3R - 79

REPORTS

DATE:

2/7/2001

BIOTECH REMEDIATION INC.

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

ANNUAL GROUNDWATER SAMPLING
BURLINGTON RESOURCES OIL AND GAS COMPANY'S
THOMAS No. 1 LOCATION
BLOOMFIELD, NEW MEXICO

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OIL CONSERVATION DIVISION

prepared for the

NEW MEXICO OIL CONSERVATION DIVISION
Mr. Will Olson, Project Manager, Santa Fe Office
and
Mr. Denny Foust, Aztec Office

February 7, 2001

ANNUAL GROUNDWATER SAMPLING
BURLINGTON RESOURCES OIL AND GAS COMPANY'S
THOMAS No. 1 LOCATION
BLOOMFIELD, NEW MEXICO

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

Prepared for the

NEW MEXICO OIL CONSERVATION DIVISION

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

February 7, 2001

Prepared by

BIOTECH REMEDIATION, INC.
710 E. 20TH STREET, SUITE 400
FARMINGTON, NEW MEXICO 87401

Prepared by:

Ken Sinks
Project Scientist

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1.0 INTRODUCTION

In compliance with and pursuant to the requirements of the New Mexico Oil Conservation Division (NMOCD), BioTech Remediation, Inc. (BioTech), submits the following 2000 Annual Monitoring and Sampling Report for the Burlington Resources Oil and Gas Company's Thomas No. 1 (now Clayton Investments) well located in Bloomfield, New Mexico.

This report summarizes the monitoring, sampling and data compilation activities for the period of January 2000 through December 2000. Included are groundwater measurement of all wells and laboratory analyses for MW-02 and MW-03.

2.0 ANNUAL MONITORING AND SAMPLING ACTIVITIES

BioTech personnel completed the monitoring and sampling requirements for the Thomas No. 1 well located in Bloomfield, New Mexico on August 7, 2000 and December 13, 2000. During the monitoring and sampling events, groundwater monitor well measurements and sample collection strictly followed the procedures outlined below.

2.1 Groundwater Measurement

During each groundwater sampling event, depth to groundwater measurements were recorded for each monitor well. A Solonist Probe was used to measure from the survey point on the top of the well casing to the top of groundwater in the well. Depth measurements were recorded to 1/100 of a foot. Groundwater measurement data is summarized and presented in Table 1 and groundwater contour plots based on 2000 elevation data were constructed and are found on Figures 1A and 1B.

2.2 Groundwater Sample Collection

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, at which time each monitor well was considered to be successfully purged.

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 drain device. 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 until a meniscus formed and no headspace or air bubbles were present in the sample bottle. The sample container cap was replaced then tightly closed. The sample vial was observed while rotating to further ascertain that it was void of air.

2.3 Sample Preservation

Sample preservation consisted of the following; the vials were prepared in advance by the analyzing laboratory with hydrochloric acid (HCl). The HCl was added primarily to prevent bacterial degradation of hydrocarbons during sample transport and laboratory holding time.

2.3 Sample Transport

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 each of the samples avoided the potential for sample misidentification. The samples were then placed on ice and cooled to approximately 4° C.

2.5 Analysis

Groundwater sampling of the two monitor wells was conducted during August 2000 and December, 2000. During each sampling event, collected samples were analyzed for MTBE, benzene, toluene, ethylbenzene, and total xylenes (BTEX) per EPA Method 8021B. The laboratory results analyses are presented in Table 2.

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 method for decontaminating equipment was 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 DISCUSSION AND RECOMMENDATIONS

The contaminant concentrations in MW-03 continue to be below the NMWQCC standards for all contaminants. MW-02 continues to show a declining overall concentration (see Table 2), this indicates the source of contamination is being cleaned up through natural attenuation. Table 1 shows the groundwater elevation data in all monitor wells. Figures 1A and 1B illustrate the groundwater contours for the area at the time of sampling and monitoring in August 2000 and December 2000.

No further action is recommended at this time. BioTech will continue to monitor the

site on a semi-annual base (July and January) and report the information on an annual basis by April following the January sampling.

TABLES

TABLE 1
SUMMARY OF GROUNDWATER MONITORING DATA
Thomas Well #1, Bloomfield, NM

WELL	DATE	TOC	OUTAGE FT	WATER ELEV.	TEMP °C	pH	DO mg/l	Cond.	ORP	TDS	NTU"s	% Salinity	Purged vol.
MW-01	10/20/94	5376.91	4.95	5371.95	14.8	6.81	NM	2280	NM	NM	NM	NM	
	01/04/95	5376.91	5.90	5371.00	17.5	6.96	NM	2120	NM	NM	NM	NM	
	07/10/95	5376.91	4.85	5372.05	16.7	7.05	NM	2790	NM	NM	NM	NM	
	01/10/96	5376.91	4.86	5372.04	8.9	7.18	NM	3960	NM	NM	NM	NM	
	07/15/96	5376.91	5.14	5371.76	17.8	7.04	NM	2160	NM	NM	NM	NM	
	01/08/97	5376.91	4.76	5372.14	110.2	7.00	NM	2200	NM	NM	NM	NM	
	08/21/98	5376.91	3.29	5373.62	NM	NM	NM	NM	NM	NM	NM	NM	
	03/03/99	5376.91	3.20	5373.71	10.0	6.50	0.07	4300	NM	NM	NM	NM	
	06/17/99	5376.91	3.68	5373.23	NM	NM	NM	NM	NM	NM	NM	NM	
	09/13/99	5376.91	3.33	5373.58	NM	NM	NM	NM	NM	NM	NM	NM	
	01/20/00	5376.91	3.38	5373.53	10.7	5.90	0.08	NM	NM	NM	NM	NM	1.00
	08/07/00	5376.91	3.93	5372.98	15.4	6.70	0.36	NM	NM	NM	NM	NM	1.00
	12/13/00	5376.91	3.58	5373.33	NM	NM	NM	NM	NM	NM	NM	NM	
MW-02	10/28/92	5376.97	6.43	5370.54	20.0	7.20	NM	2200	NM	NM	NM	NM	
	11/13/92	5376.97	6.49	5370.48	16.1	6.97	NM	2250	NM	NM	NM	NM	
	10/20/94	5376.97	5.71	5371.26	19.1	6.64	NM	2460	NM	NM	NM	NM	
	01/04/95	5376.97	5.95	5371.02	7.1	6.95	NM	2160	NM	NM	NM	NM	
	07/10/95	5376.97	5.74	5371.23	NM	NM	NM	NM	NM	NM	NM	NM	
	01/10/96	5376.97	5.57	5371.40	NM	NM	NM	NM	NM	NM	NM	NM	
	07/15/96	5376.97	5.74	5371.23	NM	NM	NM	NM	NM	NM	NM	NM	
	01/08/97	5376.97	5.44	5371.53	NM	NM	NM	NM	NM	NM	NM	NM	
	08/21/98	5376.97	4.09	5372.88	NM	NM	NM	NM	NM	NM	NM	NM	
	03/03/99	5376.97	3.73	5373.24	9.7	7.00	NM	2170	NM	NM	NM	NM	
	06/17/99	5376.97	4.18	5372.79	NM	NM	0.01	NM	NM	NM	NM	NM	
	09/13/99	5376.97	3.62	5373.35	NM	NM	NM	NM	NM	NM	NM	NM	
	01/20/00	5376.97	3.89	5373.08	NM	6.20	NM	NM	NM	NM	NM	NM	1.00
	08/07/00	5376.97	4.51	5372.46	18.4	6.10	0.26	NM	NM	NM	NM	NM	1.30
	12/13/00	5376.97	4.15	5372.82	NM	NM	NM	NM	NM	NM	NM	NM	1.50
MW-03	10/28/92	5375.56	4.48	5371.08	20.0	7.12	NM	2450	NM	NM	NM	NM	
	11/13/92	5375.56	4.56	5371.00	13.5	7.03	NM	2300	NM	NM	NM	NM	
	10/20/94	5375.56	4.30	5371.26	16.5	2.86	NM	2970	NM	NM	NM	NM	
	01/04/95	5375.56	4.55	5371.01	6.3	5.35	NM	2640	NM	NM	NM	NM	
	07/10/95	5375.56	4.35	5371.21	17.0	7.08	NM	2160	NM	NM	NM	NM	
	01/10/96	5375.56	4.27	5371.29	8.4	7.43	NM	4640	NM	NM	NM	NM	
	07/15/96	5375.56	4.45	5371.11	23.2	6.95	NM	1610	NM	NM	NM	NM	
	01/08/97	5375.56	4.14	5371.42	9.3	7.21	NM	2550	NM	NM	NM	NM	
	08/21/98	5375.56	2.90	5372.66	NM	NM	NM	NM	NM	NM	NM	NM	
	03/03/99	5375.56	2.27	5373.29	8.3	7.11	NM	4820	NM	NM	NM	NM	

TABLE 1
SUMMARY OF GROUNDWATER MONITORING DATA
Thomas Well #1, Bloomfield, NM

WELL	DATE	TOC	OUTAGE FT	WATER ELEV.	TEMP °C	pH	DO mg/l	Cond.	ORP	TDS	NTU"s	% Salinity	Purged vol.
	06/17/99	5375.56	2.95	5372.61	NM	7.40	0.02	NM	NM	NM	NM	NM	
	09/13/99	5375.56	2.63	5372.93	NM	6.80	NM	NM	NM	NM	NM	NM	
	01/20/00	5375.56	2.48	5373.08	9.4	6.30	0.16	NM	NM	NM	NM	NM	1.25
	08/07/00	5375.56	3.35	5372.21	19.0	6.20	0.28	NM	NM	NM	NM	NM	1.00
	12/13/00	5375.56	2.77	5372.79	NM	NM	NM	NM	NM	NM	NM	NM	1.00
MW-04	10/20/94	5375.56	5.52	5370.04	11.9	6.92	NM	4160	NM	NM	NM	NM	
	01/04/95	5375.56	4.76	5370.80	6.1	6.97	NM	2350	NM	NM	NM	NM	
	07/10/95	5375.56	4.58	5370.98	15.0	7.11	NM	1840	NM	NM	NM	NM	
	01/10/96	5375.56	4.41	5371.15	8.4	7.52	NM	2770	NM	NM	NM	NM	
	07/15/96	5375.56	4.58	5370.98	21.6	7.20	NM	1470	NM	NM	NM	NM	
	01/08/97	5375.56	4.29	5371.27	8.2	7.23	NM	1660	NM	NM	NM	NM	
	08/21/98	5375.56	2.95	5372.61	NM	NM	NM	NM	NM	NM	NM	NM	
	03/03/99	5375.56	2.44	5373.12	8.1	8.20	0.12	6820	NM	NM	NM	NM	
	06/17/99	5375.56	3.01	5372.55	NM	NM	NM	NM	NM	NM	NM	NM	
	09/13/99	5375.56	2.67	5372.89	NM	NM	NM	NM	NM	NM	NM	NM	
	01/20/00	5375.56	2.65	5372.91	9.0	8.40	0.44	NM	NM	NM	NM	NM	
	08/07/00	5375.56	3.41	5372.15	20.3	8.00	0.31	NM	NM	NM	NM	NM	
	12/13/00	5375.56	2.91	5372.65	NM	NM	NM	NM	NM	NM	NM	NM	
MW-05	01/04/95	5376.35	6.04	5370.31	6.1	6.97	NM	2350	NM	NM	NM	NM	
	07/11/95	5376.35	5.97	5370.38	15.0	7.11	NM	1840	NM	NM	NM	NM	
	10/20/95	5376.35	5.80	5370.55	11.9	6.92	NM	4160	NM	NM	NM	NM	
	01/10/96	5376.35	5.81	5370.54	8.8	7.44	NM	3190	NM	NM	NM	NM	
	07/15/96	5376.35	5.88	5370.47	14.8	7.02	NM	1290	NM	NM	NM	NM	
	01/08/97	5376.35	5.70	5370.65	8.5	6.85	NM	2070	NM	NM	NM	NM	
	08/21/98	5376.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/03/99	5376.35	3.62	5372.73	9.2	6.50	0.09	3690	NM	NM	NM	NM	
	06/17/99	5376.35	4.51	5371.84	NM	NM	NM	NM	NM	NM	NM	NM	
	09/13/99	5376.35	4.30	5372.05	NM	NM	NM	NM	NM	NM	NM	NM	
	01/20/00	5376.35	3.91	5372.44	9.8	7.30	0.93	NM	NM	NM	NM	NM	
	08/07/00	5376.35	5.12	5371.23	14.4	6.30	0.94	NM	NM	NM	NM	NM	
	12/13/00	5376.35	4.22	5372.13	NM	NM	NM	NM	NM	NM	NM	NM	

NM - Signifies the parameter was not measured.

TABLE 2
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
Thomas Well #1, Bloomfield, NM

WELL	DATE	TIME	ug/L				
			MTBE	BENZENE	TOLUENE	ETHYLBENZ	XYLENES
MW-01	11/01/91		NS	ND	ND	ND	ND
	09/01/92		NS	ND	ND	ND	ND
	06/15/93		NS	ND	ND	ND	ND
	10/20/94		NS	<0.03	<0.03	<0.03	<0.09
	01/04/95		NS	<0.03	<0.03	<0.03	<0.09
	07/10/95		NS	1.9	ND(1.0)	2.2	ND(2.0)
	01/10/96		NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
	07/15/96		NS	<0.10	0.1	<0.10	<0.20
	01/08/97		NS	NS	NS	NS	NS
	08/21/98		NS	NS	NS	NS	NS
	03/03/99		NS	NS	NS	NS	NS
	06/17/99		NS	NS	NS	NS	NS
	09/13/99		NS	NS	NS	NS	NS
	01/20/00		NS	NS	NS	NS	NS
	08/07/00		NS	NS	NS	NS	NS
	12/13/00		NS	NS	NS	NS	NS
MW-02	08/18/91		NS	10.0	750.0	750.0	620.0
	08/31/91		NS	800.0	2800.0	400.0	8100.0
	11/01/91		NS	800.0	2800.0	400.0	8100.0
	09/01/92		NS	251.0	64.0	23.0	346.0
	09/15/92		NS	251.0	64.0	23.0	397.0
	10/28/92		NS	1230.0	570.0	113.0	2750.0
	11/13/92		NS	3.0	484.0	164.0	1190.0
	12/07/92		NS	850.0	291.0	98.0	912.0
	06/15/93		NS	860.0	420.0	130.0	2540.0
	10/20/94		NS	556.0	<0.3	79.4	569.0
	01/04/95		NS	448.0	8.3	48.0	340.0
	07/10/95		NS	400.0	ND(10.0)	47.0	324.0
	01/10/96		NS	390.0	ND(10.0)	64.0	395.0
	07/15/96		NS	150.0	<5.0	22.0	110.0
	01/08/97		NS	400.0	2.3	78.0	400.0
	08/21/98		NS	180.0	4.1	48.0	487.4
	03/03/99		NS	260.0	3.7	68.0	703.0
	06/17/99	1308	ND	220.0	18.0	84.0	812.0
	09/13/99	1359	NS	340.0	20.0	110.0	1403.3
	01/20/00	1410	3.3	440.0	ND	130.0	1606.7
	08/07/00	1137	ND	84.0	ND	48.0	435.4
	12/13/00	1005	ND	120.0	ND	56.0	394.0
MW-03	08/18/91		NS	10.0	750.0	750.0	620.0
	08/31/91		NS	1500.0	30000.0	2000.0	38000.0
	11/01/91		NS	1500.0	30000.0	2000.0	36000.0
	09/01/92		NS	ND	8220.0	ND	ND
	09/15/92		NS	ND	8220.0	ND	3630.0

TABLE 2
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
Thomas Well #1, Bloomfield, NM

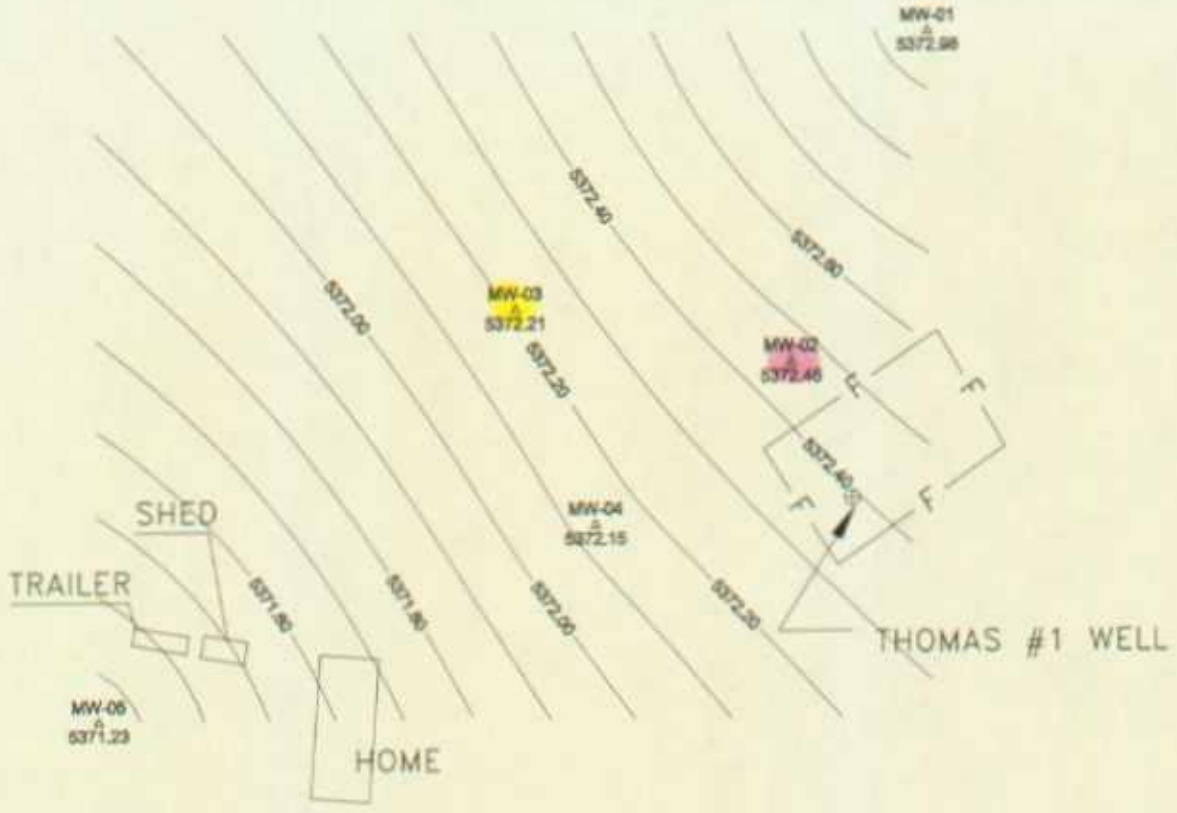
WELL	DATE	TIME	ug/L				
			MTBE	BENZENE	TOLUENE	ETHYLBENZ	XYLENES
	10/28/92		NS	256.0	11400.0	1120.0	5640.0
	11/13/92		NS	117.0	4270.0	980.0	9850.0
	12/08/92		NS	25.6	1560.0	570.0	1720.0
	06/15/93		NS	ND	7800.0	780.0	7100.0
	10/20/94		NS	521.0	10900.0	455.0	4040.0
	01/04/95		NS	122.0	2700.0	155.0	1322.0
	07/11/95		NS	ND(10.0)	620.0	61.0	273.0
	01/10/96		NS	ND(25.0)	1200.0	88.0	470.0
	07/15/96		NS	<1.0	57.0	8.0	33.0
	01/08/97		NS	<1.0	150.0	22.0	77.0
	08/21/98		NS	ND	4.6	13.0	16.2
	03/03/99		NS	ND	51.0	14.0	40.2
	06/17/99	1240	ND	ND	10.0	16.0	22.6
	09/13/99	1425	NS	5.8	4.0	8.6	16.5
	01/20/00	1220	ND	ND	110.0	31.0	95.0
	08/07/00	1347	ND	ND	8.8	34.0	21.3
	12/13/00	1027	ND	ND	5.3	13.0	10.0
MW-04	11/01/91		NS	ND	ND	ND	ND
	09/04/92		NS	ND	ND	ND	ND
	06/15/93		NS	ND	ND	ND	ND
	01/04/95		NS	<0.3	<0.3	<0.3	<0.5
	07/10/95		NS	ND(1.0)	ND(1.0)	ND(1.0)	1.3
	01/10/96		NS	ND(1.0)	ND(1.0)	3.6	15.4
	07/16/96		NS	<1.0	0.1	<0.1	0.2
	01/08/97		NS	<1.0	1.3	3.7	35.0
	08/21/98		NS	NS	NS	NS	NS
	03/03/99		NS	NS	NS	NS	NS
	06/17/99		NS	NS	NS	NS	NS
	09/13/99		NS	NS	NS	NS	NS
	01/20/00		NS	NS	NS	NS	NS
	08/07/00		NS	NS	NS	NS	NS
	08/07/00		NS	NS	NS	NS	NS
MW-05	10/20/34		NS	<0.3	<0.3	<0.3	<0.9
	11/01/91		NS	ND	ND	ND	ND
	09/01/92		NS	ND	ND	ND	ND
	06/15/93		NS	9.7	ND	ND	ND
	01/04/95		NS	<0.3	<0.3	<0.3	<0.9
	07/11/95		NS	13.0	6.1	3.7	9.0
	01/10/96		NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
	07/16/96		NS	<0.1	<0.1	<0.1	<0.2
	01/08/97		NS	<1.0	1.1	<0.1	<0.1
	08/21/98		NS	NS	NS	NS	NS
	03/03/99		NS	NS	NS	NS	NS

TABLE 2
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
Thomas Well #1, Bloomfield, NM

WELL	DATE	TIME	ug/L				
			MTBE	BENZENE	TOLUENE	ETHYLBENZ	XYLENES
	06/17/99		NS	NS	NS	NS	NS
	09/13/99		NS	NS	NS	NS	NS
	01/20/00		NS	NS	NS	NS	NS
	08/07/00		NS	NS	NS	NS	NS
	12/13/00		NS	NS	NS	NS	NS

NS - Signifies Not Sampled for this test
ND - Signifies Not Detected at tests lowest limits of detection

FIGURES



SCALE: 1" = 100'

100 0 100 200 300

GRAPHIC SCALE – FEET

KEY

GROUNDWATER CONTOUR

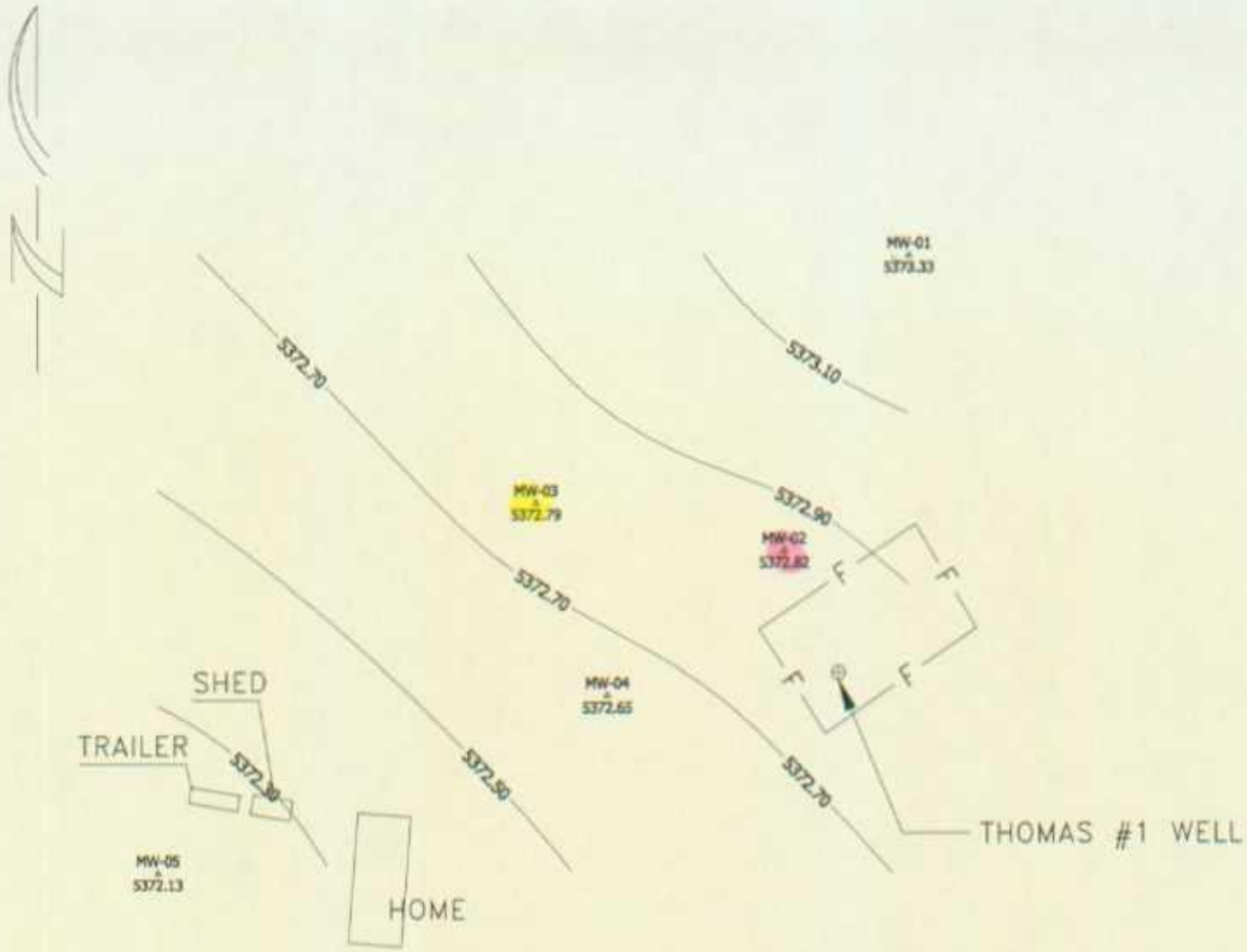
THOMAS NO. 1 WELL
BLOOMFIELD, NM

DRAWN BY: K. SINKS

FIGURE 1A
GROUNDWATER
CONTOUR MAP

AUGUST 7, 2000

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



SCALE: 1" = 100'

100 0 100 200 300

GRAPHIC SCALE – FEET

KEY

GROUNDWATER CONTOUR

THOMAS NO. 1 WELL
BLOOMFIELD, NM

98THO\121300WL

DRAWN BY: K. SINKS

FIGURE 1B
GROUNDWATER
CONTOUR MAP

DECEMBER 13, 2000

BioTech REMEDIATION

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

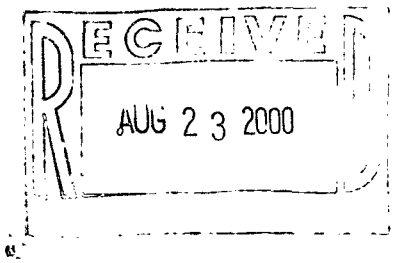
APPENDIX

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

ON SITE TECHNOLOGIES, LTD.

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: Clayton Farm; Thomas #1 Well

Order No.: 0008004

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 8/7/2000 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,

David Cox

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

ON SITE
TECHNOLOGIES, LTD.

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

On Site Technologies, LTD. **Date:** *21-Aug-00*

CLIENT: BioTech Remediation, Inc.
Project: Clayton Farm; Thomas #1 Well
Lab Order: 0008004

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: *21-Aug-00*

Client:	BioTech Remediation, Inc.	**Client Sample Info:**	Thomas #1 Well
Work Order:	0008004	**Client Sample ID:**	Travel Blank
Lab ID:	0008004-01A **Matrix:** AQUEOUS	**Collection Date:**	8/7/2000 10:00:00 AM
Project:	Clayton Farm; Thomas #1 Well	**COC Record:**	10844

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	8/15/2000
Benzene	ND	0.5		µg/L	1	8/15/2000
Toluene	ND	0.5		µg/L	1	8/15/2000
Ethylbenzene	ND	0.5		µg/L	1	8/15/2000
m,p-Xylene	ND	1		µg/L	1	8/15/2000
o-Xylene	ND	0.5		µg/L	1	8/15/2000

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

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ANALYTICAL REPORT

Date: *21-Aug-00*

Client:	BioTech Remediation, Inc.	**Client Sample Info:**	Thomas #1 Well
Work Order:	0008004	**Client Sample ID:**	MW-2
Lab ID:	0008004-02A **Matrix:** AQUEOUS	**Collection Date:**	8/7/2000 11:37:00 AM
Project:	Clayton Farm; Thomas #1 Well	**COC Record:**	10844

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DM**
Methyl tert-Butyl Ether	ND	10		µg/L	10	8/15/2000
Benzene	84	5		µg/L	10	8/15/2000
Toluene	ND	5		µg/L	10	8/15/2000
Ethylbenzene	48	5		µg/L	10	8/15/2000
m,p-Xylene	430	10		µg/L	10	8/15/2000
o-Xylene	5.4	5		µg/L	10	8/15/2000

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

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ANALYTICAL REPORT

Date: *21-Aug-00*

Client:	BioTech Remediation, Inc.	**Client Sample Info:**	Thomas #1 Well
Work Order:	0008004	**Client Sample ID:**	MW-3
Lab ID:	0008004-03A **Matrix:** AQUEOUS	**Collection Date:**	8/7/2000 1:47:00 PM
Project:	Clayton Farm; Thomas #1 Well	**COC Record:**	10844

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	8/15/2000
Benzene	ND	0.5		µg/L	1	8/15/2000
Toluene	8.8	0.5		µg/L	1	8/15/2000
Ethylbenzene	34	0.5		µg/L	1	8/15/2000
m,p-Xylene	19	1		µg/L	1	8/15/2000
o-Xylene	2.3	0.5		µg/L	1	8/15/2000

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

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On Site Technologies, LTD.

Date: *21-Aug-00*

CLIENT: BioTech Remediation, Inc.
Work Order: 0008004
Project: Clayton Farm; Thomas #1 Well

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: **0008004** 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: 0008004
Project: Clayton Farm; Thomas #1 Well

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: **0008004** 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: **0008004** 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: 0008004
Project: Clayton Farm; Thomas #1 Well

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: **0008004** 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: 0008004
Project: Clayton Farm; Thomas #1 Well

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: **0008004** Run ID: **GC-1_000815A** SeqNo: **30533**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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: **0008004** Run ID: **GC-1_000815A** SeqNo: **30534**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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:
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: 21-Aug-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0008004
Project: Clayton Farm; Thomas #1 Well
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					
MB1	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

ON SITE TECHNOLOGIES, LTD.

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Date: 8/20/20

Page: 1 of 1

Purchase Order No.:		Project No.	
SEND INVOICE TO	Name		
	Company	Dept.	
	Address		
	City, State, Zip		

REPORT RESULTS TO	Name		Title
	Company		
	Mailing Address		
	City, State, Zip		
	Telephone No.		Telefax No.

PROJECT LOCATION:

SAMPLER'S SIGNATURE:

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE PRES.	Number of Containers	BTEX	BTEX								LAB ID

ANALYSIS REQUESTED

Relinquished by:		Date/Time	Received by:	Date/Time
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: _____ Date 8/20/20

(Client Signature Must Accompany Request)

Special Instructions / Remarks:

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

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December 15, 2000

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

RE: Thomas #1 Well; Clayton Farm Order No.: 0012019

Dear Terry Griffin,

On Site Technologies, LTD. received 3 samples on 12/13/2000 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,

David Cox

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FAX: (505) 327-1496

On Site Technologies, LTD. **Date:** *15-Dec-00*

CLIENT: BioTech Remediation, Inc.
Project: Thomas #1 Well; Clayton Farm
Lab Order: 0012019

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: *15-Dec-00*

Client:	BioTech Remediation, Inc.	**Client Sample Info:**	Clayton Farm
Work Order:	0012019	**Client Sample ID:**	Trip Blank
Lab ID:	0012019-01A **Matrix:** AQUEOUS	**Collection Date:**	12/13/2000 9:30:00 AM
Project:	Thomas #1 Well; Clayton Farm	**COC Record:**	5287

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
- 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: *15-Dec-00*

Client:	BioTech Remediation, Inc.	**Client Sample Info:**	Clayton Farm
Work Order:	0012019	**Client Sample ID:**	MW #2
Lab ID:	0012019-02A **Matrix:** AQUEOUS	**Collection Date:**	12/13/2000 10:05:00 AM
Project:	Thomas #1 Well; Clayton Farm	**COC Record:**	5287

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DM**
Methyl tert-Butyl Ether	ND	10		µg/L	10	12/13/2000
Benzene	120	5		µg/L	10	12/13/2000
Toluene	ND	5		µg/L	10	12/13/2000
Ethylbenzene	56	5		µg/L	10	12/13/2000
m,p-Xylene	380	10		µg/L	10	12/13/2000
o-Xylene	14	5		µg/L	10	12/13/2000

Qualifiers:

PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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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: *15-Dec-00*

Client:	BioTech Remediation, Inc.	**Client Sample Info:**	Clayton Farm
Work Order:	0012019	**Client Sample ID:**	MW #3
Lab ID:	0012019-03A **Matrix:** AQUEOUS	**Collection Date:**	12/13/2000 10:27:00 AM
Project:	Thomas #1 Well; Clayton Farm	**COC Record:**	5287

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	5.3	0.5		µg/L	1	12/13/2000
Ethylbenzene	13	0.5		µg/L	1	12/13/2000
m,p-Xylene	6.7	1		µg/L	1	12/13/2000
o-Xylene	3.3	0.5		µg/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

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EMAIL: ONSITE@ONSITELTD.COM

On Site Technologies, LTD.

Date: *15-Dec-00*

CLIENT: BioTech Remediation, Inc.
Work Order: 0012019
Project: Thomas #1 Well; Clayton Farm

QC SUMMARY REPORT
Method Blank

Sample ID: **MB1** Batch ID: **GC-1_001213** Test Code: **SW8021B** Units: **µg/L** Analysis Date **12/13/2000** Prep Date:

Client ID: **0012019** 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: *15-Dec-00*

CLIENT: BioTech Remediation, Inc.
Work Order: 0012019
Project: Thomas #1 Well; Clayton Farm

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: **0012019** 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: **0012019** 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: *15-Dec-00*

CLIENT: BioTech Remediation, Inc.
Work Order: 0012019
Project: Thomas #1 Well; Clayton Farm

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: **0012019** 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: *15-Dec-00*

CLIENT: BioTech Remediation, Inc.
Work Order: 0012019
Project: Thomas #1 Well; Clayton Farm

QC SUMMARY REPORT

Continuing Calibration Verification Standard

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: **0012019** Run ID: **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				

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: **0012019** 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				

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: 0012019
Project: Thomas #1 Well; Clayton Farm

QC SUMMARY REPORT
Continuing Calibration Verification Standard

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: **0012019** 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: 15-Dec-00

CLIENT: BioTech Remediation, Inc.
Work Order: 0012019
Project: Thomas #1 Well; Clayton Farm
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					
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					
0012019-01A	94.3	100	97.3					
0012019-02A	91	97.2	93.6					
0012019-03A	84.4	88.3	87.1					
CCV1 BTEX_00121	92.6	103	93.4					
CCV2 BTEX_00121	93.6	101	96					
CCV3 BTEX_00121	93.9	101	95.4					
LCS WATER	93.2	103	95.6					
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**

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CHAIN OF CUSTODY RECORD

ON SITE TECHNOLOGIES, LTD.

Date: _____

Page 1 of 1

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Purchase Order No.:		Job No.	
SEND INVOICE TO — Name			
Company		Dept.	
Address			
City, State, Zip			
Sampling Location:			
Sampler:			

REPORT RESULTS TO		
Name		Title
Company		
Mailing Address		
City, State, Zip		
Telephone No.		Telefax No.

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	ANALYSIS REQUESTED	LAB ID

Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

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