

AP - 2

ANNUAL MONITORING REPORT

YEAR(S):
2005

Shell E&P Company

A Division of Shell Exploration & Production Company



Woodcreek
200 N Dairy Ashford
Houston, TX 77079

P.O. Box 576
Houston, TX 77001

VIA FEDERAL EXPRESS
AIRBILL NUMBER: 4455517-10000037

July 18, 2006

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**SUBJECT: SUBMITTAL OF 2005 GROUNDWATER MONITORING
REPORT, WESTGATE SUBDIVISION,
GRIMES BATTERY AND TASKER ROAD**

Dear Mr. Price:

Shell Exploration and Production Company (SEPCo) respectfully submits the enclosed 2005 Groundwater Monitoring Report for the Westgate Subdivision, Grimes Battery and Tasker Road.

This report details the groundwater monitoring and free product recovery activities for the four quarters of 2005. Also included are summary data tables, original laboratory data, and isopleth maps.

If you have any questions, please call me at (281) 544-2322 or Cliff Brunson at (505) 397-6388 or via e-mail to me at Wayne.Hamilton@shell.com or Cliff at cbrunson@bbcinternational.com.

Sincerely,

A handwritten signature in cursive script that reads "Cliff P. Brunson".

for
Wayne A. Hamilton
Sr. Staff Engineer, Legacy Properties

cc: Chris Williams, NMOCD District 1 Supervisor, 2 copies
Cliff P. Brunson, BBC International, Inc.

WESTGATE SUBDIVISION

GRIMES BATTERY & TASKER ROAD

2005 Quarterly Groundwater Monitoring Report

July 2006

**SHELL EXPLORATION & PRODUCTION
COMPANY
HOUSTON, TEXAS**

Prepared By:

BBC International, Inc.
World-Wide Environmental Specialists

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	2005 GROUNDWATER MONITORING ACTIVITIES.....	1
2.1	LNAPL Thickness and Groundwater Elevations	1
	Table 1.....	2
	Table 2.....	2
	Table 3.....	3
	Table 4.....	3
2.2	Free Product Recovery	4
	Table 5.....	4
2.3	Purging and Sampling Activities.....	7
	Table 6.....	7
	Table 7.....	9
3.0	CONCLUSION	13

APPENDICES

Appendix I: Trace Analysis, Inc., Results (1st Quarter 2005), 03/18/05
Appendix II: Trace Analysis, Inc., Results (2nd Quarter 2005), 06/27/05
Appendix III: Trace Analysis, Inc., Results (3rd Quarter 2005), 09/08/05
Appendix IV: Trace Analysis, Inc., Results (4th Quarter 2005), 12/23/05

Figure Q1: Groundwater Elevation/Gradient, 03/18/05
Figure Q2: LNAPL Thickness, 03/18/05
Figure Q3: Total BTEX Concentrations in Groundwater, 03/18/05
Figure Q4: Groundwater Elevation/Gradient, 06/16/05
Figure Q5: LNAPL Thickness, 06/16/05
Figure Q6: Total BTEX Concentrations in Groundwater, 06/16/05
Figure Q7: Groundwater Elevation/Gradient, 09/21/05
Figure Q8: LNAPL Thickness, 09/21/05
Figure Q9: Total BTEX Concentrations in Groundwater, 09/21/05
Figure Q10: Groundwater Elevation/Gradient, 12/12/05
Figure Q11: LNAPL Thickness, 12/12/05
Figure Q12: Total BTEX Concentrations in Groundwater, 12/12/05

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 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 flowlines. Oil and saltwater were produced from the wells on this lease and transported by flowlines 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.

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. In 2002, five monitor wells (TMW-1 through TMW-5) were plugged and abandoned per NMOCD approval.

2.0 2005 GROUNDWATER MONITORING ACTIVITIES

There are only eleven monitoring wells that are now gauged and sampled during a calendar year. Three of the remaining eleven wells have had measurable free product hydrocarbons detected in them. These monitor wells are GMW-1, GMW-3B, GMW-5.

2.1 LNAPL THICKNESS AND GROUNDWATER ELEVATIONS

Each quarter the eleven 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). Three wells were found to have measurable free product hydrocarbons. They are GMW-1, GMW-3B, and GMW-5. GMW-9 was sampled in the first quarter with non-detect results, then during the remaining quarters, a slight detection of hydrocarbons was discovered on the Soak-ease recovery absorbent, therefore, the well was not sampled. (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 2005 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	3/18/2005	70.88	ND	0.00	3576.96
GMW-2	3648.51	3/18/2005	70.11	ND	0.00	3578.40
GMW-3B	3648.26	3/18/2005	70.04	ND	0.00	3578.22
GMW-4	3647.79	3/18/2005	69.73	ND	0.00	3578.06
GMW-5	3648.41	3/18/2005	71.25	ND	0.00	3577.16
GMW-6	3648.22	3/18/2005	71.03	ND	0.00	3577.19
GMW-7	3644.98	3/18/2005	71.32	ND	0.00	3573.66
GMW-8	3645.66	3/18/2005	72.02	ND	0.00	3573.64
GMW-9	3646.27	3/18/2005	71.68	ND	0.00	3574.59
GMW-10	3645.65	3/18/2005	69.48	ND	0.00	3576.17
GMW-11	3644.07	3/18/2005	68.87	ND	0.00	3575.20

**Table 2. 2nd Quarter 2005 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	6/16/2005	70.85	ND	0.00	3576.99
GMW-2	3648.51	6/16/2005	70.08	ND	0.00	3578.43
GMW-3B	3648.26	6/16/2005	70.01	ND	0.00	3578.25
GMW-4	3647.79	6/16/2005	69.70	ND	0.00	3579.89
GMW-5	3648.41	6/16/2005	71.23	ND	0.00	3577.18
GMW-6	3648.22	6/16/2005	71.00	ND	0.00	3579.17
GMW-7	3644.98	6/16/2005	71.30	ND	0.00	3573.68
GMW-8	3645.66	6/16/2005	72.00	ND	0.00	3573.66
GMW-9	3646.27	6/16/2005	71.66	ND	0.00	3574.61
GMW-10	3645.65	6/16/2005	69.47	ND	0.00	3576.18
GMW-11	3644.07	6/16/2005	68.85	ND	0.00	3576.08

**Table 3. 3rd Quarter 2005 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	9/21/2005	71.14	ND	0.00	3576.70
GMW-2	3648.51	9/21/2005	70.26	ND	0.00	3578.25
GMW-3B	3648.26	9/21/2005	70.53	ND	0.00	3577.73
GMW-4	3647.79	9/21/2005	69.92	ND	0.00	3577.87
GMW-5	3648.41	9/21/2005	71.63	71.62	0.01	3576.78
GMW-6	3648.22	9/21/2005	71.14	ND	0.00	3577.08
GMW-7	3644.98	9/21/2005	71.53	ND	0.00	3573.45
GMW-8	3645.66	9/21/2005	72.16	ND	0.00	3573.50
GMW-9	3646.27	9/21/2005	71.85	ND	0.00	3574.42
GMW-10	3645.65	9/21/2005	69.67	ND	0.00	3575.98
GMW-11	3644.07	9/21/2005	69.95	ND	0.00	3574.12

**Table 4. 4th Quarter 2005 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	12/12/2005	71.21	ND	0.00	3576.63
GMW-2	3648.51	12/12/2005	70.38	ND	0.00	3578.13
GMW-3B	3648.26	12/12/2005	70.67	ND	0.00	3577.59
GMW-4	3647.79	12/12/2005	70.00	ND	0.00	3577.79
GMW-5	3648.41	12/12/2005	71.72	71.70	0.02	3576.71
GMW-6	3648.22	12/12/2005	72.23	ND	0.00	3575.99
GMW-7	3644.98	12/12/2005	71.63	ND	0.00	3573.35
GMW-8	3645.66	12/12/2005	72.26	ND	0.00	3573.40
GMW-9	3646.27	12/12/2005	71.60	ND	0.00	3574.67
GMW-10	3645.65	12/12/2005	69.88	ND	0.00	3575.77
GMW-11	3644.07	12/12/2005	70.07	ND	0.00	3574.00

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. Free Product Recovery

Date	Location			
	GMW-1	GMW-3B	GMW-5	GMW-9
	Product Recovery (quarts)	Product Recovery (quarts)	Product Recovery (quarts)	Product Recovery (quarts)
First Quarter				
1/4/05	0.00	0.00	Tip of soak-ease	0.00
1/11/05	0.00	0.75	0.75	0.00
1/25/05	Tip of soak-ease	0.00	0.75	0.00
2/11/05	Tip of soak-ease	0.00	0.75	0.00
2/25/05	0.75	0.75	1.50	0.00
3/1/05	0.00	0.00	Tip of soak-ease	0.00
3/8/05	0.00	Tip of soak-ease	Tip of soak-ease	0.00
3/11/05	0.00	Tip of soak-ease	Tip of soak-ease	0.00
3/14/05	0.00	0.00	Tip of soak-ease	0.00
3/23/05	0.75	0.75	Trace of product	0.00
First Quarter Total	1.50	2.25	3.75	0.00
Year-to Date Totals	1.50	2.25	3.75	0.00
Second Quarter				
4/5/05	0.75	0.00	1.50	Non-measurable, slight trace, Soak-ease spotted
4/8/05	0.00	Tip of soak-ease	0.75	0.00
4/12/05	0.75	0.75	0.75	0.00
4/15/05	0.75	0.75	0.75	0.00
4/20/05	0.75	0.75	0.75	0.00
4/22/05	0.75	0.75	0.75	Non-measurable, slight trace, Soak-ease spotted
4/26/05	0.75	0.75	0.75	0.00
4/29/05	0.00	Tip of soak-ease	0.75	0.00

5/3/05	0.75	Tip of soak-ease	0.75	Non-measurable, slight trace, Soak-ease spotted
5/6/05	0.75	0.75	0.75	0.00
5/10/05	0.75	Tip of soak-ease	0.75	0.00
5/17/05	Trace of product	0.75	0.75	0.00
5/27/05	0.75	0.75	0.75	Non-measurable, slight trace, Soak-ease spotted
5/31/05	0.75	Trace of product	0.75	Non-measurable, slight trace, Soak-ease spotted
6/3/05	0.75	Trace of product	0.75	Non-measurable, slight trace, Soak-ease spotted
6/7/05	0.75	0.75	0.75	0.00
6/12/06	0.75	Trace of product	1.50	Non-measurable, slight trace, Soak-ease spotted
6/15/05	0.75	Trace of product	0.75	Non-measurable, slight trace, Soak-ease spotted
6/17/05	0.75	Tip of soak-ease	0.75	Non-measurable, slight trace, Soak-ease spotted
6/21/05	0.00	Tip of soak-ease	0.75	0.00
6/28/05	0.75	0.75	0.75	Non-measurable, slight trace, Soak-ease spotted
Second Quarter Total	12.75	7.50	17.25	0.00
Year-to Date Totals	14.25	9.75	21.00	0.00
Third Quarter				
7/1/05	0.75	0.75	0.75	0.00
7/5/05	0.75	Trace of product	0.75	Non-measurable, slight trace, Soak-ease spotted
7/7/05	0.75	0.75	0.75	Non-measurable, slight trace, Soak-ease spotted
7/12/05	0.75	1.50	1.50	0.00
7/14/05	0.75	0.75	0.75	0.00
7/19/05	0.75	0.75	0.75	0.00
7/22/05	0.75	0.75	1.50	0.75
7/26/05	0.75	0.75	0.75	Non-measurable, slight trace, Soak-ease spotted
7/29/05	1.50	0.75	1.50	Non-measurable, slight trace, Soak-ease spotted
8/2/05	0.75	0.75	0.75	0.00
8/5/05	0.75	Tip of soak-ease	0.75	Non-measurable, slight trace, Soak-ease spotted
8/9/05	0.75	0.75	0.75	Non-measurable, slight trace, Soak-ease spotted
8/11/05	0.75	0.75	0.75	0.75
8/16/05	0.75	0.75	1.50	Non-measurable, slight trace, Soak-ease spotted
8/19/05	0.75	0.75	0.75	Non-measurable, slight trace, Soak-ease spotted
8/23/05	0.75	0.75	0.75	Non-measurable, slight trace, Soak-ease spotted
8/26/05	1.50	Tip of soak-ease	1.50	0.00
8/30/05	0.75	Tip of soak-ease	1.50	Non-measurable, slight trace, Soak-ease spotted

9/2/05	0.75	0.75	0.75	0.00
9/7/05	0.75	0.00	0.75	Non-measurable, slight trace, Soak-ease spotted
9/9/05	0.75	Tip of soak-ease	1.50	0.00
9/16/05	0.75	0.75	0.75	0.00
9/20/05	0.75	0.75	0.75	0.00
9/23/05	0.75	0.75	1.50	0.00
9/27/05	0.75	0.75	0.75	Non-measurable, slight trace, Soak-ease spotted
9/30/05	0.75	0.75	1.50	0.00
Third Quarter Total	21.00	15.75	26.25	1.50
Year-to Date Totals	35.25	25.50	47.25	1.50
Fourth Quarter				
10/4/05	0.75	Tip of soak-ease	0.75	Non-measurable, slight trace, Soak-ease spotted
10/7/05	0.75	Tip of soak-ease	0.75	0.00
10/11/05	Tip of soak-ease	Tip of soak-ease	0.75	0.00
10/14/05	0.75	Trace of product	0.75	0.00
10/19/05	0.75	Trace of product	0.75	Non-measurable, slight trace, Soak-ease spotted
10/21/05	0.75	Tip of soak-ease	0.75	0.00
10/25/05	0.75	Trace of product	0.75	Non-measurable, slight trace, Soak-ease spotted
11/1/05	0.75	Tip of soak-ease	0.75	0.00
11/4/05	0.75	Tip of soak-ease	1.50	0.00
11/8/05	0.75	Trace of product	0.75	0.00
11/11/05	0.75	Tip of soak-ease	0.75	Non-measurable, slight trace, Soak-ease spotted
11/15/05	1.50	0.75	1.50	0.00
11/18/05	Tip of soak-ease	0.75	1.50	Non-measurable, slight trace, Soak-ease spotted
11/23/05	Trace of product	0.75	0.75	0.00
11/29/05	Trace of product	0.75	1.50	0.00
12/2/05	Tip of soak-ease	Trace of product	0.75	Non-measurable, slight trace, Soak-ease spotted
12/6/05	0.75	Tip of soak-ease	0.75	0.00
12/16/05	0.75	Tip of soak-ease	0.75	Non-measurable, slight trace, Soak-ease spotted
12/20/05	Trace of product	Trace of product	0.75	0.00
12/23/05	0.75	Trace of product	0.75	0.00
12/27/05	0.75	Trace of product	0.75	Non-measurable, slight trace, Soak-ease spotted
Fourth Quarter Totals	12.00	3.00	18.75	0.00
Year-to Date Totals	47.25	28.50	66.00	1.50

2.3 PURGING AND SAMPLING ACTIVITIES

Each quarter all eleven 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, and 7. 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 2005 Sampling Reports

**Grimes Monitor Wells - Westgate Subdivision
BTEX: S-8260B Method**

GMW-2

Analyte	Matrix	Method Taken	1 st Quarter				2 nd Quarter			
			Work Order Number: 5032103				Work Order Number: 5061718			
			Sample No.	Date Taken	µg/L		Sample No.	Date Taken	µg/L	
					Result	Detection Limit			Result	Detection Limit
Benzene	Water	S-8260B	57767	3/18/05	<1.00	1	65651	6/16/05	<1.00	1
Toluene	Water	S-8260B	57767	3/18/05	<1.00	1	65651	6/16/05	<1.00	1
Ethylbenzene	Water	S-8260B	57767	3/18/05	<1.00	1	65651	6/16/05	<1.00	1
M,p-Xylene	Water	S-8260B	57767	3/18/05	<1.00	1	65651	6/16/05	<1.00	1
o-Xylene	Water	S-8260B	57767	3/18/05	<1.00	1	65651	6/16/05	<1.00	1

GMW-7

Analyte	Matrix	Method Taken	1 st Quarter				2 nd Quarter			
			Work Order Number: 5032103				Work Order Number: 5061718			
			Sample No.	Date Taken	µg/L		Sample No.	Date Taken	µg/L	
					Result	Detection Limit			Result	Detection Limit
Benzene	Water	S-8260B	57769	3/18/05	<1.00	1	65653	6/16/05	<1.00	1
Toluene	Water	S-8260B	57769	3/18/05	<1.00	1	65653	6/16/05	<1.00	1
Ethylbenzene	Water	S-8260B	57769	3/18/05	<1.00	1	65653	6/16/05	<1.00	1
M,p-Xylene	Water	S-8260B	57769	3/18/05	<1.00	1	65653	6/16/05	<1.00	1
o-Xylene	Water	S-8260B	57769	3/18/05	<1.00	1	65653	6/16/05	<1.00	1

GMW-8

Analyte	Matrix	Method Taken	1 st Quarter				2 nd Quarter			
			Work Order Number: 5032103				Work Order Number: 5061718			
			Sample No.	Date Taken	µg/L		Sample No.	Date Taken	µg/L	
					Result	Detection Limit			Result	Detection Limit
Benzene	Water	S-8260B	57770	3/18/05	<1.00	1	65654	6/16/05	<1.00	1
Toluene	Water	S-8260B	57770	3/18/05	<1.00	1	65654	6/16/05	<1.00	1
Ethylbenzene	Water	S-8260B	57770	3/18/05	<1.00	1	65654	6/16/05	<1.00	1
M,p-Xylene	Water	S-8260B	57770	3/18/05	<1.00	1	65654	6/16/05	<1.00	1
o-Xylene	Water	S-8260B	57770	3/18/05	<1.00	1	65654	6/16/05	<1.00	1

GMW-9

Analyte	Matrix	Method Taken	1 st Quarter				2 nd Quarter			
			Work Order Number: 5032103				Work Order Number: 5061718			
			Sample No.	Date Taken	$\mu\text{g/L}$		Sample No.	Date Taken	$\mu\text{g/L}$	
					Result	Detection Limit			Result	Detection Limit
Benzene	Water	S-8260B	57771	3/18/05	<1.00	1				
Toluene	Water	S-8260B	57771	3/18/05	<1.00	1				
Ethylbenzene	Water	S-8260B	57771	3/18/05	<1.00	1				
M,p-Xylene	Water	S-8260B	57771	3/18/05	<1.00	1				
o-Xylene	Water	S-8260B	57771	3/18/05	<1.00	1				

GMW-10

Analyte	Matrix	Method Taken	1 st Quarter				2 nd Quarter			
			Work Order Number: 5032103				Work Order Number: 5061718			
			Sample No.	Date Taken	$\mu\text{g/L}$		Sample No.	Date Taken	$\mu\text{g/L}$	
					Result	Detection Limit			Result	Detection Limit
Benzene	Water	S-8260B	57768	3/18/05	<1.00	1	65652	6/16/05	<1.00	1
Toluene	Water	S-8260B	57768	3/18/05	<1.00	1	65652	6/16/05	<1.00	1
Ethylbenzene	Water	S-8260B	57768	3/18/05	<1.00	1	65652	6/16/05	<1.00	1
M,p-Xylene	Water	S-8260B	57768	3/18/05	<1.00	1	65652	6/16/05	<1.00	1
o-Xylene	Water	S-8260B	57768	3/18/05	<1.00	1	65652	6/16/05	<1.00	1

Table 7. 3rd & 4th Quarter 2005 Sampling Reports

**Grimes Monitor Wells - Westgate Subdivision
BTEX: S-8260B Method and PAH: S-8270C**

GMW-2

Analyte	Matrix	Method Taken	3 rd Quarter				4 th Quarter			
			Work Order Number: 5092208				Work Order Number: 5121408			
			Sample No.	Date Taken	µg/L		Sample No.	Date Taken	µg/L	
					Result	Detection Limit			Result	Detection Limit
Benzene	Water	S-8260B	73975	9/21/05	<5.00	1	79912	12/12/05	<1.00	1
Toluene	Water	S-8260B	73975	9/21/05	<5.00	1	79912	12/12/05	<1.00	1
Ethylbenzene	Water	S-8260B	73975	9/21/05	<5.00	1	79912	12/12/05	<1.00	1
M,p-Xylene	Water	S-8260B	73975	9/21/05	<5.00	1	79912	12/12/05	<1.00	1
o-Xylene	Water	S-8260B	73975	9/21/05	<5.00	1	79912	12/12/05	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L		Sample No.	Date Taken	mg/L	
					Result	Detection Limit			Result	Detection Limit
Naphthalene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Acenaphthylene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Acenaphthene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Dibenzofuran	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Fluorene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Phenanthrene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Anthracene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Fluoranthene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Pyrene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Benzo[a]anthracene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Chrysene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Benzo[b]fluoranthene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Benzo[k]fluoranthene	Water	S-8270C					79912	12/12/05	<0.0004	0.0004
Benzo[a]pyrene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Indeno[1,2-3-cd]pyrene	Water	S-8270C					79912	12/12/05	<0.0004	0.0004
Dibenzo[a,h]anthracene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002
Benzo[g,h,i]perylene	Water	S-8270C					79912	12/12/05	<0.0002	0.0002

GMW-7

Analyte	Matrix	Method Taken	3 rd Quarter				4 th Quarter			
			Order ID Number: 5092208				Work Order Number: 5121408			
			Sample No.	Date Taken	µg/L		Sample No.	Date Taken	µg/L	
					Result	Detection Limit			Result	Detection Limit
Benzene	Water	S-8260B	73976	9/21/05	<1.00	1	79915	12/12/05	<1.00	1
Toluene	Water	S-8260B	73976	9/21/05	<1.00	1	79915	12/12/05	<1.00	1
Ethylbenzene	Water	S-8260B	73976	9/21/05	<1.00	1	79915	12/12/05	<1.00	1
M,p-Xylene	Water	S-8260B	73976	9/21/05	<1.00	1	79915	12/12/05	<1.00	1
o-Xylene	Water	S-8260B	73976	9/21/05	<1.00	1	79915	12/12/05	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L		Sample No.	Date Taken	mg/L	
					Result	Detection Limit			Result	Detection Limit
Naphthalene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Acenaphthylene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Acenaphthene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Dibenzofuran	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Fluorene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Phenanthrene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Anthracene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Fluoranthene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Pyrene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Benzo[a]anthracene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Chrysene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Benzo[b]fluoranthene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Benzo[k]fluoranthene	Water	S-8270C					79915	12/12/05	<0.0004	0.0004
Benzo[a]pyrene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Indeno[1,2-3-cd]pyrene	Water	S-8270C					79915	12/12/05	<0.0004	0.0004
Dibenz[a,h]anthracene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002
Benzo[g,h,i]perylene	Water	S-8270C					79915	12/12/05	<0.0002	0.0002

GMW-8

Analyte	Matrix	Method Taken	3 rd Quarter				4 th Quarter			
			Order ID Number: 5092208				Work Order Number: 5121408			
			Sample No.	Date Taken	µg/L		Sample No.	Date Taken	µg/L	
					Result	Detection Limit			Result	Detection Limit
Benzene	Water	S-8260B	73977	9/21/05	<1.00	1	79916	12/12/05	<1.00	1
Toluene	Water	S-8260B	73977	9/21/05	<1.00	1	79916	12/12/05	<1.00	1
Ethylbenzene	Water	S-8260B	73977	9/21/05	<1.00	1	79916	12/12/05	<1.00	1
M,p-Xylene	Water	S-8260B	73977	9/21/05	<1.00	1	79916	12/12/05	<1.00	1
o-Xylene	Water	S-8260B	73977	9/21/05	<1.00	1	79916	12/12/05	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L		Sample No.	Date Taken	mg/L	
					Result	Detection Limit			Result	Detection Limit
Naphthalene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Acenaphthylene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Acenaphthene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Dibenzofuran	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Fluorene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Phenanthrene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Anthracene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Fluoranthene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Pyrene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Benzo[a]anthracene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Chrysene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Benzo[b]fluoranthene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Benzo[k]fluoranthene	Water	S-8270C					79916	12/12/05	<0.0004	0.0004
Benzo[a]pyrene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Indeno[1,2,3-cd]pyrene	Water	S-8270C					79916	12/12/05	<0.0004	0.0004
Dibenz[a,h]anthracene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002
Benzo[g,h,i]perylene	Water	S-8270C					79916	12/12/05	<0.0002	0.0002

GMW-10

Analyte	Matrix	Method Taken	3 rd Quarter				4 th Quarter			
			Order ID Number: 5092208				Work Order Number: 5121408			
			Sample No.	Date Taken	µg/L		Sample No.	Date Taken	µg/L	
					Result	Detection Limit			Result	Detection Limit
Benzene	Water	S-8260B	73978	9/21/05	<1.00	1	79913	12/12/05	<1.00	1
Toluene	Water	S-8260B	73978	9/21/05	<1.00	1	79913	12/12/05	<1.00	1
Ethylbenzene	Water	S-8260B	73978	9/21/05	<1.00	1	79913	12/12/05	<1.00	1
M,p-Xylene	Water	S-8260B	73978	9/21/05	<1.00	1	79913	12/12/05	<1.00	1
o-Xylene	Water	S-8260B	73978	9/21/05	<1.00	1	79913	12/12/05	<1.00	1
Analyte	Matrix	Method Taken	Sample No.	Date Taken	mg/L		Sample No.	Date Taken	mg/L	
					Result	Detection Limit			Result	Detection Limit
Naphthalene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Acenaphthylene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Acenaphthene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Dibenzofuran	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Fluorene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Phenanthrene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Anthracene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Fluoranthene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Pyrene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Benzo[a]anthracene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Chrysene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Benzo[b]fluoranthene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Benzo[k]fluoranthene	Water	S-8270C					79913	12/12/05	<0.0004	0.0004
Benzo[a]pyrene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Indeno[1,2,3-cd]pyrene	Water	S-8270C					79913	12/12/05	<0.0004	0.0004
Dibenz[a,h]anthracene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002
Benzo[g,h,i]perylene	Water	S-8270C					79913	12/12/05	<0.0002	0.0002

GMW-4

Analyte	Matrix	Method Taken	3 rd Quarter				4 th Quarter			
			Order ID Number:				Work Order Number: 5121408			
			Sample No.	Sample No.	Sample No.		Sample No.	Sample No.	µg/L	
									Result	Detection Limit
Benzene	Water	S-8260B					79914	12/12/05	<1.00	1
Toluene	Water	S-8260B					79914	12/12/05	<1.00	1
Ethylbenzene	Water	S-8260B					79914	12/12/05	<1.00	1
M,p-Xylene	Water	S-8260B					79914	12/12/05	<1.00	1
o-Xylene	Water	S-8260B					79914	12/12/05	<1.00	1

GMW-6

Analyte	Matrix	Method Taken	3 rd Quarter				4 th Quarter			
			Order ID Number:				Work Order Number: 5121408			
			Sample No.	Date Taken	µg/L		Sample No.	Date Taken	µg/L	
					Result	Detection Limit			Result	Detection Limit
Benzene	Water	S-8260B					79917	12/12/05	<1.00	1
Toluene	Water	S-8260B					79917	12/12/05	<1.00	1
Ethylbenzene	Water	S-8260B					79917	12/12/05	<1.00	1
M,p-Xylene	Water	S-8260B					79917	12/12/05	<1.00	1
o-Xylene	Water	S-8260B					79917	12/12/05	<1.00	1

GMW-11

Analyte	Matrix	Method Taken	3rd Quarter				4th Quarter			
			Order ID Number:				Work Order Number: 5121408			
			Sample No.	Date Taken	µg/L		Sample No.	Date Taken	µg/L	
					Result	Detection Limit			Result	Detection Limit
Benzene	Water	S-8260B					79918	12/12/05	<1.00	1
Toluene	Water	S-8260B					79918	12/12/05	<1.00	1
Ethylbenzene	Water	S-8260B					79918	12/12/05	<1.00	1
M,p-Xylene	Water	S-8260B					79918	12/12/05	<1.00	1
o-Xylene	Water	S-8260B					79918	12/12/05	<1.00	1

In the first quarter of 2005, all analytes tested non-detect in all of the wells. Figure Q3 is an isopleth map of total BTEX concentration detected in the groundwater samples.

In the second quarter, all 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, all 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, 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

Monitor wells GMW-2, GMW-7, GMW-8, and GMW-10 will be sampled quarterly for BTEX using USEPA Method 8260-B. Monitor wells GMW-2, GMW-4, GMW-6, GMW-7, GMW-8, GMW-10, and GMW-11 will be analyzed for PAH's annually using USEPA Method 8270-C. Based on sample results for one year (four quarters), sampling frequency will be reviewed and may be revised.

Sampling will be discontinued when eight quarters of sample results indicate analyte concentrations below New Mexico Water Quality Control Commission, 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. Free product recovery will continue until no free product is recovered for an extended period of time.

Sample results will be submitted to NMOCD annually on April 1. All recovered fluids will be recycled and disposed of 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 would only be sampled quarterly when no measurable free product exists.

APPENDIX I

TRACE ANALYSIS, INC.
Laboratory Results
1st Quarter 2005

Westgate Subdivision
Grimes Battery & Tasker Road

July 2006

Shell Exploration & Production Company
Houston, Texas

Prepared by:
BBC International, Inc.

Summary Report

Cliff Brunson
BBC International
1324 W. Marland
Hobbs, NM 88240

Report Date: March 31, 2005

Work Order: 5032103

Project Location: Hobbs, NM
Project Name: Shell Westgate

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
57767	MW-2	water	2005-03-18	10:05	2005-03-19
57768	MW-10	water	2005-03-18	11:00	2005-03-19
57769	MW-7	water	2005-03-18	11:53	2005-03-19
57770	MW-8	water	2005-03-18	12:44	2005-03-19
57771	MW-9	water	2005-03-18	13:40	2005-03-19

Sample - Field Code	BTEX by 8260					MTBE by 8260
	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethylbenzene ($\mu\text{g/L}$)	m,p-Xylene ($\mu\text{g/L}$)	o-Xylene ($\mu\text{g/L}$)	MTBE ($\mu\text{g/L}$)
57767 - MW-2	<1.00	<1.00	<1.00	<1.00	<1.00	
57768 - MW-10	<1.00	<1.00	<1.00	<1.00	<1.00	
57769 - MW-7	<1.00	<1.00	<1.00	<1.00	<1.00	
57770 - MW-8	<1.00	<1.00	<1.00	<1.00	<1.00	
57771 - MW-9	<1.00	<1.00	<1.00	<1.00	<1.00	

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
155 McCutcheon, Suite H

Lubbock, Texas 79424
El Paso, Texas 79932

800•378•1296
888•588•3443
E-Mail: lab@traceanalysis.com

806•794•1296
915•585•3443

FAX 806•794•1298
FAX 915•585•4944

Analytical and Quality Control Report

Cliff Brunson
BBC International
1324 W. Marland
Hobbs, NM 88240

Report Date: March 31, 2005

Work Order: 5032103

Project Location: Hobbs, NM
Project Name: Shell Westgate
Project Number: Shell Westgate

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
57767	MW-2	water	2005-03-18	10:05	2005-03-19
57768	MW-10	water	2005-03-18	11:00	2005-03-19
57769	MW-7	water	2005-03-18	11:53	2005-03-19
57770	MW-8	water	2005-03-18	12:44	2005-03-19
57771	MW-9	water	2005-03-18	13:40	2005-03-19

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 5 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical Report

Sample: 57767 - MW-2

Analysis: BTEX by 8260
QC Batch: 16878
Prep Batch: 14881

Analytical Method: S 8260B
Date Analyzed: 2005-03-24
Sample Preparation: 2005-03-24

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.0	µg/L	1	50.0	96	70 - 130
Toluene-d8		49.6	µg/L	1	50.0	99	70 - 130
4-Bromofluorobenzene (4-BFB)		50.2	µg/L	1	50.0	100	70 - 130

Sample: 57768 - MW-10

Analysis: BTEX by 8260
QC Batch: 16878
Prep Batch: 14881

Analytical Method: S 8260B
Date Analyzed: 2005-03-24
Sample Preparation: 2005-03-24

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.7	µg/L	1	50.0	95	70 - 130
Toluene-d8		50.1	µg/L	1	50.0	100	70 - 130
4-Bromofluorobenzene (4-BFB)		49.6	µg/L	1	50.0	99	70 - 130

Sample: 57769 - MW-7

Analysis: BTEX by 8260
QC Batch: 16878
Prep Batch: 14881

Analytical Method: S 8260B
Date Analyzed: 2005-03-24
Sample Preparation: 2005-03-24

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<1.00	µg/L	1	1.00
Toluene		<1.00	µg/L	1	1.00
Ethylbenzene		<1.00	µg/L	1	1.00

continued ...

sample 57769 continued...

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.6	µg/L	1	50.0	95	70 - 130
Toluene-d8		49.7	µg/L	1	50.0	99	70 - 130
4-Bromofluorobenzene (4-BFB)		49.5	µg/L	1	50.0	99	70 - 130

Sample: 57770 - MW-8

Analysis: BTEX by 8260
QC Batch: 16878
Prep Batch: 14881

Analytical Method: S 8260B
Date Analyzed: 2005-03-24
Sample Preparation: 2005-03-24

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.1	µg/L	1	50.0	96	70 - 130
Toluene-d8		50.0	µg/L	1	50.0	100	70 - 130
4-Bromofluorobenzene (4-BFB)		51.4	µg/L	1	50.0	103	70 - 130

Sample: 57771 - MW-9

Analysis: BTEX by 8260
QC Batch: 16878
Prep Batch: 14881

Analytical Method: S 8260B
Date Analyzed: 2005-03-24
Sample Preparation: 2005-03-24

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.3	µg/L	1	50.0	95	70 - 130
Toluene-d8		49.4	µg/L	1	50.0	99	70 - 130
4-Bromofluorobenzene (4-BFB)		51.2	µg/L	1	50.0	102	70 - 130

Method Blank (1) QC Batch: 16878

Parameter	Flag	MDL Result	Units	RL
1,1-Dichloroethene		<0.136	µg/L	1
Benzene		<0.146	µg/L	1
Trichloroethene (TCE)		0.210	µg/L	1
Toluene		0.280	µg/L	1
Chlorobenzene		<0.0540	µg/L	1
Ethylbenzene		<0.0360	µg/L	1
m,p-Xylene		<0.0940	µg/L	1
o-Xylene		<0.0960	µg/L	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.5	µg/L	1	50.0	95	70 - 130
Toluene-d8		49.6	µg/L	1	50.0	99	70 - 130
4-Bromofluorobenzene (4-BFB)		49.4	µg/L	1	50.0	99	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 16878

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
1,1-Dichloroethene	87.4	85.4	µg/L	1	100	<0.136	87	2	70 - 130	20
Benzene	103	102	µg/L	1	100	<0.146	103	1	70 - 130	20
Trichloroethene (TCE)	98.7	98.7	µg/L	1	100	<0.117	99	0	70 - 130	20
Toluene	101	100	µg/L	1	100	<0.0600	101	1	70 - 130	20
Chlorobenzene	105	104	µg/L	1	100	<0.0540	105	1	70 - 130	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	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	47.0	46.9	µg/L	1	50.0	94	94	70 - 130
Toluene-d8	50.0	49.7	µg/L	1	50.0	100	99	70 - 130
4-Bromofluorobenzene (4-BFB)	49.9	49.9	µg/L	1	50.0	100	100	70 - 130

Standard (CCV-1) QC Batch: 16878

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	44.7	89	80 - 120	2005-03-24
1,1-Dichloroethene		µg/L	50.0	44.8	90	80 - 120	2005-03-24
Chloroform		µg/L	50.0	46.5	93	80 - 120	2005-03-24
1,2-Dichloropropane		µg/L	50.0	49.2	98	80 - 120	2005-03-24
Toluene		µg/L	50.0	48.7	97	80 - 120	2005-03-24
Chlorobenzene		µg/L	50.0	50.8	102	80 - 120	2005-03-24
Ethylbenzene		µg/L	50.0	50.9	102	80 - 120	2005-03-24

APPENDIX II

TRACE ANALYSIS, INC.

Laboratory Results

2nd Quarter 2005

**Westgate Subdivision
Grimes Battery & Tasker Road**

July 2006

**Shell Exploration & Production Company
Houston, Texas**

**Prepared by:
BBC International, Inc.**

Summary Report

Cliff Brunson
BBC International
1324 W. Marland
Hobbs, NM 88240

Report Date: June 27, 2005

Work Order: 5061718

Project Location: Hobbs, NM
Project Name: Shell Westgate

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
65651	MW-2	water	2005-06-16	12:48	2005-06-17
65652	MW-10	water	2005-06-16	13:25	2005-06-17
65653	MW-7	water	2005-06-16	14:00	2005-06-17
65654	MW-8	water	2005-06-16	14:30	2005-06-17

Sample - Field Code	BTEX by 8260					MTBE by 8260
	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	m,p-Xylene (µg/L)	o-Xylene (µg/L)	MTBE (µg/L)
65651 - MW-2	<1.00	<1.00	<1.00	<1.00	<1.00	
65652 - MW-10	<1.00	<1.00	<1.00	<1.00	<1.00	
65653 - MW-7	<1.00	<1.00	<1.00	<1.00	<1.00	
65654 - MW-8	<1.00	<1.00	<1.00	<1.00	<1.00	

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
155 McCutcheon, Suite H

Lubbock, Texas 79424
El Paso, Texas 79932

800•378•1296
888•588•3443
E-Mail: lab@traceanalysis.com

806•794•1296
915•585•3443

FAX 806•794•1298
FAX 915•585•4944

Analytical and Quality Control Report

Cliff Brunson
BBC International
1324 W. Marland
Hobbs, NM 88240

Report Date: June 27, 2005

Work Order: 5061718

Project Location: Hobbs, NM
Project Name: Shell Westgate
Project Number: Shell Westgate

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
65651	MW-2	water	2005-06-16	12:48	2005-06-17
65652	MW-10	water	2005-06-16	13:25	2005-06-17
65653	MW-7	water	2005-06-16	14:00	2005-06-17
65654	MW-8	water	2005-06-16	14:30	2005-06-17

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 5 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical Report

Sample: 65651 - MW-2

Analysis: BTEX by 8260
QC Batch: 19169
Prep Batch: 16845

Analytical Method: S 8260B
Date Analyzed: 2005-06-23
Sample Preparation: 2005-06-23

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.2	µg/L	1	50.0	94	70 - 130
Toluene-d8		50.3	µg/L	1	50.0	101	70 - 130
4-Bromofluorobenzene (4-BFB)		50.4	µg/L	1	50.0	101	70 - 130

Sample: 65652 - MW-10

Analysis: BTEX by 8260
QC Batch: 19169
Prep Batch: 16845

Analytical Method: S 8260B
Date Analyzed: 2005-06-23
Sample Preparation: 2005-06-23

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.6	µg/L	1	50.0	105	70 - 130
Toluene-d8		50.1	µg/L	1	50.0	100	70 - 130
4-Bromofluorobenzene (4-BFB)		50.1	µg/L	1	50.0	100	70 - 130

Sample: 65653 - MW-7

Analysis: BTEX by 8260
QC Batch: 19169
Prep Batch: 16845

Analytical Method: S 8260B
Date Analyzed: 2005-06-23
Sample Preparation: 2005-06-23

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<1.00	µg/L	1	1.00

continued ...

sample 65653 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Toluene		<1.00	µg/L	1	1.00
Ethylbenzene		<1.00	µg/L	1	1.00
m,p-Xylene		<1.00	µg/L	1	1.00
o-Xylene		<1.00	µg/L	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.6	µg/L	1	50.0	101	70 - 130
Toluene-d8		49.8	µg/L	1	50.0	100	70 - 130
4-Bromofluorobenzene (4-BFB)		48.9	µg/L	1	50.0	98	70 - 130

Sample: 65654 - MW-8

Analysis: BTEX by 8260
QC Batch: 19169
Prep Batch: 16845

Analytical Method: S 8260B
Date Analyzed: 2005-06-23
Sample Preparation: 2005-06-23

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.1	µg/L	1	50.0	100	70 - 130
Toluene-d8		50.2	µg/L	1	50.0	100	70 - 130
4-Bromofluorobenzene (4-BFB)		49.6	µg/L	1	50.0	99	70 - 130

Method Blank (1) QC Batch: 19169

Parameter	Flag	MDL Result	Units	RL
1,1-Dichloroethene		<0.136	µg/L	1
Benzene		<0.146	µg/L	1
Trichloroethene (TCE)		<0.117	µg/L	1
Toluene		<0.0600	µg/L	1
Chlorobenzene		<0.0540	µg/L	1
Ethylbenzene		<0.0360	µg/L	1
m,p-Xylene		<0.0940	µg/L	1
o-Xylene		<0.0960	µg/L	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.8	µg/L	1	50.0	100	70 - 130

continued ...

method blank continued ...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Toluene-d8		50.4	µg/L	1	50.0	101	70 - 130
4-Bromofluorobenzene (4-BFB)		49.0	µg/L	1	50.0	98	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 19169

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
1,1-Dichloroethene	41.8	45.1	µg/L	1	50.0	<0.136	84	8	70 - 130	20
Benzene	49.2	49.8	µg/L	1	50.0	<0.146	98	1	70 - 130	20
Trichloroethene (TCE)	46.9	47.9	µg/L	1	50.0	<0.117	94	2	70 - 130	20
Toluene	49.9	50.5	µg/L	1	50.0	<0.0600	100	1	70 - 130	20
Chlorobenzene	46.3	46.4	µg/L	1	50.0	<0.0540	93	0	70 - 130	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	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	50.5	50.8	µg/L	1	50.0	101	102	70 - 130
Toluene-d8	50.4	50.3	µg/L	1	50.0	101	101	70 - 130
4-Bromofluorobenzene (4-BFB)	49.6	49.7	µg/L	1	50.0	99	99	70 - 130

Standard (CCV-1) QC Batch: 19169

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	53.0	106	80 - 120	2005-06-23
1,1-Dichloroethene		µg/L	50.0	53.2	106	80 - 120	2005-06-23
Chloroform		µg/L	50.0	51.9	104	80 - 120	2005-06-23
1,2-Dichloropropane		µg/L	50.0	52.2	104	80 - 120	2005-06-23
Toluene		µg/L	50.0	51.8	104	80 - 120	2005-06-23
Chlorobenzene		µg/L	50.0	47.7	95	80 - 120	2005-06-23
Ethylbenzene		µg/L	50.0	50.7	101	80 - 120	2005-06-23

Page 1 of 1

TraceAnalysis, Inc. 6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424 Tel (806) 794-1236 Fax (806) 794-1238 1 (800) 378-1236 email: lab@traceanalysis.com		155 McCutcheon, Suite H El Paso, Texas 79932 Tel (915) 385-3443 Fax (915) 385-4944 1 (888) 588-3443		CHAIN-OF-CUSTODY AND ANALYSIS REQUEST LAB Order ID # <u>5041718</u>																																					
Company Name: <u>BBC INTERNATIONAL</u> Phone #: <u>(505) 397 6588</u> Address: <u>1324 W. MARLAND, HOBBS NM 88201</u> Fax #: <u>(505) 397 0397</u> Contact Person: <u>CLIFF BRUNSON</u>		ANALYSIS REQUEST (Circle or Specify Method No.) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>MTBE 8021B/602</td> <td></td> </tr> <tr> <td>BTEX 8021B/602</td> <td></td> </tr> <tr> <td>TPH 418 1/TX1005</td> <td></td> </tr> <tr> <td>TX 1005 Extended (C35)</td> <td></td> </tr> <tr> <td>PAH 8270C</td> <td></td> </tr> <tr> <td>Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/2007</td> <td></td> </tr> <tr> <td>TCLP Metals Ag As Ba Cd Cr Pb Se Hg</td> <td></td> </tr> <tr> <td>TCLP Volatiles</td> <td></td> </tr> <tr> <td>TCLP Semi Volatiles</td> <td></td> </tr> <tr> <td>TCLP Pesticides</td> <td></td> </tr> <tr> <td>RCI</td> <td></td> </tr> <tr> <td>GC/MS Vol 8260B <u>BTEX</u></td> <td></td> </tr> <tr> <td>GC/MS Semi Vol 8270C/625</td> <td></td> </tr> <tr> <td>PCB's 8082/608</td> <td></td> </tr> <tr> <td>Pesticides 8081A/608</td> <td></td> </tr> <tr> <td>BOD TSS pH</td> <td></td> </tr> <tr> <td>Moisture Content</td> <td></td> </tr> <tr> <td>Turn Around Time if different from standard</td> <td></td> </tr> </table>				MTBE 8021B/602		BTEX 8021B/602		TPH 418 1/TX1005		TX 1005 Extended (C35)		PAH 8270C		Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/2007		TCLP Metals Ag As Ba Cd Cr Pb Se Hg		TCLP Volatiles		TCLP Semi Volatiles		TCLP Pesticides		RCI		GC/MS Vol 8260B <u>BTEX</u>		GC/MS Semi Vol 8270C/625		PCB's 8082/608		Pesticides 8081A/608		BOD TSS pH		Moisture Content		Turn Around Time if different from standard	
MTBE 8021B/602																																									
BTEX 8021B/602																																									
TPH 418 1/TX1005																																									
TX 1005 Extended (C35)																																									
PAH 8270C																																									
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/2007																																									
TCLP Metals Ag As Ba Cd Cr Pb Se Hg																																									
TCLP Volatiles																																									
TCLP Semi Volatiles																																									
TCLP Pesticides																																									
RCI																																									
GC/MS Vol 8260B <u>BTEX</u>																																									
GC/MS Semi Vol 8270C/625																																									
PCB's 8082/608																																									
Pesticides 8081A/608																																									
BOD TSS pH																																									
Moisture Content																																									
Turn Around Time if different from standard																																									
Project Name: <u>WESTGATE</u> Project Location: <u>HOBBS New Mexico</u> Sampler Signature: <u>[Signature]</u>		LAB USE ONLY Intact <u>Y</u> <u>N</u> Headspace <u>Y</u> <u>N</u> Temp <u>5</u> Log-in Review <u>[Signature]</u> Carner # <u>611</u> <u>168 341 816 0</u>																																							
Project #: _____ Invoice to: _____ (if different from above)		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							
Project Location: <u>HOBBS New Mexico</u>		LAB USE ONLY																																							
Project Name: <u>WESTGATE</u>		REMARKS:																																							

APPENDIX III

TRACE ANALYSIS, INC.
Laboratory Results
3rd Quarter 2005

Westgate Subdivision
Grimes Battery & Tasker Road

July 2006

Shell Exploration & Production Company
Houston, Texas

Prepared by:
BBC International, Inc.

Summary Report

Cliff Brunson
BBC International
1324 W. Marland
Hobbs, NM 88240

Report Date: October 3, 2005

Work Order: 5092208

Project Location: Hobbs, New Mexico

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
73975	MW-2	water	2005-09-21	13:30	2005-09-22
73976	MW-7	water	2005-09-21	14:31	2005-09-22
73977	MW-8	water	2005-09-21	15:15	2005-09-22
73978	MW-10	water	2005-09-21	14:15	2005-09-22

Sample - Field Code	BTEX by 8260					MTBE by 8260
	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethylbenzene ($\mu\text{g/L}$)	m,p-Xylene ($\mu\text{g/L}$)	o-Xylene ($\mu\text{g/L}$)	MTBE ($\mu\text{g/L}$)
73975 - MW-2	<5.00	<5.00	<5.00	<5.00	<5.00	
73976 - MW-7	<1.00	<1.00	<1.00	<1.00	<1.00	
73977 - MW-8	<1.00	<1.00	<1.00	<1.00	<1.00	
73978 - MW-10	<1.00	<1.00	<1.00	<1.00	<1.00	

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
155 McCutcheon, Suite H

Lubbock, Texas 79424
El Paso, Texas 79932

800•378•1296
888•588•3443

806•794•1296
915•585•3443

FAX 806•794•1298
FAX 915•585•4944

E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Cliff Brunson
BBC International
1324 W. Marland
Hobbs, NM 88240

Report Date: October 3, 2005

Work Order: 5092208

Project Location: Hobbs, New Mexico
Project Number: Hobbs, New Mexico

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
73975	MW-2	water	2005-09-21	13:30	2005-09-22
73976	MW-7	water	2005-09-21	14:31	2005-09-22
73977	MW-8	water	2005-09-21	15:15	2005-09-22
73978	MW-10	water	2005-09-21	14:15	2005-09-22

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 5 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical Report

Sample: 73975 - MW-2

Analysis: BTEX by 8260
QC Batch: 21700
Prep Batch: 19041

Analytical Method: S 8260B
Date Analyzed: 2005-10-01
Sample Preparation: 2005-10-01

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<5.00	µg/L	5	1.00
Toluene		<5.00	µg/L	5	1.00
Ethylbenzene		<5.00	µg/L	5	1.00
m,p-Xylene		<5.00	µg/L	5	1.00
o-Xylene		<5.00	µg/L	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.7	µg/L	1	50.0	101	70 - 130
Toluene-d8		49.0	µg/L	1	50.0	98	70 - 130
4-Bromofluorobenzene (4-BFB)		53.2	µg/L	1	50.0	106	70 - 130

Sample: 73976 - MW-7

Analysis: BTEX by 8260
QC Batch: 21700
Prep Batch: 19041

Analytical Method: S 8260B
Date Analyzed: 2005-10-01
Sample Preparation: 2005-10-01

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.8	µg/L	1	50.0	104	70 - 130
Toluene-d8		49.3	µg/L	1	50.0	99	70 - 130
4-Bromofluorobenzene (4-BFB)		53.2	µg/L	1	50.0	106	70 - 130

Sample: 73977 - MW-8

Analysis: BTEX by 8260
QC Batch: 21700
Prep Batch: 19041

Analytical Method: S 8260B
Date Analyzed: 2005-10-01
Sample Preparation: 2005-10-01

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<1.00	µg/L	1	1.00

continued ...

sample 73977 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Toluene		<1.00	µg/L	1	1.00
Ethylbenzene		<1.00	µg/L	1	1.00
m,p-Xylene		<1.00	µg/L	1	1.00
o-Xylene		<1.00	µg/L	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.3	µg/L	1	50.0	105	70 - 130
Toluene-d8		48.8	µg/L	1	50.0	98	70 - 130
4-Bromofluorobenzene (4-BFB)		51.8	µg/L	1	50.0	104	70 - 130

Sample: 73978 - MW-10

Analysis: BTEX by 8260
QC Batch: 21700
Prep Batch: 19041

Analytical Method: S 8260B
Date Analyzed: 2005-10-01
Sample Preparation: 2005-10-01

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.5	µg/L	1	50.0	107	70 - 130
Toluene-d8		48.8	µg/L	1	50.0	98	70 - 130
4-Bromofluorobenzene (4-BFB)		53.2	µg/L	1	50.0	106	70 - 130

Method Blank (1) QC Batch: 21700

Parameter	Flag	MDL Result	Units	RL
1,1-Dichloroethene		<0.136	µg/L	1
Benzene		<0.146	µg/L	1
Trichloroethene (TCE)		<0.117	µg/L	1
Toluene		0.150	µg/L	1
Chlorobenzene		<0.0540	µg/L	1
Ethylbenzene		0.0700	µg/L	1
m,p-Xylene		0.160	µg/L	1
o-Xylene		<0.0960	µg/L	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.1	µg/L	1	50.0	108	70 - 130

continued ...

method blank continued...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Toluene-d8		49.5	µg/L	1	50.0	99	70 - 130
4-Bromofluorobenzene (4-BFB)		55.2	µg/L	1	50.0	110	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 21700

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
1,1-Dichloroethene	46.1	45.5	µg/L	1	50.0	<0.136	92	1	70 - 130	20
Benzene	50.6	50.0	µg/L	1	50.0	<0.146	101	1	70 - 130	20
Trichloroethene (TCE)	51.6	52.2	µg/L	1	50.0	<0.117	103	1	70 - 130	20
Toluene	50.5	50.6	µg/L	1	50.0	<0.0600	101	0	70 - 130	20
Chlorobenzene	44.5	44.3	µg/L	1	50.0	<0.0540	89	0	70 - 130	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	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	54.0	53.1	µg/L	1	50.0	108	106	70 - 130
Toluene-d8	49.2	49.1	µg/L	1	50.0	98	98	70 - 130
4-Bromofluorobenzene (4-BFB)	57.1	56.8	µg/L	1	50.0	114	114	70 - 130

Standard (CCV-1) QC Batch: 21700

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	53.3	107	80 - 120	2005-10-01
1,1-Dichloroethene		µg/L	50.0	45.8	92	80 - 120	2005-10-01
Chloroform		µg/L	50.0	56.1	112	80 - 120	2005-10-01
1,2-Dichloropropane		µg/L	50.0	49.1	98	80 - 120	2005-10-01
Toluene		µg/L	50.0	50.1	100	80 - 120	2005-10-01
Chlorobenzene		µg/L	50.0	43.7	87	80 - 120	2005-10-01
Ethylbenzene		µg/L	50.0	52.6	105	80 - 120	2005-10-01

Page 1 of 1

TraceAnalysis, Inc. 6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424 Tel (806) 794-1296 Fax (806) 794-1298 1 (800) 378-1296 email: lab@traceanalysis.com		155 McCutcheon Suite H El Paso, Texas 79932 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443						
Company Name: <u>BBC International</u> Phone #: <u>505-397-6388</u> Address: <u>1324 W. Marland</u> (Street, City, Zip) Contact Person: <u>Cliff Brunsom</u> Fax #: <u>505-397-0397</u> e-mail:		Project Name: <u>Shell E.P.Co. WestGate Attn: Wayne Hamilton</u> Project #: <u> </u> Project Location: <u>Hobbs, NM</u> Sampler Signature: <u>[Signature]</u>						
LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	VOLUME/AMOUNT	MATRIX WATER SOIL AIR SLUDGE	PRESERVATIVE METHOD HCl HNO ₃ H ₂ SO ₄ NaOH ICE NONE	SAMPLING DATE TIME	ANALYSIS REQUEST (Circle or Specify Method No.)	CHAIN-OF-CUSTODY AND ANALYSIS REQUEST LAB Order ID #: <u>5092208</u>
73975	WW # 2	2	VDA	✓		9/21/05 7:30 am	☒ GC/MS Vol. 8260B/595 ☒ GC/MS Semi. Vol. 8270C/625 ☐ PCB's 8082/608 ☐ Pesticides 8081A/608 ☐ BOD, TSS, pH ☐ Moisture Content ☐ Turn Around Time if different from standard	REMARKS: ☐ Intact ☐ Headspace ☐ Temp ☐ Log-in Review ☐ Dry Weight Basis Required ☐ TRRP Report Required ☐ Check if Special Reporting Limits Are Needed
976	WW # 7	2	VDA	✓		9/21/05 12:30 pm		
7400	WW # 8	2	VDA	✓		9/21/05 3:15 pm		
7400	WW # 10	2	VDA	✓		9/21/05 2:15 pm		
Relinquished by: <u>[Signature]</u> Date: <u>9/21/05</u> Time: <u>4:35 pm</u> Relinquished by: <u> </u> Date: <u> </u> Time: <u> </u>		Received by: <u> </u> Date: <u> </u> Time: <u> </u> Received by: <u> </u> Date: <u> </u> Time: <u> </u>		Relinquished by: <u> </u> Date: <u> </u> Time: <u> </u> Relinquished by: <u> </u> Date: <u> </u> Time: <u> </u>		Received by: <u> </u> Date: <u> </u> Time: <u> </u> Received by: <u> </u> Date: <u> </u> Time: <u> </u>		Carrier # <u>BUS 168 341 8616</u>
Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.								

ORIGINAL COPY

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296
email: lab@traceanalysis.com

TraceAnalysis, Inc.

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

Company Name: BBC International Phone #: 505-397-6388
Address: 1324 W. Marland Fax #: 505-397-0397
Contact Person: Cliff Brunson e-mail:

Invoice to: Shell E.P.Co. West Gate Attn: Wayne Hamilton
(if different from above)
Project #: _____ Project Name: _____

Project Location: Hobbs, NM
Sampler Signature: [Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME
73975	MW # 2	2	VDA ✓	✓				✓						9/21/05 1:35 p	
976	MW # 7	2	VDA ✓	✓				✓						9/21/05 2:15 p	
76	MW # 8	2	VDA ✓	✓				✓						9/21/05 3:15 p	
78	MW # 10	2	VDA ✓	✓				✓						9/21/05 2:15	

Relinquished by: [Signature] Date: 9/21/05 Time: 4:35 pm
Relinquished by: _____ Date: _____ Time: _____
Received by: _____ Date: _____ Time: _____
Received by: _____ Date: _____ Time: _____
Received at Laboratory by: Megan Melend Date: 9/22/05 Time: 1030

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

ORIGINAL COPY

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 5092208

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	
BTEX 8021B/602	
TPH 418, 1/TPH1005	
TX 1005 Extended (C35)	
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/625	✓
GC/MS Semi. Vol. 8270C/625	✓
PCBs 8082/608	✓
Pesticides 8081A/608	✓
BOD, TSS, pH	
Moisture Content	
Turn Around Time if different from standard	

REMARKS:

LAB USE ONLY

Intact Y N
Headspace Y N
Temp 48°
Log-in Review 48
☐ Dry Weight Basis Required
☐ TRRP Report Required
☐ Check if Special Reporting Limits Are Needed

Carrier # BUS 1683418616 10/464

APPENDIX IV

TRACE ANALYSIS, INC.

Laboratory Results

4th Quarter 2005

**Westgate Subdivision
Grimes Battery & Tasker Road**

July 2006

**Shell Exploration & Production Company
Houston, Texas**

**Prepared by:
BBC International, Inc.**

Summary Report

Cliff Brunson
BBC International
1324 W. Marland
Hobbs, NM 88240

Report Date: December 20, 2005

Work Order: 5121408

Project Location: Hobbs, NM
Project Number: Westgate

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
79912	MW-2	water	2005-12-12	13:00	2005-12-14
79913	MW-10	water	2005-12-12	13:48	2005-12-14
79914	MW-4	water	2005-12-12	14:21	2005-12-14
79915	MW-7	water	2005-12-12	14:51	2005-12-14
79916	MW-8	water	2005-12-12	15:25	2005-12-14
79917	MW-6	water	2005-12-12	16:00	2005-12-14
79918	MW-11	water	2005-12-12	16:44	2005-12-14

Sample - Field Code	BTEX by 8260					MTBE by 8260
	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethylbenzene ($\mu\text{g/L}$)	m,p-Xylene ($\mu\text{g/L}$)	o-Xylene ($\mu\text{g/L}$)	MTBE ($\mu\text{g/L}$)
79912 - MW-2	<1.00	<1.00	<1.00	<1.00	<1.00	
79913 - MW-10	<1.00	<1.00	<1.00	<1.00	<1.00	
79914 - MW-4	<1.00	<1.00	<1.00	<1.00	<1.00	
79915 - MW-7	<1.00	<1.00	<1.00	<1.00	<1.00	
79916 - MW-8	<1.00	<1.00	<1.00	<1.00	<1.00	
79917 - MW-6	<1.00	<1.00	<1.00	<1.00	<1.00	
79918 - MW-11	<1.00	<1.00	<1.00	<1.00	<1.00	

Sample: 79912 - MW-2

Param	Flag	Result	Units	RL
Naphthalene		<0.000200	mg/L	0.000200
Acenaphthylene		<0.000200	mg/L	0.000200
Acenaphthene		<0.000200	mg/L	0.000200
Dibenzofuran		<0.000200	mg/L	0.000200
Fluorene		<0.000200	mg/L	0.000200
Phenanthrene		<0.000200	mg/L	0.000200
Anthracene		<0.000200	mg/L	0.000200
Fluoranthene		<0.000200	mg/L	0.000200
Pyrene		<0.000200	mg/L	0.000200
Benzo(a)anthracene		<0.000200	mg/L	0.000200
Chrysene		<0.000200	mg/L	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	0.000200
Benzo(k)fluoranthene		<0.000400	mg/L	0.000400
Benzo(a)pyrene		<0.000200	mg/L	0.000200

continued ...

sample 79912 continued ...

Param	Flag	Result	Units	RL
Indeno(1,2,3-cd)pyrene		<0.000400	mg/L	0.000400
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.000200

Sample: 79913 - MW-10

Param	Flag	Result	Units	RL
Naphthalene		<0.000200	mg/L	0.000200
Acenaphthylene		<0.000200	mg/L	0.000200
Acenaphthene		<0.000200	mg/L	0.000200
Dibenzofuran		<0.000200	mg/L	0.000200
Fluorene		<0.000200	mg/L	0.000200
Phenanthrene		<0.000200	mg/L	0.000200
Anthracene		<0.000200	mg/L	0.000200
Fluoranthene		<0.000200	mg/L	0.000200
Pyrene		<0.000200	mg/L	0.000200
Benzo(a)anthracene		<0.000200	mg/L	0.000200
Chrysene		<0.000200	mg/L	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	0.000200
Benzo(k)fluoranthene		<0.000400	mg/L	0.000400
Benzo(a)pyrene		<0.000200	mg/L	0.000200
Indeno(1,2,3-cd)pyrene		<0.000400	mg/L	0.000400
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.000200

Sample: 79915 - MW-7

Param	Flag	Result	Units	RL
Naphthalene		<0.000200	mg/L	0.000200
Acenaphthylene		<0.000200	mg/L	0.000200
Acenaphthene		<0.000200	mg/L	0.000200
Dibenzofuran		<0.000200	mg/L	0.000200
Fluorene		<0.000200	mg/L	0.000200
Phenanthrene		<0.000200	mg/L	0.000200
Anthracene		<0.000200	mg/L	0.000200
Fluoranthene		<0.000200	mg/L	0.000200
Pyrene		<0.000200	mg/L	0.000200
Benzo(a)anthracene		<0.000200	mg/L	0.000200
Chrysene		<0.000200	mg/L	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	0.000200
Benzo(k)fluoranthene		<0.000400	mg/L	0.000400
Benzo(a)pyrene		<0.000200	mg/L	0.000200
Indeno(1,2,3-cd)pyrene		<0.000400	mg/L	0.000400
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.000200

Sample: 79916 - MW-8

Param	Flag	Result	Units	RL
Naphthalene		<0.000200	mg/L	0.000200
Acenaphthylene		<0.000200	mg/L	0.000200
Acenaphthene		<0.000200	mg/L	0.000200
Dibenzofuran		<0.000200	mg/L	0.000200
Fluorene		<0.000200	mg/L	0.000200
Phenanthrene		<0.000200	mg/L	0.000200
Anthracene		<0.000200	mg/L	0.000200
Fluoranthene		<0.000200	mg/L	0.000200
Pyrene		<0.000200	mg/L	0.000200
Benzo(a)anthracene		<0.000200	mg/L	0.000200
Chrysene		<0.000200	mg/L	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	0.000200
Benzo(k)fluoranthene		<0.000400	mg/L	0.000400
Benzo(a)pyrene		<0.000200	mg/L	0.000200
Indeno(1,2,3-cd)pyrene		<0.000400	mg/L	0.000400
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.000200

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
155 McCutcheon, Suite H

Lubbock, Texas 79424
El Paso, Texas 79932

800•378•1296
888•588•3443
E-Mail: lab@traceanalysis.com

806•794•1296
915•585•3443

FAX 806•794•1298
FAX 915•585•4944

Analytical and Quality Control Report

Cliff Brunson
BBC International
1324 W. Marland
Hobbs, NM 88240

Report Date: December 20, 2005

Work Order: 5121408

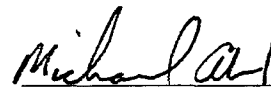
Project Location: Hobbs, NM
Project Number: Westgate

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
79912	MW-2	water	2005-12-12	13:00	2005-12-14
79913	MW-10	water	2005-12-12	13:48	2005-12-14
79914	MW-4	water	2005-12-12	14:21	2005-12-14
79915	MW-7	water	2005-12-12	14:51	2005-12-14
79916	MW-8	water	2005-12-12	15:25	2005-12-14
79917	MW-6	water	2005-12-12	16:00	2005-12-14
79918	MW-11	water	2005-12-12	16:44	2005-12-14

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 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Analytical Report

Sample: 79912 - MW-2

Analysis: BTEX by 8260
QC Batch: 23415
Prep Batch: 20543

Analytical Method: S 8260B
Date Analyzed: 2005-12-14
Sample Preparation: 2005-12-14

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.1	µg/L	1	50.0	96	70 - 130
Toluene-d8		50.5	µg/L	1	50.0	101	70 - 130
4-Bromofluorobenzene (4-BFB)		47.5	µg/L	1	50.0	95	70 - 130

Sample: 79912 - MW-2

Analysis: PAH
QC Batch: 23498
Prep Batch: 20581

Analytical Method: S 8270C
Date Analyzed: 2005-12-19
Sample Preparation: 2005-12-16

Prep Method: S 3510C
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000400	mg/L	1	0.000400
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000400	mg/L	1	0.000400
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0106	mg/L	1	0.0800	13	10 - 129

continued...

sample continued...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorobiphenyl	1	0.0112	mg/L	1	0.0800	14	16 - 108
Terphenyl-d14	2	0.0184	mg/L	1	0.0800	23	37 - 116

Sample: 79913 - MW-10

Analysis: BTEX by 8260
QC Batch: 23415
Prep Batch: 20543

Analytical Method: S 8260B
Date Analyzed: 2005-12-14
Sample Preparation: 2005-12-14

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.9	µg/L	1	50.0	98	70 - 130
Toluene-d8		50.4	µg/L	1	50.0	101	70 - 130
4-Bromofluorobenzene (4-BFB)		46.8	µg/L	1	50.0	94	70 - 130

Sample: 79913 - MW-10

Analysis: PAH
QC Batch: 23498
Prep Batch: 20581

Analytical Method: S 8270C
Date Analyzed: 2005-12-19
Sample Preparation: 2005-12-16

Prep Method: S 3510C
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000400	mg/L	1	0.000400
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000400	mg/L	1	0.000400
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

¹ Surrogate out due to peak interference.

² Surrogate out due to peak interference.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.00811	mg/L	1	0.0800	10	10 - 129
2-Fluorobiphenyl	³	0.00808	mg/L	1	0.0800	10	16 - 108
Terphenyl-d14		0.0499	mg/L	1	0.0800	62	37 - 116

Sample: 79914 - MW-4

Analysis: BTEX by 8260
QC Batch: 23415
Prep Batch: 20543

Analytical Method: S 8260B
Date Analyzed: 2005-12-14
Sample Preparation: 2005-12-14

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.0	µg/L	1	50.0	98	70 - 130
Toluene-d8		50.5	µg/L	1	50.0	101	70 - 130
4-Bromofluorobenzene (4-BFB)		46.0	µg/L	1	50.0	92	70 - 130

Sample: 79915 - MW-7

Analysis: BTEX by 8260
QC Batch: 23415
Prep Batch: 20543

Analytical Method: S 8260B
Date Analyzed: 2005-12-14
Sample Preparation: 2005-12-14

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.0	µg/L	1	50.0	98	70 - 130
Toluene-d8		50.7	µg/L	1	50.0	101	70 - 130
4-Bromofluorobenzene (4-BFB)		46.7	µg/L	1	50.0	93	70 - 130

Sample: 79915 - MW-7

Analysis: PAH
QC Batch: 23498
Prep Batch: 20581

Analytical Method: S 8270C
Date Analyzed: 2005-12-19
Sample Preparation: 2005-12-16

Prep Method: S 3510C
Analyzed By: AG
Prepared By: AG

³Surrogate out due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000400	mg/L	1	0.000400
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000400	mg/L	1	0.000400
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0228	mg/L	1	0.0800	28	10 - 129
2-Fluorobiphenyl		0.0239	mg/L	1	0.0800	30	16 - 108
Terphenyl-d14	4	0.0284	mg/L	1	0.0800	36	37 - 116

Sample: 79916 - MW-8

Analysis: BTEX by 8260
QC Batch: 23415
Prep Batch: 20543

Analytical Method: S 8260B
Date Analyzed: 2005-12-14
Sample Preparation: 2005-12-14

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.4	µg/L	1	50.0	99	70 - 130
Toluene-d8		50.9	µg/L	1	50.0	102	70 - 130
4-Bromofluorobenzene (4-BFB)		46.0	µg/L	1	50.0	92	70 - 130

Sample: 79916 - MW-8

Analysis: PAH
QC Batch: 23498
Prep Batch: 20581

Analytical Method: S 8270C
Date Analyzed: 2005-12-19
Sample Preparation: 2005-12-16

Prep Method: S 3510C
Analyzed By: AG
Prepared By: AG

⁴Surrogate out due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000400	mg/L	1	0.000400
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000400	mg/L	1	0.000400
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	5	0.00401	mg/L	1	0.0800	5	10 - 129
2-Fluorobiphenyl	6	0.00636	mg/L	1	0.0800	8	16 - 108
Terphenyl-d14		0.0853	mg/L	1	0.0800	107	37 - 116

Sample: 79917 - MW-6

Analysis: BTEX by 8260
QC Batch: 23415
Prep Batch: 20543

Analytical Method: S 8260B
Date Analyzed: 2005-12-14
Sample Preparation: 2005-12-14

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.7	µg/L	1	50.0	99	70 - 130
Toluene-d8		51.2	µg/L	1	50.0	102	70 - 130
4-Bromofluorobenzene (4-BFB)		46.0	µg/L	1	50.0	92	70 - 130

Sample: 79918 - MW-11

Analysis: BTEX by 8260
QC Batch: 23415
Prep Batch: 20543

Analytical Method: S 8260B
Date Analyzed: 2005-12-14
Sample Preparation: 2005-12-14

Prep Method: S 5030B
Analyzed By: JG
Prepared By: JG

⁵Surrogate out due to peak interference.

⁶Surrogate out due to peak interference.

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.8	µg/L	1	50.0	100	70 - 130
Toluene-d8		50.9	µg/L	1	50.0	102	70 - 130
4-Bromofluorobenzene (4-BFB)		46.3	µg/L	1	50.0	93	70 - 130

Method Blank (1) QC Batch: 23415

Parameter	Flag	MDL Result	Units	RL
1,1-Dichloroethene		<0.136	µg/L	1
Benzene		<0.146	µg/L	1
Trichloroethene (TCE)		<0.117	µg/L	1
Toluene		0.0900	µg/L	1
Chlorobenzene		<0.0540	µg/L	1
Ethylbenzene		<0.0360	µg/L	1
m,p-Xylene		0.110	µg/L	1
o-Xylene		<0.0960	µg/L	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.8	µg/L	1	50.0	98	70 - 130
Toluene-d8		50.1	µg/L	1	50.0	100	70 - 130
4-Bromofluorobenzene (4-BFB)		46.7	µg/L	1	50.0	93	70 - 130

Method Blank (1) QC Batch: 23498

Parameter	Flag	MDL Result	Units	RL
Naphthalene		<0.0000853	mg/L	0.0002
Acenaphthylene		<0.0000768	mg/L	0.0002
Acenaphthene		<0.000103	mg/L	0.0002
Dibenzofuran		<0.000200	mg/L	0.0002
Fluorene		<0.0000861	mg/L	0.0002
Phenanthrene		<0.0000884	mg/L	0.0002
Anthracene		<0.000170	mg/L	0.0002
Fluoranthene		<0.0000969	mg/L	0.0002
Pyrene		<0.0000855	mg/L	0.0002
Benzo(a)anthracene		<0.0000703	mg/L	0.0002
Chrysene		<0.000113	mg/L	0.0002
Benzo(b)fluoranthene		<0.000134	mg/L	0.0002
Benzo(k)fluoranthene		<0.000227	mg/L	0.0004

continued...

method blank continued ...

Parameter	Flag	MDL Result	Units	RL
Benzo(a)pyrene		<0.000200	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.000253	mg/L	0.0004
Dibenzo(a,h)anthracene		<0.000180	mg/L	0.0002
Benzo(g,h,i)perylene		<0.000158	mg/L	0.0002

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0322	mg/L	1	0.0800	40	10 - 128
2-Fluorobiphenyl		0.0359	mg/L	1	0.0800	45	18.8 - 107.7
Terphenyl-d14		0.0652	mg/L	1	0.0800	82	24.3 - 151.2

Laboratory Control Spike (LCS-1) QC Batch: 23415

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
1,1-Dichloroethene	45.1	44.9	µg/L	1	50.0	<0.136	90	0	70 - 130	20
Benzene	46.6	46.9	µg/L	1	50.0	<0.146	93	1	70 - 130	20
Trichloroethene (TCE)	48.0	48.9	µg/L	1	50.0	<0.117	96	2	70 - 130	20
Toluene	47.1	47.0	µg/L	1	50.0	<0.0600	94	0	70 - 130	20
Chlorobenzene	48.5	48.9	µg/L	1	50.0	<0.0540	97	1	70 - 130	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	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	48.9	48.6	µg/L	1	50.0	98	97	70 - 130
Toluene-d8	50.0	50.0	µg/L	1	50.0	100	100	70 - 130
4-Bromofluorobenzene (4-BFB)	46.9	47.7	µg/L	1	50.0	94	95	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 23498

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Naphthalene	0.0328	0.0398	mg/L	1	0.0800	<0.0000853	41	19	11.1 - 127.6	20
Acenaphthylene	0.0414	0.0453	mg/L	1	0.0800	<0.0000768	52	9	24.3 - 130.6	20
Acenaphthene	0.0385	0.0354	mg/L	1	0.0800	<0.000103	48	8	21.2 - 134.6	20
Dibenzofuran	0.0346	0.0331	mg/L	1	0.0800	<0.000200	43	4	10 - 187.2	20
Fluorene	0.0331	0.0327	mg/L	1	0.0800	<0.0000861	41	1	22.3 - 147	20
Phenanthrene	0.0478	0.0476	mg/L	1	0.0800	<0.0000884	60	0	23 - 149.4	20
Anthracene	0.0501	0.0460	mg/L	1	0.0800	<0.000170	63	8	24.8 - 149.8	20
Fluoranthene	0.0472	0.0565	mg/L	1	0.0800	<0.0000969	59	18	17.1 - 163.6	20
Pyrene	0.0437	0.0472	mg/L	1	0.0800	<0.0000855	55	8	23.4 - 163	20
Benzo(a)anthracene	0.0386	0.0348	mg/L	1	0.0800	<0.0000703	48	10	26.9 - 141.6	20
Chrysene	0.0436	0.0474	mg/L	1	0.0800	<0.000113	54	8	17.6 - 149.6	20
Benzo(b)fluoranthene	0.0398	0.0394	mg/L	1	0.0800	<0.000134	50	1	10 - 180	20
Benzo(k)fluoranthene	0.0567	0.0632	mg/L	1	0.0800	<0.000227	71	11	12.3 - 164.9	20
Benzo(a)pyrene	0.0464	0.0532	mg/L	1	0.0800	<0.000200	58	14	22.2 - 170.2	20

continued ...

control spikes continued...

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Indeno(1,2,3-cd)pyrene	0.0332	0.0336	mg/L	1	0.0800	<0.000253	42	1	25.9 - 160	20
Dibenzo(a,h)anthracene	0.0315	0.0307	mg/L	1	0.0800	<0.000180	39	3	11.3 - 160.8	20
Benzo(g,h,i)perylene	0.0379	0.0390	mg/L	1	0.0800	<0.000158	47	3	23.6 - 160.5	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	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Nitrobenzene-d5	0.0271	0.0559	mg/L	1	0.0800	34	70	16.4 - 128.3
2-Fluorobiphenyl	0.0312	0.0658	mg/L	1	0.0800	39	82	20.6 - 116.7
Terphenyl-d14	0.0239	0.0522	mg/L	1	0.0800	30	65	20.2 - 150.7

Standard (CCV-1) QC Batch: 23415

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	46.4	93	80 - 120	2005-12-14
1,1-Dichloroethene		µg/L	50.0	44.6	89	80 - 120	2005-12-14
Chloroform		µg/L	50.0	44.0	88	80 - 120	2005-12-14
1,2-Dichloropropane		µg/L	50.0	45.4	91	80 - 120	2005-12-14
Toluene		µg/L	50.0	44.3	89	80 - 120	2005-12-14
Chlorobenzene		µg/L	50.0	46.0	92	80 - 120	2005-12-14
Ethylbenzene		µg/L	50.0	43.5	87	80 - 120	2005-12-14

Standard (CCV-1) QC Batch: 23498

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	59.4	99	80 - 120	2005-12-19
Acenaphthylene		mg/L	60.0	61.4	102	80 - 120	2005-12-19
Acenaphthene		mg/L	60.0	60.6	101	80 - 120	2005-12-19
Dibenzofuran		mg/L	60.0	54.5	91	80 - 120	2005-12-19
Fluorene		mg/L	60.0	53.4	89	80 - 120	2005-12-19
Phenanthrene		mg/L	60.0	65.7	110	80 - 120	2005-12-19
Anthracene		mg/L	60.0	65.3	109	80 - 120	2005-12-19
Fluoranthene		mg/L	60.0	63.7	106	80 - 120	2005-12-19
Pyrene		mg/L	60.0	69.0	115	80 - 120	2005-12-19
Benzo(a)anthracene		mg/L	60.0	51.8	86	80 - 120	2005-12-19
Chrysene		mg/L	60.0	60.2	100	80 - 120	2005-12-19
Benzo(b)fluoranthene		mg/L	60.0	50.0	83	80 - 120	2005-12-19
Benzo(k)fluoranthene		mg/L	60.0	62.2	104	80 - 120	2005-12-19
Benzo(a)pyrene		mg/L	60.0	52.7	88	80 - 120	2005-12-19
Indeno(1,2,3-cd)pyrene		mg/L	60.0	54.5	91	80 - 120	2005-12-19
Dibenzo(a,h)anthracene		mg/L	60.0	58.7	98	80 - 120	2005-12-19
Benzo(g,h,i)perylene		mg/L	60.0	56.1	94	80 - 120	2005-12-19

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		58.2	mg/L	1	60.0	97	80 - 120
2-Fluorobiphenyl		61.5	mg/L	1	60.0	102	80 - 120
Terphenyl-d14		64.7	mg/L	1	60.0	108	80 - 120

Page 1 of 1

Trace Analysis, Inc. 6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424 Tel (806) 794-1296 Fax (806) 794-1298 1 (800) 378-1296 email: lab@traceanalysis.com		155 McCutcheon, Suite H El Paso, Texas 79932 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443	
Company Name: BBC INTERNATIONAL Address: 1324 W MARLAND Contact Person: CLIFF BRUNSON		Phone #: 505) 397 6588 Fax #: 505) 397 0397 e-mail:	
Invoice to: SHELL E&P Company A/H: Wayne Hamilton (if different from above) Project #: WESTGATE		Project Name: WESTGATE Project Location: HOBBS, New Mexico	
Project Location: HOBBS, New Mexico Sampler Signature: <i>Roger Hernandez</i>		Matrix: WATER Preservative: HNO₃ Method: ICE None: ✓	
LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	VOLUME/AMOUNT
79912	MW# 2	VOA 2	2
13	MW# 2	VOA 1	1
13	MW# 10	VOA 2	2
14	MW# 10	VOA 1	1
15	MW# 4	VOA 2	2
15	MW# 7	VOA 2	2
16	MW# 7	VOA 1	1
16	MW# 8	VOA 2	2
17	MW# 8	VOA 1	1
17	MW# 6	VOA 2	2
18	MW# 11	VOA 2	2
Relinquished by:	Date: 12-17-05 5:15	Received by:	Date: 12-14-05 09:45
Relinquished by:	Date:	Received by:	Date:
Relinquished by:	Date:	Received by:	Date:

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST LAB Order ID # 5121408	
ANALYSIS REQUEST (Circle or Specify Method No.)	
TX 1005 Extended (C35) TPH 418, 1/TPH 1005 BTEX 8021B/602 MTBE 8021B/602 PAH 8270C Total Metals Ag As Ba Cd Cr Pb Se Hg 8010B/200.7 TCLP Metals Ag As Ba Cd Cr Pb Se Hg TCLP Volatiles TCLP Semi Volatiles TCLP Pesticides RCI GC/MS Vol. 8260B/602 GC/MS Semi. Vol. 8270C/602 PCB's 8082/608 Pesticides 8081A/608 BOD, TSS, PH Moisture Content Turn Around Time if different from standard	Intact ☒ Y / N Headspace ☒ Y / N Temp ☒ 40° Log-in Review ☒ <i>SR</i> Carrier # BUS 64168 7857325
REMARKS:	

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

OCD FILES

35MM DRAWINGS

AP-002

FILE NUMBER

ANNUAL MONITORING REPORT

DOCUMENT TYPE

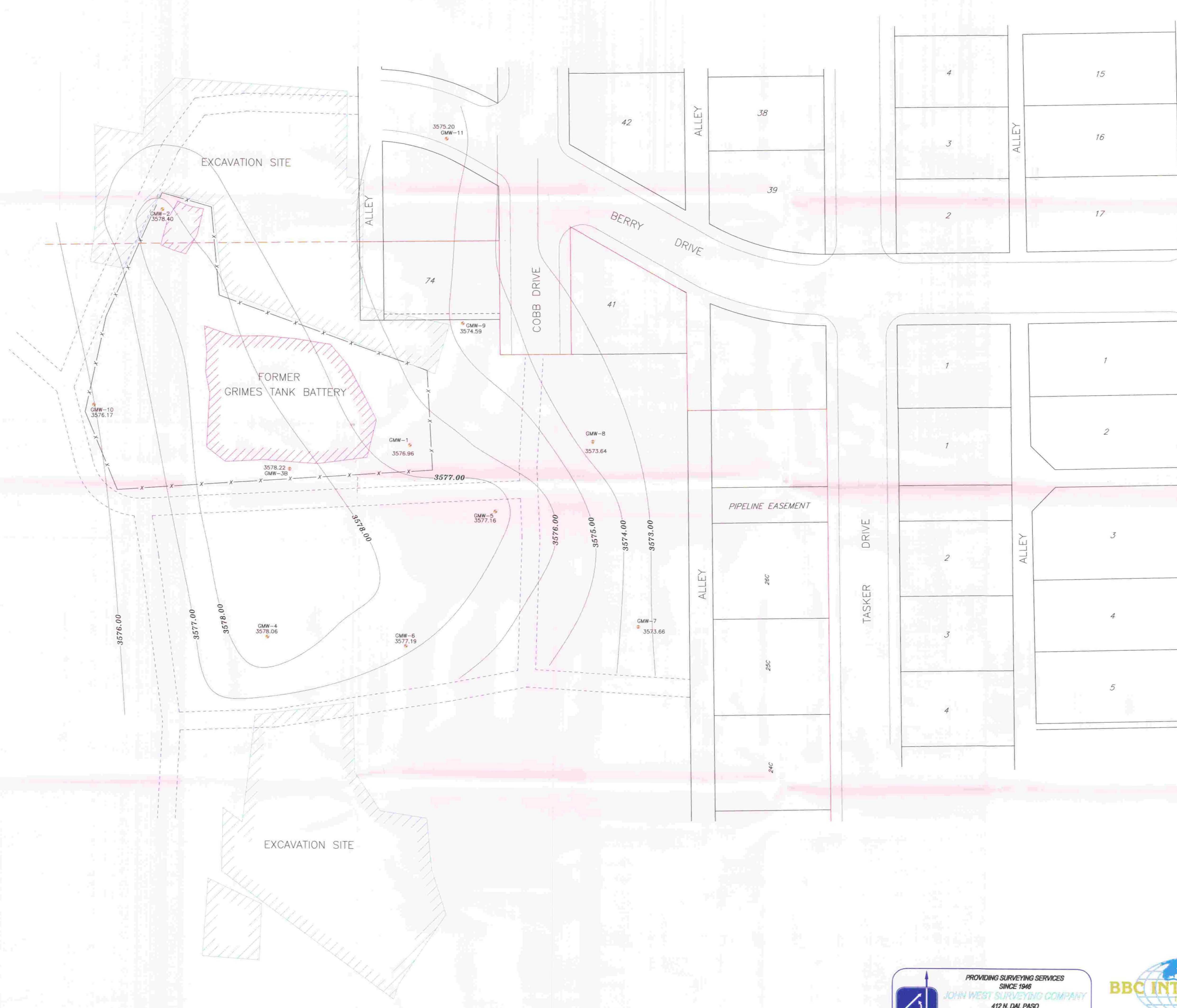
2005

12

NO OF DWGS

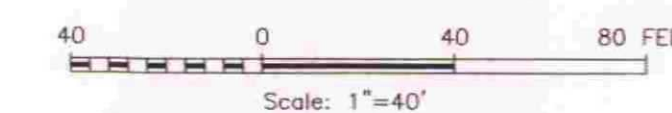
28

BOX



LEGEND

-  DENOTES EXCAVATED AREA
 DENOTES PROPOSED PARK CURVE-OUT
 DENOTES EXISTING RESIDENCE
 DENOTES TRAIL LEASE ROAD
 DENOTES NEW EXCAVATION SITE
 GMW - DENOTES GRIMES MONITOR WELL



BBC INTERNATIONAL, INC. / ARCADIS GERAGHTY & MILLER

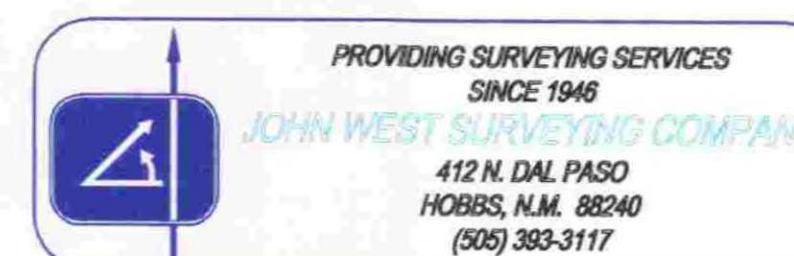
GRIMES BATTERY

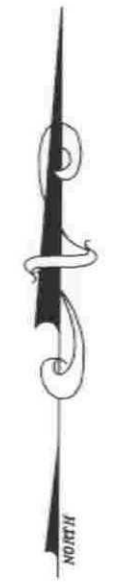
GROUND WATER ELEVATION/GRADIENT
1st Quarter 2005
MEASURED 3/18/05

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

SURVEYED BY: LAWLESS	DRAWN BY: LA	REV. DATE: 3/28/06
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGUREQ1
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'

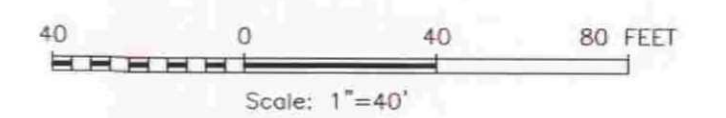
FIGURE Q1
1st Quarter 2005





LEGEND

- DENOTES EXCAVATED AREA
- DENOTES PROPOSED PARK CURVE-OUT
- DENOTES EXISTING RESIDENCE
- DENOTES DIRT LEASE ROAD
- DENOTES NEW EXCAVATION SITE
- GMW - DENOTES GRIMES MONITOR WELL
- ND NON DETECT
- NS NOT SAMPLED

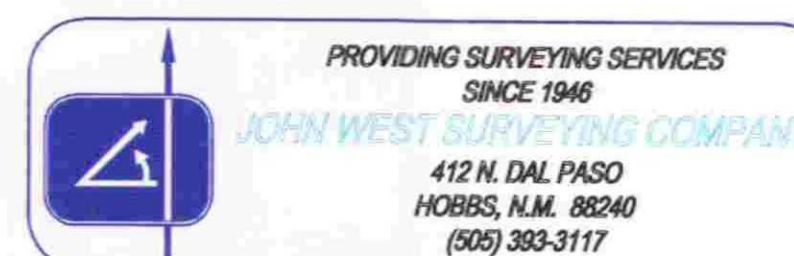


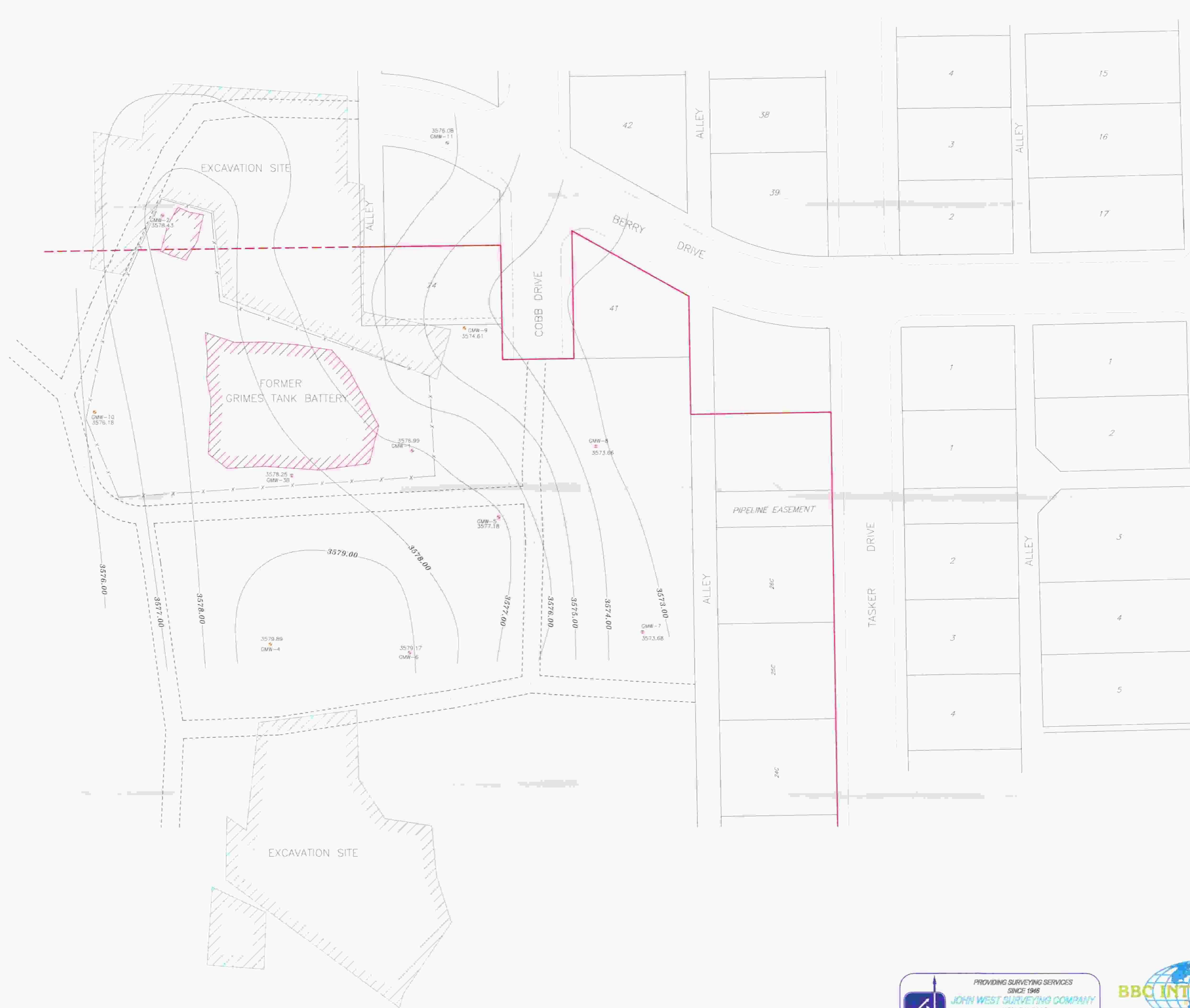
BBC INTERNATIONAL, INC. / ARCADIS GERAGHTY & MILLER

GRIMES BATTERY & TASKER ROAD
TOTAL BTEX CONCENTRATION (mg/L)
1st Quarter 2005
MEASURED 3/18/05

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

SURVEYED BY: LAWLESS	DRAWN BY: LA	REV. DATE: 3/28/06	E-3081
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGUREQ3	
DATE END: 8/17/98	CHECKED BY:	SHEET 1 OF 1	FIGURE Q3
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	1st Quarter 2005





- LEGEND
- DENOTES EXCAVATED AREA
 - DENOTES PROPOSED PARK CURVE-OUT
 - DENOTES EXISTING RESIDENCE
 - DENOTES DIRT LEASE ROAD
 - DENOTES NEW EXCAVATION SITE
 - GMW - DENOTES GRIMES MONITOR WELL

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

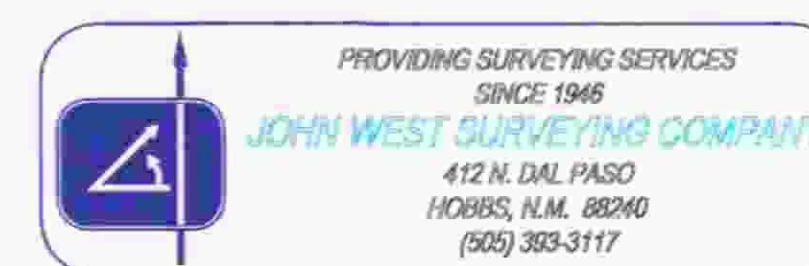
BBC INTERNATIONAL, INC. / ARCADIS GERAGHTY & MILLER

GRIMES BATTERY
GROUND WATER ELEVATION/GRADIENT
2nd Quarter 2005
MEASURED 6/16/05

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

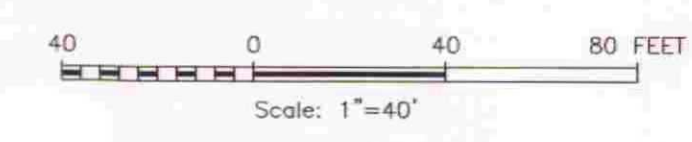
SURVEYED BY: LAWLESS	DRAWN BY: EA	REV. DATE: 3/28/06
DATE BEG: 5/11/98	DATE: 8/13/98	FILE NAME: FIGURE04
DATE END: 8/1/98	CHECKED BY:	SHEET 1 OF 1
PROJECT #: 02.13.0369	DISK #: BBC	Scale: 1"=40'

E-3081
FIGURE Q4
2nd Quarter 2005





- LEGEND
- ////// DENOTES EXCAVATED AREA
 - DENOTES PROPOSED PARK CURVE-OUT
 - DENOTES EXISTING RESIDENCE
 - - - DENOTES DIRT LEASE ROAD
 - - - DENOTES NEW EXCAVATION SITE
 - ⊙ GMW - DENOTES GRIMES MONITOR WELL
 - ND NON DETECT
 - NM NOT MEASURED



BBC INTERNATIONAL, INC. / ARCADIS GERAGHTY & MILLER

GRIMES BATTERY
LNAPL THICKNESS
2nd Quarter 2005
MEASURED 6/16/05

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

SURVEYED BY: LAWLESS	DRAWN BY: LA	REV. DATE: 3/28/06	E-3081
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGUREQ5	FIGURE Q5 2nd Quarter 2005
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	
PROJECT #: 0213.0368	DISK #: BBC	Scale: 1"=40'	

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
INCORPORATED
412 N. DAL PASO
HOBBS, N.M. 88240
(805) 383-3117

BBC INTERNATIONAL
INCORPORATED
WORLD-WIDE ENVIRONMENTAL SPECIALISTS



PROVIDING SURVEYING SERVICES
SINCE 1948
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 383-3117

BBC INTERNATIONAL
INCORPORATED
WORLD-WIDE ENVIRONMENTAL INITIATIVES

BBC INTERNATIONAL, INC. / ARCADIS GERAGHTY & MILLER

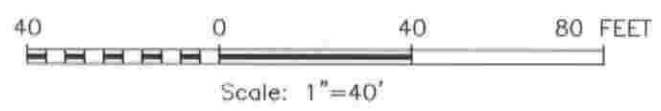
GRIMES BATTERY
TOTAL BTEX CONCENTRATION (mg/L)
2nd Quarter 2005
MEASURED 6/16/05

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

SURVEYED BY: LAWLESS	DRAWN BY: LA	REV. DATE: 3/28/06	E-3081
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGURE06	FIGURE 06 2nd Quarter 2005
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	
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
 - GMW - DENOTES GRIMES MONITOR WELL



BBC INTERNATIONAL, INC. / ARCADIS GERAGHTY & MILLER

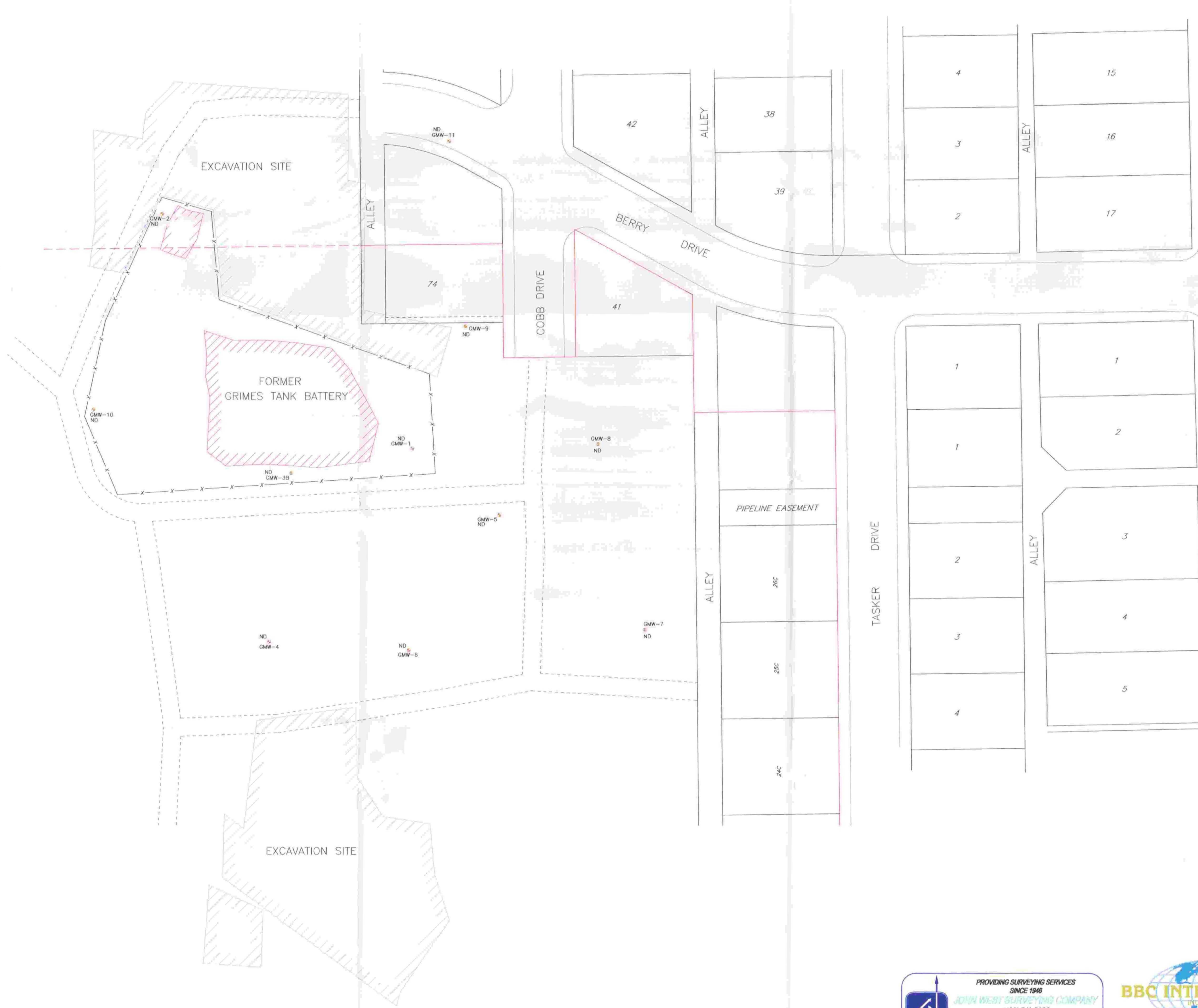
GRIMES BATTERY
GROUND WATER ELEVATION/GRADIENT
3rd Quarter 2005
MEASURED 9/21/05

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

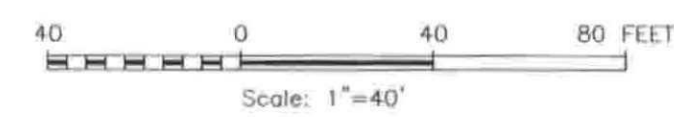
SURVEYED BY: LAWLESS	DRAWN BY: LA	REV. DATE: 3/28/06	E-3081
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGURE07	
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	FIGURE 07
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	3rd Quarter 2005

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBES, N.M. 88240
(505) 393-3117

BBC INTERNATIONAL
INCORPORATED
WORLD-WIDE ENVIRONMENTAL SPECIALISTS



- LEGEND
- /// DENOTES EXCAVATED AREA
 - DENOTES PROPOSED PARK CURVE-OUT
 - DENOTES EXISTING RESIDENCE
 - - - DENOTES DIRT LEASE ROAD
 - DENOTES NEW EXCAVATION SITE
 - GMW - DENOTES GRIMES MONITOR WELL
 - ND: NON DETECT
 - NM: NOT MEASURED



BBC INTERNATIONAL, INC. / ARCADIS GERAGHTY & MILLER

GRIMES BATTERY
LNAPL THICKNESS
3rd Quarter 2005
MEASURED 9/21/05

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

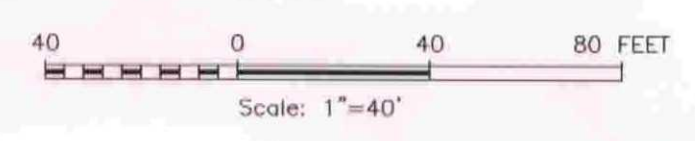
SURVEYED BY: LAWLESS	DRAWN BY: LA	REV. DATE: 3/28/06	E-3081
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGUREQ8	FIGURE Q8
DATE END: 9/11/98	CHECKED BY:	SHEET: 1 OF 1	3rd Quarter 2005
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBBS, N.M. 88240
(505) 383-3117





- LEGEND
- /// DENOTES EXCAVATED AREA
 - DENOTES PROPOSED PARK CURVE-OUT
 - DENOTES EXISTING RESIDENCE
 - - - DENOTES DIRT LEASE ROAD
 - - - DENOTES NEW EXCAVATION SITE
 - GMW - DENOTES GRIMES MONITOR WELL
 - ND NON DETECT
 - NS NOT SAMPLED



BBC INTERNATIONAL, INC. / ARCADIS GERAGHTY & MILLER

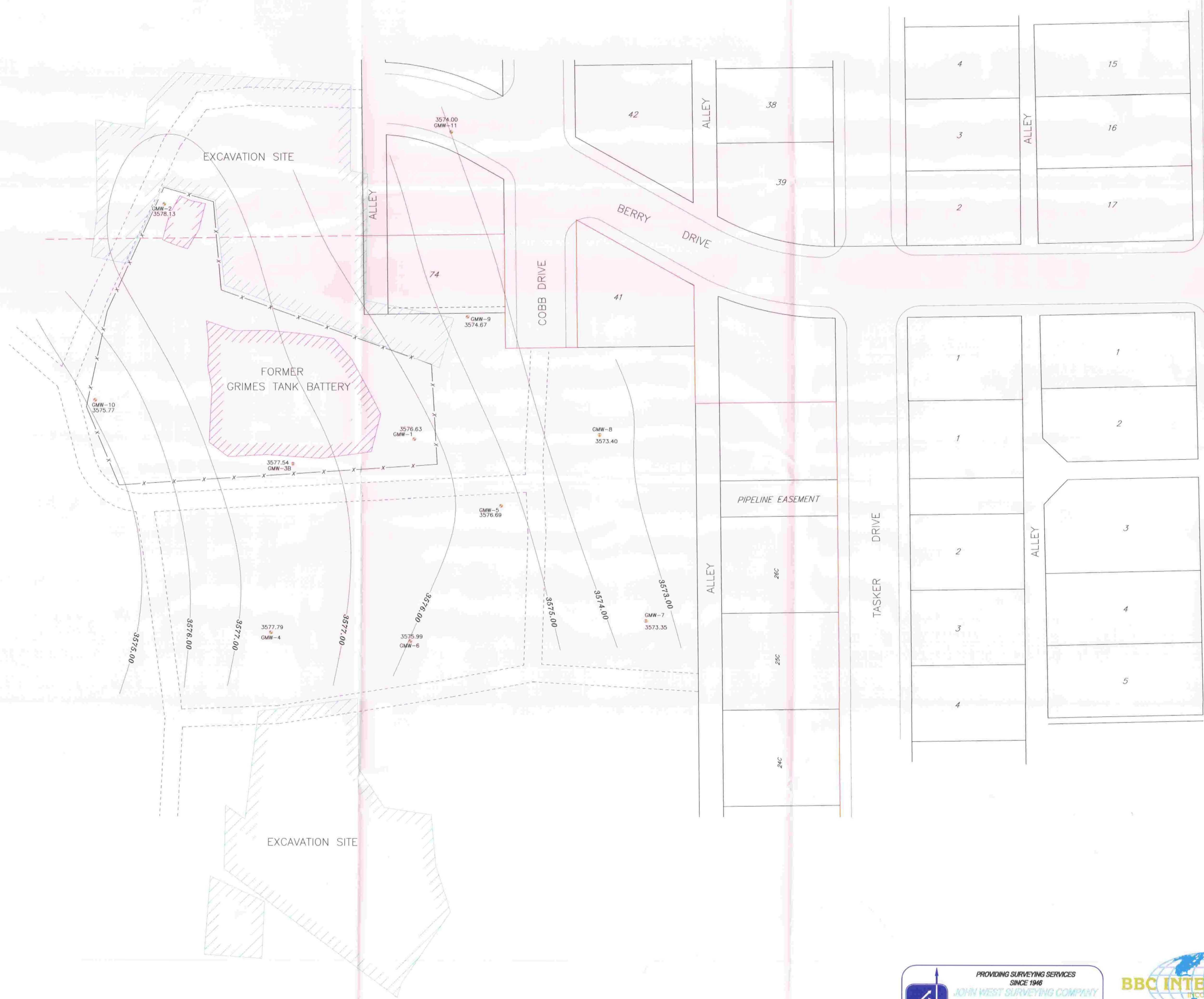
GRIMES BATTERY
TOTAL BTEX CONCENTRATION (mg/L)
3rd Quarter 2005
MEASURED 9/21/05

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

SURVEYED BY: LAWLESS	DRAWN BY: LA	REV. DATE: 3/28/06	E-3081
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGUREQ9	
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	FIGURE Q9
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	3rd Quarter 2005

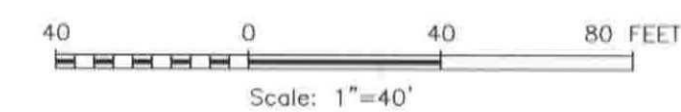
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBBS, N.M. 88240
(505) 383-3117

BBC INTERNATIONAL
INCORPORATED
WORLD-WIDE ENVIRONMENTAL SCIENTISTS



LEGEND

-  DENOTES EXCAVATED AREA
 DENOTES PROPOSED PARK CURVE-OUT
 DENOTES EXISTING RESIDENCE
 DENOTES DIRT LEASE ROAD
 DENOTES NEW EXCAVATION SITE
 GMW - DENOTES GRIMES MONITOR WELL



BBC INTERNATIONAL, INC. / ARCADIS GERAGHTY & MILLER

GRIMES BATTERY

GROUND WATER ELEVATION/GRADIENT
4th Quarter 2005
MEASURED 12/12/05

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

SURVEYED BY: LAWLESS	DRAWN BY: LA	REV. DATE: 3/28/06
DATE BEGIN: 5/11/98	DATE: 8/13/98	FILE NAME: FIGUREQ10
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'

FIGURE Q10
4th Quarter 2005





PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117



BBC INTERNATIONAL, INC. / ARCADIS GERAGHTY & MILLER			
GRIMES BATTERY			
LNAPL THICKNESS			
4th Quarter 2005			
MEASURED 12/12/05			
CONTOURS DEPICTED ON THIS DRAWING BASED ON INTERPRETATION BY S. HALL			
SURVEYED BY: LAWLESS	DRAWN BY: LA	REV. DATE: 3/28/06	E-3081 FIGURE Q11 4th Quarter 2005
DATE BEGON: 5/11/98	DATE: 8/13/98	FILE NAME: FIGUREQ11	
DATE END: 9/1/98	CHECKED BY:	SHEET 1 OF 1	
PROJECT #: 02.13.0368	DISK #: BBC	Scale: 1"=40'	

