.312	0.107	0.200	103	75	125	0.312	0.11 20
Cadmium	0.103	U	0.100	103	75	125	0.103	0.029 20
Chromium	0.416	U	0.400	104	75	125	0.413	0.77 20
Lead	0.980	U	1.00	98.0	75	125	0.986	0.65 20
Selenium	1.04	U	1.00	104	75	125	1.06	1.9 20
Silver	0.104	U	0.100	104	75	125	0.103	1.5 20

QC Type: Post Digestion/Distillation Spike
Sample ID: 0012179-01B A
Run ID: TJA-IRIS_010108A

Analysis Date: 01/08/01 23:43
Prep Batch ID: 4736

Units: mg/L
Seq No: 190147

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	1.12	0.038 J	1.00	108	75	125		
Barium	0.310	0.107	0.200	102	75	125		
Cadmium	0.102	U	0.100	102	75	125		
Chromium	0.406	U	0.400	102	75	125		
Lead	0.960	U	1.00	96.0	75	125		
Selenium	1.06	U	1.00	106	75	125		
Silver	0.0983	U	0.100	98.3	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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Individual pages or portions of this report may not be separated and presented for regulatory compliance.



Mountain States Analytical, Inc.

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

January 19, 2001



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

QC Type: Serial Dilution
Sample ID: 0012179-01B L
Run ID: TJA-IRIS_010108A

Analysis Date: 01/08/01 23:47
Prep Batch ID: 4736

Units: mg/L
Seq No: 190148

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Arsenic	U						0.038 J	NC 10
Barium	0.105						0.107	1.7 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

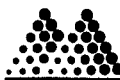
S - Results outside normal recovery limits

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



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: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

SW-846 7470A: Mercury by CVAA, Water

QC Type: Method Blank
Sample ID: PBW-4726
Run ID: FIMS_001220B

Analysis Date: 12/20/00 16:53
Prep Batch ID: 4726

Units: µg/L
Seq No: 182894

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	0.047	0	0	0	-0.1	0.1		

QC Type: Laboratory Control Sample (Water)
Sample ID: LCSW-4726
Run ID: FIMS_001220B

Analysis Date: 12/20/00 16:55
Prep Batch ID: 4726

Units: µg/L
Seq No: 182895

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	5.46		5.00	109	80	120		

QC Type: Sample Duplicate
Sample ID: 0011332-01C D
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:12
Prep Batch ID: 4726

Units: µg/L
Seq No: 182961

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD Limit
Mercury	0.35 JR(3a)						0.22 J	45 20

3a: Duplicates not evaluated - matrix sample <10x the detection limit

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

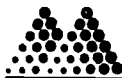
J - Analyte detected below the PQL

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

Analysis Report



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

QC Type: Matrix Spike
Sample ID: 0011332-01C MS
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:13
Prep Batch ID: 4726

Units: µg/L
Seq No: 182962

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Mercury	4.29	0.22 J	5.00	81.4	80	120		

QC Type: Matrix Spike Duplicate
Sample ID: 0011332-01C MSD
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:15
Prep Batch ID: 4726

Units: µg/L
Seq No: 182963

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Mercury	4.13 S(2b)	0.22 J	5.00	78.1	80	120	4.29	3.9 20

2b: MS/MSD are outside acceptable limit - RPD and PDS were within acceptable limits

QC Type: Serial Dilution
Sample ID: 0011332-01C L
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:18
Prep Batch ID: 4726

Units: µg/L
Seq No: 182964

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Mercury	U						0.22 J	NC 10

U - Not detected above the MDL

B - Analyte detected in the associated Method Blank

S - Results outside normal recovery limits

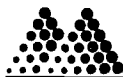
J - Analyte detected below the PQL

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.

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

Analysis Report



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

QC Type: Post Digestion/Distillation Spike
Sample ID: 0011332-01C A
Run ID: FIMS_001220B

Analysis Date: 12/21/00 08:28
Prep Batch ID: 4726

Units: µg/L
Seq No: 182965

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Mercury	11.4	0.22 J	10.0	112	85	115		

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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Anal. 12/15/00



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

SW-846 8270C: Semi-Volatiles, Water

QC Type: Method Blank
Sample ID: MB-4679
Run ID: HP-1_001215A

Analysis Date: 12/15/00 18:35
Prep Batch ID: 4679

Units: µg/L
Seq No: 192471

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Acenaphthene	U	0	0	0		4		
Acenaphthylene	U	0	0	0		4		
Anthracene	U	0	0	0		2		
Benz(a)anthracene	U	0	0	0		2		
Benzo(a)pyrene	U	0	0	0		2		
Benzo(b)fluoranthene	U	0	0	0		3		
Benzo(ghi)perylene	U	0	0	0		2		
Benzo(k)fluoranthene	U	0	0	0		3		
Chrysene	U	0	0	0		2		
Dibenz(a,h)anthracene	U	0	0	0		2		
Fluoranthene	U	0	0	0		2		
Fluorene	U	0	0	0		3		
Indene	U	0	0	0		5		
Indeno(1,2,3-cd)pyrene	U	0	0	0		2		
2-Methylnaphthalene	U	0	0	0		6		
Naphthalene	U	0	0	0		5		
Phenanthrene	U	0	0	0		2		
Pyrene	U	0	0	0		2		
Quinoline	U	0	0	0		4		
Surrogates								
2,4,6-Tribromophenol	157	0	200	78.7	1	152		
2-Fluorophenol	113	0	200	56.3	7	77		
2-Fluorobiphenyl	66.1	0	100	66.1	23	104		
Nitrobenzene-d5	74.4	0	100	74.4	30	119		
Phenol-d6	76.7	0	200	38.4	2	68		
Terphenyl-d14	93.4	0	100	93.4	7	133		

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

Analysis Report



Quality Control Summary

Client: On Site Technologies, Ltd.
Project: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

QC Type: Laboratory Control Spike
Sample ID: LCS-4679
Run ID: HP-1_001215A

Analysis Date: 12/15/00 19:16
Prep Batch ID: 4679

Units: µg/L
Seq No: 192472

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Acenaphthene	87.8		100	87.8	53	109		
4-Chloro-3-methylphenol	77.7		100	77.7	50	117		
2-Chlorophenol	74.3		100	74.3	43	100		
1,4-Dichlorobenzene	54.5		100	54.5	28	95		
2,4-Dinitrotoluene	83.0		100	83.0	59	120		
N-Nitrosodi-N-propylamine	77.4		100	77.4	46	106		
4-Nitrophenol	36.9		100	36.9	14	59		
Pentachlorophenol	77.6		100	77.6	46	130		
Phenol	38.0		100	38.0	15	56		
Pyrene	89.2		100	89.2	55	116		
1,2,4-Trichlorobenzene	55.5		100	55.5	34	99		
Surrogates								
2,4,6-Tribromophenol	180		200	89.9	1	152		
2-Fluorophenol	96.3		200	48.1	7	77		
2-Fluorobiphenyl	77.0		100	77.0	23	104		
Nitrobenzene-d5	72.8		100	72.8	30	119		
Phenol-d6	61.2		200	30.6	2	68		
Terphenyl-d14	83.0		100	83.0	7	133		

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: Water Analysis
Project ID:

Report Number: 0012162-1
Date Reported: 01/19/01
Work Order: 0012162

QC Type: Laboratory Control Spike Duplicate
Sample ID: LCSD-4679
Run ID: HP-1_001215A

Analysis Date: 12/15/00 19:57
Prep Batch ID: 4679

Units: µg/L
Seq No: 192473

Parameter	Result	Spike Parent	True Value	Percent Recovery	Low Limit	High Limit	Duplicate Parent	RPD RPD Limit
Acenaphthene	86.1		100	86.1	53	109	87.8	2.0 28
4-Chloro-3-methylphenol	79.9		100	79.9	50	117	77.7	2.8 37
2-Chlorophenol	74.9		100	74.9	43	100	74.3	0.84 29
1,4-Dichlorobenzene	51.7		100	51.7	28	95	54.5	5.3 32
2,4-Dinitrotoluene	82.3		100	82.3	59	120	83.0	0.80 22
N-Nitrosodi-N-propylamine	79.0		100	79.0	46	106	77.4	2.0 55
4-Nitrophenol	36.2		100	36.2	14	59	36.9	2.1 47
Pentachlorophenol	81.5		100	81.5	46	130	77.6	4.9 49
Phenol	38.8		100	38.8	15	56	38.0	2.3 23
Pyrene	82.6		100	82.6	55	116	89.2	7.6 25
1,2,4-Trichlorobenzene	58.7		100	58.7	34	99	55.5	5.7 28
Surrogates								
2,4,6-Tribromophenol	176		200	88.0	1	152		
2-Fluorophenol	96.3		200	48.2	7	77		
2-Fluorobiphenyl	78.4		100	78.4	23	104		
Nitrobenzene-d5	73.7		100	73.7	30	119		
Phenol-d6	62.1		200	31.0	2	68		
Terphenyl-d14	81.5		100	81.5	7	133		

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

1202

On Site Technologies, LTD.

612 E. Murray Drive
Farmington, NM 87401
(505) 325-2432

CHAIN-OF-CUSTODY RECORD

Page 1 of 2

Subcontractor:

Mountain States Analytical, Inc.
1645 West 2200 South

TEL: (800) 973-6724
FAX: (801) 972-6278

Salt Lake City, UT 84119

Acct #:

11-Dec-00

Sample ID	Matrix	Collection Date	Bottle Type	Requested Tests			
				E300	SW6010B	SW7470	SW6270C
0012014-02B	Aqueous	12/7/2000 9:30:00 AM	1LAMGU				
0012014-02D	Aqueous	12/7/2000 9:30:00 AM	500HDEHNO3		7	1	1
0012014-02E	Aqueous	12/7/2000 9:30:00 AM	250HDE	2			
0012014-03B	Aqueous	12/7/2000 10:39:00 AM	1LAMGU				1
0012014-03D	Aqueous	12/7/2000 10:39:00 AM	500HDEHNO3		7	1	
0012014-03E	Aqueous	12/7/2000 10:39:00 AM	250HDE	2			
0012014-04B	Aqueous	12/7/2000 11:02:00 AM	1LAMGU				1
0012014-04D	Aqueous	12/7/2000 11:02:00 AM	500HDEHNO3		7	1	
0012014-04E	Aqueous	12/7/2000 11:02:00 AM	250HDE	2			
0012014-05B	Aqueous	12/7/2000 12:15:00 PM	1LAMGU				1
0012014-05D	Aqueous	12/7/2000 12:15:00 PM	500HDEHNO3		7	1	
0012014-05E	Aqueous	12/7/2000 12:15:00 PM	250HDE	2			
0012014-06B	Aqueous	12/7/2000 1:30:00 PM	1LAMGU				1
0012014-06D	Aqueous	12/7/2000 1:30:00 PM	500HDEHNO3		7	1	
0012014-06E	Aqueous	12/7/2000 1:30:00 PM	250HDE	2			
0012014-07B	Aqueous	12/7/2000 2:30:00 PM	1LAMGU				1
0012014-07D	Aqueous	12/7/2000 2:30:00 PM	500HDEHNO3		7	1	
0012014-07E	Aqueous	12/7/2000 2:30:00 PM	250HDE	2			

Comments:

Please analyze submitted water samples for (B) PAH by SW8270, (D) Total Metals: Cr, Pb, As, Se, Ar, Ba, Cd and Hg by SW6010B, (E) Fluoride and Bromide. Refer to prior MSAL work order #0001009.

Relinquished by: Heidi Roca

Date/Time

12/11/00 1530

Received by: Mofaw d. Eden

Date/Time

12/12/00 0951

On Site Technologies, LTD.

612 E. Murry Drive
Farmington, NM 87401
(505) 325-2432

CHAIN-OF-CUSTODY RECORD

Page 2 of 2

Subcontractor:

Mountain States Analytical, Inc.
1645 West 2200 South

TEL: (800) 973-6724
FAX: (801) 972-6278

Salt Lake City, UT 84119

Accl #:

11-Dec-00

Sample ID	Matrix	Collection Date	Bottle Type	Requested Tests				
				E300	SW6010B	SW7470	SW8270C	
0012014-08B	Aqueous	12/7/2000 3:39:00 PM	11AMGU				1	
0012014-08D	Aqueous	12/7/2000 3:39:00 PM	500-HDPEHNO3		7	1		
0012014-08E	Aqueous	12/7/2000 3:39:00 PM	250-HDPE	2				

Comments:

Please analyze submitted water samples for (B) PAH by SW8270, (D) Total Metals: Cr, Pb, As, Se, Ar, Ba, Cd and Hg by SW6010B, (E) Fluoride and Bromide. Refer to prior MSAL work order #0001009.

Relinquished by: Heidi Rasmussen	Date/Time: 12/11/00 15:30	Received by: Matthew J. Edman	Date/Time: 12/17/00 09:51
Relinquished by:		Received by:	

Mountain States Analytical, Inc.

Sample Receipt Checklist

Client Name On Site Technologies
Carrier: UPS

Work Order No. 0012162
Carrier Number: 1Z 66E 585 01 1001 702 4

Cooler Information:

Cooler Number/ID: OST F

Condition of Shipping Container: Good Fair Damaged

(If damaged, explain)

Cooler Sealed: Yes No Not Applicable

Custody Seals Present: Yes No Not Applicable

Intact

Broken

Seal Number: _____

Coolant:

Ice

Blue Ice

None

Other: _____

Temperature: _____

20C

Thermometer ID: _____

3910

Correction Factor: 0

Packing material paper, bubble wrap, ice

Surface Radioactivity Reading (if required) _____ mR/hr

Ludlum Model 3 Serial # _____

Chain-Of-Custody Information:

COC Present: Yes No Other: _____

COC signed (relinquished and received): Yes No Not Applicable

COC agrees with sample labels: Yes No

Notes: Chain - 0012016 label 12016

Sample Information:

Samples included in cooler: 0012014 - (02D, 03D, 04D, 05D, 06D, 06E, 07E, 08D, 08E)
0012016 - (02B, 03B, 04B, 05B, 05E, 06B, 06E, 07B, 07E)

Custody Seals Present:

Yes

No

Not Applicable

Other: _____

Intact

Broken

Seal Number(s) _____

Sample containers intact: Yes No Notes: _____

Samples in proper containers: Yes No

Sufficient sample volume: Yes No

All samples received in hold time: Yes No

Water - Volatiles zero headspace:

Yes

No

Not Applicable

Pre-preserved with HCL: YES NO

Notes: _____

Water - pH acceptable upon receipt: Yes

Adjusted (see comments below)

Not Applicable

HNO₃ = <2

H₂SO₄ = _____

NaOH = _____

ZnAC / NaOH = _____

Water - pH adjusted: (MSAI Tracking No.)

HNO₃ _____

H₂SO₄ _____

NaOH _____

ZnAC _____

Na₂SO₄ _____

Other _____

Notes: _____

Cooler Contents Inspected & Verified By:

Matthew J. Eden

Date: 12/12/06

Time: 1206

Mountain States Analytical, Inc.

Sample Receipt Checklist

Client Name On Site Technologies
Carrier: UPS

Work Order No. 0012462
Carrier Number: 17 66E 585 01 1001 700 6

Cooler Information:

Cooler Number/ID: OST D

Condition of Shipping Container: Good Fair Damaged

(If damaged, explain) _____

Cooler Sealed: Yes No Not Applicable

Custody Seals Present: Yes No Not Applicable

Intact Broken Seal Number: _____

Coolant: Ice Blue Ice None Other: _____

Temperature: 3.5°C Thermometer ID: 3365 Correction Factor: 0

Packing material ice, bubble wrap, paper

Surface Radioactivity Reading (if required) _____ mR/hr Ludlum Model 3 Serial # _____

Chain-Of-Custody Information:

COC Present: Yes No Other: _____

COC signed (relinquished and received): Yes No Not Applicable

COC agrees with sample labels: Yes No

Notes: _____

Sample Information:

Samples included in cooler: 0012011 - (02B, 02D, 02E, 03B, 03D, 03E, 04B, 04D, 04E, 04F, 04G, 04H, 04I, 04J, 04K, 04L, 04M, 04N, 04O, 04P, 04Q, 04R, 04S, 04T, 04U, 04V, 04W, 04X, 04Y, 04Z)
0012012 - (02B, 02D, 02E, 03B, 03D, 03E, 04B, 04D, 04E, 04F, 04G, 04H, 04I, 04J, 04K, 04L, 04M, 04N, 04O, 04P, 04Q, 04R, 04S, 04T, 04U, 04V, 04W, 04X, 04Y, 04Z)
0012013 - (02B, 02D, 02E, 03B, 03D, 03E, 04B, 04D, 04E, 04F, 04G, 04H, 04I, 04J, 04K, 04L, 04M, 04N, 04O, 04P, 04Q, 04R, 04S, 04T, 04U, 04V, 04W, 04X, 04Y, 04Z)

Custody Seals Present: Yes No Not Applicable Other _____
Intact Broken Seal Number(s) _____

Sample containers intact: Yes No Notes: _____

Samples in proper containers: Yes No _____

Sufficient sample volume: Yes No _____

All samples received in hold time: Yes No _____

Water - Volatiles zero headspace: Yes No Not Applicable Pre-preserved with HCL: YES NO

Notes: _____

Water - pH acceptable upon receipt: Yes Adjusted (see comments below) Not Applicable

HNO₃ = < 2 H₂SO₄ = _____ NaOH = _____ ZnAC / NaOH = _____

Water - pH adjusted: (MSAI Tracking No.)

HNO₃ _____ H₂SO₄ _____ NaOH _____

ZnAC _____ Na₂SO₂O₃ _____ Other _____

Notes: _____

Cooler Contents Inspected & Verified By:

Mathew J. Eden

Date: 12/13/00

Time: 1229

Mountain States Analytical, Inc.

Sample Receipt Checklist

Client Name On Site Technologies
Carrier: UPS

Work Order No. 00121162
Carrier Number: 1Z 66E 585 01 1001 701 5

Cooler Information:

Cooler Number/ID: OST G
Condition of Shipping Container: ☒ Good ☐ Fair ☐ Damaged
(If damaged, explain) _____

Cooler Sealed: ☒ Yes ☐ No ☐ Not Applicable

Custody Seals Present: ☒ Yes ☐ No ☐ Not Applicable

☒ Intact

☐ Broken

Seal Number: _____

Coolant: ☒ Ice ☐ Blue Ice ☐ None ☐ Other: _____

Temperature: 4.5°C

Thermometer ID: 3365

Correction Factor: 0

Packing material ice, bubble wrap, paper

Surface Radioactivity Reading (if required) _____ mR/hr

Ludium Model 3 Serial # _____

Chain-Of-Custody Information:

COC Present: ☒ Yes ☐ No ☐ Other: _____

COC signed (relinquished and received): ☒ Yes ☐ No ☐ Not Applicable

COC agrees with sample labels: ☒ Yes ☐ No

Notes: Chain - 0012016 Label - 12016

Sample Information:

Samples included in cooler: 001201A - (03B, 04B, 05B, 06B, 07B, 08B, 09B, 10B, 11B, 12B, 13B, 14B, 15B, 16B, 17B, 18B, 19B, 20B, 21B, 22B, 23B, 24B, 25B, 26B, 27B, 28B, 29B, 30B, 31B, 32B, 33B, 34B, 35B, 36B, 37B, 38B, 39B, 40B, 41B, 42B, 43B, 44B, 45B, 46B, 47B, 48B, 49B, 50B, 51B, 52B, 53B, 54B, 55B, 56B, 57B, 58B, 59B, 60B, 61B, 62B, 63B, 64B, 65B, 66B, 67B, 68B, 69B, 70B, 71B, 72B, 73B, 74B, 75B, 76B, 77B, 78B, 79B, 80B, 81B, 82B, 83B, 84B, 85B, 86B, 87B, 88B, 89B, 90B, 91B, 92B, 93B, 94B, 95B, 96B, 97B, 98B, 99B, 100B)
001201B - (02D, 02E, 03D, 03E, 04D, 04E, 05D, 06D, 07D)

Custody Seals Present: Yes ☒ No ☐ Not Applicable ☐ Other: _____
Intact ☐ Broken ☐ Seal Number(s) _____

Sample containers intact: ☒ Yes ☐ No

Notes: _____

Samples in proper containers: ☒ Yes ☐ No

Sufficient sample volume: ☒ Yes ☐ No

All samples received in hold time: ☒ Yes ☐ No

Water - Volatiles zero headspace: Yes ☐ No ☒ Not Applicable Pre-preserved with HCL: YES ☐ NO

Notes: _____

Water - pH acceptable upon receipt: ☒ Yes ☐ Adjusted (see comments below) ☐ Not Applicable

HNO₃ = < 2

H₂SO₄ = _____

NaOH = _____

ZnAC / NaOH = _____

Water - pH adjusted: (MSAI Tracking No.)

HNO₃ _____

H₂SO₄ _____

NaOH _____

ZnAC _____

Na₂SO₄ _____

Other _____

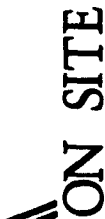
Notes: _____

Cooler Contents Inspected & Verified By:

Matthew L. Eden

Date: 12/12/00

Time: 1257



2000

Page: 1 of 1

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

[Signature]

