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ANNUAL MONITORING REPORT

YEAR(S): 2001

WESTGATE SUBDIVISION
GRIMES BATTERY & TASKER ROAD

2001 Groundwater Monitoring Report

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OIL CONSERVATION DIVISION

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SHELL EXPLORATION & PRODUCTION COMPANY
HOUSTON, TEXAS

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1.0 INTRODUCTION

The subject site is located in west Hobbs, New Mexico. Assessment activities (Stage 1 Abatement activities) were conducted on developed and undeveloped property bordered by Tasker Road to the East, the Los Cuatro, Inc. property to the West, Sanger Road to the South, and Princess Jeanne Drive to the North. Assessment activities also included undeveloped property extending approximately 400 feet west of Cobb Drive. Based on the results of the assessment activities (both Stage 1 and proposed Stage 2 Abatement activities), quarterly groundwater monitoring and remediation activities are being performed.

The Grimes lease is an oil production property that has been in operation since the late 1920's. It consists of producing and injection wells, tank batteries, and associated flow lines. Oil and saltwater were produced from the wells on this lease and transported by flow lines to the Grimes battery. Prior to decommissioning of the Grimes battery in 1993, produced oil from the battery was transported south in a pipeline owned by Shell Pipeline (currently known as Equilon Pipeline). The pipeline is decommissioned and terminates at the former battery location.

2.0 2001 GROUNDWATER MONITORING ACTIVITIES

Per NMOCD requirements, there are sixteen groundwater monitoring wells in the Westgate Subdivision that are being monitored quarterly for BTEX using USEPA Method 8260-B and annually for PAHs using USEPA Method 8270-C. Four of the sixteen wells have measurable free product hydrocarbons detected in them. These monitor wells are GMW-1, GMW-3B, GMW-5, and GMW-9.

2.1 LNAPL THICKNESS AND GROUNDWATER ELEVATIONS

Each quarter the sixteen monitor wells were measured from the top of the casing for depth to groundwater, depth to LNAPL, LNAPL thickness, and corrected groundwater elevations prior to sampling (**Tables 1, 2, 3, 4**). Four wells were found to have measurable free product hydrocarbons. They are GMW-1, GMW-3B, GMW-5, and GMW-9 (**Tables 1, 2, 3, 4**). Groundwater gradient and elevations for the first quarter are depicted in **Figure Q1**, for the second quarter in **Figure Q4**, for the third quarter in Figure Q7, and for the fourth quarter in Figure Q10. LNAPL thicknesses for the first quarter are depicted in **Figure Q2**, for the second quarter in **Figure Q5**, for the third quarter in **Figure Q8**, and for the fourth quarter in **Figure Q11**.

Table 1. 1st Quarter 2001 LNAPL and Groundwater Elevation Westgate Subdivision - Hobbs, NM

MONITORING WELL	TOP OF CASING	DATE	DEPTH TO GROUNDWATER	DEPTH TO LNAPL	LNAPL THICKNESS	CORRECTED GROUNDWATER
GMW-1	3647.84	3/31/01	68.71	68.70	0.01	3579.14
GMW-2	3648.51	3/31/01	69.21	ND	0.00	3579.30
GMW-3B	3648.26	3/31/01	69.45	68.77	0.50	3579.31
GMW-4	3647.79	3/31/01	68.95	ND	0.00	3578.84
GMW-5	3648.41	3/31/01	73.82	72.07	1.28	3575.87
GMW-6	3648.22	3/31/01	69.70	ND	0.00	3578.52
GMW-7	3644.98	3/31/01	67.40	ND	0.00	3577.58
GMW-8	3645.66	3/31/01	67.99	ND	0.00	3577.67
GMW-9	3646.27	3/31/01	67.02	67.01	0.01	3579.26
GMW-10	3645.65	3/31/01	66.11	ND	0.00	3579.54
GMW-11	3644.07	3/31/01	65.45	ND	0.00	3578.62
TMW-1	3646.18	3/31/01	68.91	ND	0.00	3577.27
TMW-2	3643.94	3/31/01	67.02	ND	0.00	3576.92
TMW-3	3643.5	3/31/01	66.58	ND	0.00	3576.92
TMW-4	3643.69	3/31/01	67.48	ND	0.00	3576.21
TMW-5	3643.35	3/31/01	67.27	ND	0.00	3576.08

Table 2. 2nd Quarter 2001 LNAPL and Groundwater Elevation Westgate Subdivision - Hobbs, NM

MONITORING WELL	TOP OF CASING	DATE	DEPTH TO GROUNDWATER	DEPTH TO LNAPL	LNAPL THICKNESS	CORRECTED GROUNDWATER
GMW-1	3647.84	6/28/01	68.75	68.73	0.01	3579.10
GMW-2	3648.51	6/28/01	69.48	ND	0.00	3579.03
GMW-3B	3648.26	6/28/01	70.01	69.51	0.37	3578.62
GMW-4	3647.79	6/28/01	69.11	ND	0.00	3578.68
GMW-5	3648.41	6/28/01	74.04	72.16	1.37	3575.74
GMW-6	3648.22	6/28/01	70.12	ND	0.00	3578.10
GMW-7	3644.98	6/28/01	67.61	ND	0.00	3577.37
GMW-8	3645.66	6/28/01	68.24	ND	0.00	3577.42
GMW-9	3646.27	6/28/01	67.04	67.03	0.01	3579.24
GMW-10	3645.65	6/28/01	66.39	ND	0.00	3579.26
GMW-11	3644.07	6/28/01	65.71	ND	0.00	3578.36
TMW-1	3646.18	6/28/01	69.12	ND	0.00	3577.06
TMW-2	3643.94	6/28/01	67.21	ND	0.00	3576.73
TMW-3	3643.5	6/28/01	66.74	ND	0.00	3576.76
TMW-4	3643.69	6/28/01	67.73	ND	0.00	3575.96
TMW-5	3643.35	6/28/01	67.54	ND	0.00	3575.81

Table 3. 3rd Quarter 2001 LNAPL and Groundwater Elevation Westgate Subdivision - Hobbs, NM

MONITORING WELL	TOP OF CASING	DATE	DEPTH TO GROUNDWATER	DEPTH TO LNAPL	LNAPL THICKNESS	CORRECTED GROUNDWATER
GMW-1	3647.84	9/26/01	70.35	Sheen	0.00	3577.49
GMW-2	3648.51	9/26/01	69.74	ND	0.00	3578.77
GMW-3B	3648.26	9/26/01	70.71	Sheen	0.00	3577.55
GMW-4	3647.79	9/26/01	69.34	ND	0.00	3578.45
GMW-5	3648.41	9/26/01	73.73	71.58	1.57	3576.25
GMW-6	3648.22	9/26/01	70.33	ND	0.00	3577.89
GMW-7	3644.98	9/26/01	67.84	ND	0.00	3577.14
GMW-8	3645.66	9/26/01	68.53	ND	0.00	3577.13
GMW-9	3646.27	9/26/01	68.67	68.66	0.01	3577.61
GMW-10	3645.65	9/26/01	66.61	ND	0.00	3579.04
GMW-11	3644.07	9/26/01	65.94	ND	0.00	3578.13
TMW-1	3646.18	9/26/01	69.35	ND	0.00	3576.83
TMW-2	3643.94	9/26/01	67.43	ND	0.00	3576.51
TMW-3	3643.5	9/26/01	66.99	ND	0.00	3576.51
TMW-4	3643.69	9/26/01	67.97	ND	0.00	3575.72
TMW-5	3643.35	9/26/01	67.76	ND	0.00	3575.59

Table 4. 4th Quarter 2001 LNAPL and Groundwater Elevation Westgate Subdivision - Hobbs, NM

MONITORING WELL	TOP OF CASING	DATE	DEPTH TO GROUNDWATER	DEPTH TO LNAPL	LNAPL THICKNESS	CORRECTED GROUNDWATER
GMW-1	3647.84	12/17/01	70.36	Sheen	0.00	3577.48
GMW-2	3648.51	12/17/01	70.02	ND	0.00	3578.49
GMW-3B	3648.26	12/17/01	70.23	Sheen	0.00	3578.03
GMW-4	3647.79	12/17/01	69.63	ND	0.00	3578.16
GMW-5	3648.41	12/17/01	73.16	71.00	1.58	3576.83
GMW-6	3648.22	12/17/01	70.60	ND	0.00	3577.62
GMW-7	3644.98	12/17/01	68.15	ND	0.00	3576.83
GMW-8	3645.66	12/17/01	68.79	ND	0.00	3576.87
GMW-9	3646.27	12/17/01	68.91	Sheen	0.00	3577.36
GMW-10	3645.65	12/17/01	66.93	ND	0.00	3578.72
GMW-11	3644.07	12/17/01	66.26	ND	0.00	3577.81
TMW-1	3646.18	12/17/01	69.64	ND	0.00	3576.54
TMW-2	3643.94	12/17/01	67.75	ND	0.00	3576.19
TMW-3	3643.5	12/17/01	67.24	ND	0.00	3576.26
TMW-4	3643.69	12/17/01	68.20	ND	0.00	3575.49
TMW-5	3643.35	12/17/01	68.00	ND	0.00	3575.35

2.2 FREE PRODUCT RECOVERY

Downhole passive absorbing skimmers were installed in monitor wells GMW-1, GMW-3B, GMW-5, and GMW-9. Free product was removed periodically from each monitor well (Table 5). All recovered fluids were transported to the Sundance Services NMOCD approved disposal facility near Eunice, NM for recycling and disposal.

Table 5. 2001 Quarterly Product Recovery Volumes

Date	Location			
	GMW-1 Product Recovery (gallons)	GMW-3B Product Recovery (gallons)	GMW-5 Product Recovery (gallons)	GMW-9 Product Recovery (gallons)
First Quarter				
1/2/01	0.25	0.25	0.75	0.00
1/8/01	0.00	0.25	0.50	0.00
1/10/01	0.25	0.00	0.25	0.00
1/15/01	0.00	0.00	0.50	0.00
1/19/01	0.00	0.50	0.25	0.00
1/23/01	0.25	0.25	0.50	0.00
1/26/01	0.00	0.00	0.25	0.00
2/5/01	0.00	0.25	0.75	0.00
2/8/01	0.25	0.00	0.25	0.00
2/14/01	0.00	0.25	0.50	0.00
2/16/01	0.00	0.00	0.25	0.00
2/21/01	0.25	0.25	0.50	0.00
2/26/01	0.25	0.00	0.25	0.00
3/2/01	0.25	0.25	0.25	0.00
3/7/01	0.00	0.00	0.25	0.00
3/12/01	0.25	0.25	0.25	0.00
3/16/01	0.00	0.00	0.25	0.00
3/21/01	0.25	0.25	0.75	0.00
3/26/01	0.25	0.00	0.25	0.00
3/29/01	0.00	0.50	0.25	0.00
First Quarter Total	2.50	3.25	7.75	0.00
Year-to Date Totals	2.50	3.25	7.75	0.00

Date	Location			
	GMW-1 Product Recovery (gallons)	GMW-3B Product Recovery (gallons)	GMW-5 Product Recovery (gallons)	GMW-9 Product Recovery (gallons)
Second Quarter				
4/2/01	0.25	0.25	0.25	0.00
4/5/01	0.00	0.00	0.25	0.00
4/11/01	0.25	0.25	0.75	0.00
4/19/01	0.25	0.00	0.25	0.00
4/23/01	0.25	0.50	0.25	0.00
4/26/01	0.00	0.00	0.50	0.00
4/30/01	0.25	0.25	0.25	0.00
5/2/02	0.00	0.25	0.25	0.00
5/9/01	0.00	0.25	0.75	0.00
5/14/01	0.25	0.25	0.25	0.00
5/18/01	0.00	0.25	0.25	0.00
5/23/01	0.00	0.25	0.75	0.00
5/28/01	0.25	0.00	0.00	0.00
5/31/01	0.00	0.00	0.75	0.00
6/1/01	0.00	0.25	0.00	0.00
6/6/01	0.25	0.25	0.50	0.00
6/11/01	0.25	0.00	0.25	0.00
6/14/01	0.25	0.25	0.00	0.00
6/18/01	0.25	0.00	0.75	0.00
6/21/01	0.25	0.00	0.25	0.00
6/25/01	0.25	0.25	0.50	0.00
6/27/01	0.25	0.00	0.25	0.00
Second Quarter Total	3.50	3.50	8.00	0.00
Year-to Date Totals	6.00	6.75	15.75	0.00

Date	Location			
	GMW-1 Product Recovery (gallons)	GMW-3B Product Recovery (gallons)	GMW-5 Product Recovery (gallons)	GMW-9 Product Recovery (gallons)
Third Quarter				
7/5/01	0.00	0.25	0.75	0.00
7/10/01	0.00	0.00	0.25	0.00
7/13/01	0.00	0.25	0.25	0.00
7/17/01	0.00	0.25	0.25	0.00
7/20/01	0.00	0.00	0.00	0.00
7/24/01	0.00	0.00	0.75	0.00
7/27/01	0.00	0.25	0.25	0.00
8/1/01	0.00	0.00	0.25	0.00
8/6/01	0.00	0.25	0.00	0.00
8/9/01	0.00	0.00	0.75	0.00
8/13/01	0.00	0.25	0.25	0.00
8/16/01	0.00	0.00	0.25	0.00
8/20/01	0.00	0.25	0.25	0.00
8/23/01	0.00	0.00	0.25	0.00
8/27/01	0.00	0.25	0.00	0.00
8/30/01	0.00	0.00	0.75	0.00
9/4/01	0.00	0.25	0.25	0.00
9/7/01	0.00	0.00	0.25	0.00
9/11/01	0.00	0.25	0.00	0.00
9/14/01	0.00	0.00	0.75	0.00
9/18/01	0.00	0.25	0.25	0.00
9/21/01	0.00	0.25	0.50	0.00
9/25/01	0.00	0.25	0.25	0.00
9/28/01	0.00	0.25	0.25	0.00
Third Quarter Total	0.00	3.50	7.75	0.00
Year-to Date Totals	6.00	10.25	23.50	0.00

Date	Location			
	GMW-1	GMW-3B	GMW-5	GMW-9
	Product Recovery (gallons)	Product Recovery (gallons)	Product Recovery (gallons)	Product Recovery (gallons)
Fourth Quarter				
10/1/01	0.00	0.25	0.50	0.00
10/5/01	0.00	0.25	0.25	0.00
10/9/01	0.00	0.25	0.00	0.00
10/12/01	0.00	0.00	0.75	0.00
10/16/01	0.00	0.00	0.25	0.00
10/19/01	0.00	0.25	0.25	0.00
10/23/01	0.00	0.00	0.25	0.00
10/26/01	0.00	0.25	0.25	0.00
10/30/01	0.00	0.00	0.00	0.00
11/2/01	0.00	0.25	0.75	0.00
11/6/01	0.00	0.00	0.25	0.00
11/9/01	0.00	0.00	0.25	0.00
11/13/01	0.00	0.25	0.25	0.00
11/16/01	0.00	0.00	0.25	0.00
11/20/01	0.00	0.00	0.25	0.00
11/23/01	0.00	0.25	0.25	0.00
11/27/01	0.00	0.00	0.25	0.00
11/30/01	0.00	0.25	0.25	0.00
12/4/01	0.00	0.00	0.00	0.00
12/7/01	0.00	0.25	0.75	0.00
12/11/01	0.00	0.00	0.25	0.00
12/14/01	0.00	0.25	0.25	0.00
12/18/01	0.00	0.00	0.25	0.00
12/21/01	0.00	0.25	0.50	0.00
12/28/01	0.00	0.25	0.25	0.00
12/31/02	0.00	0.00	0.25	0.00
Fourth Quarter Totals	0.00	3.25	7.75	0.00
Year-to Date Totals	6.00	13.50	31.25	0.00

2.3 PURGING AND SAMPLING ACTIVITIES

Each quarter all sixteen monitor wells were measured from the top of the casing for depth to groundwater, depth to LNAPL, LNAPL thickness, and corrected groundwater elevations prior to sampling (**Table 1**). All purged fluids were drummed, transported, and disposed of at Sundance Services NMOCD approved disposal facility near Eunice, NM for recycling and disposal.

The groundwater samples were sent to Trace Analysis Laboratories in Lubbock, TX to be analyzed for BTEX (USEPA Method 8260-B) and PAHs (USEPA Method 8270-C). The results per quarter per monitor well are summarized in **Tables 6, 7, 8, and 9**. Laboratory analytical results, QA/QC, and chain-of-custody reports for the groundwater samples collected and analyzed are included in **Appendix I through Appendix IV**.

Table 6. 1st & 2nd Quarter 2001 Sampling Reports
Grimes Monitor Wells - Westgate Subdivision
BTEX: S-8260B Method

GMW-2

Analyte	Matrix	Method Taken	1st Quarter Order ID Number: A00032303				2nd Quarter Order ID Number: A00061409			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	168260	3/31/01	<1.00	1	174766	6/28/01	<1.00	1
Toluene	Water	S-8260B	168260	3/31/01	<1.00	1	174766	6/28/01	<1.00	1
Ethylbenzene	Water	S-8260B	168260	3/31/01	<1.00	1	174766	6/28/01	<1.00	1
M,p-Xylene	Water	S-8260B	168260	3/31/01	<1.00	1	174766	6/28/01	<1.00	1
o-Xylene	Water	S-8260B	168260	3/31/01	<1.00	1	174766	6/28/01	<1.00	1

GMW-4

Analyte	Matrix	Method Taken	1st Quarter Order ID Number: A00032303				2nd Quarter Order ID Number: A00061409			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	168261	3/31/01	<1.00	1	174767	6/28/01	<1.00	1
Toluene	Water	S-8260B	168261	3/31/01	<1.00	1	174767	6/28/01	<1.00	1
Ethylbenzene	Water	S-8260B	168261	3/31/01	<1.00	1	174767	6/28/01	<1.00	1
M,p-Xylene	Water	S-8260B	168261	3/31/01	<1.00	1	174767	6/28/01	<1.00	1
o-Xylene	Water	S-8260B	168261	3/31/01	<1.00	1	174767	6/28/01	<1.00	1

GMW-6

Analyte	Matrix	Method Taken	1st Quarter Order ID Number: A00032303				2nd Quarter Order ID Number: A00061409			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	168262	3/31/01	<1.00	1	174768	6/28/01	<1.00	1
Toluene	Water	S-8260B	168262	3/31/01	<1.00	1	174768	6/28/01	<1.00	1
Ethylbenzene	Water	S-8260B	168262	3/31/01	<1.00	1	174768	6/28/01	<1.00	1
M,p-Xylene	Water	S-8260B	168262	3/31/01	<1.00	1	174768	6/28/01	<1.00	1
o-Xylene	Water	S-8260B	168262	3/31/01	<1.00	1	174768	6/28/01	<1.00	1

GMW-7

Analyte	Matrix	Method Taken	1st Quarter Order ID Number: A00032303				2nd Quarter Order ID Number: A00061409			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	168263	3/31/01	<1.00	1	174769	6/28/01	<1.00	1
Toluene	Water	S-8260B	168263	3/31/01	<1.00	1	174769	6/28/01	<1.00	1
Ethylbenzene	Water	S-8260B	168263	3/31/01	<1.00	1	174769	6/28/01	<1.00	1
M,p-Xylene	Water	S-8260B	168263	3/31/01	<1.00	1	174769	6/28/01	<1.00	1
o-Xylene	Water	S-8260B	168263	3/31/01	<1.00	1	174769	6/28/01	<1.00	1

GMW-8

Analyte	Matrix	Method Taken	1st Quarter Order ID Number: A00032303				2nd Quarter Order ID Number: A00061409			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	168264	3/31/01	<1.00	1	174770	6/28/01	<1.00	1
Toluene	Water	S-8260B	168264	3/31/01	<1.00	1	174770	6/28/01	<1.00	1
Ethylbenzene	Water	S-8260B	168264	3/31/01	<1.00	1	174770	6/28/01	<1.00	1
M,p-Xylene	Water	S-8260B	168264	3/31/01	<1.00	1	174770	6/28/01	<1.00	1
o-Xylene	Water	S-8260B	168264	3/31/01	<1.00	1	174770	6/28/01	<1.00	1

GMW-10

Analyte	Matrix	Method Taken	1st Quarter Order ID Number: A00032303				2nd Quarter Order ID Number: A00061409			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	168265	3/31/01	<1.00	1	174771	6/28/01	<1.00	1
Toluene	Water	S-8260B	168265	3/31/01	<1.00	1	174771	6/28/01	<1.00	1
Ethylbenzene	Water	S-8260B	168265	3/31/01	<1.00	1	174771	6/28/01	<1.00	1
M,p-Xylene	Water	S-8260B	168265	3/31/01	<1.00	1	174771	6/28/01	<1.00	1
o-Xylene	Water	S-8260B	168265	3/31/01	<1.00	1	174771	6/28/01	<1.00	1

GMW-11

Analyte	Matrix	Method Taken	1st Quarter Order ID Number: A00032303				2nd Quarter Order ID Number: A00061409			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	168266	3/31/01	<1.00	1	174772	6/28/01	<1.00	1
Toluene	Water	S-8260B	168266	3/31/01	<1.00	1	174772	6/28/01	<1.00	1
Ethylbenzene	Water	S-8260B	168266	3/31/01	<1.00	1	174772	6/28/01	<1.00	1
M,p-Xylene	Water	S-8260B	168266	3/31/01	<1.00	1	174772	6/28/01	<1.00	1
o-Xylene	Water	S-8260B	168266	3/31/01	<1.00	1	174772	6/28/01	<1.00	1

Table 7. 1st & 2nd Quarter 2001 Sampling Reports
Tasker Monitor Wells - Westgate Subdivision
BTEX: S-8260B Method

TMW-1

Analyte	Matrix	Method Taken	1st Quarter Order ID Number: A00032303				2nd Quarter Order ID Number: A00061409			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	168255	3/31/01	<1.00	1	174773	6/28/01	<1.00	1
Toluene	Water	S-8260B	168255	3/31/01	<1.00	1	174773	6/28/01	<1.00	1
Ethylbenzene	Water	S-8260B	168255	3/31/01	<1.00	1	174773	6/28/01	<1.00	1
M,p-Xylene	Water	S-8260B	168255	3/31/01	<1.00	1	174773	6/28/01	<1.00	1
o-Xylene	Water	S-8260B	168255	3/31/01	<1.00	1	174773	6/28/01	<1.00	1

TMW-2

Analyte	Matrix	Method Taken	1st Quarter Order ID Number: A00032303				2nd Quarter Order ID Number: A00061409			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	168256	3/31/01	<1.00	1	174774	6/28/01	<1.00	1
Toluene	Water	S-8260B	168256	3/31/01	<1.00	1	174774	6/28/01	<1.00	1
Ethylbenzene	Water	S-8260B	168256	3/31/01	<1.00	1	174774	6/28/01	<1.00	1
M,p-Xylene	Water	S-8260B	168256	3/31/01	<1.00	1	174774	6/28/01	<1.00	1
o-Xylene	Water	S-8260B	168256	3/31/01	<1.00	1	174774	6/28/01	<1.00	1

TMW-3

Analyte	Matrix	Method Taken	1st Quarter Order ID Number: A00032303				2nd Quarter Order ID Number: A00061409			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	168257	3/31/01	<1.00	1	174775	6/28/01	<1.00	1
Toluene	Water	S-8260B	168257	3/31/01	<1.00	1	174775	6/28/01	<1.00	1
Ethylbenzene	Water	S-8260B	168257	3/31/01	<1.00	1	174775	6/28/01	<1.00	1
M,p-Xylene	Water	S-8260B	168257	3/31/01	<1.00	1	174775	6/28/01	<1.00	1
o-Xylene	Water	S-8260B	168257	3/31/01	<1.00	1	174775	6/28/01	<1.00	1

TMW-4

Analyte	Matrix	Method Taken	1st Quarter Order ID Number: A00032303				2nd Quarter Order ID Number: A00061409			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	168258	3/31/01	<1.00	1	174776	6/28/01	<1.00	1
Toluene	Water	S-8260B	168258	3/31/01	<1.00	1	174776	6/28/01	<1.00	1
Ethylbenzene	Water	S-8260B	168258	3/31/01	<1.00	1	174776	6/28/01	<1.00	1
M,p-Xylene	Water	S-8260B	168258	3/31/01	<1.00	1	174776	6/28/01	<1.00	1
o-Xylene	Water	S-8260B	168258	3/31/01	<1.00	1	174776	6/28/01	<1.00	1

TMW-5

Analyte	Matrix	Method Taken	1st Quarter Order ID Number: A00032303				2nd Quarter Order ID Number: A00061409			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	168259	3/31/01	1.13	1	174777	6/28/01	<1.00	1
Toluene	Water	S-8260B	168259	3/31/01	<1.00	1	174777	6/28/01	<1.00	1
Ethylbenzene	Water	S-8260B	168259	3/31/01	57.7	1	174777	6/28/01	52.3	1
M,p-Xylene	Water	S-8260B	168259	3/31/01	<1.00	1	174777	6/28/01	<1.00	1
o-Xylene	Water	S-8260B	168259	3/31/01	<1.00	1	174777	6/28/01	<1.00	1

Table 8. 3rd & 4th Quarter 2001 Sampling Reports
Grimes Monitor Wells - Westgate Subdivision
BTEX: S-8260B Method and PAH: S-8270C

GMW-2

Analyte	Matrix	Method Taken	3rd Quarter Order ID Number: A01100136				4th Quarter Order ID Number: A00122118			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	180811	9/26/01	<1.00	1	187581	12/17/01	<1.00	1
Toluene	Water	S-8260B	180811	9/26/01	1.38	1	187581	12/17/01	<1.00	1
Ethylbenzene	Water	S-8260B	180811	9/26/01	<1.00	1	187581	12/17/01	<1.00	1
M,p-Xylene	Water	S-8260B	180811	9/26/01	<1.00	1	187581	12/17/01	<1.00	1
o-Xylene	Water	S-8260B	180811	9/26/01	<1.00	1	187581	12/17/01	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit
Naphthalene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Acenaphthylene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Acenaphthene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Fluorene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Phenanthrene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Anthracene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Fluoranthene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Pyrene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Benzo[a]anthracene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Chrysene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Benzo[b]fluoranthene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Benzo[k]fluoranthene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Benzo[a]pyrene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Indeno[1,2-3-cd]pyrene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Dibenz[a,h]anthracene	Water	S-8270C					187581	12/17/01	<0.005	0.005
Benzo[g,h,i]perylene	Water	S-8270C					187581	12/17/01	<0.005	0.005

GMW-4

Analyte	Matrix	Method Taken	3rd Quarter Order ID Number: A00092209				4th Quarter Order ID Number: A00122118			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	180812	9/26/01	<1.00	1	187578	12/17/01	<1.00	1
Toluene	Water	S-8260B	180812	9/26/01	<1.00	1	187578	12/17/01	<1.00	1
Ethylbenzene	Water	S-8260B	180812	9/26/01	<1.00	1	187578	12/17/01	<1.00	1
M,p-Xylene	Water	S-8260B	180812	9/26/01	<1.00	1	187578	12/17/01	<1.00	1
o-Xylene	Water	S-8260B	180812	9/26/01	<1.00	1	187578	12/17/01	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit
Naphthalene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Acenaphthylene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Acenaphthene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Fluorene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Phenanthrene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Anthracene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Fluoranthene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Pyrene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Benzo[a]anthracene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Chrysene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Benzo[b]fluoranthene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Benzo[k]fluoranthene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Benzo[a]pyrene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Indeno[1,2-3-cd]pyrene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Dibenz[a,h]anthracene	Water	S-8270C					187578	12/17/01	<0.005	0.005
Benzo[g,h,i]perylene	Water	S-8270C					187578	12/17/01	<0.005	0.005

GMW-6

Analyte	Matrix	Method Taken	3rd Quarter Order ID Number: A00092209				4th Quarter Order ID Number: A00122118			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	180813	9/26/01	<1.00	1	187579	12/17/01	<1.00	1
Toluene	Water	S-8260B	180813	9/26/01	<1.00	1	187579	12/17/01	<1.00	1
Ethylbenzene	Water	S-8260B	180813	9/26/01	<1.00	1	187579	12/17/01	<1.00	1
M,p-Xylene	Water	S-8260B	180813	9/26/01	<1.00	1	187579	12/17/01	<1.00	1
o-Xylene	Water	S-8260B	180813	9/26/01	<1.00	1	187579	12/17/01	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit
Naphthalene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Acenaphthylene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Acenaphthene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Fluorene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Phenanthrene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Anthracene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Fluoranthene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Pyrene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Benzo[a]anthracene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Chrysene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Benzo[b]fluoranthene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Benzo[k]fluoranthene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Benzo[a]pyrene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Indeno[1,2-3-cd]pyrene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Dibenz[a,h]anthracene	Water	S-8270C					187579	12/17/01	<0.005	0.005
Benzo[g,h,i]perylene	Water	S-8270C					187579	12/17/01	<0.005	0.005

GMW-7

Analyte	Matrix	Method Taken	3rd Quarter Order ID Number: A00092209				4th Quarter Order ID Number: A00122118			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	180814	9/26/01	<1.00	1	187588	12/17/01	<1.00	1
Toluene	Water	S-8260B	180814	9/26/01	<1.00	1	187588	12/17/01	<1.00	1
Ethylbenzene	Water	S-8260B	180814	9/26/01	<1.00	1	187588	12/17/01	<1.00	1
M,p-Xylene	Water	S-8260B	180814	9/26/01	<1.00	1	187588	12/17/01	<1.00	1
o-Xylene	Water	S-8260B	180814	9/26/01	<1.00	1	187588	12/17/01	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit
Naphthalene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Acenaphthylene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Acenaphthene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Fluorene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Phenanthrene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Anthracene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Fluoranthene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Pyrene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Benzo[a]anthracene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Chrysene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Benzo[b]fluoranthene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Benzo[k]fluoranthene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Benzo[a]pyrene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Indeno[1,2-3-cd]pyrene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Dibenz[a,h]anthracene	Water	S-8270C					187588	12/17/01	<0.005	0.005
Benzo[g,h,i]perylene	Water	S-8270C					187588	12/17/01	<0.005	0.005

GMW-8

Analyte	Matrix	Method Taken	3rd Quarter Order ID Number: A00092209				4th Quarter Order ID Number: A00122118			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	180815	9/26/01	<1.00	1	187589	12/17/01	<1.00	1
Toluene	Water	S-8260B	180815	9/26/01	1.19	1	187589	12/17/01	<1.00	1
Ethylbenzene	Water	S-8260B	180815	9/26/01	<1.00	1	187589	12/17/01	<1.00	1
M,p-Xylene	Water	S-8260B	180815	9/26/01	<1.00	1	187589	12/17/01	<1.00	1
o-Xylene	Water	S-8260B	180815	9/26/01	<1.00	1	187589	12/17/01	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit
Naphthalene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Acenaphthylene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Acenaphthene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Fluorene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Phenanthrene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Anthracene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Fluoranthene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Pyrene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Benzo[a]anthracene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Chrysene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Benzo[b]fluoranthene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Benzo[k]fluoranthene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Benzo[a]pyrene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Indeno[1,2-3-cd]pyrene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Dibenz[a,h]anthracene	Water	S-8270C					187589	12/17/01	<0.005	0.005
Benzo[g,h,i]perylene	Water	S-8270C					187589	12/17/01	<0.005	0.005

GMW-10

Analyte	Matrix	Method Taken	3rd Quarter Order ID Number: A00092209				4th Quarter Order ID Number: A00122118			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	180816	9/26/01	<1.00	1	187580	12/17/01	<1.00	1
Toluene	Water	S-8260B	180816	9/26/01	<1.00	1	187580	12/17/01	<1.00	1
Ethylbenzene	Water	S-8260B	180816	9/26/01	<1.00	1	187580	12/17/01	<1.00	1
M,p-Xylene	Water	S-8260B	180816	9/26/01	<1.00	1	187580	12/17/01	<1.00	1
o-Xylene	Water	S-8260B	180816	9/26/01	<1.00	1	187580	12/17/01	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit
Naphthalene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Acenaphthylene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Acenaphthene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Fluorene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Phenanthrene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Anthracene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Fluoranthene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Pyrene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Benzo[a]anthracene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Chrysene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Benzo[b]fluoranthene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Benzo[k]fluoranthene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Benzo[a]pyrene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Indeno[1,2-3-cd]pyrene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Dibenz[a,h]anthracene	Water	S-8270C					187580	12/17/01	<0.005	0.005
Benzo[g,h,i]perylene	Water	S-8270C					187580	12/17/01	<0.005	0.005

GMW-11

Analyte	Matrix	Method Taken	3rd Quarter Order ID Number: A00092209				4th Quarter Order ID Number: A00122118			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	180817	9/26/01	<1.00	1	187582	12/17/01	<1.00	1
Toluene	Water	S-8260B	180817	9/26/01	<1.00	1	187582	12/17/01	<1.00	1
Ethylbenzene	Water	S-8260B	180817	9/26/01	<1.00	1	187582	12/17/01	<1.00	1
M,p-Xylene	Water	S-8260B	180817	9/26/01	<1.00	1	187582	12/17/01	<1.00	1
o-Xylene	Water	S-8260B	180817	9/26/01	<1.00	1	187582	12/17/01	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit
Naphthalene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Acenaphthylene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Acenaphthene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Fluorene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Phenanthrene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Anthracene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Fluoranthene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Pyrene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Benzo[a]anthracene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Chrysene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Benzo[b]fluoranthene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Benzo[k]fluoranthene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Benzo[a]pyrene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Indeno[1,2-3-cd]pyrene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Dibenz[a,h]anthracene	Water	S-8270C					187582	12/17/01	<0.005	0.005
Benzo[g,h,i]perylene	Water	S-8270C					187582	12/17/01	<0.005	0.005

Table 9. 3rd & 4th Quarter 2001 Sampling Reports
Tasker Monitor Wells - Westgate Subdivision
BTEX: S-8260B Method and PAH: S-8270C

TMW-1

Analyte	Matrix	Method Taken	3rd Quarter Order ID Number: A00092209				4th Quarter Order ID Number: A00122118			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	180806	9/26/01	<1.00	1	187587	12/17/01	<1.00	1
Toluene	Water	S-8260B	180806	9/26/01	<1.00	1	187587	12/17/01	<1.00	1
Ethylbenzene	Water	S-8260B	180806	9/26/01	<1.00	1	187587	12/17/01	<1.00	1
M,p-Xylene	Water	S-8260B	180806	9/26/01	<1.00	1	187587	12/17/01	<1.00	1
o-Xylene	Water	S-8260B	180806	9/26/01	<1.00	1	187587	12/17/01	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit
Naphthalene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Acenaphthylene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Acenaphthene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Fluorene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Phenanthrene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Anthracene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Fluoranthene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Pyrene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Benzo[a]anthracene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Chrysene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Benzo[b]fluoranthene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Benzo[k]fluoranthene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Benzo[a]pyrene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Indeno[1,2-3-cd]pyrene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Dibenz[a,h]anthracene	Water	S-8270C					187587	12/17/01	<0.005	0.005
Benzo[g,h,i]perylene	Water	S-8270C					187587	12/17/01	<0.005	0.005

TMW-2

Analyte	Matrix	Method Taken	3rd Quarter Order ID Number: A00092209				4th Quarter Order ID Number: A00122118			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	180807	9/26/01	<1.00	1	187585	12/17/01	<1.00	1
Toluene	Water	S-8260B	180807	9/26/01	<1.00	1	187585	12/17/01	<1.00	1
Ethylbenzene	Water	S-8260B	180807	9/26/01	<1.00	1	187585	12/17/01	<1.00	1
M,p-Xylene	Water	S-8260B	180807	9/26/01	<1.00	1	187585	12/17/01	<1.00	1
o-Xylene	Water	S-8260B	180807	9/26/01	<1.00	1	187585	12/17/01	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit
Naphthalene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Acenaphthylene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Acenaphthene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Fluorene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Phenanthrene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Anthracene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Fluoranthene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Pyrene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Benzo[a]anthracene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Chrysene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Benzo[b]fluoranthene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Benzo[k]fluoranthene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Benzo[a]pyrene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Indeno[1,2-3-cd]pyrene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Dibenz[a,h]anthracene	Water	S-8270C					187585	12/17/01	<0.005	0.005
Benzo[g,h,i]perylene	Water	S-8270C					187585	12/17/01	<0.005	0.005

TMW-3

Analyte	Matrix	Method Taken	3rd Quarter Order ID Number: A00092209				4th Quarter Order ID Number: A00122118			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	180808	9/26/01	<1.00	1	187586	12/17/01	<1.00	1
Toluene	Water	S-8260B	180808	9/26/01	<1.00	1	187586	12/17/01	<1.00	1
Ethylbenzene	Water	S-8260B	180808	9/26/01	<1.00	1	187586	12/17/01	<1.00	1
M,p-Xylene	Water	S-8260B	180808	9/26/01	<1.00	1	187586	12/17/01	<1.00	1
o-Xylene	Water	S-8260B	180808	9/26/01	<1.00	1	187586	12/17/01	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit
Naphthalene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Acenaphthylene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Acenaphthene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Fluorene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Phenanthrene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Anthracene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Fluoranthene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Pyrene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Benzo[a]anthracene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Chrysene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Benzo[b]fluoranthene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Benzo[k]fluoranthene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Benzo[a]pyrene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Indeno[1,2-3-cd]pyrene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Dibenz[a,h]anthracene	Water	S-8270C					187586	12/17/01	<0.005	0.005
Benzo[g,h,i]perylene	Water	S-8270C					187586	12/17/01	<0.005	0.005

TMW-4

Analyte	Matrix	Method Taken	3rd Quarter Order ID Number: A00092209				4th Quarter Order ID Number: A00122118			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	180809	9/26/01	<1.00	1	187584	12/17/01	<1.00	1
Toluene	Water	S-8260B	180809	9/26/01	<1.00	1	187584	12/17/01	<1.00	1
Ethylbenzene	Water	S-8260B	180809	9/26/01	<1.00	1	187584	12/17/01	<1.00	1
M,p-Xylene	Water	S-8260B	180809	9/26/01	<1.00	1	187584	12/17/01	<1.00	1
o-Xylene	Water	S-8260B	180809	9/26/01	<1.00	1	187584	12/17/01	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit
Naphthalene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Acenaphthylene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Acenaphthene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Fluorene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Phenanthrene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Anthracene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Fluoranthene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Pyrene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Benzo[a]anthracene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Chrysene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Benzo[b]fluoranthene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Benzo[k]fluoranthene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Benzo[a]pyrene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Indeno[1,2-3-cd]pyrene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Dibenz[a,h]anthracene	Water	S-8270C					187584	12/17/01	<0.005	0.005
Benzo[g,h,i]perylene	Water	S-8270C					187584	12/17/01	<0.005	0.005

TMW-5

Analyte	Matrix	Method Taken	3rd Quarter Order ID Number: A00092209				4th Quarter Order ID Number: A00122118			
			Sample No.	Date Taken	µg/L Result	µg/L Detection Limit	Sample No.	Date Taken	µg/L Result	µg/L Detection Limit
Benzene	Water	S-8260B	180810	9/26/01	1.46	1	187583	12/17/01	<10.0	1
Toluene	Water	S-8260B	180810	9/26/01	<1.00	1	187583	12/17/01	<10.0	1
Ethylbenzene	Water	S-8260B	180810	9/26/01	80.3	1	187583	12/17/01	45.6	1
M,p-Xylene	Water	S-8260B	180810	9/26/01	<1.00	1	187583	12/17/01	<10.0	1
o-Xylene	Water	S-8260B	180810	9/26/01	<1.00	1	187583	12/17/01	<10.0	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit	Sample No.	Date Taken	mg/L Result	mg/L Detection Limit
Naphthalene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Acenaphthylene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Acenaphthene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Fluorene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Phenanthrene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Anthracene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Fluoranthene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Pyrene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Benzo[a]anthracene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Chrysene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Benzo[b]fluoranthene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Benzo[k]fluoranthene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Benzo[a]pyrene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Indeno[1,2-3-cd]pyrene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Dibenz[a,h]anthracene	Water	S-8270C					187583	12/17/01	<0.005	0.005
Benzo[g,h,i]perylene	Water	S-8270C					187583	12/17/01	<0.005	0.005

In the first quarter of 2001, benzene and ethylbenzene was detected in TMW #5, at concentrations of 1.13 μg/L (ppb) and 57.7μg/L (ppb), respectively. All other analytes tested non-detect in all of the wells. **Figure Q3** is an isopleth map of total BTEX concentration detected in the groundwater samples.

The second quarter results of 2001, detected ethylbenzene in TMW #5 at a concentration of 52.3 μg/L (ppb). All other analytes tested non-detect in all of the wells. **Figure Q6** is an isopleth map of total BTEX concentrations detected in the groundwater samples.

In the third quarter of 2001, toluene was detected in GMW #2, and GMW #8 at concentrations of 1.38 μg/L (ppb) and 1.19 μg/L (ppb), respectively. Benzene and ethylbenzene was detected in TMW #5, at concentrations of 1.46 μg/L and 80.3 μg/L (ppb), respectively. All other analytes tested non-detect in all of the wells. **Figure Q9** is an isopleth map of total BTEX concentrations detected in the groundwater samples.

In the fourth quarter of 2001, ethylbenzene was detected in TMW #5 at a concentration of 45.6 μg/L (ppb). All other analytes tested non-detect in all of the wells. **Figure Q12** is an isopleth map of total BTEX concentrations detected in the groundwater samples.

3.0 CONCLUSION & RECOMMENDATION

All monitor wells not impacted by hydrocarbons were sampled quarterly for four quarters in year 2001. The groundwater samples were analyzed for BTEX using USEPA Method 8260-B for each of the four quarters and PAH's analyzed annually using USEPA Method 8270-C. Based on the sample results for years 1999, 2000, and 2001, the number of monitor wells that need to be sampled quarterly should be revised.

According to NMOCD regulations, groundwater sampling can be discontinued when eight (8) consecutive quarters of sample results indicate analyte concentrations below New Mexico Water Quality Control Commission (NMWQCC), Title 20, Chapter 6, part 2 (20 NMAC 6.2) Standards. If no 20 NMAC 6.2 Standard is available for a detected analyte, USEPA standards will be used.

As shown by the annual reports previously submitted in April 2000 (1999 results), April 2001 (2000 results), and this current 2002 report (2001 results), a total of ten (10) consecutive quarters have been analyzed. Twelve (12) of the existing sixteen (16) monitor wells have been analyzed for these ten quarters with either non-detect results or, in the case of well TMW-5, well below NMWQCC standards for the analytes tested.

Therefore, we recommend that we reduce the number of monitor wells to be analyzed in 2002. Based on the test results and location of the monitor wells, we recommend that the following monitor wells be plugged and abandoned: TMW-1, TMW-2, TMW-3, TMW-4, TMW-5, GMW-4, GMW-6, and GMW-11. In addition, well GMW-3A needs to

be officially plugged and abandoned. This well collapsed shortly after drilling in 1998 and was replaced by GMW-3B, but was never officially plugged and abandoned and the surface well marker removed. Of the remaining eight (8) wells, four are still impacted by hydrocarbons. These are: GMW-1, GMW-3B, GMW-5, and GMW-9. These wells are actively being skimmed of free hydrocarbon product and this will continue until all free product is recovered, after which, the wells will be sampled for BTEX quarterly and PAH annually until eight (8) consecutive quarters of analytical results below NMWQCC standards are observed. The remaining four (4) wells (GMW-2, GMW-7, GMW-8, and GMW-10) will continue to be sampled as in the past until all of the remaining eight (8) wells have eight (8) consecutive quarters of results below NMWQCC standards.

These remaining eight (8) wells represent the four (4) wells impacted by hydrocarbons and up-gradient, side-gradient, and down-gradient wells of the hydrocarbon plume.

As has been done in the past, free product recovery will continue in the four (4) monitor wells until no free product is recovered. All recovered fluids will be disposed of and recycled at an NMOCD-approved facility. Per discussions with the NMOCD in early 2000, it was agreed that Shell would not be required to sample any monitor wells that have free product until such time that free product is no longer detected in the wells. These wells will only be sampled quarterly when no measurable free product exists.

As in the past, all sample results, tables, and isopleth maps will be submitted to the NMOCD annually on or about April 1.

Shell E & P Company respectfully requests the NMOCD to accept this recommendation as soon as possible so the proposed sampling revisions and plugging activities can be implemented.

APPENDIX I

TRACE ANALYSIS, INC.

Laboratory Results
1st Quarter 2001

Westgate Subdivision
Grimes Battery & Tasker Road

April 2001

Shell Exploration & Production Company
Houston, Texas

Prepared by:
BBC International, Inc.

TRACEANALYSIS, INC.
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Analytical and Quality Control Report

Cliff Brunson
BBC International Inc.
P.O. Box 805
Hobbs, NM 88241

Report Date: April 16, 2001

Order ID Number: A01040317

Project Number: Westgate
Project Name: 1331 Tasker
Project Location: Hobbs,NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
168255	TMW-1	Water	3/31/01	8:30	4/3/01
168257	TMW-3	Water	3/31/01	12:07	4/3/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 4 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 168255 - TMW-1

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10282	Date Analyzed:	4/5/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08844	Date Prepared:	4/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.34	μg/L	1	50	98	80 - 120
Toluene-d8		43.31	μg/L	1	50	86	80 - 120
4-Bromofluorobenzene		43.72	μg/L	1	50	87	80 - 120

Sample: 168257 - TMW-3

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10282	Date Analyzed:	4/5/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08844	Date Prepared:	4/5/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.53	μg/L	1	50	103	80 - 120
Toluene-d8		44.90	μg/L	1	50	89	80 - 120
4-Bromofluorobenzene		43.48	μg/L	1	50	86	80 - 120

Quality Control Report
Method Blank

Method Blank QCBatch: QC10282

Param	Flag	Results	Units	Reporting Limit
Benzene		<1.00	µg/L	1
Toluene		<1.00	µg/L	1
Ethylbenzene		<1.00	µg/L	1
m,p-Xylene		<1.00	µg/L	1
o-Xylene		<1.00	µg/L	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.13	µg/L	1	50	102	80 - 120
Toluene-d8		42.87	µg/L	1	50	85	80 - 120
4-Bromofluorobenzene		45.36	µg/L	1	50	90	80 - 120

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC10282

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
1,1-Dichloroethene	101	107	µg/L	1	100	<1.00	101	5	71 - 132	20
Benzene	99	101	µg/L	1	100	<1.00	99	2	81 - 114	20
Trichloroethene (TCE)	106	107	µg/L	1	100	<1.00	106	0	79 - 111	20
Toluene	106	108	µg/L	1	100	<1.00	106	1	81 - 110	20
Chlorobenzene	92	95	µg/L	1	100	<1.00	92	3	88 - 112	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
Dibromofluoromethane	45.42	46.69	µg/L	1	50	90	93	80 - 120
Toluene-d8	43.86	44.77	µg/L	1	50	87	89	80 - 120
4-Bromofluorobenzene	45.01	44.86	µg/L	1	50	90	89	80 - 120

Quality Control Report
Continuing Calibration Verification Standards

CCV (1) QCBatch: QC10282

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	100	101	101	80 - 120	4/5/01

Continued ...

. . . Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
1,1-Dichloroethene		μg/L	100	96	96	80 - 120	4/5/01
Chloroform		μg/L	100	85	85	80 - 120	4/5/01
1,2-Dichloropropane		μg/L	100	106	106	80 - 120	4/5/01
Toluene		μg/L	100	106	106	80 - 120	4/5/01
Chlorobenzene		μg/L	100	96	96	80 - 120	4/5/01
Ethylbenzene		μg/L	100	96	96	80 - 120	4/5/01
Dibromofluoromethane		μg/L	50	47.43	94	80 - 120	4/5/01
Toluene-d8		μg/L	50	43.12	86	80 - 120	4/5/01
4-Bromofluorobenzene		μg/L	50	44.03	88	80 - 120	4/5/01

TRACEANALYSIS, INC.
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Analytical and Quality Control Report

Cliff Brunson
BBC International Inc.
P.O. Box 805
Hobbs, NM 88241

Report Date: April 16, 2001

Order ID Number: A01040317

Project Number: Westgate
Project Name: 1331 Tasker
Project Location: Hobbs,NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
168256	TMW-2	Water	3/31/01	11:00	4/3/01
168258	TMW-4	Water	3/31/01	18:15	4/3/01
168259	TMW-5	Water	3/31/01	18:30	4/3/01
168260	GMW-2	Water	3/31/01	13:06	4/3/01
168261	GMW-4	Water	3/31/01	14:15	4/3/01
168262	GMW-6	Water	3/31/01	15:17	4/3/01
168263	GMW-7	Water	3/31/01	16:06	4/3/01
168264	GMW-8	Water	3/31/01	17:30	4/3/01
168265	GMW-10	Water	3/31/01	17:01	4/3/01
168266	GMW-11	Water	3/31/01	16:40	4/3/01
168267	Trip Blank	Water	3/31/01	:	4/3/01
168268	Field Blank	Water	3/31/01	:	4/3/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 168256 - TMW-2

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10396	Date Analyzed:	4/11/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08947	Date Prepared:	4/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.52	μg/L	1	50	97	89 - 110
Toluene-d8		51.36	μg/L	1	50	102	95 - 107
4-Bromofluorobenzene		48.37	μg/L	1	50	96	81 - 105

Sample: 168258 - TMW-4

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10396	Date Analyzed:	4/11/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08947	Date Prepared:	4/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.04	μg/L	1	50	98	89 - 110
Toluene-d8		51.25	μg/L	1	50	102	95 - 107
4-Bromofluorobenzene		48.88	μg/L	1	50	97	81 - 105

Sample: 168259 - TMW-5

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10396	Date Analyzed:	4/11/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08947	Date Prepared:	4/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		1.13	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		57.7	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.24	µg/L	1	50	98	89 - 110
Toluene-d8		50.59	µg/L	1	50	101	95 - 107
4-Bromofluorobenzene		50.24	µg/L	1	50	100	81 - 105

Sample: 168260 - GMW-2

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10396	Date Analyzed:	4/11/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08947	Date Prepared:	4/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.03	µg/L	1	50	98	89 - 110
Toluene-d8		51.01	µg/L	1	50	102	95 - 107
4-Bromofluorobenzene		48.30	µg/L	1	50	96	81 - 105

Sample: 168261 - GMW-4

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10396	Date Analyzed:	4/11/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08947	Date Prepared:	4/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.04	µg/L	1	50	96	89 - 110
Toluene-d8		51.13	µg/L	1	50	102	95 - 107
4-Bromofluorobenzene		47.77	µg/L	1	50	95	81 - 105

Sample: 168262 - GMW-6

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10396	Date Analyzed:	4/11/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08947	Date Prepared:	4/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1

Continued . . .

... *Continued* Sample: 168262 Analysis: 8260

Param	Flag	Result	Units	Dilution	RDL
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.45	μg/L	1	50	96	89 - 110
Toluene-d8		51.31	μg/L	1	50	102	95 - 107
4-Bromofluorobenzene		47.65	μg/L	1	50	95	81 - 105

Sample: 168263 - GMW-7

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10396	Date Analyzed:	4/11/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08947	Date Prepared:	4/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.36	μg/L	1	50	98	89 - 110
Toluene-d8		51.05	μg/L	1	50	102	95 - 107
4-Bromofluorobenzene		47.96	μg/L	1	50	95	81 - 105

Sample: 168264 - GMW-8

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10430	Date Analyzed:	4/12/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08978	Date Prepared:	4/12/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.03	μg/L	1	50	98	89 - 110
Toluene-d8		50.60	μg/L	1	50	101	95 - 107
4-Bromofluorobenzene		48.60	μg/L	1	50	97	81 - 105

Sample: 168265 - GMW-10

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10430	Date Analyzed:	4/12/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08978	Date Prepared:	4/12/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.13	μg/L	1	50	98	89 - 110
Toluene-d8		50.98	μg/L	1	50	101	95 - 107
4-Bromofluorobenzene		47.39	μg/L	1	50	94	81 - 105

Sample: 168266 - GMW-11

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10430	Date Analyzed:	4/12/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08978	Date Prepared:	4/12/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.34	μg/L	1	50	98	89 - 110
Toluene-d8		50.71	μg/L	1	50	101	95 - 107
4-Bromofluorobenzene		48.31	μg/L	1	50	96	81 - 105

Sample: 168267 - Trip Blank

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10430	Date Analyzed:	4/12/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08978	Date Prepared:	4/12/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.20	μg/L	1	50	98	89 - 110
Toluene-d8		51.49	μg/L	1	50	102	95 - 107
4-Bromofluorobenzene		47.56	μg/L	1	50	95	81 - 105

Sample: 168268 - Field Blank

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC10430	Date Analyzed:	4/12/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB08978	Date Prepared:	4/12/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.53	μg/L	1	50	99	89 - 110
Toluene-d8		51.44	μg/L	1	50	102	95 - 107
4-Bromofluorobenzene		47.35	μg/L	1	50	94	81 - 105

Quality Control Report
Method Blank

Method Blank QCBatch: QC10396

Param	Flag	Results	Units	Reporting Limit
Benzene		<1.00	µg/L	1
Toluene		<1.00	µg/L	1
Ethylbenzene		<1.00	µg/L	1
m,p-Xylene		<1.00	µg/L	1
o-Xylene		<1.00	µg/L	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.45	µg/L	1	50	96	89 - 110
Toluene-d8		51.01	µg/L	1	50	102	95 - 107
4-Bromofluorobenzene		47.74	µg/L	1	50	95	81 - 105

Method Blank QCBatch: QC10430

Param	Flag	Results	Units	Reporting Limit
Benzene		<1.00	µg/L	1
Toluene		<1.00	µg/L	1
Ethylbenzene		<1.00	µg/L	1
m,p-Xylene		<1.00	µg/L	1
o-Xylene		<1.00	µg/L	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.11	µg/L	1	50	98	89 - 110
Toluene-d8		51.48	µg/L	1	50	102	95 - 107
4-Bromofluorobenzene		47.29	µg/L	1	50	94	81 - 105

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC10396

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
1,1-Dichloroethene	102	103	µg/L	1	100	<1.00	102	0	71 - 132	20
Benzene	104	106	µg/L	1	100	<1.00	104	1	81 - 114	20
Trichloroethene (TCE)	86	88	µg/L	1	100	<1.00	86	2	79 - 111	20
Toluene	102	104	µg/L	1	100	<1.00	102	1	81 - 110	20
Chlorobenzene	99	102	µg/L	1	100	<1.00	99	2	88 - 112	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
Dibromofluoromethane	47.32	47.62	µg/L	1	50	94	95	89 - 110
Toluene-d8	50.78	50.70	µg/L	1	50	101	101	95 - 107
4-Bromofluorobenzene	47.44	47.95	µg/L	1	50	94	95	81 - 105

Laboratory Control Spikes

QCBatch: QC10430

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
1,1-Dichloroethene	105	107	µg/L	1	100	<1.00	105	1	71 - 132	20
Benzene	107	109	µg/L	1	100	<1.00	107	1	81 - 114	20
Trichloroethene (TCE)	90	91	µg/L	1	100	<1.00	90	1	79 - 111	20
Toluene	105	106	µg/L	1	100	<1.00	105	0	81 - 110	20
Chlorobenzene	102	104	µg/L	1	100	<1.00	102	1	88 - 112	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
Dibromofluoromethane	49.17	48.96	µg/L	1	50	98	97	89 - 110
Toluene-d8	49.83	50.62	µg/L	1	50	99	101	95 - 107
4-Bromofluorobenzene	48.29	47.80	µg/L	1	50	96	95	81 - 105

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC10396

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	105	111	µg/L	1	100		105	5	75 - 135	20
Toluene	103	109	µg/L	1	100	<1.00	103	5	74 - 117	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
Dibromofluoromethane	49.08	49.06	µg/L	1	50	98	98	89 - 110
Toluene-d8	50.35	50.49	µg/L	1	50	100	100	95 - 107
4-Bromofluorobenzene	47.43	48.14	µg/L	1	50	94	96	81 - 105

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC10396

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	100	98	98	80 - 120	4/11/01
1,1-Dichloroethene		µg/L	100	95	95	80 - 120	4/11/01
Chloroform		µg/L	100	97	97	80 - 120	4/11/01
1,2-Dichloropropane		µg/L	100	103	103	80 - 120	4/11/01
Toluene		µg/L	100	102	102	80 - 120	4/11/01
Chlorobenzene		µg/L	100	99	99	80 - 120	4/11/01
Ethylbenzene		µg/L	100	102	102	80 - 120	4/11/01
Dibromofluoromethane		µg/L	50	50.20	100	80 - 120	4/11/01
Toluene-d8		µg/L	50	49.38	98	80 - 120	4/11/01
4-Bromofluorobenzene		µg/L	50	51.43	102	80 - 120	4/11/01

CCV (1) QCBatch: QC10430

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	100	100	100	80 - 120	4/12/01
1,1-Dichloroethene		µg/L	100	97	97	80 - 120	4/12/01
Chloroform		µg/L	100	98	98	80 - 120	4/12/01
1,2-Dichloropropane		µg/L	100	103	103	80 - 120	4/12/01
Toluene		µg/L	100	102	102	80 - 120	4/12/01
Chlorobenzene		µg/L	100	99	99	80 - 120	4/12/01
Ethylbenzene		µg/L	100	102	102	80 - 120	4/12/01
Dibromofluoromethane		µg/L	50	50.45	100	80 - 120	4/12/01
Toluene-d8		µg/L	50	49.49	98	80 - 120	4/12/01
4-Bromofluorobenzene		µg/L	50	51.06	102	80 - 120	4/12/01

Summary Report

Cliff Brunson
BBC International Inc.
P.O. Box 805
Hobbs, NM 88241

Report Date: April 16, 2001

Order ID Number: A01040317

Project Number: Westgate
Project Name: 1331 Tasker
Project Location: Hobbs,NM

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
168255	TMW-1	Water	3/31/01	8:30	4/3/01
168256	TMW-2	Water	3/31/01	11:00	4/3/01
168257	TMW-3	Water	3/31/01	12:07	4/3/01
168258	TMW-4	Water	3/31/01	18:15	4/3/01
168259	TMW-5	Water	3/31/01	18:30	4/3/01
168260	GMW-2	Water	3/31/01	13:06	4/3/01
168261	GMW-4	Water	3/31/01	14:15	4/3/01
168262	GMW-6	Water	3/31/01	15:17	4/3/01
168263	GMW-7	Water	3/31/01	16:06	4/3/01
168264	GMW-8	Water	3/31/01	17:30	4/3/01
168265	GMW-10	Water	3/31/01	17:01	4/3/01
168266	GMW-11	Water	3/31/01	16:40	4/3/01
168267	Trip Blank	Water	3/31/01	:	4/3/01
168268	Field Blank	Water	3/31/01	:	4/3/01

This report consists of a total of 4 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 168255 - TMW-1

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 168256 - TMW-2

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

This is only a summary. Please, refer to the complete report package for quality control data.

Sample: 168257 - TMW-3

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 168258 - TMW-4

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 168259 - TMW-5

Param	Flag	Result	Units
Benzene		1.13	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		57.7	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 168260 - GMW-2

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 168261 - GMW-4

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Continued on next page ...

Sample 168262 continued . . .

Param	Flag	Result	Units

Sample: 168262 - GMW-6

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 168263 - GMW-7

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 168264 - GMW-8

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 168265 - GMW-10

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 168266 - GMW-11

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 168267 - Trip Blank

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 168268 - Field Blank

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

168255-68

6701 Aberdeen Avenue, Ste. 9
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TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
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1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # AD1040317

Company Name: BBC International
Phone #: 1-505-397-6388
Address: (Street, City, Zip) 1324 W. Marland, Hobbs, NM. 88240
Fax #: 1-505-397-0397
Contact Person: CLIFF P. BRUNSON
Invoice to: (If different from above) Shell E&P Oil Company Attn: WAYNE Hamilton
Project #:
Project Name: Westgate
Project Location: Hobbs NM
Sampler Signature: [signature]

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/ BTEX	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH						Turn Around Time if different from standard	Hold
168255	TMW-1	2	VOA	✓				✓						3-31-01	8:30											✓											
56	TMW-2	2	VOA	✓				✓						3-31-01	11:00											✓											
57	TMW-3	2	VOA	✓				✓						3-31-01	12:07											✓											
58	TMW-4	2	VOA	✓				✓						3-31-01	6:15											✓											
59	TMW-5	2	VOA	✓				✓						3-31-01	6:30											✓											
60	GMW-2	2	VOA	✓				✓						3-31-01	1:06											✓											
61	GMW-4	2	VOA	✓				✓						3-31-01	2:15											✓											
62	GMW-6	2	VOA	✓				✓						3-31-01	3:17											✓											
63	GMW-7	2	VOA	✓				✓						3-31-01	4:06											✓											
64	GMW-8	2	VOA	✓				✓						3-31-01	5:30											✓											
65	GMW-10	2	VOA	✓				✓						3-31-01	5:01											✓											

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	4-2-01	11:45			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			[signature]	4-3-01	1:00pm

LAB USE ONLY
Intact Y N
Headspace Y / N
Temp 4 °
Log-in Review [initials]

REMARKS: Sediment in vials

☐ Check If Special Reporting Limits Are Needed

Carrier #

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

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El Paso, Texas 79932
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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A01040317

Company Name:

Phone #: 1-505-397-6388

Address: (Street, City, Zip) 1324 W Marland Hobbs NM 88240

Fax #: 1-505-397-0397

Contact Person: CLIFF P BRONSON

Invoice to: (If different from above) Shell E+P Oil Company ATTN: WAYNE HAMILTON

Project #:

Project Name: Westgate

Project Location: Hobbs NM

Sampler Signature: David Paul Walley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE		PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE		SAMPLING: DATE	TIME
168266	GMW-11	2	VOA	✓					✓							3-31-01	4:40
67	Trip Blank	2	VOA													3-31-01	—
68	Field Blank	1														3-31-01	—

LAB #	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/ BTEX	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
168266											✓						
67											✓						
68											✓						

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
David Walley	4-2-01	11:45 am			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Nicki Hurley	4-3-01	1:04

LAB USE ONLY

Intact Y / N

Headspace Y / N

Temp 4 °

Log-in Review MS

REMARKS:

sediment in vials

☐ Check If Special Reporting Limits Are Needed

Carrier # Priority Parcel

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

APPENDIX II

TRACE ANALYSIS, INC.

Laboratory Results
2nd Quarter 2001

Westgate Subdivision
Grimes Battery & Tasker Road

April 2001

Shell Exploration & Production Company
Houston, Texas

Prepared by:
BBC International, Inc.

Summary Report

Cliff Brunson
BBC International Inc.
P.O. Box 805
Hobbs, NM 88241

Report Date: July 19, 2001

Order ID Number: A01070502

Project Number: N/A
Project Name: Shell Westgate
Project Location: Hobbs,NM

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
174766	GMW-2	Water	6/28/01	16:25	7/3/01
174767	GMW-4	Water	6/28/01	16:50	7/3/01
174768	GMW-6	Water	6/28/01	17:05	7/3/01
174769	GMW-7	Water	6/28/01	17:15	7/3/01
174770	GMW-8	Water	6/28/01	17:20	7/3/01
174771	GMW-10	Water	6/28/01	17:36	7/3/01
174772	GMW-11	Water	6/28/01	18:00	7/3/01
174773	TMW-1	Water	6/28/01	16:06	7/3/01
174774	TMW-2	Water	6/28/01	14:20	7/3/01
174775	TMW-3	Water	6/28/01	13:10	7/3/01
174776	TMW-4	Water	6/28/01	12:30	7/3/01
174777	TMW-5	Water	6/28/01	11:45	7/3/01

This report consists of a total of 3 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 174766 - GMW-2

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 174767 - GMW-4

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 174768 - GMW-6

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 174769 - GMW-7

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 174770 - GMW-8

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 174771 - GMW-10

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 174772 - GMW-11

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Continued on next page ...

Sample 174773 continued ...

Param	Flag	Result	Units

Sample: 174773 - TMW-1

Param	Flag	Result	Units
Benzene		<1.00	µg/L
Toluene		<1.00	µg/L
Ethylbenzene		<1.00	µg/L
m,p-Xylene		<1.00	µg/L
o-Xylene		<1.00	µg/L

Sample: 174774 - TMW-2

Param	Flag	Result	Units
Benzene		<1.00	µg/L
Toluene		<1.00	µg/L
Ethylbenzene		<1.00	µg/L
m,p-Xylene		<1.00	µg/L
o-Xylene		<1.00	µg/L

Sample: 174775 - TMW-3

Param	Flag	Result	Units
Benzene		<1.00	µg/L
Toluene		<1.00	µg/L
Ethylbenzene		<1.00	µg/L
m,p-Xylene		<1.00	µg/L
o-Xylene		<1.00	µg/L

Sample: 174776 - TMW-4

Param	Flag	Result	Units
Benzene		<1.00	µg/L
Toluene		<1.00	µg/L
Ethylbenzene		<1.00	µg/L
m,p-Xylene		<1.00	µg/L
o-Xylene		<1.00	µg/L

Sample: 174777 - TMW-5

Param	Flag	Result	Units
Benzene		<1.00	µg/L
Toluene		<1.00	µg/L
Ethylbenzene		52.3	µg/L
m,p-Xylene		<1.00	µg/L
o-Xylene		<1.00	µg/L

TRACEANALYSIS, INC.

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155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Cliff Brunson
BBC International Inc.
P.O. Box 805
Hobbs, NM 88241

Report Date: July 19, 2001

Order ID Number: A01070502

Project Number: N/A
Project Name: Shell Westgate
Project Location: Hobbs,NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
174766	GMW-2	Water	6/28/01	16:25	7/3/01
174767	GMW-4	Water	6/28/01	16:50	7/3/01
174768	GMW-6	Water	6/28/01	17:05	7/3/01
174769	GMW-7	Water	6/28/01	17:15	7/3/01
174770	GMW-8	Water	6/28/01	17:20	7/3/01
174771	GMW-10	Water	6/28/01	17:36	7/3/01
174772	GMW-11	Water	6/28/01	18:00	7/3/01
174773	TMW-1	Water	6/28/01	16:06	7/3/01
174774	TMW-2	Water	6/28/01	14:20	7/3/01
174775	TMW-3	Water	6/28/01	13:10	7/3/01
174776	TMW-4	Water	6/28/01	12:30	7/3/01
174777	TMW-5	Water	6/28/01	11:45	7/3/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 174766 - GMW-2

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC12508	Date Analyzed:	7/10/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB10706	Date Prepared:	7/9/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.29	µg/L	1	50	102	87 - 112
Toluene-d8		49.77	µg/L	1	50	99	94 - 106
4-Bromofluorobenzene		50.08	µg/L	1	50	100	84 - 107

Sample: 174767 - GMW-4

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC12508	Date Analyzed:	7/10/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB10706	Date Prepared:	7/9/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.74	µg/L	1	50	103	87 - 112
Toluene-d8		49.60	µg/L	1	50	99	94 - 106
4-Bromofluorobenzene		49.88	µg/L	1	50	99	84 - 107

Sample: 174768 - GMW-6

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC12508	Date Analyzed:	7/10/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB10706	Date Prepared:	7/9/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.16	µg/L	1	50	100	87 - 112
Toluene-d8		49.57	µg/L	1	50	99	94 - 106
4-Bromofluorobenzene		49.25	µg/L	1	50	98	84 - 107

Sample: 174769 - GMW-7

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC12508	Date Analyzed:	7/10/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB10706	Date Prepared:	7/9/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.13	µg/L	1	50	102	87 - 112
Toluene-d8		49.60	µg/L	1	50	99	94 - 106
4-Bromofluorobenzene		49.23	µg/L	1	50	98	84 - 107

Sample: 174770 - GMW-8

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC12508	Date Analyzed:	7/10/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB10706	Date Prepared:	7/9/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.19	µg/L	1	50	98	87 - 112
Toluene-d8		49.99	µg/L	1	50	99	94 - 106
4-Bromofluorobenzene		51.01	µg/L	1	50	102	84 - 107

Sample: 174771 - GMW-10

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC12508	Date Analyzed:	7/10/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB10706	Date Prepared:	7/9/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1

Continued . . .

... Continued Sample: 174771 Analysis: 8260

Param	Flag	Result	Units	Dilution	RDL
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.84	µg/L	1	50	101	87 - 112
Toluene-d8		49.87	µg/L	1	50	99	94 - 106
4-Bromofluorobenzene		49.27	µg/L	1	50	98	84 - 107

Sample: 174772 - GMW-11

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC12508	Date Analyzed:	7/10/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB10706	Date Prepared:	7/9/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.63	µg/L	1	50	103	87 - 112
Toluene-d8		49.74	µg/L	1	50	99	94 - 106
4-Bromofluorobenzene		49.32	µg/L	1	50	98	84 - 107

Sample: 174773 - TMW-1

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC12508	Date Analyzed:	7/10/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB10706	Date Prepared:	7/9/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.32	µg/L	1	50	104	87 - 112
Toluene-d8		49.89	µg/L	1	50	99	94 - 106
4-Bromofluorobenzene		49.71	µg/L	1	50	99	84 - 107

Sample: 174774 - TMW-2

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC12508	Date Analyzed:	7/10/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB10706	Date Prepared:	7/9/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.22	µg/L	1	50	104	87 - 112
Toluene-d8		49.46	µg/L	1	50	98	94 - 106
4-Bromofluorobenzene		49.60	µg/L	1	50	99	84 - 107

Sample: 174775 - TMW-3

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC12543	Date Analyzed:	7/11/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB10733	Date Prepared:	7/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.38	µg/L	1	50	106	87 - 112
Toluene-d8		48.96	µg/L	1	50	97	94 - 106
4-Bromofluorobenzene		48.93	µg/L	1	50	97	84 - 107

Sample: 174776 - TMW-4

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC12543	Date Analyzed:	7/11/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB10733	Date Prepared:	7/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.54	µg/L	1	50	109	87 - 112
Toluene-d8		49.30	µg/L	1	50	98	94 - 106
4-Bromofluorobenzene		49.44	µg/L	1	50	98	84 - 107

Sample: 174777 - TMW-5

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC12543	Date Analyzed:	7/11/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB10733	Date Prepared:	7/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		52.3	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.68	μg/L	1	50	109	87 - 112
Toluene-d8		48.56	μg/L	1	50	97	94 - 106
4-Bromofluorobenzene		52.05	μg/L	1	50	104	84 - 107

Quality Control Report
Method Blank

Method Blank QCBatch: QC12508

Param	Flag	Results	Units	Reporting Limit
Benzene		<1.00	μg/L	1
Toluene		<1.00	μg/L	1
Ethylbenzene		<1.00	μg/L	1
m,p-Xylene		<1.00	μg/L	1
o-Xylene		<1.00	μg/L	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.87	μg/L	1	50	101	87 - 112
Toluene-d8		49.45	μg/L	1	50	98	94 - 106
4-Bromofluorobenzene		50.16	μg/L	1	50	100	84 - 107

Method Blank QCBatch: QC12543

Param	Flag	Results	Units	Reporting Limit
Benzene		<1.00	μg/L	1
Toluene		<1.00	μg/L	1
Ethylbenzene		<1.00	μg/L	1
m,p-Xylene		<1.00	μg/L	1
o-Xylene		<1.00	μg/L	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.72	μg/L	1	50	107	87 - 112
Toluene-d8		48.92	μg/L	1	50	97	94 - 106
4-Bromofluorobenzene		49.65	μg/L	1	50	99	84 - 107

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC12508

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
1,1-Dichloroethene	93	99	μg/L	1	100	<1.00	93	6	80 - 120	20
Benzene	100	107	μg/L	1	100	<1.00	100	6	80 - 120	20
Trichloroethene (TCE)	88	92	μg/L	1	100	<1.00	88	4	80 - 120	20
Toluene	99	107	μg/L	1	100	<1.00	99	7	80 - 120	20
Chlorobenzene	98	105	μg/L	1	100	<1.00	98	6	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
Dibromofluoromethane	50.77	50.21	µg/L	1	50	101	100	87 - 112
Toluene-d8	48.27	48.42	µg/L	1	50	96	96	94 - 106
4-Bromofluorobenzene	50.41	50.47	µg/L	1	50	100	100	84 - 107

Laboratory Control Spikes QCBatch: QC12543

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
1,1-Dichloroethene	105	108	µg/L	1	100	<1.00	105	2	80 - 120	20
Benzene	108	110	µg/L	1	100	<1.00	108	1	80 - 120	20
Trichloroethene (TCE)	92	94	µg/L	1	100	<1.00	92	2	80 - 120	20
Toluene	106	110	µg/L	1	100	<1.00	106	3	80 - 120	20
Chlorobenzene	103	105	µg/L	1	100	<1.00	103	1	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
Dibromofluoromethane	52.70	52.61	µg/L	1	50	105	105	87 - 112
Toluene-d8	47.63	47.38	µg/L	1	50	95	94	94 - 106
4-Bromofluorobenzene	48.49	49.81	µg/L	1	50	96	99	84 - 107

Quality Control Report
Continuing Calibration Verification Standards

CCV (1) QCBatch: QC12508

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	100	89	89	80 - 120	7/10/01
1,1-Dichloroethene		µg/L	100	92	92	80 - 120	7/10/01
Chloroform		µg/L	100	99	99	80 - 120	7/10/01
1,2-Dichloropropane		µg/L	100	104	104	80 - 120	7/10/01
Toluene		µg/L	100	100	100	80 - 120	7/10/01
Chlorobenzene		µg/L	100	99	99	80 - 120	7/10/01
Ethylbenzene		µg/L	100	104	104	80 - 120	7/10/01
Dibromofluoromethane		µg/L	50	49.78	99	80 - 120	7/10/01
Toluene-d8		µg/L	50	48.17	96	80 - 120	7/10/01
4-Bromofluorobenzene		µg/L	50	51.93	103	80 - 120	7/10/01

CCV (1) QCBatch: QC12543

Continued ...

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	100	91	91	80 - 120	7/11/01
1,1-Dichloroethene		µg/L	100	96	96	80 - 120	7/11/01
Chloroform		µg/L	100	104	104	80 - 120	7/11/01
1,2-Dichloropropane		µg/L	100	108	108	80 - 120	7/11/01
Toluene		µg/L	100	105	105	80 - 120	7/11/01
Chlorobenzene		µg/L	100	101	101	80 - 120	7/11/01
Ethylbenzene		µg/L	100	106	106	80 - 120	7/11/01
Dibromofluoromethane		µg/L	50	51.47	102	80 - 120	7/11/01
Toluene-d8		µg/L	50	47.62	95	80 - 120	7/11/01
4-Bromofluorobenzene		µg/L	50	51.85	103	80 - 120	7/11/01

174766-

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1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A01070502

Company Name: BBC International
Phone #: (505)-397-6388
Address: (Street, City, Zip) 1324 W. Marland Hobbs, NM
Fax #: (505)-397-0397
Contact Person: Cliff P. Brunson
Invoice to: (If different from above) Shell + P Company Attn: Wayne Hamilton
Project #:
Project Name: Shell Westgate
Project Location: Hobbs, NM
Sampler Signature: [signature]

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/ BTEX only	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH						Turn Around Time if different from standard	Hold
	~~Smw-1~~	~~2~~	~~VOA~~	~~✓~~				~~✓~~						~~6-28~~	~~4:25~~											✓											
174766	Smw-2	2	VOA	✓				✓						6-28	4:25											✓											
67	Smw-4	2	VOA	✓				✓						6-28	4:50											✓											
68	Smw-6	2	VOA	✓				✓						6-28	5:05											✓											
69	Smw-7	2	VOA	✓				✓						6-28	5:15											✓											
70	Smw-8	2	VOA	✓				✓						6-28	5:20											✓											
71	Smw-10	2	VOA	✓				✓						6-28	5:36											✓											
72	Smw-11	2	VOA	✓				✓						6-28	6:00											✓											
73	TMW-1	2	VOA	✓				✓						6-29	4:06											✓											
74	TMW-2	2	VOA	✓				✓						6-29	2:20											✓											
75	TMW-3	2	VOA	✓				✓						6-28	1:10											✓											

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	7-2-01	8:00			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Nell Green	7-3-01	3:00pm

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 4 °
Log-in Review MA

REMARKS:
7/18

☐ Check If Special Reporting Limits Are Needed

Carrier #

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0107050 2

Company Name: BBC International
Phone #: 505-397-6388
Address: (Street, City, Zip) 1324 W. Marland Hobbs, NM
Fax #: 505-397-0397
Contact Person: CLIFF P. BRUNSON
Invoice to: (If different from above) Shell E+P Company ATTN: Wayne Hamilton
Project #:
Project Name: Shell Westgate
Project Location:
Sampler Signature: [signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/ Btex only	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH						Turn Around Time if different from standard	Hold
174776	TMW-4	1 2	VOA	✓				✓						6-28	12:30											✓											
77	TMW-5	2	VOA	✓				✓						6-28	11:45											✓											

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	7-2-01	8:00			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Nell Green	7-3-01	3:00 pm

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp °
Log-in Review MA

REMARKS:
174776 - Broken vial

☐ Check If Special Reporting Limits Are Needed

Carrier #

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

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APPENDIX III

TRACE ANALYSIS, INC.

Laboratory Results
3rd Quarter 2001

Westgate Subdivision
Grimes Battery & Tasker Road

April 2001

Shell Exploration & Production Company
Houston, Texas

Prepared by:
BBC International, Inc.

Summary Report

Cliff Brunson
BBC International Inc.
P.O. Box 805
Hobbs, NM 88241

Report Date: October 11, 2001

Order ID Number: A01100136

Project Number: N/A
Project Name: Shell Westgate
Project Location: Hobbs,NM

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
180806	TMW-1	Water	9/26/01	10:30	9/28/01
180807	TMW-2	Water	9/26/01	11:15	9/28/01
180808	TMW-3	Water	9/26/01	10:00	9/28/01
180809	TMW-4	Water	9/26/01	11:25	9/28/01
180810	TMW-5	Water	9/26/01	8:00	9/28/01
180811	GMW-2	Water	9/26/01	16:20	9/28/01
180812	GMW-4	Water	9/26/01	17:30	9/28/01
180813	GMW-6	Water	9/26/01	17:27	9/28/01
180814	GMW-7	Water	9/26/01	16:48	9/28/01
180815	GMW8	Water	9/26/01	16:46	9/28/01
180816	GMW10	Water	9/26/01	5:49	9/28/01
180817	GMW11	Water	9/26/01	17:45	9/28/01
180818	Trip Blank	Water	9/26/01	:	9/28/01

This report consists of a total of 4 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 180806 - TMW-1

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 180807 - TMW-2

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 180808 - TMW-3

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 180809 - TMW-4

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 180810 - TMW-5

Param	Flag	Result	Units
Benzene		1.46	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		80.3	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 180811 - GMW-2

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		1.38	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 180812 - GMW-4

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Continued on next page ...

Sample 180813 continued ...

Param	Flag	Result	Units

Sample: 180813 - GMW-6

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 180814 - GMW-7

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 180815 - GMW8

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		1.19	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 180816 - GMW10

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 180817 - GMW11

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

Sample: 180818 - Trip Blank

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L

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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Cliff Brunson
BBC International Inc.
P.O. Box 805
Hobbs, NM 88241

Report Date: October 11, 2001

Order ID Number: A01100136

Project Number: N/A
Project Name: Shell Westgate
Project Location: Hobbs,NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
180806	TMW-1	Water	9/26/01	10:30	9/28/01
180807	TMW-2	Water	9/26/01	11:15	9/28/01
180808	TMW-3	Water	9/26/01	10:00	9/28/01
180809	TMW-4	Water	9/26/01	11:25	9/28/01
180810	TMW-5	Water	9/26/01	8:00	9/28/01
180811	GMW-2	Water	9/26/01	16:20	9/28/01
180812	GMW-4	Water	9/26/01	17:30	9/28/01
180813	GMW-6	Water	9/26/01	17:27	9/28/01
180814	GMW-7	Water	9/26/01	16:48	9/28/01
180815	GMW8	Water	9/26/01	16:46	9/28/01
180816	GMW10	Water	9/26/01	5:49	9/28/01
180817	GMW11	Water	9/26/01	17:45	9/28/01
180818	Trip Blank	Water	9/26/01	:	9/28/01

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 8 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 180806 - TMW-1

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.1	µg/L	1	50	106	88 - 112
Toluene-d8		49.6	µg/L	1	50	99	90 - 109
4-Bromofluorobenzene		46.8	µg/L	1	50	94	84 - 103

Sample: 180807 - TMW-2

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.3	µg/L	1	50	103	88 - 112
Toluene-d8		49.6	µg/L	1	50	99	90 - 109
4-Bromofluorobenzene		46.4	µg/L	1	50	93	84 - 103

Sample: 180808 - TMW-3

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.6	μg/L	1	50	101	88 - 112
Toluene-d8		49.5	μg/L	1	50	99	90 - 109
4-Bromofluorobenzene		46.6	μg/L	1	50	93	84 - 103

Sample: 180809 - TMW-4

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.1	μg/L	1	50	108	88 - 112
Toluene-d8		49.5	μg/L	1	50	99	90 - 109
4-Bromofluorobenzene		46.6	μg/L	1	50	93	84 - 103

Sample: 180810 - TMW-5

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		1.46	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		80.3	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.9	μg/L	1	50	108	88 - 112
Toluene-d8		49.4	μg/L	1	50	99	90 - 109
4-Bromofluorobenzene		49.8	μg/L	1	50	100	84 - 103

Sample: 180811 - GMW-2

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		1.38	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1

Continued . . .

... *Continued* Sample: 180811 Analysis: 8260

Param	Flag	Result	Units	Dilution	RDL
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.9	µg/L	1	50	104	88 - 112
Toluene-d8		49.6	µg/L	1	50	99	90 - 109
4-Bromofluorobenzene		47.6	µg/L	1	50	95	84 - 103

Sample: 180812 - GMW-4

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.9	µg/L	1	50	102	88 - 112
Toluene-d8		49.4	µg/L	1	50	99	90 - 109
4-Bromofluorobenzene		47.7	µg/L	1	50	95	84 - 103

Sample: 180813 - GMW-6

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.5	µg/L	1	50	105	88 - 112
Toluene-d8		49.3	µg/L	1	50	99	90 - 109
4-Bromofluorobenzene		47.4	µg/L	1	50	95	84 - 103

Sample: 180814 - GMW-7

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.4	µg/L	1	50	101	88 - 112
Toluene-d8		49.5	µg/L	1	50	99	90 - 109
4-Bromofluorobenzene		48.0	µg/L	1	50	96	84 - 103

Sample: 180815 - GMW8

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		1.19	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.0	µg/L	1	50	104	88 - 112
Toluene-d8		48.9	µg/L	1	50	98	90 - 109
4-Bromofluorobenzene		48.5	µg/L	1	50	97	84 - 103

Sample: 180816 - GMW10

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.3	µg/L	1	50	105	88 - 112
Toluene-d8		49.3	µg/L	1	50	99	90 - 109
4-Bromofluorobenzene		47.7	µg/L	1	50	95	84 - 103

Sample: 180817 - GMW11

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.8	µg/L	1	50	98	88 - 112
Toluene-d8		48.8	µg/L	1	50	98	90 - 109
4-Bromofluorobenzene		47.0	µg/L	1	50	94	84 - 103

Sample: 180818 - Trip Blank

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC14727	Date Analyzed:	10/6/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB12537	Date Prepared:	10/6/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.7	µg/L	1	50	99	88 - 112
Toluene-d8		49.2	µg/L	1	50	98	90 - 109
4-Bromofluorobenzene		47.2	µg/L	1	50	94	84 - 103

Quality Control Report
Method Blank

Method Blank QCBatch: QC14727

Param	Flag	Results	Units	Reporting Limit
Benzene		<1.00	µg/L	1
Toluene		<1.00	µg/L	1
Ethylbenzene		<1.00	µg/L	1
m,p-Xylene		<1.00	µg/L	1
o-Xylene		<1.00	µg/L	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.0	µg/L	1	50	104	88 - 112
Toluene-d8		50.0	µg/L	1	50	100	90 - 109
4-Bromofluorobenzene		46.6	µg/L	1	50	93	84 - 103

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC14727

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
1,1-Dichloroethene	91.8	93.1	µg/L	1	100	<1.00	92	1	74 - 127	20
Benzene	105	104	µg/L	1	100	<1.00	105	1	89 - 114	20
Trichloroethene (TCE)	84.9	83.8	µg/L	1	100	<1.00	85	1	77 - 102	20
Toluene	104	102	µg/L	1	100	<1.00	104	2	87 - 111	20
Chlorobenzene	102	102	µg/L	1	100	<1.00	102	0	87 - 109	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
Dibromofluoromethane	50.6	51.9	µg/L	1	50	101	104	88 - 112
Toluene-d8	49.7	50.2	µg/L	1	50	99	100	90 - 109
4-Bromofluorobenzene	49.0	48.1	µg/L	1	50	98	96	84 - 103

Quality Control Report
Continuing Calibration Verification Standards

CCV (1) QCBatch: QC14727

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	100	106	106	80 - 120	10/6/01

Continued ...

... *Continued*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
1,1-Dichloroethene		µg/L	100	111	111	80 - 120	10/6/01
Chloroform		µg/L	100	109	109	80 - 120	10/6/01
1,2-Dichloropropane		µg/L	100	95.0	95	80 - 120	10/6/01
Toluene		µg/L	100	103	103	80 - 120	10/6/01
Chlorobenzene		µg/L	100	101	101	80 - 120	10/6/01
Ethylbenzene		µg/L	100	101	101	80 - 120	10/6/01
Dibromofluoromethane		µg/L	50	51.9	104	80 - 120	10/6/01
Toluene-d8		µg/L	50	49.3	99	80 - 120	10/6/01
4-Bromofluorobenzene		µg/L	50	51.4	103	80 - 120	10/6/01

180806-

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
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1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon, Suite R
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0110013 6

Company Name: BBC International Inc.
Phone #: (505) 397-6388
Address: (Street, City, Zip) 1324 West Marland Hobbs, NM
Fax #: (505) 397-0397
Contact Person: Cliff P Brownson
Invoice to: (If different from above) Shell E+P Company Attn: Wayne hamilton
Project #:
Project Name: Shell Westgate
Project Location: Hobbs NM
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8260B	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
180806	TMW-1	2	VOA	✓				✓						9.26.01	10:30		✓															
07	TMW-2	2	VOA	✓				✓						9.26.01	11:15		✓															
08	TMW-3	2	VOA	✓				✓						6.26.01	10:00		✓															
09	TMW-4	2	VOA	✓				✓						6.26.01	11:25		✓															
10	TMW-5	2	VOA	✓				✓						6.27.01	8:00		✓															
11	SMW-2	2	VOA	✓				✓						9.26.01	4:20		✓															
12	SMW-4	2	VOA	✓				✓						9.26.01	5:30		✓															
13	SMW-6	2	VOA	✓				✓						9.26.01	5:27		✓															
14	SMW-7	2	VOA	✓				✓						9.26.01	4:41		✓															
15	SMW-8	2	VOA	✓				✓						9.26.01	4:46		✓															
16	SMW-10	2	VOA	✓				✓						9.26.01	5:49		✓															

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	9.27.01	12:40			
			Received at Laboratory by: [signature]	10-1-01 9-28-01	

LAB USE ONLY
Intact: Y / N
Headspace: Y / N
Temp: °
Log-in Review: [signature]
Carrier #

REMARKS:

10/12/01

☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

40

6701 Aberdeen Avenue, Ste. 9
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TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0110036

Company Name: BBC International Inc.
Address: (Street, City, Zip) 1324 West Marland Hobbs NM
Phone #: (505) 397-6388
Fax #: (505) 397-0397
Contact Person: Cliff P. Brunson
Invoice to: (If different from above) Shell E&P Company Attn: Wayne Hamilton
Project #:
Project Location: Hobbs NM
Project Name: Shell Westgate
Sampler Signature: Lloyd Paul Woolly

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8260B	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
180817	9MW-11	2	VOA	✓				✓						9-20-01	5:40		✓															
18	Trip Blank	2	VOA														✓															
	Trip Blank	1	6oz																													

Relinquished by: Date: Time: 9-27-01 1740
Received by: Date: Time:
Relinquished by: Date: Time:
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Vicki Dunley 10-1-01 Date: Time: 9-28-01 4°

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp °
Log-in Review

REMARKS:

☐ Check If Special Reporting Limits Are Needed

APPENDIX IV

TRACE ANALYSIS, INC.

Laboratory Results
4th Quarter 2001

Westgate Subdivision
Grimes Battery & Tasker Road

April 2001

Shell Exploration & Production Company
Houston, Texas

Prepared by:
BBC International, Inc.

Summary Report

Cliff Brunson
BBC International Inc.
P.O. Box 805
Hobbs, NM 88241

Report Date: January 22, 2002

Order ID Number: A01121922

Project Number: Westgate
Project Name: 1331 Tasker
Project Location: Hobbs,NM

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
187578	GMW #4	Water	12/17/01	9:30	12/19/01
187579	GMW #6	Water	12/17/01	10:00	12/19/01
187580	GMW #10	Water	12/17/01	10:30	12/19/01
187581	GMW #2	Water	12/17/01	11:00	12/19/01
187582	GMW #11	Water	12/17/01	11:30	12/19/01
187583	TMW #5	Water	12/17/01	12:00	12/19/01
187584	TMW #4	Water	12/17/01	7:00	12/19/01
187585	TMW #2	Water	12/17/01	7:30	12/19/01
187586	TMW #3	Water	12/17/01	8:05	12/19/01
187587	TMW #1	Water	12/17/01	8:30	12/19/01
187588	GMW #7	Water	12/17/01	9:00	12/19/01
187589	GMW #8	Water	12/17/01	13:00	12/19/01

Comments: PAH samples resampled on 01/25/02 due to laboratory error.
This report consists of a total of 7 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 187578 - GMW #4

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L
Naphthalene		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
Acenaphthene		<0.005	mg/L
Fluorene		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Pyrene		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
Chrysene		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L

Continued on next page . . .

Sample 187578 continued ...

Param	Flag	Result	Units
Benzo(g,h,i)perylene		<0.005	mg/L

Sample: 187579 - GMW #6

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L
Naphthalene		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
Acenaphthene		<0.005	mg/L
Fluorene		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Pyrene		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
Chrysene		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L
Benzo(g,h,i)perylene		<0.005	mg/L

Sample: 187580 - GMW #10

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L
Naphthalene		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
Acenaphthene		<0.005	mg/L
Fluorene		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Pyrene		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
Chrysene		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L

Continued on next page ...

Sample 187580 continued . . .

Param	Flag	Result	Units
Benzo(g,h,i)perylene		<0.005	mg/L

Sample: 187581 - GMW #2

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L
Naphthalene		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
Acenaphthene		<0.005	mg/L
Fluorene		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Pyrene		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
Chrysene		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L
Benzo(g,h,i)perylene		<0.005	mg/L

Sample: 187582 - GMW #11

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L
Naphthalene		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
Acenaphthene		<0.005	mg/L
Fluorene		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Pyrene		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
Chrysene		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L

Continued on next page . . .

Sample 187582 continued ...

Param	Flag	Result	Units
Benzo(g,h,i)perylene		<0.005	mg/L

Sample: 187583 - TMW #5

Param	Flag	Result	Units
Benzene		<10.0	μg/L
Toluene		<10.0	μg/L
Ethylbenzene		45.6	μg/L
m,p-Xylene		<10.0	μg/L
o-Xylene		<10.0	μg/L
Naphthalene		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
Acenaphthene		<0.005	mg/L
Fluorene		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Pyrene		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
Chrysene		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L
Benzo(g,h,i)perylene		<0.005	mg/L

Sample: 187584 - TMW #4

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L
Naphthalene		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
Acenaphthene		<0.005	mg/L
Fluorene		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Pyrene		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
Chrysene		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L

Continued on next page ...

Sample 187584 continued ...

Param	Flag	Result	Units
Benzo(g,h,i)perylene		<0.005	mg/L

Sample: 187585 - TMW #2

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L
Naphthalene		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
Acenaphthene		<0.005	mg/L
Fluorene		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Pyrene		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
Chrysene		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L
Benzo(g,h,i)perylene		<0.005	mg/L

Sample: 187586 - TMW #3

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L
Naphthalene		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
Acenaphthene		<0.005	mg/L
Fluorene		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Pyrene		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
Chrysene		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L

Continued on next page ...

Sample 187586 continued ...

Param	Flag	Result	Units
Benzo(g,h,i)perylene		<0.005	mg/L

Sample: 187587 - TMW #1

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L
Naphthalene		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
Acenaphthene		<0.005	mg/L
Fluorene		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Pyrene		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
Chrysene		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L
Benzo(g,h,i)perylene		<0.005	mg/L

Sample: 187588 - GMW #7

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L
Naphthalene		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
Acenaphthene		<0.005	mg/L
Fluorene		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Pyrene		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
Chrysene		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L

Continued on next page ...

Sample 187588 continued ...

Param	Flag	Result	Units
Benzo(g,h,i)perylene		<0.005	mg/L

Sample: 187589 - GMW #8

Param	Flag	Result	Units
Benzene		<1.00	μg/L
Toluene		<1.00	μg/L
Ethylbenzene		<1.00	μg/L
m,p-Xylene		<1.00	μg/L
o-Xylene		<1.00	μg/L
Naphthalene		<0.005	mg/L
Acenaphthylene		<0.005	mg/L
Acenaphthene		<0.005	mg/L
Fluorene		<0.005	mg/L
Phenanthrene		<0.005	mg/L
Anthracene		<0.005	mg/L
Fluoranthene		<0.005	mg/L
Pyrene		<0.005	mg/L
Benzo(a)anthracene		<0.005	mg/L
Chrysene		<0.005	mg/L
Benzo(b)fluoranthene		<0.005	mg/L
Benzo(k)fluoranthene		<0.005	mg/L
Benzo(a)pyrene		<0.005	mg/L
Indeno(1,2,3-cd)pyrene		<0.005	mg/L
Dibenzo(a,h)anthracene		<0.005	mg/L
Benzo(g,h,i)perylene		<0.005	mg/L

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El Paso, Texas 79932
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Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # AD2011616

Company Name: B.B.C International
Phone #: 1-505-397-6388
Address: (Street, City, Zip) 1324 W. Marland Hobbs NM
Fax #: 1-505-397-0397
Contact Person: Cliff P. Branson
Invoice to: (If different from above) Shell E&P Company Attn: Kenny Hawthorn
Project #:
Project Name: West Gate
Project Location: Hobbs
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH						Turn Around Time if different from standard	Hold
188909	GMW #2 187581	1		✓								✓		1/15/01	10:10												✓										
10	GMW #10 187580	1		✓								✓			10:45												✓										
11	GMW #4 187578	1		✓								✓			11:00												✓										
12	GMW #6 187579	1		✓								✓			11:15												✓										
13	GMW #7 187588	1		✓								✓			11:35												✓										
14	GMW #8 187589	1		✓								✓			12:00												✓										
15	GMW #11 187582	1		✓								✓			12:30												✓										
16	TMW #1 187587	1		✓								✓			1:00												✓										
17	TMW #2 187585	1		✓								✓			1:30												✓										
18	TMW #3 187586	1		✓								✓			2:00												✓										
19	TMW #4 187584	1		✓								✓			3:00												✓										

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	1-15-01	4:30			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Dansby	1-16-02	2:15pm

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp. 3 °
Log-in Review TB

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Carrier #

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

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El Paso, Texas 79932
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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # AD20116 16

Company Name: BBC International
Phone #: Same
Address: (Street, City, Zip) 152 W. Midland, Hobbs 88240
Fax #: Same
Contact Person: Same
Invoice to: (If different from above) Same
Project #: Same
Project Name: West Gate
Project Location: Same
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625 PAH	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
188920	T.M.W. #5 187583		1	✓								✓		1-15-01	2:30												✓					

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	1-15-01	4:30			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: [signature]	1-16-02	2:15 pm

LAB USE ONLY
Intact (Y) / N
Headspace Y / N
Temp 3 °
Log-in Review [signature]

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Carrier #

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

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TRACEANALYSIS, INC.

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155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Cliff Brunson
BBC International Inc.
P.O. Box 805
Hobbs, NM 88241

Report Date: January 22, 2002

Order ID Number: A01121922

Project Number: Westgate
Project Name: 1331 Tasker
Project Location: Hobbs,NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
187578	GMW #4	Water	12/17/01	9:30	12/19/01
187579	GMW #6	Water	12/17/01	10:00	12/19/01
187580	GMW #10	Water	12/17/01	10:30	12/19/01
187581	GMW #2	Water	12/17/01	11:00	12/19/01
187582	GMW #11	Water	12/17/01	11:30	12/19/01
187583	TMW #5	Water	12/17/01	12:00	12/19/01
187584	TMW #4	Water	12/17/01	7:00	12/19/01
187585	TMW #2	Water	12/17/01	7:30	12/19/01
187586	TMW #3	Water	12/17/01	8:05	12/19/01
187587	TMW #1	Water	12/17/01	8:30	12/19/01
187588	GMW #7	Water	12/17/01	9:00	12/19/01
187589	GMW #8	Water	12/17/01	13:00	12/19/01

Comments: PAH samples resampled on 01/25/02 due to laboratory error.
These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 17 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 187578 - GMW #4

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC16938	Date Analyzed:	12/26/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB16731	Date Prepared:	12/26/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.8	μg/L	1	50	106	84 - 122
Toluene-d8	[1]	46.8	μg/L	1	50	93	95 - 105
4-Bromofluorobenzene		48.3	μg/L	1	50	97	91 - 108

Sample: 187578 - GMW #4

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC17455	Date Analyzed:	1/16/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB17147	Date Prepared:	1/16/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		56.81	mg/L	1	80	71	35 - 114
2-Fluorobiphenyl		63.12	mg/L	1	80	78	43 - 116
Terphenyl-d14		32.3	mg/L	1	80	40	33 - 141

[1] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

Sample: 187579 - GMW #6

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC16938	Date Analyzed:	12/26/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB16731	Date Prepared:	12/26/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.5	μg/L	1	50	109	84 - 122
Toluene-d8		47.6	μg/L	1	50	95	95 - 105
4-Bromofluorobenzene		49.3	μg/L	1	50	99	91 - 108

Sample: 187579 - GMW #6

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC17455	Date Analyzed:	1/16/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB17147	Date Prepared:	1/16/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		48.46	mg/L	1	80	60	35 - 114
2-Fluorobiphenyl		52.50	mg/L	1	80	65	43 - 116
Terphenyl-d14	[2]	22.68	mg/L	1	80	28	33 - 141

Sample: 187580 - GMW #10

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC16938	Date Analyzed:	12/26/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB16731	Date Prepared:	12/26/01

[2] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.2	μg/L	1	50	108	84 - 122
Toluene-d8	[3]	46.9	μg/L	1	50	93	95 - 105
4-Bromofluorobenzene		49.1	μg/L	1	50	98	91 - 108

Sample: 187580 - GMW #10

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC17455	Date Analyzed:	1/16/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB17147	Date Prepared:	1/16/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		55.87	mg/L	1	80	69	35 - 114
2-Fluorobiphenyl		59.44	mg/L	1	80	74	43 - 116
Terphenyl-d14		26.93	mg/L	1	80	33	33 - 141

Sample: 187581 - GMW #2

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC16938	Date Analyzed:	12/26/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB16731	Date Prepared:	12/26/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1

Continued ...

[3]low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

... *Continued* Sample: 187581 Analysis: 8260

Param	Flag	Result	Units	Dilution	RDL
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.7	μg/L	1	50	109	84 - 122
Toluene-d8	[4]	46.7	μg/L	1	50	93	95 - 105
4-Bromofluorobenzene		48.8	μg/L	1	50	98	91 - 108

Sample: 187581 - GMW #2

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC17455	Date Analyzed:	1/16/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB17147	Date Prepared:	1/16/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		39.18	mg/L	1	80	48	35 - 114
2-Fluorobiphenyl		43.81	mg/L	1	80	54	43 - 116
Terphenyl-d14	[5]	15.19	mg/L	1	80	18	33 - 141

Sample: 187582 - GMW #11

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC16938	Date Analyzed:	12/26/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB16731	Date Prepared:	12/26/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1

Continued ...

[4] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.
[5] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

... *Continued* Sample: 187582 Analysis: 8260

Param	Flag	Result	Units	Dilution	RDL
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.0	μg/L	1	50	108	84 - 122
Toluene-d8	[6]	46.5	μg/L	1	50	93	95 - 105
4-Bromofluorobenzene		48.4	μg/L	1	50	97	91 - 108

Sample: 187582 - GMW #11

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC17455	Date Analyzed:	1/16/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB17147	Date Prepared:	1/16/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		51.35	mg/L	1	80	64	35 - 114
2-Fluorobiphenyl		54.52	mg/L	1	80	68	43 - 116
Terphenyl-d14		27.68	mg/L	1	80	34	33 - 141

Sample: 187583 - TMW #5

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC16938	Date Analyzed:	12/26/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB16731	Date Prepared:	12/26/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<10.0	μg/L	10	1
Toluene		<10.0	μg/L	10	1
Ethylbenzene		45.6	μg/L	10	1
m,p-Xylene		<10.0	μg/L	10	1
o-Xylene		<10.0	μg/L	10	1

[6] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.5	μg/L	10	50	109	84 - 122
Toluene-d8	[7]	46.8	μg/L	10	50	93	95 - 105
4-Bromofluorobenzene		49.5	μg/L	10	50	99	91 - 108

Sample: 187583 - TMW #5

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC17455	Date Analyzed:	1/16/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB17147	Date Prepared:	1/16/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		50.81	mg/L	1	80	63	35 - 114
2-Fluorobiphenyl		47.70	mg/L	1	80	59	43 - 116
Terphenyl-d14	[8]	24.30	mg/L	1	80	30	33 - 141

Sample: 187584 - TMW #4

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC16938	Date Analyzed:	12/26/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB16731	Date Prepared:	12/26/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.8	μg/L	1	50	110	84 - 122

Continued ...

[7] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.
[8] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Toluene-d8	[9]	46.8	µg/L	1	50	93	95 - 105
4-Bromofluorobenzene		49.2	µg/L	1	50	98	91 - 108

Sample: 187584 - TMW #4

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC17455	Date Analyzed:	1/16/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB17147	Date Prepared:	1/16/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		49.97	mg/L	1	80	62	35 - 114
2-Fluorobiphenyl		52.85	mg/L	1	80	66	43 - 116
Terphenyl-d14		29.47	mg/L	1	80	36	33 - 141

Sample: 187585 - TMW #2

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC16938	Date Analyzed:	12/26/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB16731	Date Prepared:	12/26/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	µg/L	1	1
Toluene		<1.00	µg/L	1	1
Ethylbenzene		<1.00	µg/L	1	1
m,p-Xylene		<1.00	µg/L	1	1
o-Xylene		<1.00	µg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.9	µg/L	1	50	108	84 - 122
Toluene-d8		47.5	µg/L	1	50	95	95 - 105
4-Bromofluorobenzene		50.0	µg/L	1	50	100	91 - 108

[9] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

Sample: 187585 - TMW #2

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC17455	Date Analyzed:	1/16/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB17147	Date Prepared:	1/16/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		46.02	mg/L	1	80	57	35 - 114
2-Fluorobiphenyl		49.35	mg/L	1	80	61	43 - 116
Terphenyl-d14	[10]	25.33	mg/L	1	80	31	33 - 141

Sample: 187586 - TMW #3

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC16938	Date Analyzed:	12/26/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB16731	Date Prepared:	12/26/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		55.0	μg/L	1	50	110	84 - 122
Toluene-d8	[11]	47.2	μg/L	1	50	94	95 - 105
4-Bromofluorobenzene		49.7	μg/L	1	50	99	91 - 108

Sample: 187586 - TMW #3

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC17455	Date Analyzed:	1/16/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB17147	Date Prepared:	1/16/02

[10] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.
[11] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		53.56	mg/L	1	80	66	35 - 114
2-Fluorobiphenyl		58.25	mg/L	1	80	72	43 - 116
Terphenyl-d14	[12]	25.48	mg/L	1	80	31	33 - 141

Sample: 187587 - TMW #1

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC16938	Date Analyzed:	12/26/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB16731	Date Prepared:	12/26/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.9	μg/L	1	50	110	84 - 122
Toluene-d8		47.4	μg/L	1	50	95	95 - 105
4-Bromofluorobenzene		49.4	μg/L	1	50	99	91 - 108

Sample: 187587 - TMW #1

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC17455	Date Analyzed:	1/16/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB17147	Date Prepared:	1/16/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005

Continued ...

[12] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

... *Continued* Sample: 187587 Analysis: PAH

Param	Flag	Result	Units	Dilution	RDL
Fluorene		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		48.19	mg/L	1	80	60	35 - 114
2-Fluorobiphenyl		51.23	mg/L	1	80	64	43 - 116
Terphenyl-d14	[13]	21.45	mg/L	1	80	26	33 - 141

Sample: 187588 - GMW #7

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC16938	Date Analyzed:	12/26/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB16731	Date Prepared:	12/26/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		55.1	μg/L	1	50	110	84 - 122
Toluene-d8		47.6	μg/L	1	50	95	95 - 105
4-Bromofluorobenzene		49.4	μg/L	1	50	99	91 - 108

Sample: 187588 - GMW #7

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC17455	Date Analyzed:	1/16/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB17147	Date Prepared:	1/16/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005

Continued ...

[13] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

... *Continued* Sample: 187588 Analysis: PAH

Param	Flag	Result	Units	Dilution	RDL
Anthracene		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005
Pyrene		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		47.05	mg/L	1	80	58	35 - 114
2-Fluorobiphenyl		47.63	mg/L	1	80	59	43 - 116
Terphenyl-d14		34.31	mg/L	1	80	42	33 - 141

Sample: 187589 - GMW #8

Analysis:	8260	Analytical Method:	S 8260B	QC Batch:	QC16938	Date Analyzed:	12/26/01
Analyst:	JG	Preparation Method:	E 5030B	Prep Batch:	PB16731	Date Prepared:	12/26/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<1.00	μg/L	1	1
Toluene		<1.00	μg/L	1	1
Ethylbenzene		<1.00	μg/L	1	1
m,p-Xylene		<1.00	μg/L	1	1
o-Xylene		<1.00	μg/L	1	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.6	μg/L	1	50	109	84 - 122
Toluene-d8	[14]	47.0	μg/L	1	50	94	95 - 105
4-Bromofluorobenzene		51.2	μg/L	1	50	102	91 - 108

Sample: 187589 - GMW #8

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC17455	Date Analyzed:	1/16/02
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB17147	Date Prepared:	1/16/02

Param	Flag	Result	Units	Dilution	RDL
Naphthalene		<0.005	mg/L	1	0.005
Acenaphthylene		<0.005	mg/L	1	0.005
Acenaphthene		<0.005	mg/L	1	0.005
Fluorene		<0.005	mg/L	1	0.005
Phenanthrene		<0.005	mg/L	1	0.005
Anthracene		<0.005	mg/L	1	0.005
Fluoranthene		<0.005	mg/L	1	0.005

Continued ...

[14] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

... *Continued* Sample: 187589 Analysis: PAH

Param	Flag	Result	Units	Dilution	RDL
Pyrene		<0.005	mg/L	1	0.005
Benzo(a)anthracene		<0.005	mg/L	1	0.005
Chrysene		<0.005	mg/L	1	0.005
Benzo(b)fluoranthene		<0.005	mg/L	1	0.005
Benzo(k)fluoranthene		<0.005	mg/L	1	0.005
Benzo(a)pyrene		<0.005	mg/L	1	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	1	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	1	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	1	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		50.66	mg/L	1	80	63	35 - 114
2-Fluorobiphenyl		51.41	mg/L	1	80	64	43 - 116
Terphenyl-d14		44.70	mg/L	1	80	55	33 - 141

Quality Control Report
Method Blank

Method Blank QCBatch: QC16938

Param	Flag	Results	Units	Reporting Limit
Benzene		<1.00	μg/L	1
Toluene		<1.00	μg/L	1
Ethylbenzene		<1.00	μg/L	1
m,p-Xylene		<1.00	μg/L	1
o-Xylene		<1.00	μg/L	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.9	μg/L	1	50	98	84 - 122
Toluene-d8	[15]	46.4	μg/L	1	50	92	95 - 105
4-Bromofluorobenzene		47.5	μg/L	1	50	95	91 - 108

Method Blank QCBatch: QC17455

Param	Flag	Results	Units	Reporting Limit
Naphthalene		<0.005	mg/L	0.005
Acenaphthylene		<0.005	mg/L	0.005
Acenaphthene		<0.005	mg/L	0.005
Fluorene		<0.005	mg/L	0.005
Phenanthrene		<0.005	mg/L	0.005
Anthracene		<0.005	mg/L	0.005
Fluoranthene		<0.005	mg/L	0.005
Pyrene		<0.005	mg/L	0.005
Benzo(a)anthracene		<0.005	mg/L	0.005
Chrysene		<0.005	mg/L	0.005
Benzo(b)fluoranthene		<0.005	mg/L	0.005
Benzo(k)fluoranthene		<0.005	mg/L	0.005
Benzo(a)pyrene		<0.005	mg/L	0.005
Indeno(1,2,3-cd)pyrene		<0.005	mg/L	0.005
Dibenzo(a,h)anthracene		<0.005	mg/L	0.005
Benzo(g,h,i)perylene		<0.005	mg/L	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		62.40	mg/L	1	80	78	35 - 114
2-Fluorobiphenyl		67.16	mg/L	1	80	83	43 - 116
Terphenyl-d14		68.88	mg/L	1	80	86	33 - 141

Quality Control Report
Lab Control Spikes and Duplicate Spikes

[15] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

Laboratory Control Spikes QCBatch: QC16938

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
1,1-Dichloroethene	101	104	μg/L	1	100	<1.00	101	2	92 - 129	20
Benzene	105	108	μg/L	1	100	<1.00	105	2	94 - 112	20
Trichloroethene (TCE)	104	105	μg/L	1	100	<1.00	104	0	90 - 113	20
Toluene	104	104	μg/L	1	100	<1.00	104	0	89 - 109	20
Chlorobenzene	98	99	μg/L	1	100	<1.00	98	1	93 - 114	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
Dibromofluoromethane	48.4	48.8	μg/L	1	50	96	97	84 - 122
Toluene-d8	47.3	[16] 47.2	μg/L	1	50	94	94	95 - 105
4-Bromofluorobenzene	47.7	47.8	μg/L	1	50	95	95	91 - 108

Laboratory Control Spikes QCBatch: QC17455

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Naphthalene	79.67	71.29	mg/L	1	80	<0.005	99	11	21 - 133	20
Acenaphthylene	92.21	83.84	mg/L	1	80	<0.005	115	9	33 - 145	20
Acenaphthene	86.07	77.69	mg/L	1	80	<0.005	107	10	47 - 145	20
Fluorene	79.61	73.35	mg/L	1	80	<0.005	99	8	59 - 121	20
Phenanthrene	86.79	81.42	mg/L	1	80	<0.005	108	6	54 - 120	20
Anthracene	93.29	85.62	mg/L	1	80	<0.005	116	8	27 - 133	20
Fluoranthene	80.95	79.61	mg/L	1	80	<0.005	101	1	26 - 137	20
Pyrene	74.57	66.06	mg/L	1	80	<0.005	93	12	52 - 115	20
Benzo(a)anthracene	87.75	80.95	mg/L	1	80	<0.005	109	8	33 - 143	20
Chrysene	81.75	74.6	mg/L	1	80	<0.005	102	9	17 - 168	20
Benzo(b)fluoranthene	84.78	79.94	mg/L	1	80	<0.005	105	5	33 - 143	20
Benzo(k)fluoranthene	85.25	79.29	mg/L	1	80	<0.005	106	7	17 - 168	20
Benzo(a)pyrene	88.43	81.5	mg/L	1	80	<0.005	110	8	24 - 159	20
Indeno(1,2,3-cd)pyrene	81.15	74.19	mg/L	1	80	<0.005	101	8	0 - 171	20
Dibenzo(a,h)anthracene	60.78	55.27	mg/L	1	80	<0.005	75	9	0 - 227	20
Benzo(g,h,i)perylene	85.52	82.62	mg/L	1	80	<0.005	106	3	0 - 219	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
Nitrobenzene-d5	73.86	62.17	mg/L	1	80	92	77	35 - 114
2-Fluorobiphenyl	77.59	66.52	mg/L	1	80	96	83	43 - 116
Terphenyl-d14	68.67	59.2	mg/L	1	80	85	74	33 - 141

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes QCBatch: QC16938

[16] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	104	105	μg/L	1	100	<1.00	104	1	80 - 120	20
Toluene	103	104	μg/L	1	100	<1.00	103	1	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
Dibromofluoromethane	53.4	54.5	μg/L	1	50	107	109	84 - 122
Toluene-d8	[17] 47.0	[18] 47.0	μg/L	1	50	94	94	95 - 105
4-Bromofluorobenzene	50.3	50.4	μg/L	1	50	101	101	91 - 108

Quality Control Report
Continuing Calibration Verification Standards

CCV (1) QCBatch: QC16938

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		μg/L	100	95.0	95	80 - 120	12/26/01
1,1-Dichloroethene		μg/L	100	91.0	91	80 - 120	12/26/01
Chloroform		μg/L	100	97.0	97	80 - 120	12/26/01
1;2-Dichloropropane		μg/L	100	101	101	80 - 120	12/26/01
Toluene		μg/L	100	103	103	80 - 120	12/26/01
Chlorobenzene		μg/L	100	93.0	93	80 - 120	12/26/01
Ethylbenzene		μg/L	100	99.0	99	80 - 120	12/26/01
Dibromofluoromethane		μg/L	50	48.5	97	80 - 120	12/26/01
Toluene-d8		μg/L	50	45.9	92	80 - 120	12/26/01
4-Bromofluorobenzene		μg/L	50	49.8	100	80 - 120	12/26/01

CCV (1) QCBatch: QC17455

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60	60.73	101	80 - 120	1/16/02
Acenaphthylene		mg/L	60	64.84	108	80 - 120	1/16/02
Acenaphthene		mg/L	60	61.17	101	80 - 120	1/16/02
Fluorene		mg/L	60	61.82	103	80 - 120	1/16/02
Phenanthrene		mg/L	60	57.79	96	80 - 120	1/16/02
Anthracene		mg/L	60	64.45	107	80 - 120	1/16/02
Fluoranthene		mg/L	60	54.55	90	80 - 120	1/16/02
Pyrene		mg/L	60	49.64	82	80 - 120	1/16/02
Benzo(a)anthracene		mg/L	60	60.61	101	0 - 120	1/16/02
Chrysene		mg/L	60	60.28	100	0 - 120	1/16/02

Continued ...

[17] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.
[18] low surrogate recovery, other surrogates within acceptable limits showing analysis to be in control.

... *Continued*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzo(b)fluoranthene		mg/L	60	59.47	99	80 - 120	1/16/02
Benzo(k)fluoranthene		mg/L	60	60.0	100	80 - 120	1/16/02
Benzo(a)pyrene		mg/L	60	58.95	98	80 - 120	1/16/02
Indeno(1,2,3-cd)pyrene		mg/L	60	52.72	87	80 - 120	1/16/02
Dibenzo(a,h)anthracene		mg/L	60	52.25	87	80 - 120	1/16/02
Benzo(g,h,i)perylene		mg/L	60	55.7	92	80 - 120	1/16/02
Nitrobenzene-d5		mg/L	60	63.08	105	80 - 120	1/16/02
2-Fluorobiphenyl		mg/L	60	61.51	102	80 - 120	1/16/02
Terphenyl-d14		mg/L	60	54.6	91	80 - 120	1/16/02

187578-79

Page ___ of ___

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TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0112192 2

Company Name: BBC International
Phone #: (505) 397-6388
Address: (Street, City, Zip) 1324 W. Marland Hobbs N.M. 88240
Fax #: (505) 397-0397
Contact Person: Cliff Price Brunson
Invoice to: (If different from above) Shell E & P Company, Attn: Wayne Hamilton
Project #:
Project Name: West gate
Project Location: Hobbs N.M. 88240
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE + 1 liter	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624 B Tex only	GC/MS Semi. Vol. 8270C/625 PAH	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH						Turn Around Time if different from standard	Hold
187578	G.M.W#4	2	VOA	✓				✓						12/19/01	9:30											✓											
79	G.M.W#6	1	1 liter	✓								✓			10:00												✓										
	G.M.W#6	2	VOA	✓				✓							10:00											✓											
80	G.M.W#10	1	1 liter	✓								✓			10:30												✓										
	G.M.W#10	2	VOA	✓				✓							10:30											✓											
81	G.M.W#2	1	1 liter	✓								✓			11:00												✓										
	G.M.W#2	2	VOA	✓				✓							11:00											✓											
82	G.M.W#11	1	1 liter	✓								✓			11:50												✓										
	G.M.W#11	2	VOA	✓				✓							11:50											✓											
83	G.M.W#5 ~~TMW5~~ TMW5 per CINE	1	1 liter	✓								✓			12:00												✓										
	G.M.W#5	2	VOA	✓				✓							12:00											✓											

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	12-18-01	10:40			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Vicki Ousley	12/19-01	10:00

LAB USE ONLY

Intact (Y) / N
Headspace Y / N
Temp 6° (L) °
Log-in Review [initials]

REMARKS:

1/10/02

☐ Check If Special Reporting Limits Are Needed

F 1/21/02

Carrier # TNMO 982-956-761-0

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Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #: ___

Company Name: SBC International
Phone #: 1-505-397-6388
Address: (Street, City, Zip) 1324 W. Marland Hobbs 88240
Fax #: 1-505-397-0395
Contact Person: Cliff R. Brunson
Invoice to: (If different from above) Shell E & P Company Attn: Wayne Hamilton
Project #:
Project Name: West Gate
Project Location: Hobbs N.M. 8820
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE		PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE		SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/~~624~~ BTX only	GC/MS Semi. Vol. 8270C/~~625~~ PAH	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH						Turn Around Time if different from standard	Hold
187584	T.M.W#4	2	VOA	✓					✓				✓			12-19-01	9:00										✓												
	T.M.W#4	1	1 liter	✓									✓				7:00											✓											
85	T.M.W#2	2	VOA	✓					✓								7:30										✓												
	T.M.W#2	1	1 liter	✓									✓				7:30											✓											
86	T.M.W#3	2	VOA	✓					✓								8:05										✓												
	T.M.W#3	1	1 liter	✓									✓				8:05											✓											
87	T.M.W#1	2	VOA	✓					✓								8:30										✓												
	T.M.W#1	1	1 liter	✓									✓				8:30											✓											
88	T.M.W#7 GMW on label	2	VOA	✓					✓								9:00										✓												
	T.M.W#7 GMW7 per CH	1	1 liter	✓									✓				9:00											✓											
	G.M.W#4	2	VOA	✓					✓								9:30										✓												

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	12-19-01	10:40			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Dewsey	12-19-01	10:00

LAB USE ONLY

Intact Y / N
Headspace Y / N
Temp 6 °
Log-in Review ___

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Carrier # TNT NNO 902-956-161-0

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Fax (915) 585-4944
1 (888) 588-3443

Company Name: BBC. International
Phone #: 1-505-391-6388
Address: (Street, City, Zip) 1324 W Marland
Fax #: 1-505-317-0397
Contact Person: Cliff Branson
Invoice to: (If different from above) Shell E&P Company, Attn: Wayne Hamilton
Project #:
Project Name: West Gate
Project Location: Hobbs NM 88240
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	SAMPLING: DATE	TIME
187589	G.M.W #8	2	VOA	✓				✓				12-19-01	1:00
	G.M.W #8	1	1 Liter	✓						✓		12-19-01	1:00

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB #	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC-MS Vol. 8260B/~~624~~	GC/MS Semi. Vol. 8270C/~~625~~	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH					Turn Around Time if different from standard	Hold
187589											✓ BTEX only	PAH									
												✓									

Relinquished by: Date: Time: 12-19-01 10:40
Received by: Date: Time:
Relinquished by: Date: Time:
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Date: Time: 12-19-01 10:00

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 6°
Log-in Review

REMARKS:

Carrier # TNM&O 902-756-161

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35MM DRAWINGS

AP-2

FILE NUMBER

Annual Monitoring Report

DOCUMENT TYPE

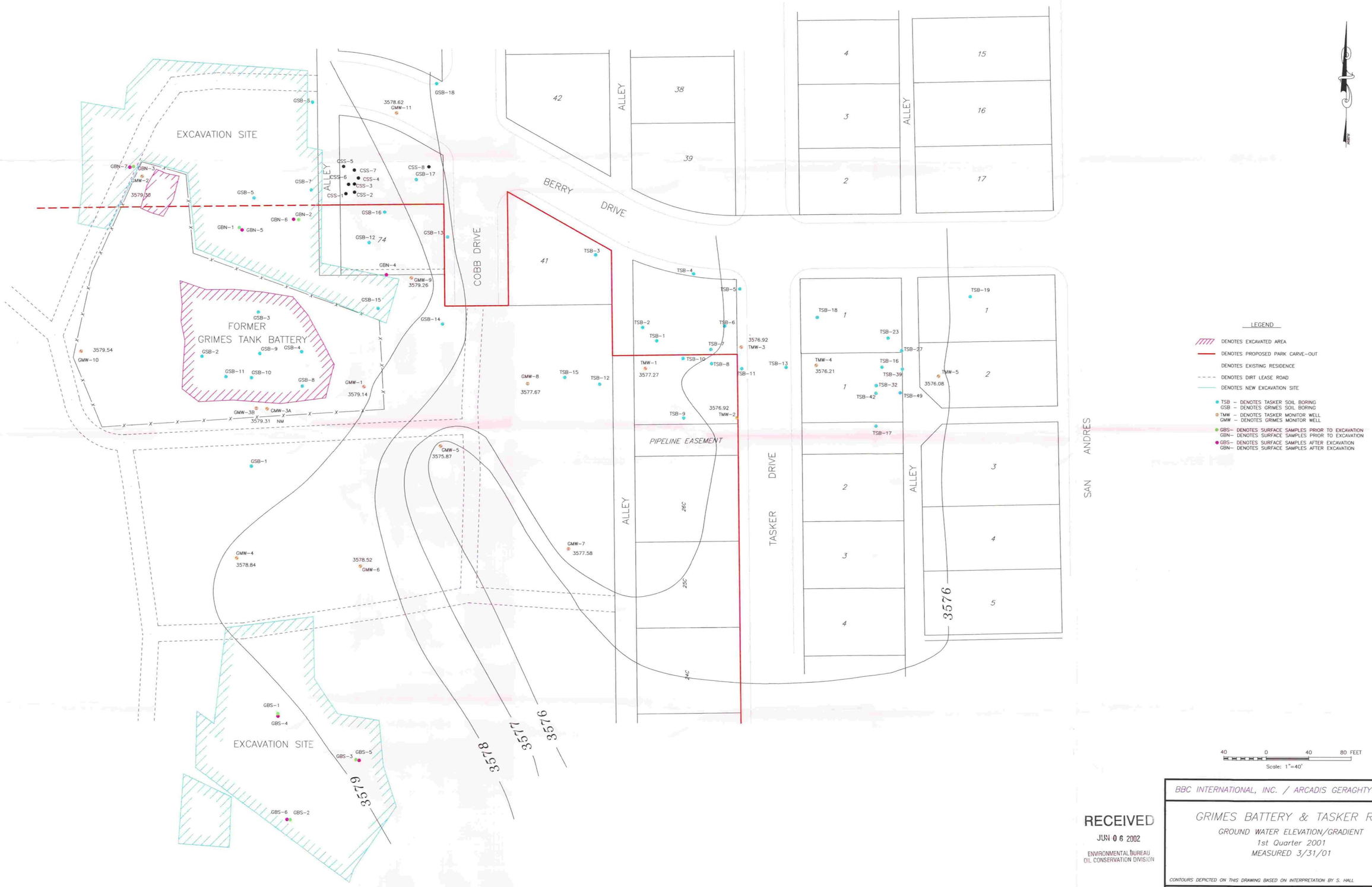
2001

12

NO OF DWGS

29

BOX



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OIL CONSERVATION DIVISION

BBC INTERNATIONAL, INC. / ARCADIS GERAGHTY & MILLER

GRIMES BATTERY & TASKER ROAD
GROUND WATER ELEVATION/GRADIENT
1st Quarter 2001
MEASURED 3/31/01

CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL

SURVEYED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 05/14/02	E-3081
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGURE01	FIGURE Q1
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	1st Quarter 2001
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

JOHN WEST SURVEYING COMPANY
HOBBS, NEW MEXICO

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OIL CONSERVATION DIVISION

JOHN WEST SURVEYING COMPANY
HOBBS, NEW MEXICO

BBC INTERNATIONAL, INC. / ARCADIS GERAGHTY & MILLER

GRIMES BATTERY & TASKER ROAD

LNAPL THICKNESS
1st Quarter 2001
MEASURED 3/31/01
CONTOUR INTERVAL 0.5 FEET

CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL

SURVEYED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 05/14/02	E-3082
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGURE02	FIGURE Q2
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	1st Quarter 2001
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

LEGEND

- DENOTES EXCAVATED AREA
- DENOTES PROPOSED PARK CARVE-OUT
- DENOTES EXISTING RESIDENCE
- DENOTES DIRT LEASE ROAD
- DENOTES NEW EXCAVATION SITE
- TSB – DENOTES TASKER SOIL BORING
  GSB – DENOTES GRIMES SOIL BORING
- TMW – DENOTES TASKER MONITOR WELL
  GMW – DENOTES GRIMES MONITOR WELL
- GBS– DENOTES SURFACE SAMPLES PRIOR TO EXCAVATION
  GBN– DENOTES SURFACE SAMPLES PRIOR TO EXCAVATION
- GBS– DENOTES SURFACE SAMPLES AFTER EXCAVATION
  GBN– DENOTES SURFACE SAMPLES AFTER EXCAVATION
- ND – NOT DETECTED
- NS – NOT SAMPLED

First Quarter – 2001

Grimes Monitor Well #	UG/L	Benzene	Toluene	Ethylbenzene	M, p-Xylene	o-Xylene
GMW-2	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-4	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-6	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-7	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-8	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-10	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-11	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1

Tasker Monitor Well #	UG/L	Benzene	Toluene	Ethylbenzene	M, p-Xylene	o-Xylene
TMW-1	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-2	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-3	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-4	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-5	Result	1.13	<1.00	57.7	<1.00	<1.00
	Detection Limit	1	1	1	1	1

40 0 40 80 FEET
Scale: 1"=40'

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GRIMES BATTERY & TASKER ROAD
TOTAL BTEX CONCENTRATIONS IN GROUNDWATER
1st Quarter 2001
MEASURED DATE: 3/31/01
CONTOUR INTERVAL IS SHOWN (MILLIGRAMS PER LITER)

CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL

SURVEYED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 05/15/02	E-3083
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGURE03	FIGURE 03
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	1st Quarter 2001
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

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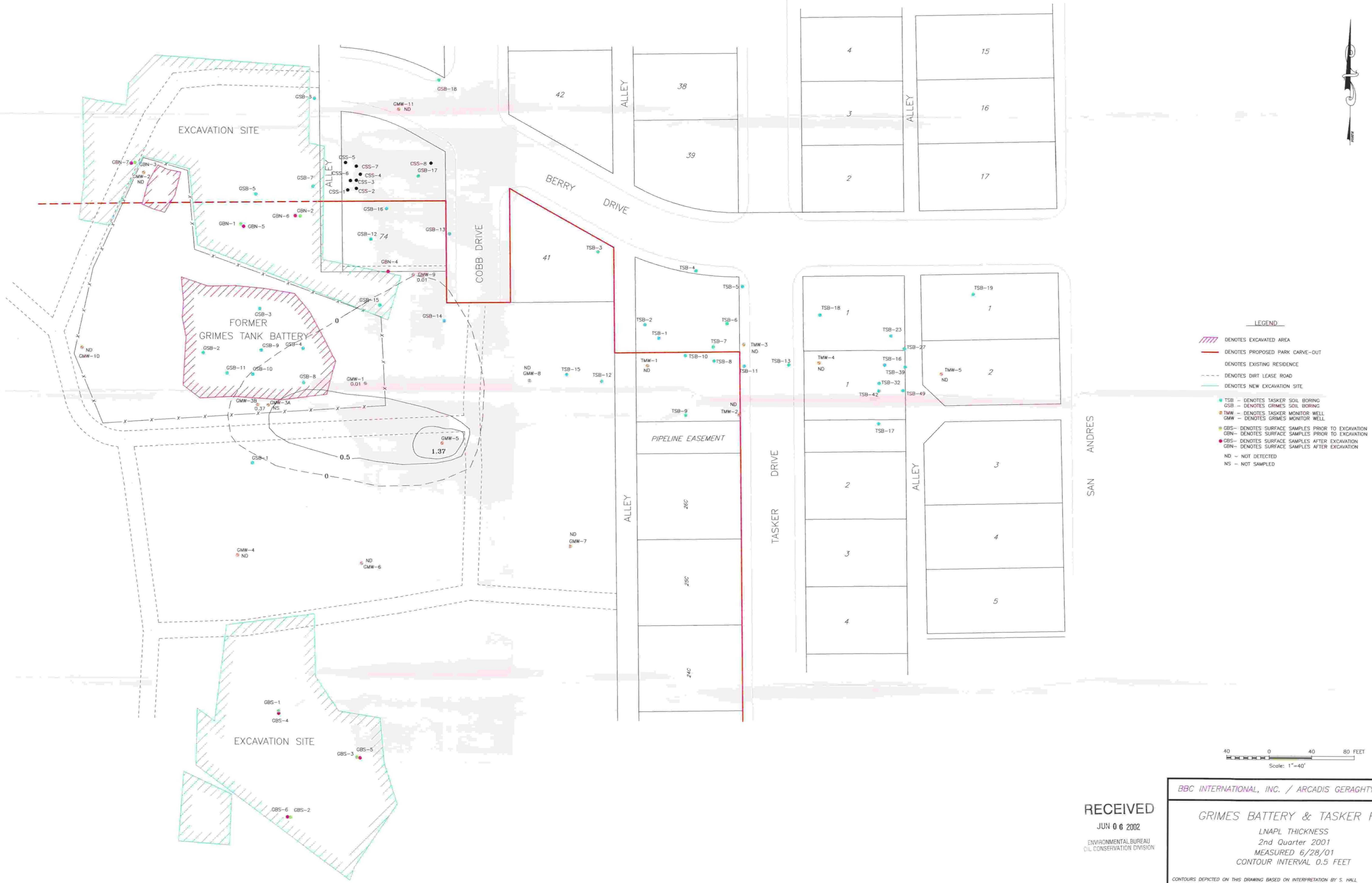
GRIMES BATTERY & TASKER ROAD
GROUND WATER ELEVATION/GRADIENT
2nd Quarter 2001
MEASURED 6/28/01

CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL

SURVEYED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 05/16/02	E-3084
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGUREQ4	FIGURE Q4
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	2nd Quarter 2001
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

JOHN WEST SURVEYING COMPANY
HOBBS, NEW MEXICO



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GRIMES BATTERY & TASKER ROAD

LNAPL THICKNESS
2nd Quarter 2001
MEASURED 6/28/01
CONTOUR INTERVAL 0.5 FEET

CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL

SURVEYED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 05/16/02	E-3085
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGURE05	FIGURE Q5
DATE END: 8/1/98	CHECKED BY:	SHEET 1 OF 1	2nd Quarter 2001
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

JOHN WEST SURVEYING COMPANY
HOBBS, NEW MEXICO

LEGEND

- DENOTES EXCAVATED AREA
- DENOTES PROPOSED PARK CARVE-OUT
- DENOTES EXISTING RESIDENCE
- DENOTES DIRT LEASE ROAD
- DENOTES NEW EXCAVATION SITE
- TSB – DENOTES TASKER SOIL BORING
  GSB – DENOTES GRIMES SOIL BORING
- TMW – DENOTES TASKER MONITOR WELL
  GMW – DENOTES GRIMES MONITOR WELL
- GBS– DENOTES SURFACE SAMPLES PRIOR TO EXCAVATION
  GBN– DENOTES SURFACE SAMPLES PRIOR TO EXCAVATION
- GBS– DENOTES SURFACE SAMPLES AFTER EXCAVATION
  GBN– DENOTES SURFACE SAMPLES AFTER EXCAVATION
- ND – NOT DETECTED
- NS – NOT SAMPLED

Second Quarter – 2001

Crimes Monitor Well #	UG/L	Benzene	Toluene	Ethylbenzene	M, p-Xylene	o-Xylene
GMW-2	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-4	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-6	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-7	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-8	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-10	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-11	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1

Tasker Monitor Well #	UG/L	Benzene	Toluene	Ethylbenzene	M, p-Xylene	o-Xylene
TMW-1	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-2	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-3	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-4	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-5	Result	<1.00	<1.00	52.3	<1.00	<1.00
	Detection Limit	1	1	1	1	1

40 0 40 80 FEET
Scale: 1"=40'

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GRIMES BATTERY & TASKER ROAD
TOTAL BTEX CONCENTRATIONS IN GROUNDWATER
2nd Quarter 2001
MEASURED DATE: 6/28/2001
CONTOUR INTERVAL IS SHOWN (MILLIGRAMS PER LITER)

CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL

SURVEYED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 05/16/02	E-3088
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGURE06	FIGURE 06
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	2nd Quarter 2001
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

JOHN WEST SURVEYING COMPANY
HOBBS, NEW MEXICO

LEGEND

- DENOTES EXCAVATED AREA
- DENOTES PROPOSED PARK CARVE-OUT
- DENOTES EXISTING RESIDENCE
- DENOTES DIRT LEASE ROAD
- DENOTES NEW EXCAVATION SITE
- TSB – DENOTES TASKER SOIL BORING
  GSB – DENOTES GRIMES SOIL BORING
- TMW – DENOTES TASKER MONITOR WELL
  GMW – DENOTES GRIMES MONITOR WELL
- GBS– DENOTES SURFACE SAMPLES PRIOR TO EXCAVATION
  GBN– DENOTES SURFACE SAMPLES PRIOR TO EXCAVATION
- GBS– DENOTES SURFACE SAMPLES AFTER EXCAVATION
  GBN– DENOTES SURFACE SAMPLES AFTER EXCAVATION

40 0 40 80 FEET
Scale: 1"=40'

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GRIMES BATTERY & TASKER ROAD

GROUND WATER ELEVATION/GRADIENT
3rd Quarter 2001
MEASURED 9/26/01

CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL

SURVEYED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 05/16/02	E-3087
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGURE07	FIGURE Q7
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	3rd Quarter 2001
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

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GRIMES BATTERY & TASKER ROAD

LNAPL THICKNESS
3rd Quarter 2001
MEASURED 12/17/01
CONTOUR INTERVAL IN FEET

CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL

SURVEYED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 05/16/02
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGURE08
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'

E-3088
FIGURE Q8
4th Quarter 2001

JOHN WEST SURVEYING COMPANY
HOBBS, NEW MEXICO

LEGEND

- DENOTES EXCAVATED AREA
- DENOTES PROPOSED PARK CARVE-OUT
- DENOTES EXISTING RESIDENCE
- DENOTES DIRT LEASE ROAD
- DENOTES NEW EXCAVATION SITE
- TSB – DENOTES TASKER SOIL BORING
  GSB – DENOTES GRIMES SOIL BORING
- TMW – DENOTES TASKER MONITOR WELL
  GMW – DENOTES GRIMES MONITOR WELL
- GBS– DENOTES SURFACE SAMPLES PRIOR TO EXCAVATION
  GBN– DENOTES SURFACE SAMPLES PRIOR TO EXCAVATION
- GBS– DENOTES SURFACE SAMPLES AFTER EXCAVATION
  GBN– DENOTES SURFACE SAMPLES AFTER EXCAVATION
- ND – NOT DETECTED
- NS – NOT SAMPLED

Third Quarter – 2001

Grimes Monitor Well #	*UG/L*	*Benzene*	*Toluene*	*Ethylbenzene*	*M, p-Xylene*	*o-Xylene*
GMW-2	Result	<1.00	1.38	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-4	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-6	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-7	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-8	Result	<1.00	1.19	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-10	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-11	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1

Tasker Monitor Well #	*UG/L*	*Benzene*	*Toluene*	*Ethylbenzene*	*M, p-Xylene*	*o-Xylene*
TMW-1	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-2	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-3	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-4	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-5	Result	1.46	<1.00	80.3	<1.00	<1.00
	Detection Limit	1	1	1	1	1

40 0 40 80 FEET
Scale: 1"=40'

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GRIMES BATTERY & TASKER ROAD
TOTAL BTEX CONCENTRATIONS IN GROUNDWATER
3rd Quarter 2001
MEASURED DATE: 9/26/01
CONTOUR INTERVAL IS SHOWN (MILLIGRAMS PER LITER)

CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL

SURVEYED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 05/17/02	E-3089
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGURE09	FIGURE Q9
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	1st Quarter 2001
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

JOHN WEST SURVEYING COMPANY
HOBBS, NEW MEXICO

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GRIMES BATTERY & TASKER ROAD
GROUND WATER ELEVATION/GRADIENT
4th Quarter 2001
MEASURED 12/17/01

CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL

SURVEYED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 05/17/02	E-3090
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGUREQ10	FIGURE Q10
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	3rd Quarter 2001
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

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GRIMES BATTERY & TASKER ROAD

LNAPL THICKNESS
4th Quarter 2001
MEASURED 12/17/01
CONTOUR INTERVAL IN FEET

CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL

SURVEYED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 05/17/02	E-3091
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGURE011	FIGURE 011
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	4th Quarter 2001
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

JOHN WEST SURVEYING COMPANY
HOBBS, NEW MEXICO

LEGEND

- DENOTES EXCAVATED AREA
- DENOTES PROPOSED PARK CARVE-OUT
- DENOTES EXISTING RESIDENCE
- DENOTES DIRT LEASE ROAD
- DENOTES NEW EXCAVATION SITE
- TSB – DENOTES TASKER SOIL BORING
  GSB – DENOTES GRIMES SOIL BORING
- TMW – DENOTES TASKER MONITOR WELL
  GMW – DENOTES GRIMES MONITOR WELL
- GBS– DENOTES SURFACE SAMPLES PRIOR TO EXCAVATION
  GBN– DENOTES SURFACE SAMPLES PRIOR TO EXCAVATION
- GBS– DENOTES SURFACE SAMPLES AFTER EXCAVATION
  GBN– DENOTES SURFACE SAMPLES AFTER EXCAVATION
- ND – NOT DETECTED
- NS – NOT SAMPLED

Fourth Quarter – 2001

Grimes Monitor Well #	*UG/L*	*Benzene*	*Toluene*	*Ethylbenzene*	*M, p-Xylene*	*o-Xylene*
GMW-2	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-4	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-6	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-7	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-8	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-10	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
GMW-11	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1

Tasker Monitor Well #	*UG/L*	*Benzene*	*Toluene*	*Ethylbenzene*	*M, p-Xylene*	*o-Xylene*
TMW-1	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-2	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-3	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-4	Result	<1.00	<1.00	<1.00	<1.00	<1.00
	Detection Limit	1	1	1	1	1
TMW-5	Result	<10.0	<10.0	45.6	<10.0	<10.0
	Detection Limit	1	1	1	1	1

40 0 40 80 FEET
Scale: 1"=40'

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GRIMES BATTERY & TASKER ROAD
TOTAL BTEX CONCENTRATIONS IN GROUNDWATER
4th Quarter 2001
MEASURED DATE: 12/17/01
CONTOUR INTERVAL IS SHOWN (MILLIGRAMS PER LITER)

CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL

SURVEYED BY: LAWLESS	DRAWN BY: LMP	REV. DATE: 05/17/02	E-3092
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGUREQ12	FIGURE Q12
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	4th Quarter 2001
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

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