

**1R - 120**

# **REPORTS**

**DATE:**

**2004**

# **ANNUAL MONITORING REPORT**

*IR-120*

## **MONUMENT 11**

**LEA COUNTY, NEW MEXICO**

**SE ¼ NE ¼ SECTION 30, TOWNSHIP 19 SOUTH, RANGE 37 EAST**

**LNK ENERGY LEAK NUMBER: TNM MONUMENT-11**

**ETGI PROJECT NUMBER: LI 2054**

**PREPARED FOR:**

**LINK ENERGY  
5805 EAST HIGHWAY 80  
MIDLAND, TEXAS 79701**

**PREPARED BY:**

**ENVIRONMENTAL TECHNOLOGY GROUP, INC.  
2540 WEST MARLAND  
HOBBS, NEW MEXICO 88240**

**April 2004**

## **ANNUAL MONITORING REPORT**

**MONUMENT 11**  
**LEA COUNTY, NEW MEXICO**  
**SE ¼ NE ¼ SECTION 30, TOWNSHIP 19 SOUTH, RANGE 37 EAST**  
**LNK ENERGY LEAK NUMBER: TNM MONUMENT-11**  
**ETGI PROJECT NUMBER: LI 2054**

**PREPARED FOR:**

**LINK ENERGY**  
**5805 EAST HIGHWAY 80**  
**MIDLAND, TEXAS 79701**

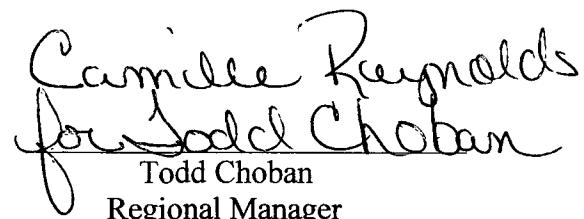
**PREPARED BY:**

**ENVIRONMENTAL TECHNOLOGY GROUP, INC.**  
**2540 WEST MARLAND**  
**HOBBS, NEW MEXICO 88240**

**April 2004**



\_\_\_\_\_  
Robert B. Eidson  
Geologist / Senior Project Manager



\_\_\_\_\_  
Camille Reynolds  
for Todd Choban  
Todd Choban  
Regional Manager

## **TABLE OF CONTENTS**

INTRODUCTION .....	1
FIELD ACTIVITIES .....	1
GROUNDWATER GRADIENT .....	1
LABORATORY RESULTS .....	1
SUMMARY .....	2
DISTRIBUTION .....	3

### **FIGURES**

Figure 1 – Site Location Map

Figure 2A Inferred Groundwater Gradient Map – February 10, 2003

2B Inferred Groundwater Gradient Map – May 13, 2003

2C Inferred Groundwater Gradient Map – August 22, 2003

2D Inferred Groundwater Gradient Map – December 15, 2003

Figure 3A Groundwater Concentration Map – February 11, 2003

3B Groundwater Concentration Map – May 13, 2003

3C Groundwater Concentration Map – August 22, 2003

3D Groundwater Concentration Map – December 15, 2003

### **TABLES**

Table 1 – Groundwater Elevation Data

Table 2 – Concentrations of BTEX in Groundwater

### **APPENDICES**

Appendix A – Laboratory Reports

## **INTRODUCTION**

Environmental Technology Group, Inc. (ETGI), on behalf of Link Energy (Link), has prepared this Annual Monitoring Report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 1 of each year. This report is intended to be viewed as a complete document with figures, attachments, tables and text. The report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2003 only. For reference, the Site Location Map is provided as Figure 1.

Groundwater monitoring was conducted during four quarterly events in calendar year 2003 to assess the levels and extent of dissolved phase and Phase-Separated Hydrocarbon (PSH) constituents. The groundwater monitoring events consisted of measuring static water levels in the monitor wells, checking for the presence of PSH, and purging and sampling of each well exhibiting sufficient recharge. Monitor wells containing a thickness of PSH greater than 0.01 foot were not sampled.

## **FIELD ACTIVITIES**

The monitor wells were gauged and sampled on February 10-11, May 13, August 22 and December 15, 2003. During each sampling event the monitor wells were purged of approximately three well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos Pump. Groundwater was allowed to recharge and samples were obtained using disposable Teflon samplers. Water samples were collected in clean glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a polystyrene tank and disposed of by Vista Trucking of Eunice, New Mexico from January through September and by Lobo Trucking of Hobbs, New Mexico between October and December utilizing a licensed disposal facility (NMOCD AO SWD-730).

## **GROUNDWATER GRADIENT**

Locations of the monitor wells and the inferred groundwater gradient, constructed from measurements collected during the quarterly monitoring events are depicted on Figures 2A-2D, the Inferred Groundwater Gradient Maps. Cumulative groundwater elevation data is provided as Table 1. Groundwater elevation contours, generated from water level measurements acquired during the quarterly monitoring events of 2003, indicated a gradient varying between 0.010 ft./ft. and 0.013 ft./ft. to the southeast as measured between groundwater monitor wells MW-4 and MW-3. The depth to groundwater as measured from the top of the well casing, ranged between 23.44 to 26.21 feet in the shallow alluvial aquifer.

A measurable thickness of PSH was detected in monitor well MW-4 during the annual monitoring period. A maximum thickness of 0.05 foot was recorded and is shown on Table 1. An absorbent sock has been installed in monitor well MW-4 to recover PSH and is monitored weekly for PSH thickness and replacement purposes.

## **LABORATORY RESULTS**

Groundwater samples collected during the monitoring events were delivered to AnalySys Inc., Austin, Texas for determination of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) constituent concentrations by EPA Method SW846-8260b. A cumulative listing of BTEX constituent concentrations is summarized in Table 2 and copies of the laboratory reports generated during this reporting period are provided as Appendix A. The inferred extent of PSH and groundwater sampling results for benzene and total BTEX concentrations are depicted on Figures 3A-3D, the Groundwater Concentration Maps.

Review of the laboratory analytical results generated from analysis of the groundwater samples obtained during the 2003 monitoring period indicate that benzene and total BTEX concentrations are below applicable NMOCD regulatory standards. However, at least a sheen of PSH was detected in monitor well MW-4 during each gauging event in 2003.

## **SUMMARY**

This report presents the results of groundwater monitoring activities for the annual monitoring period 2003. A measurable thickness of PSH was detected in monitor well MW-4 during the annual monitoring period. A maximum thickness of 0.05 foot was measured during the first monitoring event of the 2003 reporting period.

Groundwater elevation contours, generated from water level measurements acquired during the quarterly monitoring events of 2003, indicated a general gradient of 0.010 ft./ft. to 0.013 ft./ft. to the southeast as measured between groundwater monitor wells MW-4 and MW-3.

Review of the laboratory analytical results generated from analysis of the groundwater samples obtained during the monitoring period indicate that benzene and total BTEX concentrations are below applicable NMOCD regulatory standards. However, at least a sheen of PSH was detected in monitor well MW-4 during each gauging event in 2003.

Groundwater sampling results from samples collected at monitor wells MW-1, MW-2 and MW-3 have not exceeded the NMOCD regulatory standards for benzene or total BTEX concentrations for at least eight consecutive monitoring events. At this time, we are requesting that the above referenced monitor wells be gauged quarterly but sampled annually, until conditions for site closure are met.

## **DISTRIBUTION**

Copy 1 & 2: William C. Olson and Ed Martin  
New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Copy 3: Chris Williams  
New Mexico Oil Conservation Division (District 1)  
1625 French Drive  
Hobbs, New Mexico 88240

Copy 4: Jeff Dann  
Link Energy  
2000 W. Sam Houston Parkway  
Suite 400  
Houston, Texas 77042

Copy 5: Jimmy Bryant  
Link Energy  
5805 Highway 80 East  
Midland, Texas 79701

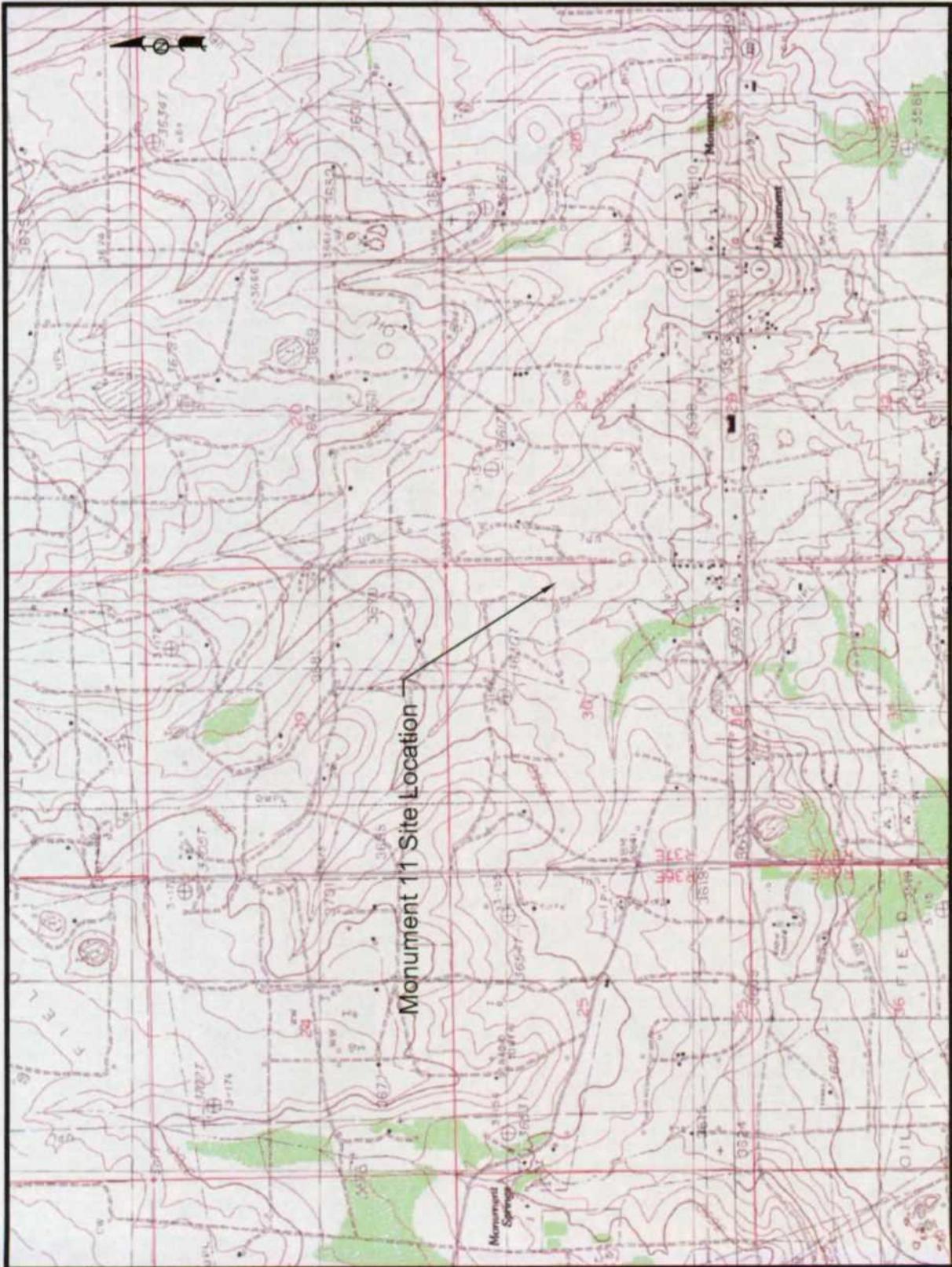
Copy 6: Environmental Technology Group, Inc.  
4600 West Wall Street  
Midland, Texas 79703

Copy 7: Environmental Technology Group, Inc.  
2540 West Marland  
Hobbs, New Mexico 88240

Copy Number: \_\_\_\_\_

\_\_\_\_\_  
Quality Control Reviewer

## **FIGURES**



Environmental Technology Group, Inc.



Figure 1  
Site Location Map

Link Energy  
Monument 111  
Lea County, NM

.5  
.25  
0  
.25  
.5  
Distance in Miles

Scale 1: 3 Miles  
Print By: JCU  
Created By: RE  
February 18, 2004  
ETGI Project #: L12054  
Lat: N32° 38' 9.2" Long: W107° 17' 2.4"

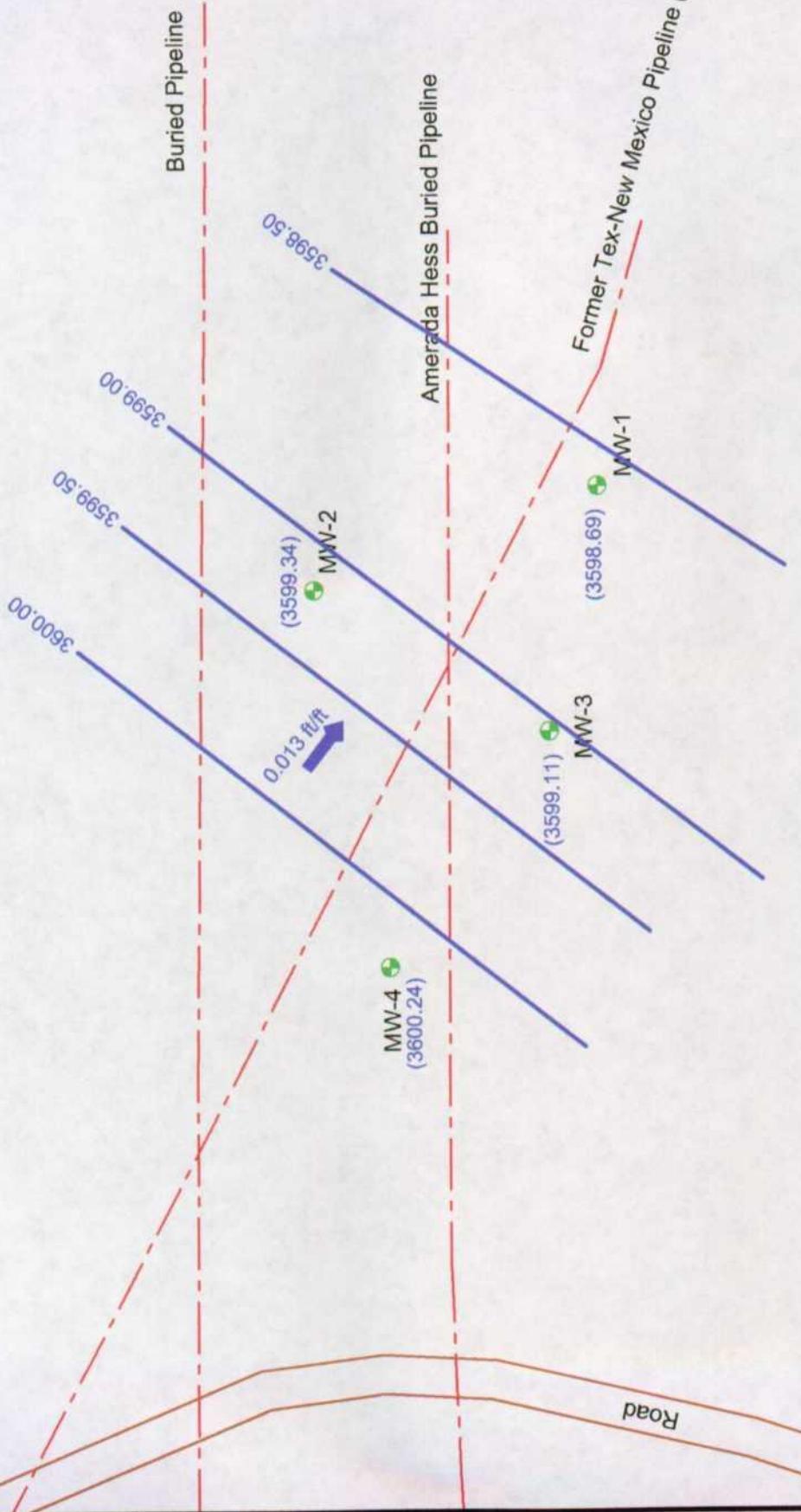


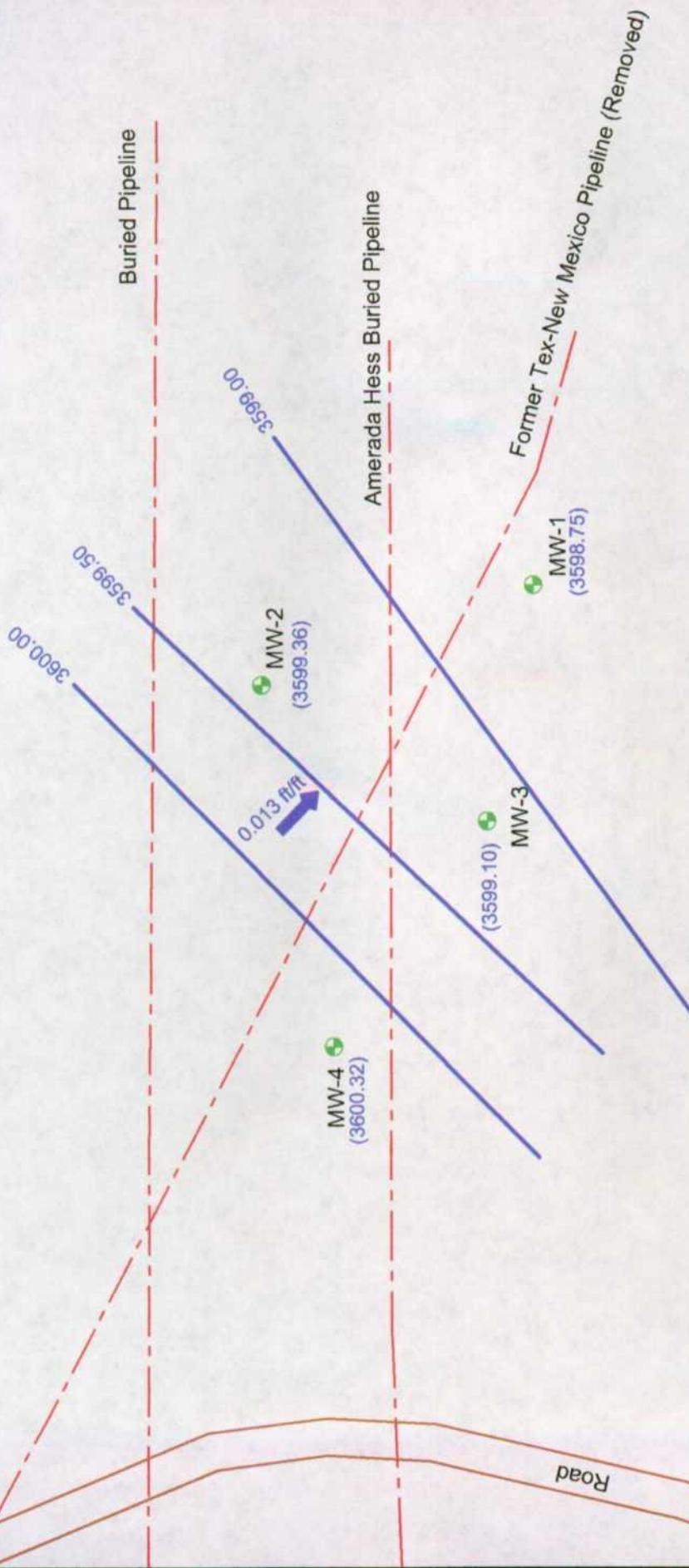
Figure 2A  
Inferred Groundwater Gradient Map  
2/10/03  
Link Energy  
Monument 11  
Les County, NM

Environmental Technology Group, Inc.		
Project Name:	Site 1	Scale: 1" = 80'
Project No.:	SE 14 NE 1/4 Sec 30 T15S R27E	Prepared By: RE
Date:	March 18, 2004	Checked By: RE
ETG Project #: 4-20254	132 SW 05 2 N 103° 16' 56" W	Approved By: RE

Figure 2A  
Inferred Groundwater Gradient Map  
2/10/03  
Link Energy  
Monument 11  
Les County, NM

Monitor Well Location	Groundwater Elevation Contour	Gradient Direction And Magnitude
(3599.10)	3599.00	0.012 ft/ft

Environmental Technology Group, Inc.
Project Name:
Project No.:
Date:



Environmental Technology Group, Inc.	
Technology Division	Chemical Processing
ETG I	Prepared By: ca
Environmental Services	Checked By: RE
500 N. 14th Street, Suite 1000	Date: 5/16/04
Omaha, NE 68102	Page 14 of 188 Total
Telephone: (402) 341-2200	ETD Project #: L2254
Fax: (402) 341-2254	Scale: 30' 07" E by 30' 07" N
Link Energy Monument 11, Cass County, NE	

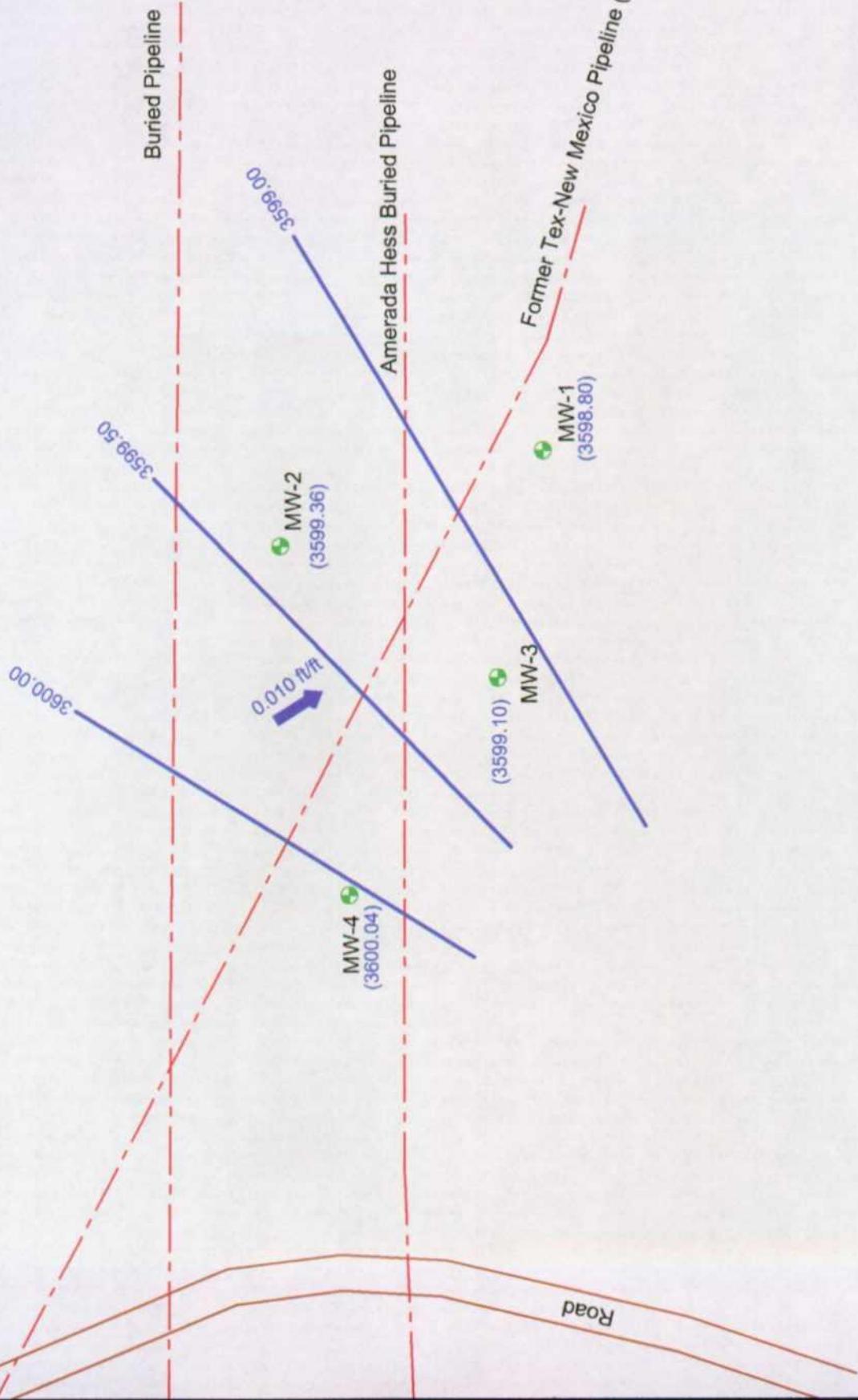
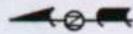


Figure 2C  
Inferred Groundwater Gradient Map  
8/22/03  
Link Energy  
Monument 11  
Lea County, NM  
(3599.10)

Monitor Well Location  
Groundwater Elevation Contour  
Groundwater Elevation  
0.012 ft/ft  
Gradient Direction And Magnitude

Environmental Technology Group, Inc.	
Scale: 1" = 80'	Prep. By: cs Checked By: RE
March 16, 2004	SE 1/4 NE 1/4 Sec 36 T18S R27E NAD83
ETGI Project # L-2054	32° 58' 07" Z N 102° 16' 58" W

Figure 2C  
Inferred Groundwater Gradient Map  
8/22/03  
Link Energy  
Monument 11  
Lea County, NM  
(3599.10)



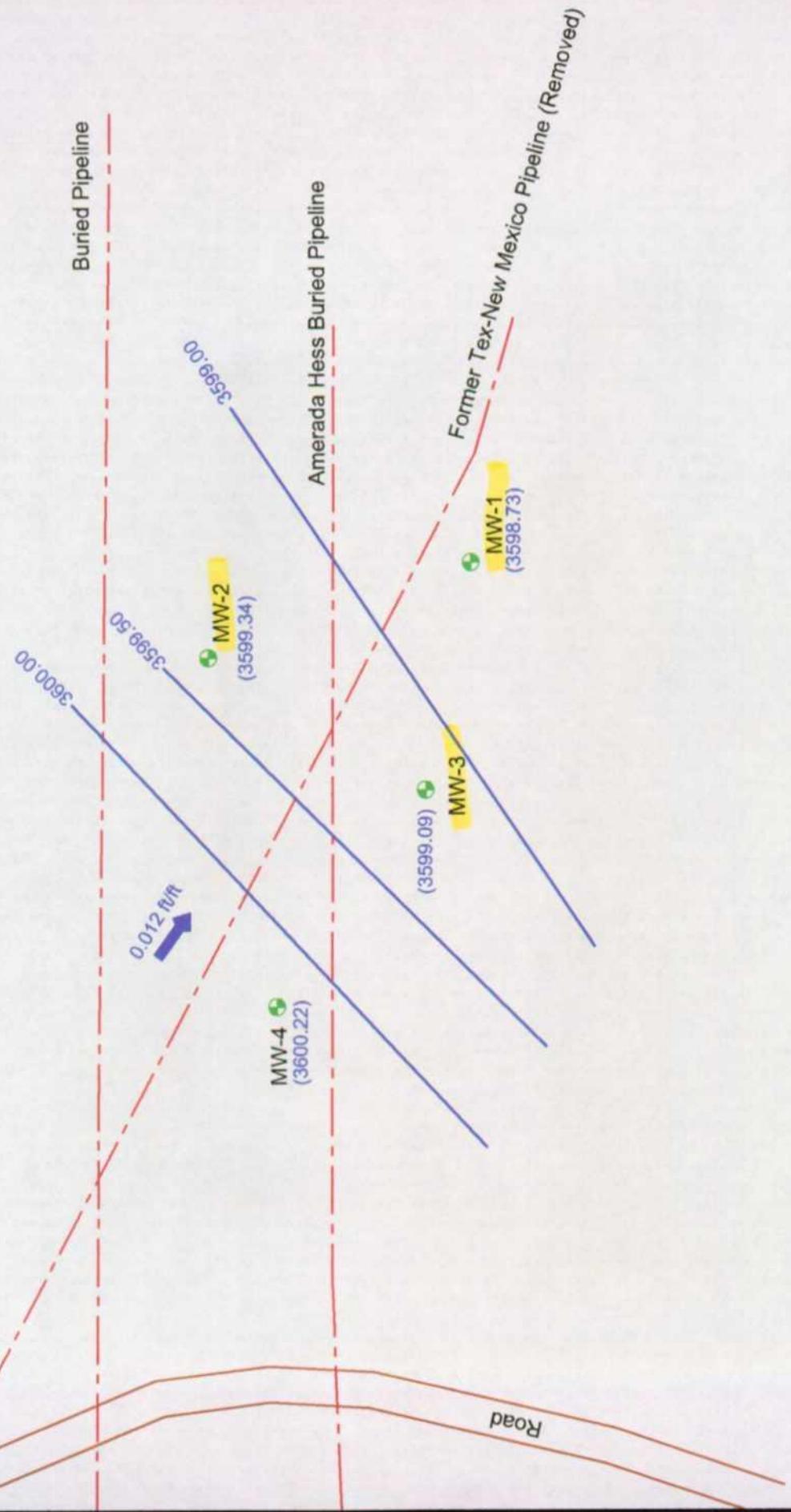


Figure 2D  
Inferred Groundwater Gradient Map  
Link Energy  
Monument 11  
Lee County, NM

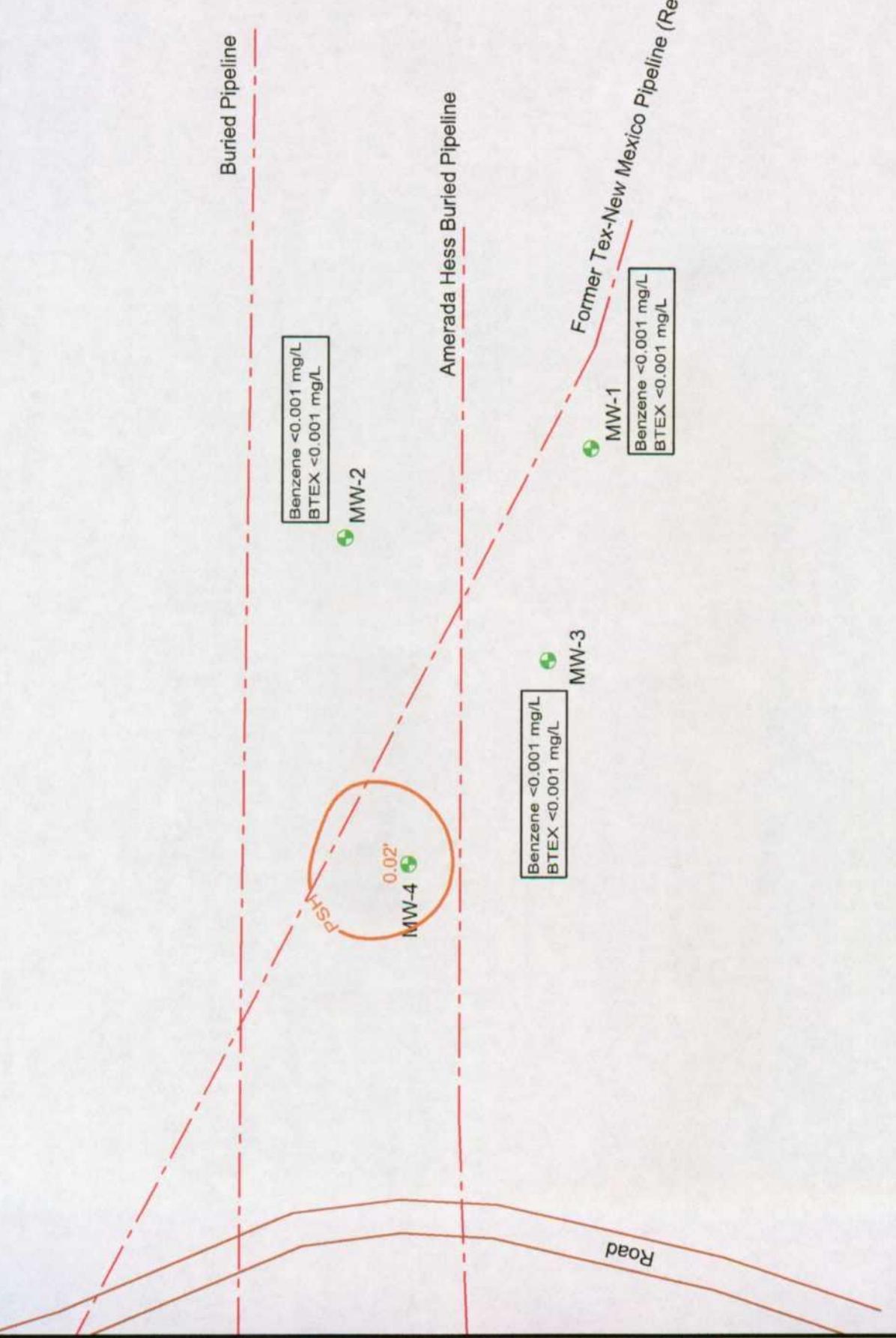
Gradient Direction And Magnitude  
0.012 ft/ft

Environmental Technology Group, Inc.

State: 1° = 60' Prop By: ca Checked By: RE  
March 18, 2004 SEC 14, T14 S 26 7555 N 103° 15' 48.07" W  
ETD: Pioneer II L2034



Figure 2D  
Inferred Groundwater Gradient Map  
Link Energy  
Monument 11  
Lee County, NM



Monitor Well Location  
Inferred PSH Extent

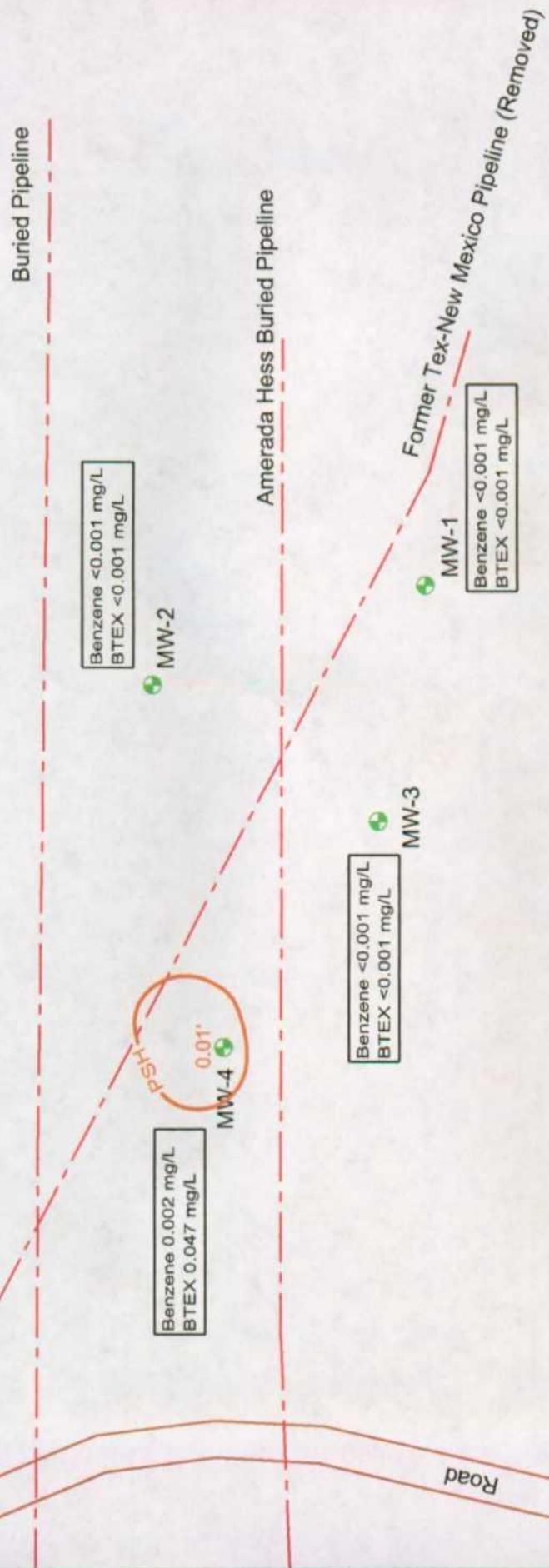
0 30 60  
Distance in feet

60 30 0 30 60  
PSH Thickness in feet

Figure 3A  
Groundwater Concentration  
Map 2/11/03  
Link Energy  
Monument 11  
Les County, NM



Environmental Technology  
Group, Inc.  
Prep By: ca Checked By: RE  
Scale: 1" = 87' Date: 30 T19S R3E  
March 18, 2004 SEE 14 NE 1/4 Sec 30 T19S R3E  
ETGI Project # L 2054  
SW 1/4 SW 1/4 N 1/4 SW 1/4 W



Monitor Well Location  
Infrared PSH Extent  
Note: PSH Thickness in Feet

Distance in Feet

Figure 3B  
Groundwater Concentration  
Map 5/13/03  
Link Energy  
Monument 11  
Leslie County, NM

Environmental Technology  
Group, Inc.  
Prep By: os Checked By: RE  
March 18, 2004 SIE 14 NE 14 Sec 26 T18 R5TE  
ETGI Project # L-2054 26° 38' 07" E N 40° 15' 46" N





Buried Pipeline

Benzene <0.001 mg/L  
BTEX <0.001 mg/L

MW-2

Amerada Hess Buried Pipeline

Benzene <0.001 mg/L  
BTEX <0.001 mg/L

MW-3

Former Tex-New Mexico Pipeline (Removed)

MW-1

Benzene <0.001 mg/L  
BTEX <0.001 mg/L

Sheen  
PSH

MW-4

Road

Distance in Feet  
60 30 0 30 60

Monitor Well Location  
Inferred PSH Extent

Figure 3C  
Groundwater Concentration  
Map 8/22/03  
Link Energy  
Monument 11  
Les County, NM

Environmental Technology  
Group, Inc.

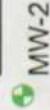


Prep By: ca Checked By: RE  
March 18, 2004 SEC 14 NE 1/4 Sec 26 TSS NTS  
ETGI Project # L-2034 32° 38' 07" Z N 103° 16' 26" W

1

Buried Pipeline

Benzene <0.001 mg/L  
BTEX <0.002 mg/L



Benzene 0.003 mg/L  
BTEX 0.045 mg/L



MW-4

Amerada Hess Buried Pipeline

Benzene 0.001 mg/L  
BTEX <0.002 mg/L



MW-3



Former Tex-New Mexico Pipeline (Removed)



MW-1

Benzene <0.001 mg/L  
BTEX <0.002 mg/L



Distance in Feet  
60 30 0 30 60

Monitor Well Location  
Inferred PSH Extent

Figure 3D  
Groundwater Concentration  
Map 12/15/03  
Link Energy  
Monument 11  
Luna County, NM

Environmental Technology  
Group, Inc.  
Prep By: cs Checked By: RE  
Scale: 1" = 80' Date 30 1/1988 RATE  
March 18, 2004 BE 14 NE 1/4 Sec 30 T 19 R 4  
ETG Project # L 20565 32° 38' 07" N 102° 16' 48" W



**TABLES**

**TABLE 1**  
**GROUNDWATER ELEVATION DATA**

**LINK ENERGY  
MONUMENT 11  
LEA COUNTY, NEW MEXICO  
ETGI PROJECT #LI 2054**

<b>WELL NUMBER</b>	<b>DATE MEASURED</b>	<b>TOP OF CASING ELEVATION</b>	<b>DEPTH TO PRODUCT</b>	<b>DEPTH TO WATER</b>	<b>PSH THICKNESS</b>	<b>CORRECTED GROUNDWATER ELEVATION</b>
MW - 1	05/03/00	3,624.90	-	27.04	0.00	3,597.86
	08/30/00	3,624.90	-	26.19	0.00	3,598.71
	11/17/00	3,624.90	-	26.20	0.00	3,598.70
	03/07/01	3,624.90	-	26.15	0.00	3,598.75
	05/23/01	3,624.90	-	26.15	0.00	3,598.75
	08/27/01	3,624.90	-	26.17	0.00	3,598.73
	10/24/01	3,624.90	-	26.15	0.00	3,598.75
	02/11/02	3,624.90	-	26.11	0.00	3,598.79
	05/16/02	3,624.90	-	26.12	0.00	3,598.78
	09/10/02	3,624.90	-	26.16	0.00	3,598.74
	11/15/02	3,624.90	-	26.16	0.00	3,598.74
	02/10/03	3,624.90	-	26.21	0.00	3,598.69
	05/13/03	3,624.90	-	26.15	0.00	3,598.75
	08/22/03	3,624.90	-	26.10	0.00	3,598.80
	12/15/03	3,624.90	-	26.17	0.00	3,598.73
MW - 2	05/03/00	3,624.91	-	25.60	0.00	3,599.31
	08/30/00	3,624.91	-	25.55	0.00	3,599.36
	11/17/00	3,624.91	-	25.60	0.00	3,599.31
	03/07/01	3,624.91	-	25.56	0.00	3,599.35
	05/23/01	3,624.91	-	25.56	0.00	3,599.35
	08/27/01	3,624.91	-	25.55	0.00	3,599.36
	10/24/01	3,624.91	-	25.54	0.00	3,599.37
	02/11/02	3,624.91	-	25.56	0.00	3,599.35
	05/16/02	3,624.91	-	25.55	0.00	3,599.36
	09/10/02	3,624.91	-	25.57	0.00	3,599.34
	11/15/02	3,624.91	-	25.55	0.00	3,599.36
	02/10/03	3,624.91	-	25.57	0.00	3,599.34
	05/13/03	3,624.91	-	25.55	0.00	3,599.36
	08/22/03	3,624.91	-	25.55	0.00	3,599.36
	12/15/03	3,624.91	-	25.57	0.00	3,599.34
MW - 3	05/03/00	3,623.99	-	24.91	0.00	3,599.08
	08/30/00	3,623.99	-	24.88	0.00	3,599.11
	11/17/00	3,623.99	-	24.92	0.00	3,599.07
	03/07/01	3,623.99	-	24.88	0.00	3,599.11

**TABLE 1**  
**GROUNDWATER ELEVATION DATA**

**LINK ENERGY  
MONUMENT 11  
LEA COUNTY, NEW MEXICO  
ETGI PROJECT #LI 2054**

<b>WELL NUMBER</b>	<b>DATE MEASURED</b>	<b>TOP OF CASING ELEVATION</b>	<b>DEPTH TO PRODUCT</b>	<b>DEPTH TO WATER</b>	<b>PSH THICKNESS</b>	<b>CORRECTED GROUNDWATER ELEVATION</b>
MW - 3	05/23/01	3,623.99	-	24.90	0.00	3,599.09
	08/27/01	3,623.99	-	24.89	0.00	3,599.10
	10/24/01	3,623.99	-	24.88	0.00	3,599.11
	02/11/02	3,623.99	-	24.89	0.00	3,599.10
	05/16/02	3,623.99	-	24.86	0.00	3,599.13
	09/10/02	3,623.99	-	24.91	0.00	3,599.08
	11/15/02	3,623.99	-	24.89	0.00	3,599.10
	02/10/03	3,623.99	-	24.88	0.00	3,599.11
	05/13/03	3,623.99	-	24.89	0.00	3,599.10
	08/22/03	3,623.90	-	24.89	0.00	3,599.10
	12/15/03	3,623.90	-	24.90	0.00	3,599.09
MW - 4	05/03/00	3,624.02	23.61	23.75	0.14	3,600.39
	08/30/00	3,624.02	23.31	23.61	0.30	3,600.67
	11/17/00	3,624.02	23.55	23.70	0.15	3,600.45
	03/07/01	3,624.02	23.60	23.82	0.22	3,600.39
	05/23/01	3,624.02	23.63	23.79	0.16	3,600.37
	08/27/01	3,624.02	23.46	23.52	0.06	3,600.55
	10/24/01	3,624.02	23.61	23.64	0.03	3,600.41
	02/11/02	3,624.02	23.57	23.89	0.32	3,600.40
	05/16/02	3,624.02	23.61	23.80	0.19	3,600.38
	09/10/02	3,624.02	23.60	23.74	0.14	3,600.40
	10/14/02	3,624.02	23.56	23.70	0.14	3,600.44
	11/15/02	3,624.02	23.74	23.76	0.02	3,600.28
	12/27/02	3,624.02	23.77	23.78	0.01	3,600.25
	01/07/03	3,624.02	23.76	23.79	0.03	3,600.26
	02/10/03	3,624.02	23.78	23.80	0.02	3,600.24
	03/05/03	3,624.02	23.81	23.81	Sheen	3,600.21
	03/20/03	3,624.02	23.81	23.86	0.05	3,600.20
	03/27/03	3,624.02	23.73	23.73	Sheen	3,600.29
	04/16/03	3,624.02	23.75	23.75	Sheen	3,600.27
	05/13/03	3,624.02	23.70	23.71	0.01	3,600.32
	05/15/03	3,624.02	23.44	23.44	Sheen	3,600.58
	05/21/03	3,624.02	23.81	23.81	Sheen	3,600.21
	05/28/03	3,624.02	23.83	23.83	Sheen	3,600.19

**TABLE 1**  
**GROUNDWATER ELEVATION DATA**

**LINK ENERGY  
MONUMENT 11  
LEA COUNTY, NEW MEXICO  
ETGI PROJECT #LI 2054**

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 4	06/05/03	3,624.02	23.74	23.74	Sheen	3,600.28
	06/10/03	3,624.02	23.83	23.83	Sheen	3,600.19
	06/25/03	3,624.02	23.73	23.76	0.03	3,600.29
	07/10/03	3,624.02	23.90	23.90	Sheen	3,600.12
	07/31/03	3,624.02	23.74	23.74	Sheen	3,600.28
	08/05/03	3,624.02	23.92	23.92	Sheen	3,600.10
	08/22/03	3,624.02	23.98	23.98	Sheen	3,600.04
	09/30/03	3,624.02	23.65	23.65	Sheen	3,600.37
	10/06/03	3,624.02	23.65	23.65	Sheen	3,600.37
	10/14/03	3,624.02	23.79	23.79	Sheen	3,600.23
	10/21/03	3,624.02	24.11	24.11	Sheen	3,599.91
	10/27/03	3,624.02	24.08	24.08	Sheen	3,599.94
	11/06/03	3,624.02	23.95	23.95	Sheen	3,600.07
	11/10/03	3,624.02	24.18	24.18	Sheen	3,599.84
	11/17/03	3,624.02	23.90	23.90	Sheen	3,600.12
	12/04/03	3,624.02	23.90	23.91	0.01	3,600.12
	12/15/03	3,624.02	23.80	23.80	Sheen	3,600.22
	12/22/03	3,624.02	23.60	23.60	Sheen	3,600.42
	12/31/03	3,624.02	23.80	23.81	0.01	3,600.22

*Elevations Based on the North American Vertical Datum of 1929.*

TABLE 2

## CONCENTRATIONS OF BTEX IN GROUNDWATER

LINK ENERGY  
 MONUMENT 11  
 LEA COUNTY, NEW MEXICO  
 ETGI PROJECT #LI 2054

*All results are reported in mg/L.*

SAMPLE DATE	SAMPLE DATE	EPA Method SW 846 - 8260				
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE
MW - 1	05/03/00	<0.001	<0.001	<0.001	<0.001	<0.001
	08/30/00	<0.001	<0.001	<0.001	<0.001	<0.001
	11/17/00	<0.001	<0.001	<0.001	<0.001	<0.001
	03/07/01	<0.001	<0.001	<0.001	<0.001	<0.001
	05/23/01	<0.005	<0.005	<0.005	<0.005	
	08/27/01	<0.001	<0.001	<0.001	<0.001	<0.002
	10/24/01	<0.001	<0.001	<0.001	<0.001	<0.002
	02/11/02	<0.001	<0.001	<0.001	<0.001	<0.002
	05/16/02	<0.001	<0.001	<0.001	<0.001	<0.001
	09/10/02	<0.001	<0.001	<0.001	<0.001	<0.001
	11/15/02	<0.001	<0.001	<0.001	<0.001	<0.001
	02/11/03	<0.001	<0.001	<0.001	<0.001	<0.001
	05/13/03	<0.001	<0.001	<0.001	<0.001	<0.001
	08/22/03	<0.001	<0.001	<0.001	<0.001	<0.001
	12/15/03	<0.001	<0.001	<0.001	<0.002	<0.001
MW - 2	05/03/00	<0.001	<0.001	<0.001	<0.001	<0.001
	08/30/00	<0.001	<0.001	<0.001	<0.001	<0.001
	11/17/00	<0.001	<0.001	<0.001	<0.001	<0.001
	03/07/01	<0.001	<0.001	<0.001	<0.001	<0.001
	05/23/01	<0.005	<0.005	<0.005	<0.005	
	08/27/01	<0.001	<0.001	<0.001	<0.001	<0.002
	10/24/01	<0.001	<0.001	<0.001	<0.001	<0.002
	02/11/02	<0.001	<0.001	<0.001	<0.001	<0.002
	05/16/02	<0.001	<0.001	<0.001	<0.001	<0.001
	09/10/02	<0.001	<0.001	<0.001	<0.001	<0.001
	11/15/02	<0.001	<0.001	<0.001	<0.001	<0.001
	02/11/03	<0.001	<0.001	<0.001	<0.001	<0.001
	05/13/03	<0.001	<0.001	<0.001	<0.001	<0.001
	08/22/03	<0.001	<0.001	<0.001	<0.001	<0.001
	12/15/03	<0.001	<0.001	<0.001	<0.002	<0.001
MW - 3	05/03/00	0.004	0.002	0.001	<0.001	<0.001
	08/03/00	0.001	0.001	0.002	<0.001	<0.001
	11/17/00	<0.001	<0.001	<0.001	<0.001	<0.001
	03/07/01	0.002	<0.001	<0.001	<0.001	<0.001
	05/23/01	<0.005	<0.005	<0.005	<0.005	
	08/27/01	<0.001	<0.001	<0.001	<0.001	<0.002
	10/24/01	<0.001	<0.001	<0.001	<0.001	<0.002
	02/11/02	<0.001	<0.001	<0.001	<0.001	<0.002
	05/16/02	<0.001	<0.001	<0.001	<0.001	<0.001
	09/10/02	<0.001	<0.001	<0.001	<0.001	<0.001
	11/15/02	<0.001	<0.001	<0.001	<0.001	<0.001

TABLE 2

## CONCENTRATIONS OF BTEX IN GROUNDWATER

LINK ENERGY  
 MONUMENT 11  
 LEA COUNTY, NEW MEXICO  
 ETGI PROJECT #LI 2054

*All results are reported in mg/L.*

SAMPLE DATE	SAMPLE DATE	EPA Method SW 846 - 8260				
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE
MW - 3	02/11/03	<0.001	<0.001	<0.001	<0.001	<0.001
	05/13/03	<0.001	<0.001	<0.001	<0.001	<0.001
	08/22/03	<0.001	<0.001	<0.001	<0.001	<0.001
	12/15/03	0.001	<0.001	<0.001	<0.002	<0.001
MW - 4	05/13/03	0.002	<0.001	0.006	0.035	0.004
	12/15/03	0.003	<0.001	0.005	0.035	0.002
EB - 1	08/30/00	<0.001	<0.001	<0.001	<0.001	<0.001
	11/17/00	<0.001	<0.001	<0.001	<0.001	<0.001
	03/07/01	<0.001	<0.001	<0.001	<0.001	<0.001
	05/23/01	<0.005	0.016	<0.005	<0.005	
	08/27/01	<0.001	<0.001	<0.001	<0.001	<0.001
	10/24/01	<0.001	<0.001	<0.001	<0.001	<0.001
	02/11/02	<0.001	<0.001	<0.001	<0.001	<0.001
	05/16/02	<0.001	<0.001	<0.001	<0.001	<0.001
	09/10/02	<0.001	<0.001	<0.001	<0.001	<0.001

*Note: m,p and o Xylenes combined when analyzed by Trace Laboratories, Inc. only.*

*Note: "EB-1" refers to an equipment blank collected during sampling activities.*

**Appendix A**  
**Laboratory Reports**

**AnalySys**  
Inc.

# FILE

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**Client:** Environmental Tech Group  
**Attn:** Robert Edison  
**Address:** 2540 W. Maryland  
 Hobbs NM 88240  
**Phone:** 505 397-4882 **FAX:** 505 397-4701

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	<1	02/17/03	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	02/17/03	8260b	---	1.9	78	84.6	75.7
Ethylbenzene	<1	µg/L	1	<1	02/17/03	8260b	---	0.5	101.8	97.9	103.3
m,p-Xylenes	<1	µg/L	1	<1	02/17/03	8260b	---	1	103.8	98.3	105.4
o-Xylene	<1	µg/L	1	<1	02/17/03	8260b	---	0.6	101.4	96.1	103.7
Toluene	<1	µg/L	1	<1	02/17/03	8260b	---	8.4	91	84.3	87.4

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

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**Q**TMISYS  
WEC

3512 Montopolis Drive, Austin, TX 78744 &  
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Client: Environmental Tech Group  
Attn: Robert Edison

Project ID: Monument #11 EO 2054  
Sample Name: WEM1121103 MW-1

Report#/Lab ID#: 139436  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	88.8	80-120	---
Toluene-d8	8260b	102	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

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<b>Attn:</b>	Robert Edison
<b>Address:</b>	2540 W. Marland Hobbs NM 88240
<b>Phone:</b>	505 397-4882 FAX: 505 397-4701

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics:8260b/BTEX	---		---		02/17/03	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	02/17/03	8260b	---	1.9	78	84.6	75.7
Ethylbenzene	<1	µg/L	1	<1	02/17/03	8260b	---	0.5	101.8	97.9	103.3
m,p-Xylenes	<1	µg/L	1	<1	02/17/03	8260b	---	1	103.8	98.3	105.4
o-Xylene	<1	µg/L	1	<1	02/17/03	8260b	---	0.6	101.4	96.1	103.7
Toluene	<1	µg/L	1	<1	02/17/03	8260b	---	8.4	91	84.3	87.4

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Richard Laster

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Report#/Lab ID#: 139437	Report Date: 02/19/03
Project ID: Monument #11 EO 2054	
Sample Name: WEM1121103 MW-2	
Sample Matrix: water	
Date Received: 02/14/2003	Time: 13:00
Date Sampled: 02/11/2003	Time: 16:15

#### QUALITY ASSURANCE DATA<sup>1</sup>

**CONTLYSYS**  
INC.

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Client: Environmental Tech Group  
Attn: Robert Edison

Project ID: Monument #11 EO 2054  
Sample Name: WEM1121103 MW-2

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	96.4	80-120	---
Toluene-d8	8260b	98.3	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**AnalySys**  
m/s

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 Hobbs NM 88240  
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**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	<1	02/18/03	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	02/18/03	8260b	---	4.6	78.8	87.8	70.9
Ethylbenzene	<1	µg/L	1	<1	02/18/03	8260b	---	2.9	105	98.5	103.2
m,p-Xylenes	<1	µg/L	1	<1	02/18/03	8260b	---	1	107.5	97.9	105.1
o-Xylene	<1	µg/L	1	<1	02/18/03	8260b	---	3.8	105.7	95.3	103.2
Toluene	<1	µg/L	1	<1	02/18/03	8260b	---	5.3	89.8	85.9	81.6

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 Richard Laster

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Report#Lab ID#: 1:39438	Report Date: 02/19/03
Project ID: Monument #11 EO 2054	
Sample Name: WEM1121103 MW-3	
Sample Matrix: water	
Date Received: 02/14/2003	Time: 13:00
Date Sampled: 02/11/2003	Time: 16:30

**QUALITY ASSURANCE DATA 1**

**QNTL Y545**

MTI  
Client: Environmental Tech Group  
Attn: Robert Edison

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	96.5	80-120	---
Toluene-d8	8260b	102	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

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Project ID: Monument#11 EO 2054  
Report#Lab ID#: 139438  
Sample Name: WEM1121103 MW-3  
Sample Matrix: water



# FILE

ANALYST  
R. Laster

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Client: Environmental Tech Group  
Attn: Ken Dutton  
Address: 2540 W. Maryland  
Hobbs,  
NM 88240  
Phone: 505 397-4882 FAX: 505 397-4701

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	<1	05/24/03	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	05/24/03	8260b	---	7.3	91.8	86.3	99.6
Ethylbenzene	<1	µg/L	1	<1	05/24/03	8260b	---	4.4	106.7	105	103
m,p-Xylenes	<1	µg/L	1	<1	05/24/03	8260b	---	3.4	109.8	108.4	110.1
o-Xylene	<1	µg/L	1	<1	05/24/03	8260b	---	5.7	100	108.3	109.3
Toluene	<1	µg/L	1	<1	05/24/03	8260b	---	7.4	96	89.6	105.2

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Richard Laster

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**CHI** 5

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group  
Attn: Ken Dutton

Project ID: EO 2054  
Sample Name: MW-1

Report# / Lab ID#: 142915  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	92.9	80-120	---
Toluene-d8	8260b	103	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**ANALYSIS**

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**Attn:** Ken Dutton  
**Address:** 2540 W. Marland  
 Hobbs,  
 NM 88240  
**Phone:** 505 397-4882    **FAX:** 505 397-4701

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		05/24/03	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	05/24/03	8260b	---	7.3	91.8	86.3	99.6
Ethylbenzene	<1	µg/L	1	<1	05/24/03	8260b	---	4.4	106.7	105	103
m,p-Xylenes	<1	µg/L	1	<1	05/24/03	8260b	---	3.4	109.8	108.4	110.1
o-Xylene	<1	µg/L	1	<1	05/24/03	8260b	---	5.7	100	108.3	109.3
Toluene	<1	µg/L	1	<1	05/24/03	8260b	---	7.4	96	89.6	105.2

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**CHROMAS**

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(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group  
Attn: Ken Dutton

Project ID: EO 2054  
Sample Name: MW-2

Report# /Lab ID#: 142916  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	99.9	80-120	---
Toluene-d8	8260b	107	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**AnalySys**

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 Hobbs,  
 NM 88240  
**Phone:** 505 397-4882    **FAX:** 505 397-4701

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	05/24/03	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	05/24/03	8260b	J	7.3	91.8	86.3	99.6
Ethylbenzene	<1	µg/L	1	<1	05/24/03	8260b	---	4.4	106.7	105	103
m,p-Xylenes	<1	µg/L	1	<1	05/24/03	8260b	---	3.4	109.8	108.4	110.1
o-Xylene	<1	µg/L	1	<1	05/24/03	8260b	---	5.7	100	108.3	109.3
Toluene	<1	µg/L	1	<1	05/24/03	8260b	---	7.4	96	89.6	105.2

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 Richard Laster

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Report# /Lab ID#: 142917	Report Date: 05/28/03
Project ID: EO 2054	
Sample Name: MW-3	
Sample Matrix: water	
Date Received: 05/21/2003	Time: 09:35
Date Sampled: 05/13/2003	Time: 03:00

**QUALITY ASSURANCE DATA<sup>1</sup>**

*7/17/03*

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client:	Environmental Tech Group	Project ID:	EO 2054
Attn:	Ken Dutton	Sample Name:	MW-3
REPORT OF SURROGATE RECOVERY			

Client:	Environmental Tech Group	Project ID:	EO 2054	
Attn:	Ken Dutton	Sample Name:	MW-3	
Report# /Lab ID#: 142917				
Sample Matrix: water				
Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	99	80-120	---
Toluene-d8	8260b	106	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**Exceptions Report:**

Report #/Lab ID#: 142917	Matrix: water
Client: Environmental Tech Group	Attn: Ken Dutton
Project ID: EO 2054	
Sample Name: MW-3	

**Sample Temperature/Condition <=6°C**

The typical sample temperature criteria (except for metals by ICP, GFAA and AA, and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

**Sample Bottles & Preservation**

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

**J flag Discussion**

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

**Comments pertaining to Data Qualifiers and QC data:**

Parameter	Qualif	Qualif	Comment
Benzene		J	See J-flag discussion above.

**Notes:**

**ANALYSYS**

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 2209 N. Padre Island Dr., Corpus Christi, TX 78408  
 (512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Tech Group  
**Attn:** Ken Dutton  
**Address:** 2540 W. Marland  
 Hobbs,  
 NM 88240  
**Phone:** 505 397-4882      **FAX:** 505 397-4701

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		05/27/03	8260b	---	---	---	---	---
Benzene	2.28	µg/L	1	<1	05/27/03	8260b	---	7.3	91.8	86.3	99.6
Ethylbenzene	5.84	µg/L	1	<1	05/27/03	8260b	---	4.4	106.7	105	103
m,p-Xylenes	34.9	µg/L	1	<1	05/27/03	8260b	---	3.4	109.8	108.4	110.1
o-Xylene	3.62	µg/L	1	<1	05/27/03	8260b	---	5.7	100	108.3	109.3
Toluene	<1	µg/L			05/27/03	8260b	---	7.4	96	89.6	105.2

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

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**Q/TTL/VS**

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(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group  
Attn: Ken Dutton

Project ID: EO 2054  
Sample Name: MW-4

Report#Lab ID#: 142918  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	96.4	80-120	---
Toluene-d8	8260b	99.3	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.



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0 5

Client: Environmental Tech Group  
Attn: Robert Eddison  
Address: 2540 W. Marland  
Hobbs  
Phone: 505 397-4882 FAX: 505 397-4701

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method	Data Qual <sup>6</sup>	Prec. <sup>7</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	<1	08/29/03	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	08/29/03	8260b	---	10.2	95.8	89	87
Ethylbenzene	<1	µg/L	1	<1	08/29/03	8260b	---	0.8	111.7	113.1	110.4
m,p-Xylenes	<1	µg/L	1	<1	08/29/03	8260b	---	4.9	108.3	108.8	109.5
o-Xylene	<1	µg/L	1	<1	08/29/03	8260b	---	2.3	110	110.4	110.2
Toluene	<1	µg/L	1	<1	08/29/03	8260b	---	8	98.1	90.4	89.4

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Respectfully Submitted,

*Richard Lester*  
*Richard Lester*

Richard Lester

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Report#/ <b>Lab ID#: 146591</b>	Report Date: 09/03/03
Project ID: EO 2054 Mon.11	
Sample Name: MW-1	
Sample Matrix: water	
Date Received: 08/26/2003	Time: 12:00
Date Sampled: 08/22/2003	Time: 13:00

**QUALITY ASSURANCE DATA<sup>1</sup>**

*Q* *T* *E* *L* *I* *P* *S*

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group  
Attn: Robert Eidsom

Project ID: EO 2054 Mon.11  
Sample Name: MW-1

Report#Lab ID#: 146591  
Sample Matrix: water

REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	96.4	80-120	---
Toluene-d8	8260b	107	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

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**Client:** Environmental Tech Group  
**Attn:** Robert Eidsen  
**Address:** 2540 W. Marland  
 Hobbs NM 88240  
**Phone:** 505 397-4882 **FAX:** 505 397-4701

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	---	08/29/03	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	08/29/03	8260b	---	10.2	95.8	89	87
Ethylbenzene	<1	µg/L	1	<1	08/29/03	8260b	---	0.8	111.7	113.1	110.4
m,p-Xylenes	<1	µg/L	1	<1	08/29/03	8260b	---	4.9	108.3	108.8	109.5
o-Xylene	<1	µg/L	1	<1	08/29/03	8260b	---	2.3	110	110.4	110.2
Toluene	<1	µg/L	1	<1	08/29/03	8260b	---	8	98.1	90.4	89.4

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Respectfully Submitted,

*Richard Laster*  
 Richard Laster

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**07** **14** **15**

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Client: Environmental Tech Group  
Attn: Robert Eidson

Project ID: EO 2054 Mon.11  
Sample Name: MW-2

Report#/Lab ID#: 146592  
Sample Matrix: water

#### REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	101	80-120	---
Toluene-d8	8260b	106	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**Q** **1** **1** **1** **1** **1** **5**

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**Client:** Environmental Tech Group  
**Attn:** Robert Eidsen  
**Address:** 2540 W. Marland  
 Hobbs  
**Phone:** 505 397-4882    **FAX:** 505 397-4701

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	---	---	08/29/03	8260b	---	---	---	---	---	---
Benzene	<1	µg/L	1	<1	08/29/03	8260b	J	10.2	95.8	89	87
Ethylbenzene	<1	µg/L	1	<1	08/29/03	8260b	---	0.8	111.7	113.1	110.4
m,p-Xylenes	<1	µg/L	1	<1	08/29/03	8260b	J	4.9	108.3	108.8	109.5
o-Xylene	<1	µg/L	1	<1	08/29/03	8260b	---	2.3	110	110.4	110.2
Toluene	<1	µg/L	1	<1	08/29/03	8260b	---	8	98.1	90.4	89.4

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Respectfully Submitted,  
 Richard J. Easter

Richard J. Easter

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Report#/Lab ID#: 146593	Report Date: 09/03/03
Project ID: EO 2054 Mon.11	
Sample Name: MW-3	
Sample Matrix: water	
Date Received: 08/26/2003	Time: 12:00
Date Sampled: 08/22/2003	Time: 14:00

#### QUALITY ASSURANCE DATA<sup>1</sup>

**07** **17** **27** **37** **47** **57** **67** **77** **87**

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Client: Environmental Tech Group  
Attn: Robert Edson

Project ID: EO 2054 Mon.11  
Sample Name: MW-3

Report#/Lab ID#: 146593  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	105	80-120	---
Toluene-d8	8260b	108	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 146593 Matrix: water  
Client: Environmental Tech Group Attn: Robert Eidsen  
Project ID: EO 2054 Mon.11  
Sample Name: MW-3

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex., in a bottle with no cooler).

### Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (e.g., the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
Benzene	J	See J-flag discussion above.
m,p-Xylenes	J	See J-flag discussion above.

Notes:



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 2209 N. Padre Island Dr., Corpus Christi, TX 78408  
 (512) 385-5886 • FAX (512) 385-7411

**5**

Client: Environmental Tech Group  
 Attn: Jerry Brian  
 Address: 2540 W. Marland Hobbs NM 88240  
 Phone: (505) 397-4882 FAX: (505) 397-4701

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	ug/L	---	<1	12/25/03	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	ug/L	1	<1	12/25/03	8260b	---	1.6	91.5	92.3	96.5
Ethylbenzene	<1	ug/L	1	<1	12/25/03	8260b	---	1.9	101.5	105.6	103.5
m,p-Xylenes	<2	ug/L	2	<2	12/25/03	8260b	---	1.8	103.2	107.5	104.6
o-Xylene	<1	ug/L	1	<1	12/25/03	8260b	---	1.7	104	107.8	106.7
Toluene	<1	ug/L	1	<1	12/25/03	8260b	---	1	96	100.3	101.7

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Respectfully Submitted,  
  
 Richard Elton

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**2209 N Padre Island Dr., Corpus Christi, TX 78408**  
**(512) 385-5386 • FAX (512) 385-7411**

Project ID: EO 2054 Mon-11  
Sample Name: MW-1

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,1,2-Dichloroethane-d4	8260b	99.1	80-120	---
Toluene-d8	8260b	104	88-110	---

Data Qualifiers: D = Surrogates diluted and X = Surrogates outside advisory recovery limits.

Report Date: 12/30/03  
Page#: 2

7 5

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**Client:** Environmental Tech Group  
**Attn:** Jerry Brian  
**Address:** 2540 W. Maryland  
            Robbs  
**Phone:** (505) 397-4882    **FAX:** (505) 397-4701

#### REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		12/25/03	8260b(5030/5035)	---	---	---	---	---
Benzene	<1	µg/L	1	<1	12/25/03	8260b	---	1.6	91.5	92.3	96.5
Ethylbenzene	<1	µg/L	1	<1	12/25/03	8260b	---	1.9	101.5	105.6	103.5
m,p-Xylenes	<2	µg/L	2	<2	12/25/03	8260b	---	1.8	103.2	107.5	104.6
o-Xylene	<1	µg/L	1	<1	12/25/03	8260b	---	1.7	104	107.8	106.7
Toluene	<1	µg/L	1	<1	12/25/03	8260b	---	1	96	100.3	101.7

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Respectfully Submitted,  
  
 Richard Elton

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**5**

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group  
Attn: Jerry Brian

Project ID: EO 2054 Mon-11  
Sample Name: MW-2

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	100	80-120	---
Toluene-d8	8260b	106	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

Report# /Lab ID#: 151289  
Sample Matrix: water

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Environmental Tech Group  
Attn: Jerry Brian  
Address: 2540 W. Maryland  
            Hobbs  
Phone: (505) 397-4882     FAX: (505) 397-4701

REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	<1	12/30/03	8260b(5030/5035)	---	---	---	---	---
Benzene	1.14	µg/L	1	<1	12/30/03	8260b	---	1.6	91.5	92.3	96.5
Ethylbenzene	<1	µg/L	1	<1	12/30/03	8260b	---	1.9	101.5	105.6	103.5
m,p-Xylenes	<2	µg/L	2	<2	12/30/03	8260b	---	1.8	103.2	107.5	104.6
o-Xylene	<1	µg/L	1	<1	12/30/03	8260b	---	1.7	104	107.8	106.7
Toluene	<1	µg/L	1	<1	12/30/03	8260b	---	1	96	100.3	101.7

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,

  
Richard Elton

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S3 =MS and/or PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

Report#Lab ID#: 151290     Report Date: 12/30/03  
Project ID: EO 2054 Mon-11  
Sample Name: MW-3  
Sample Matrix: water  
Date Received: 12/23/2003     Time: 12:00  
Date Sampled: 12/15/2003     Time: 02:30

QUALITY ASSURANCE DATA<sup>1</sup>

**5**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client:	Environmental Tech Group	Project ID: EO 2054 Mon-11
Attn:	Jerry Brian	Sample Name: MW-3

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	98	80-120	---
Toluene-d8	8260b	104	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 151290 Matrix: water  
Client: Environmental Tech Group Attn: Jerry Brian  
Project ID: EO 2054 Mon-11  
Sample Name: MW-3

Sample Temperature/Condition  $\leq 6^{\circ}\text{C}$

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is  $\leq 6^{\circ}\text{C}$ . Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

Sample Bottles & Preservation

Sample received  
 Sample received  
 Sample received

A J flag data qualifier levels/blanks and other Because the reported presence and relative

Comments pertaining to Data Qualifiers and QC data:

Comments per training to Date			
Parameter	Qualif	Comment	
Volatile organics-8260b/BTEX	H	Hold time for this parameter exceeded by 1* days.	

Notes

**3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411**

<b>Client:</b>	Environmental Tech Group		
<b>Attn:</b>	Jerry Brian		
<b>Address:</b>	2540 W. Maryland	NM	88240
<b>Hobbs</b>			
<b>Phone:</b>	(505) 397-4882	<b>FAX:</b>	(505) 397-4701

REPORT OF ANALYSIS

Parameter	Volatile organics-8260b/BTEX	Result	Units	RQL <sup>5</sup>	Blank	Date	Method 6	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Benzene	2.89	$\mu\text{g/L}$	1	<1	12/30/03	8260b(5030/5035)	--	--	1.6	91.5	92.3	96.5
Ethylbenzene	5.07	$\mu\text{g/L}$	1	<1	12/30/03	8260b	--	--	1.9	101.5	105.6	103.5
m,p-Xylenes	34.9	$\mu\text{g/L}$	2	<2	12/30/03	8260b	--	--	1.8	103.2	107.5	104.6
$\alpha$ -Xylene	2.01	$\mu\text{g/L}$	1	<1	12/30/03	8260b	--	--	1.7	104	107.8	106.7
Toluene	<1	$\mu\text{g/L}$	1	<1	12/30/03	8260b	--	--	1	96	100.3	101.7

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2003, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully submitted,  
  
Richard E. Lutz

Richard Elton

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recover) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than (<) values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M=Matrix interference.

QUALITY ASSURANCE DATA

<b>Report#</b>	<b>Lab ID#:</b>	151291	<b>Report Date:</b>	12/30/03
<b>Project ID:</b>	EO 2034 Mon-11			
<b>Sample Name:</b>	MW-4			
<b>Sample Matrix:</b>	water			
<b>Date Received:</b>	12/23/2003		<b>Time:</b>	12:00
<b>Date Sampled:</b>	12/15/2003		<b>Time:</b>	03:00

Page#: 1 Report Date: 12/30/03

**5**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group  
Attn: Jerry Brian

Project ID: EO 2054 Mon-11  
Sample Name: MW-4

Report#/Lab ID#: 151291  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	103	80-120	---
Toluene-d8	8260b	101	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 151291 Matrix: water  
Client: Environmental Tech Group Attn: Jerry Brian  
Project ID: EO 2054 Mon-11  
Sample Name: MW-4

### Sample Temperature/Condition $\leq 6^{\circ}\text{C}$

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is  $\leq 6^{\circ}\text{C}$ . Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (e.g. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
Volatile organics-3260b/BTEX	H	Hold time for this parameter exceeded by 1* days.

Notes:



## Sample Analysis Case Narrative & Exceptions Report

Client: Environmental Tech Group Project ID: EO 2054 Mon-11

Attn: Jerry Brian

for Sample #'s: 151288 thru 151291

Analyzed by AnalySys, Inc.

Final Review Date: 1/5/2004 By:  (R. Elton)

### Case Narrative:

1. The samples represented on the enclosed chain-of-custody were received just prior to the Christmas Holiday on 12/23/2003 in conjunction with a large number of other samples from ETGI. As is true for many of the samples received from ETGI that day, the samples for this project had been sampled much earlier, in this case on 12/15/2003 and had been held for more than half the available hold time for the BTEX test requested. AnalySys, Inc. attempted to get as many of these samples as possible analyzed within the 14 day hold time window, however, two of the samples in this project grouping could not be analyzed until after the Christmas holiday and subsequently exceeded hold times by one day for the BTEX analysis. Had these samples not been held for a week prior to shipping (just before a holiday) the hold times would have been met.

In this instance, exceeding the hold times probably has not significantly affected data quality; since not even "J" flags were observed in these two samples.

# **EOTT ENERGY LLC**

P.O. BOX 4666  
HOUSTON, TEXAS 77210-4666

March 31, 2003

Mr. Randolph Bayliss, P.E.  
Hydrologist  
Oil Conservation Division  
State of New Mexico  
1220 Sout St. Francis Drive  
Santa Fe NM 87505

Dear Mr. Bayliss;

EOTT Energy, LLC is an Operator of crude oil pipelines and terminal facilities located in the state of New Mexico. EOTT actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and workplans developed in consultation with the New Mexico Oil Conservation Division. Consistent with the rules and regulations of the New Mexico OCD, EOTT hereby submits its annual monitoring reports for the following titled sites:

TNM 98-02	Section 31, Township 19 South, Range 37 East Lea County NM
TNM 97-16	Section 12, Township 24 South, Range 37 East, Lea County NM
Monument 19	Section 32, Township 19 South, Range 37 East, Lea County NM
TNM SPS-11	Section 18, Township 18 South, Range 36 East, Lea County NM
TNM 97-18	Section 28, Township 20 South, Range 37 East, Lea County NM
HDO 90-23	Section 6, Township 20 South, Range 37 East, Lea County NM
Monument 2	Section 06 & 07, Township 20 South, Range 38 East, Lea County NM
Leo (Flap) Sims	Section 27, Township 19 South, Range 37 East, Lea County NM
Monument 11	Section 30, Township 19 South, Range 37 East, Lea County NM
Monument 17	Section 17, Township 19 South, Range 37 East, Lea County NM
TNM 98-05A	Section 26, Township 21 South, Range 37 East, Lea County NM
LF 37	Sections 19 & 20, Township 19 South, Range 37 East, Lea County NM
TNM 97-04	Section 11, Township 16 South, Range 35 East, Lea County NM
LF-59	Section 32, Township 19 South, Range 37 East, Lea County NM
Monument Barber 10" Sour	Section 32, Township 19 South, Range 37 East, Lea County NM

ETGI prepared these documents and has vouched for their accuracy and completeness, and on behalf of EOTT Energy, I have personally reviewed the documents and interviewed ETGI in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that EOTT Energy submits these Annual Compliance Monitoring Reports for the above 15 facilities.

I look forward to scheduling a meeting with you in the second or third week of March as you schedule allows, which will allow for an opportunity to review and discuss the results of the monitoring. If you have questions in the interim, please contact me at (713) 993-5047.

Sincerely,



Bill Von Drehle  
Director Environmental  
EOTT ENERGY LLC

Cc: Frank Hernandez

ANNUAL MONITORING REPORT

IR-120

MAR 25 2003

fls S/G 103

EOTT ENERGY, LLC  
MONUMENT 11  
LEA COUNTY, NEW MEXICO  
NE ¼, NE ¼ SECTION 30, TOWNSHIP 19 SOUTH, RANGE 37 EAST

PREPARED FOR:

EOTT ENERGY, LLC  
5805 EAST HIGHWAY 80  
MIDLAND, TEXAS 79701

PREPARED BY:

ENVIRONMENTAL TECHNOLOGY GROUP, INC.  
2540 WEST MARLAND  
HOBBS, NEW MEXICO 88240

April 2003



Robert B. Eidson  
Geologist / Senior Project Manager



Chance I. Johnson  
New Mexico Regional Manager

## **TABLE OF CONTENTS**

**INTRODUCTION**

**FIELD ACTIVITIES**

**GROUNDWATER GRADIENT**

**LABORATORY RESULTS**

**SUMMARY**

**FIGURES**

Figure 1 – Site Location Map

Figure 2 – Inferred Groundwater Gradient Map

Figure 3 – NMOCD Site Map

**TABLES**

Table 1 – Groundwater Elevation

Table 2 – Groundwater Chemistry

**APPENDICES**

Appendix A – Laboratory Reports

## **INTRODUCTION**

Environmental Technology Group, Inc. (ETGI), on behalf of EOTT Energy, LLC (EOTT), prepared this Annual Monitoring Report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 1 of each year. This report is intended to be viewed as a complete document with figures, attachments, tables and text. The report presents the results of the quarterly groundwater monitoring events only. For reference, the Site Location Map is provided as Figure 1.

Groundwater monitoring was conducted during four quarterly events in calendar year 2002 to assess the levels and extent of dissolved phase and phase-separated petroleum hydrocarbon (PSH) constituents. The groundwater monitoring events consisted of measuring static water levels in the monitor wells, checking for the presence of PSH, and purging and sampling of each well exhibiting sufficient recharge. Monitor wells containing measurable levels of PSH were not sampled.

## **FIELD ACTIVITIES**

The site monitor wells were gauged and sampled on February 11, May 16, September 10 and November 15, 2002. During each sampling event, the monitor wells designated to be sampled were purged of approximately three well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos Pump. Groundwater was allowed to recharge and samples were obtained using disposable Teflon samplers. Water samples were collected in clean glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a polystyrene tank and disposed of by Pate Trucking, Hobbs, New Mexico or Vista Trucking of Eunice, New Mexico utilizing a licensed disposal facility (NMOCD AO SWD-730).

## **GROUNDWATER GRADIENT**

Locations of the monitor wells and the inferred groundwater gradient, as measured on November 15, 2002, are depicted on Figures 2 and 3, the Inferred Groundwater Gradient Map and the NMOCD Gradient Map. The groundwater elevation data is provided as Table 1. Groundwater elevation contours, generated from the final quarterly event of calendar year 2002 water level measurements, indicated a general gradient of 0.009 ft/ft to the southeast as measured between groundwater monitor wells MW-4 and MW-1. The depth to groundwater, as measured from the top of the well casing, ranged between 23.70 to 26.16 feet in the shallow alluvial aquifer.

A measurable thickness of PSH was detected in monitor well MW-4 during the annual monitoring period. A maximum thickness of 0.32 foot was measured and is reflected on Table 1, Groundwater Elevation data.

## **LABORATORY RESULTS**

Groundwater samples collected during the sampling events were delivered to AnalySys Inc., Austin, Texas for determination of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) constituent concentrations by EPA Method SW846-8260b. The cumulative groundwater chemistry data is provided as Table 2 and copies of the Laboratory Reports are provided as Appendix A.

Laboratory results obtained from all of the site groundwater samples obtained during the calendar year 2002 monitoring period indicate that dissolved phase benzene and BTEX constituent concentrations were below laboratory method detection limits in all of the on-site monitor wells.

## **SUMMARY**

This report presents the results of monitoring activities for the annual monitoring period of calendar year 2002. A measurable thickness of PSH was detected in monitor well MW-4 during the annual monitoring period. A maximum thickness of 0.32 foot was measured during the first sampling event of the reporting period. Approximately 6 gallons of PSH was recovered from the site during this reporting period by manual recovery methods. Recovered PSH was reintroduced into the EOTT transportation system at the Lea Station Facility, Monument, New Mexico.

Groundwater elevation contours, generated from the final quarterly event of calendar year 2002 water level measurements, indicated a general gradient of 0.009 ft/ft to the southeast.

Laboratory results from all of the site groundwater samples, obtained during the calendar year 2002 monitoring period, indicate that dissolved phase benzene and BTEX constituent concentrations were below laboratory method detection limits in all of the on-site monitor wells sampled this period.

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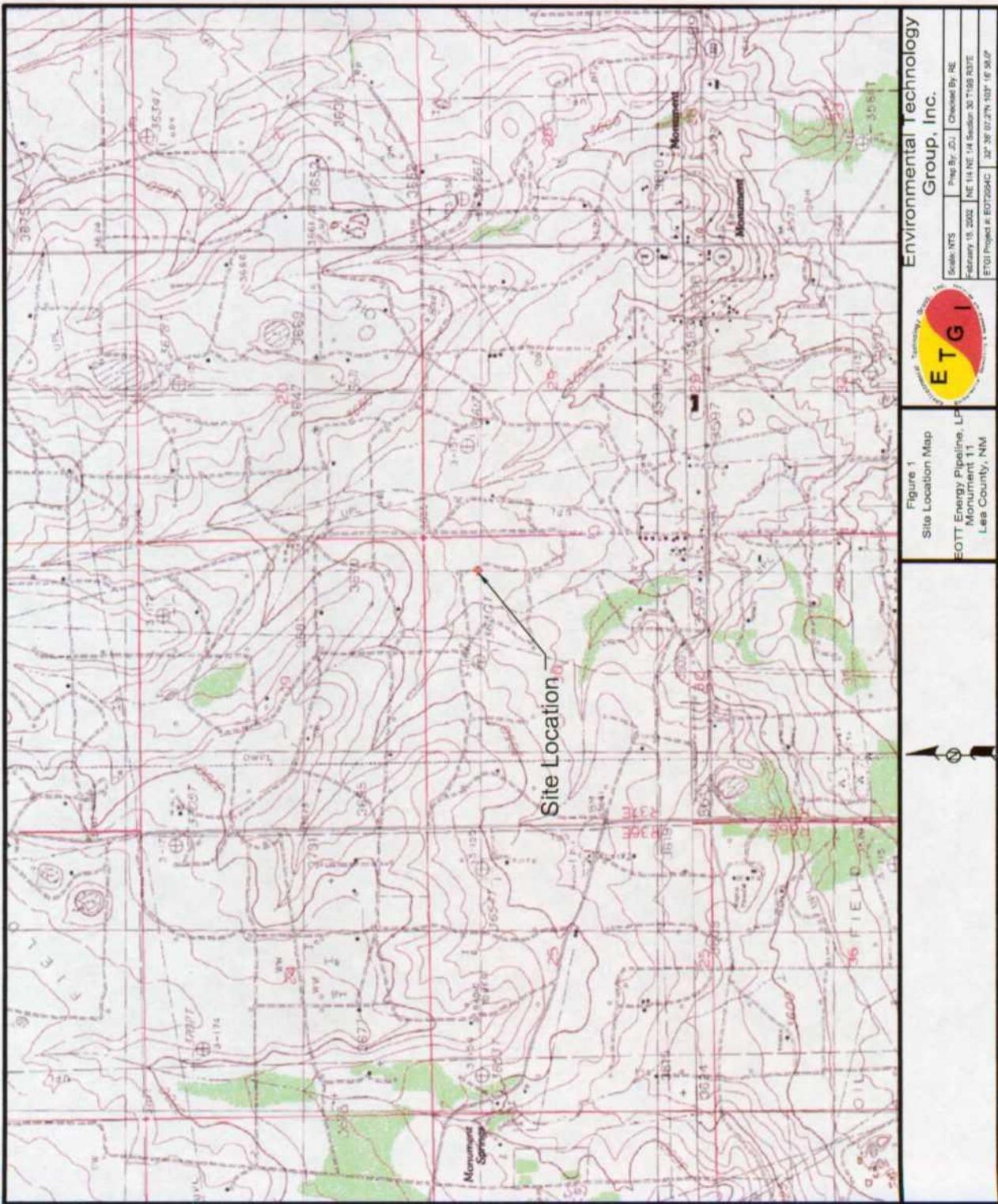
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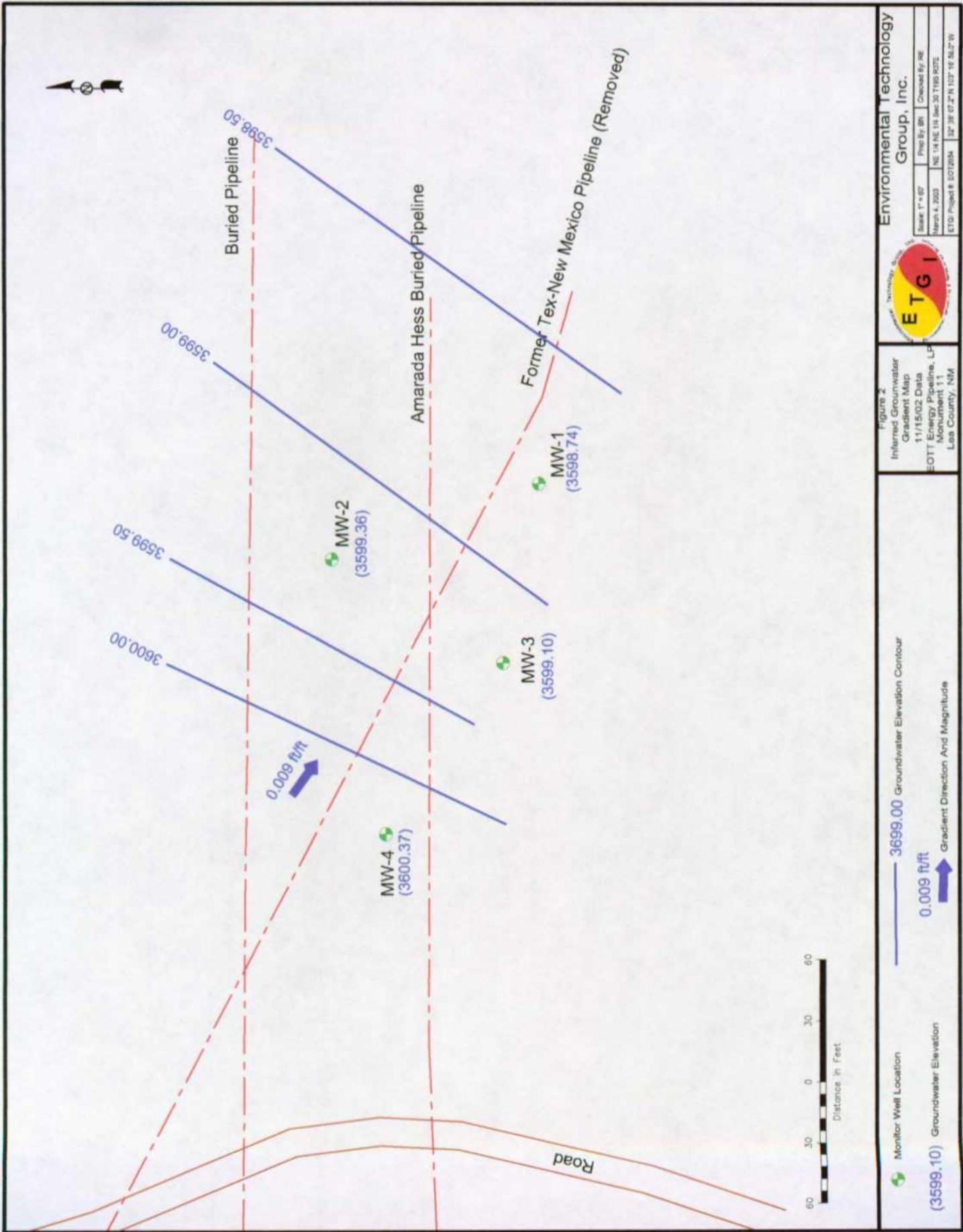
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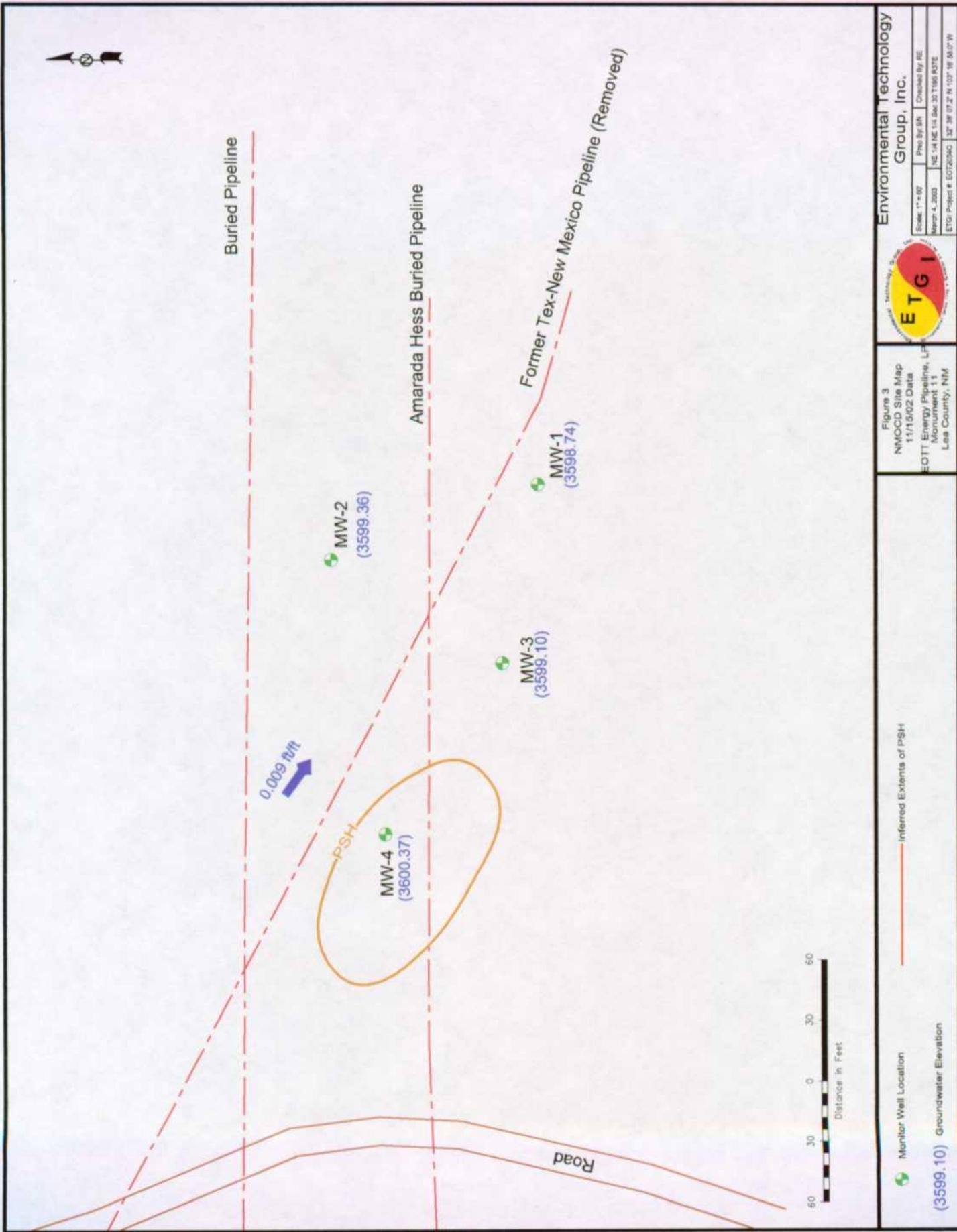
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Hobbs, New Mexico 88240

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Camille Reynolds  
Quality Control Review







**TABLE 1**  
**GROUNDWATER ELEVATION**

**EOTT ENERGY, LLC**  
**MONUMENT 11**  
**LEA COUNTY, NEW MEXICO**  
**ETGI PROJECT #EO 2054**

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 1	05/03/00	3,624.90	ND	27.04	0.00	3,597.86
	08/30/00	3,624.90	ND	26.19	0.00	3,598.71
	11/17/00	3,624.90	ND	26.20	0.00	3,598.70
	03/07/01	3,624.90	ND	26.15	0.00	3,598.75
	05/23/01	3,624.90	ND	26.15	0.00	3,598.75
	08/27/01	3,624.90	ND	26.17	0.00	3,598.73
	10/24/01	3,624.90	ND	26.15	0.00	3,598.75
	02/11/02	3,624.90	ND	26.11	0.00	3,598.79
	05/16/02	3,624.90	ND	26.12	0.00	3,598.78
	09/10/02	3,624.90	ND	26.16	0.00	3,598.74
	11/15/02	3,624.90	ND	26.16	0.00	3,598.74
MW - 2	05/03/00	3,624.91	ND	25.60	0.00	3,599.31
	08/30/00	3,624.91	ND	25.55	0.00	3,599.36
	11/17/00	3,624.91	ND	25.60	0.00	3,599.31
	03/07/01	3,624.91	ND	25.56	0.00	3,599.35
	05/23/01	3,624.91	ND	25.56	0.00	3,599.35
	08/27/01	3,624.91	ND	25.55	0.00	3,599.36
	10/24/01	3,624.91	ND	25.54	0.00	3,599.37
	02/11/02	3,624.91	ND	25.56	0.00	3,599.35
	05/16/02	3,624.91	ND	25.55	0.00	3,599.36
	09/10/02	3,624.91	ND	25.57	0.00	3,599.34
	11/15/02	3,624.91	ND	25.55	0.00	3,599.36
MW - 3	05/03/00	3,623.99	ND	24.91	0.00	3,599.08
	08/30/00	3,623.99	ND	24.88	0.00	3,599.11
	11/17/00	3,623.99	ND	24.92	0.00	3,599.07
	03/07/01	3,623.99	ND	24.88	0.00	3,599.11
	05/23/01	3,623.99	ND	24.90	0.00	3,599.09
	08/27/01	3,623.99	ND	24.89	0.00	3,599.10
	10/24/01	3,623.99	ND	24.88	0.00	3,599.11
	02/11/02	3,623.99	ND	24.89	0.00	3,599.10
	05/16/02	3,623.99	ND	24.86	0.00	3,599.13
	09/10/02	3,623.99	ND	24.91	0.00	3,599.08
	11/15/02	3,623.99	ND	24.89	0.00	3,599.10

TABLE 1  
GROUNDWATER ELEVATION

EOTT ENERGY, LLC  
MONUMENT 11  
LEA COUNTY, NEW MEXICO  
ETGI PROJECT #EO 2054

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 4	05/03/00	3,624.09	23.61	23.75	0.14	3,600.46
	08/30/00	3,624.09	23.31	23.61	0.30	3,600.74
	11/17/00	3,624.09	23.55	23.70	0.15	3,600.52
	03/07/01	3,624.09	23.60	23.82	0.22	3,600.46
	05/23/01	3,624.09	23.63	23.79	0.16	3,600.44
	08/27/01	3,624.09	23.46	23.52	0.06	3,600.62
	10/24/01	3,624.09	23.61	23.64	0.03	3,600.48
	02/11/02	3,624.09	23.57	23.89	0.32	3,600.47
	05/16/02	3,624.09	23.61	23.80	0.19	3,600.45
	09/10/02	3,624.09	23.60	23.74	0.14	3,600.47
	10/14/02	3,624.09	23.56	23.70	0.14	3,600.51
	11/15/02	3,624.09	23.76	23.74	0.02	3600.37
	12/27/02	3,624.09	23.77	23.78	0.01	3600.32

TABLE 2

## GROUNDWATER CHEMISTRY

EOTT ENERGY, LLC  
 MONUMENT 11  
 LEA COUNTY, NEW MEXICO  
 ETGI PROJECT #EO 2054

*All concentrations are in mg/L*

SAMPLE DATE	SAMPLE DATE	SW 846 - 8260b			
		BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES
MW - 1	05/03/00	<0.001	<0.001	<0.001	<0.001
	08/30/00	<0.001	<0.001	<0.001	<0.001
	11/17/00	<0.001	<0.001	<0.001	<0.001
	03/07/01	<0.001	<0.001	<0.001	<0.001
	05/23/01	<0.005	<0.005	<0.005	<0.005
	08/27/01	<0.001	<0.001	<0.001	<0.001
	10/24/01	<0.001	<0.001	<0.001	<0.001
	02/11/02	<0.001	<0.001	<0.001	<0.001
	05/16/02	<0.001	<0.001	<0.001	<0.001
	09/10/02	<0.001	<0.001	<0.001	<0.001
	11/15/02	<0.001	<0.001	<0.001	<0.001
MW - 2	05/03/00	<0.001	<0.001	<0.001	<0.001
	08/30/00	<0.001	<0.001	<0.001	<0.001
	11/17/00	<0.001	<0.001	<0.001	<0.001
	03/07/01	<0.001	<0.001	<0.001	<0.001
	05/23/01	<0.005	<0.005	<0.005	<0.005
	08/27/01	<0.001	<0.001	<0.001	<0.001
	10/24/01	<0.001	<0.001	<0.001	<0.001
	02/11/02	<0.001	<0.001	<0.001	<0.001
	05/16/02	<0.001	<0.001	<0.001	<0.001
	09/10/02	<0.001	<0.001	<0.001	<0.001
	11/15/02	<0.001	<0.001	<0.001	<0.001
MW - 3	05/03/00	0.004	0.002	0.001	<0.001
	08/03/00	0.001	0.001	0.002	<0.001
	11/17/00	<0.001	<0.001	<0.001	<0.001
	03/07/01	0.002	<0.001	<0.001	<0.001
	05/23/01	<0.005	<0.005	<0.005	<0.005
	08/27/01	<0.001	<0.001	<0.001	<0.001
	10/24/01	<0.001	<0.001	<0.001	<0.001
	02/11/02	<0.001	<0.001	<0.001	<0.001
	05/16/02	<0.001	<0.001	<0.001	<0.001
	09/10/02	<0.001	<0.001	<0.001	<0.001
	11/15/02	<0.001	<0.001	<0.001	<0.001
EB - 1	02/11/02	<0.001	<0.001	<0.001	<0.001
	05/16/02	<0.001	<0.001	<0.001	<0.001
	09/10/02	<0.001	<0.001	<0.001	<0.001

**AnalySys**  
Inc.

**COPV**

4221 Friedrich Lane, Suite 190, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 444-5896 • FAX (512) 447-4766

**Client:** Environmental Tech Group  
**Attn:** Ann Moore  
**Address:** 4600 West Wall  
 Midland Tx 79703  
**Phone:** 915 522-1139 **FAX:** 915 520-4310

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		02/20/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	02/20/02	8260b	---	2	89.7	90.3	85.8
Ethylbenzene	<1	µg/L	1	<1	02/20/02	8260b	---	1.5	95.9	96.6	100.7
m,p-Xylenes	<1	µg/L	1	<1	02/20/02	8260b	J	2.2	95.9	97.5	98.8
o-Xylene	<1	µg/L	1	<1	02/20/02	8260b	---	1.6	95.9	96.8	102.7
Toluene	<1	µg/L	1	<1	02/20/02	8260b	---	3.9	95.7	98.8	91

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Respectfully Submitted,

*Richard Laster*

Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL, B = Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

Report#/Lab ID#: 125713	Report Date: 02/22/02
Project ID: Monument 11 EOT 2054C	
Sample Name: MW 1	
Sample Matrix: water	
Date Received: 02/19/2002	Time: 09:51
Date Sampled: 02/11/2002	Time: 12:10

**QUALITY ASSURANCE DATA<sup>1</sup>**

**Monolytics**  
INC.

4221 Freidrich Lane, Suite 190, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78404-08  
(512) 444-5896 • FAX (512) 447-4766

**Client:** Environmental Tech Group  
**Attn:** Ann Moore

**Project ID:** Monument 11 EOT 2054C  
**Sample Name:** MW 1

**Report#/Lab ID#:** 125713  
**Sample Matrix:** water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	93.9	80-120	---
Toluene-d8	8260b	101	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 125713	Matrix: water	
Client: Environmental Tech Group		Attn: Ann Moore
Project ID: Monument 11 EOT 2054C		
Sample Name: MW 1		

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA, and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TNRCC-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (e.g. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
mp-Xylenes	J	See J-flag discussion above.

Notes:

**AnalySys**  
Inc.

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**Client:** Environmental Tech Group  
**Attn:** Ann Moore  
**Address:** 4600 West Wall  
 Midland Tx 79703  
**Phone:** 915 522-1139 **FAX:** 915 520-4310

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		02/20/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	02/20/02	8260b	---	2	89.7	90.3	85.8
Ethylbenzene	<1	µg/L	1	<1	02/20/02	8260b	---	1.5	95.9	96.6	100.7
m,p-Xylenes	<1	µg/L	1	<1	02/20/02	8260b	J	2.2	95.9	97.5	98.8
o-Xylene	<1	µg/L	1	<1	02/20/02	8260b	---	1.6	95.9	96.8	102.7
Toluene	<1	µg/L	1	<1	02/20/02	8260b	---	3.9	95.7	98.8	91

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

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(512) 444-5896 • FAX (512) 447-4766

Client: Environmental Tech Group  
Attn: Ann Moore

Project ID: Monument 11 EOT 2054C  
Sample Name: MW 2

Report# /Lab ID#: 125714  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	94.7	80-120	---
Toluene-d8	8260b	97.7	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**Exceptions Report:**

Report #/Lab ID#: 125714 Matrix: water  
Client: Environmental Tech Group Attn: Ann Moore  
Project ID: Monument 11 EOT 2054C  
Sample Name: MW 2

**Sample Temperature/Condition  $\leq 6^{\circ}\text{C}$** 

The typical sample temperature criteria (except for metals by ICP, GFAA, and AA and a very few other tests) is  $\leq 6^{\circ}\text{C}$ . Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

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**Comments pertaining to Data Qualifiers and QC data:**

Parameter	Qualif	Comment
m,p-Xylenes	J	See J-flag discussion above.

Notes:



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**Client:** Environmental Tech Group  
**Attn:** Ann Moore  
**Address:** 4600 West Wall  
Midland  
**Phone:** 915 522-1139  
**FAX:** 915 520-4310  
**Tx** 79703

REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method 6	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		02/21/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	02/20/02	8260b	1	2	89.7	90.3	85.8
Ethylbenzene	<1	µg/L	1	<1	02/21/02	8260b	---	1.5	95.9	96.6	100.7
m,p-Xylenes	<1	µg/L	1	<1	02/21/02	8260b	---	2.2	95.9	97.5	98.8
o-Xylene	<1	µg/L	1	<1	02/21/02	8260b	---	1.6	95.9	96.8	102.7
Toluene	<1	µg/L	1	<1	02/20/02	8260b	---	3.9	95.7	98.8	91

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Respectfully Submitted,  
*Richard Foster*

Dissertationen

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**Control Systems Inc.**

4221 Friedrich Lane, Suite 190, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 7840408  
(512) 444-5896 • FAX (512) 447-4766

Client: Environmental Tech Group  
Attn: Ann Moore

Project ID: Monument 11 EOT 2054C  
Sample Name: MW 3

Report#/Lab ID#: 125715  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	103	80-120	---
Toluene-d8	8260b	92.8	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 125715 Matrix: water  
Client: Environmental Tech Group Attn: Ann Moore  
Project ID: Monument 11 EOT 2054C  
Sample Name: MW<sup>3</sup>

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA, and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

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### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
Benzene	J	See J-flag discussion above.

Notes:

**AnalySys Inc.**

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 444-5396 • FAX (512) 447-4766

Client: Environmental Tech Group  
Attn: Ann Moore  
Address: 4600 West Wall  
Midland Tx 79703  
Phone: 915 522-1139 FAX: 915 520-4310

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		02/20/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	02/20/02	8260b	---	2	89.7	90.3	85.8
Ethylbenzene	<1	µg/L	1	<1	02/20/02	8260b	---	1.5	95.9	96.6	100.7
m,p-Xylenes	<1	µg/L	1	<1	02/20/02	8260b	---	2.2	95.9	97.5	98.8
o-Xylene	<1	µg/L	1	<1	02/20/02	8260b	---	1.6	95.9	96.8	102.7
Toluene	<1	µg/L	1	<1	02/20/02	8260b	---	3.9	95.7	98.8	91

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Respectfully Submitted,

*Richard Laster*

Richard Laster

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2209 N. Padre Island Dr., Corpus Christi, TX 7840408  
(512) 444-5896 • FAX (512) 447-4766

Client: Environmental Tech Group  
Attn: Ann Moore

Project ID: Monument 11 EOT 2054C

Sample Name: EB

Report#/Lab ID#: 125716  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	93.8	80-120	---
Toluene-d8	8260b	97.9	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.



*AnalySys Inc.*

**COPY**

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 444-5896 • FAX (512) 447-4766

**Client:** Environmental Tech Group  
**Attn:** Ken Dutton  
**Address:** 2540 W. Marland Hobbs,  
 NM 88240

**Phone:** 505 397-4882    **FAX:** 505 397-4701

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method	Data Qual <sup>6</sup>	Prec. <sup>7</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		05/20/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	05/20/02	8260b	---	12.2	100.6	114.1	100
Ethylbenzene	<1	µg/L	1	<1	05/20/02	8260b	---	0.8	99	105.8	102.6
m,p-Xylenes	<1	µg/L	1	<1	05/20/02	8260b	---	2.4	100	108.4	102.1
o-Xylene	<1	µg/L	1	<1	05/20/02	8260b	---	0.8	99.2	104.7	103.4
Toluene	<1	µg/L	1	<1	05/20/02	8260b	---	12.7	107.7	107.2	106.6

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Respectfully Submitted,

*Richard Laster*

Richard Laster

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Report# / Lab ID#: 129593	Report Date: 05/21/02
Project ID: Monument 11 EOT 2054C	
Sample Name: MW 1	
Sample Matrix: water	
Date Received: 05/17/2002	Time: 09:30
Date Sampled: 05/16/2002	Time: 10:30

**QUALITY ASSURANCE DATA<sup>1</sup>**

**Environmental**

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2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 444-5896 • FAX (512) 447-4766

Client: Environmental Tech Group  
Attn: Ken Dutton

Project ID: Monument 11 EOT 2054C  
Sample Name: MW 1

Report#/Lab ID#: 129593  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	95.7	80-120	---
Toluene-d8	8260b	101	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

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Inc.

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 (512) 444-5896 • FAX (512) 447-4766

**Client:** Environmental Tech Group  
**Attn:** Ken Dutton  
**Address:** 2540 W. Maryland  
 Hobbs,  
 NM 88240  
**Phone:** 505 397-4882    **FAX:** 505 397-4701

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		05/20/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	05/20/02	8260b	---	12.2	100.6	114.1	100
Ethylbenzene	<1	µg/L	1	<1	05/20/02	8260b	---	0.8	99	105.8	102.6
m,p-Xylenes	<1	µg/L	1	<1	05/20/02	8260b	---	2.4	100	108.4	102.1
o-Xylene	<1	µg/L	1	<1	05/20/02	8260b	---	0.8	99.2	104.7	103.4
Toluene	<1	µg/L	1	<1	05/20/02	8260b	---	12.7	107.7	107.2	106.6

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Respectfully Submitted,

*Richard Laster*  
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**Onalysys**  
Inc.

4221 Freidrich Lane, Suite 190, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 444-5396 • FAX (512) 447-4766

Client:	Environmental Tech Group	Project ID:	Monument 11 EOT 2054C
Attn:	Ken Dutton	Sample Name:	MW 2
<b>REPORT OF SURROGATE RECOVERY</b>			

Report#/Lab ID#: 129594  
Sample Matrix: water

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	94.1	80-120	---
Toluene-d8	8260b	101	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**AnalySys**  
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**Client:** Environmental Tech Group  
**Attn:** Ken Dutton  
**Address:** 2540 W. Maryland  
Hobbs,  
NM 88240  
**Phone:** 505 397-4882    **FAX:** 505 397-4701

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		05/20/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	05/20/02	8260b	J	12.2	100.6	114.1	100
Ethylbenzene	<1	µg/L	1	<1	05/20/02	8260b	---	0.8	99	105.8	102.6
m,p-Xylenes	<1	µg/L	1	<1	05/20/02	8260b	J	2.4	100	108.4	102.1
o-Xylene	<1	µg/L	1	<1	05/20/02	8260b	---	0.8	99.2	104.7	103.4
Toluene	<1	µg/L	1	<1	05/20/02	8260b	---	12.7	107.7	107.2	106.6

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 =MS and/or MSD recovery exceed advisory limits. S2 =Post digestion spike (PDS) recovery exceeds advisory limit. S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

**CHOLYS**

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(512) 444-5896 • FAX (512) 447-4766

Client: Environmental Tech Group  
Attn: Ken Dutton

Project ID: Monument 11 EOT 2054C  
Sample Name: MW 3

Report#Lab ID#: 129595  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	113	80-120	---
Toluene-d8	8260b	100	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**Exceptions Report:**

Report #/Lab ID#: 129595 Matrix: water  
Client: Environmental Tech Group Attn: Ken Dutton  
Project ID: Monument 11 EOT 2054C  
Sample Name: MW 3

**Sample Temperature/Condition <=6°C**

The typical sample temperature criteria (except for metals by ICP, GFAA, and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

**Sample Bottles & Preservation**

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

**J flag Discussion**

A J flag data qualifier indicates (as required under TNRCC-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion/fragment noise.)

**Comments pertaining to Data Qualifiers and QC data:**

Parameter	Qualif	Comment
Benzene	J	See J-flag discussion above.
m,p-Xylenes	J	See J-flag discussion above.

Notes:

**AnalySys**  
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**Client:** Environmental Tech Group  
**Attn:** Ken Dutton  
**Address:** 2540 W. Marland  
Hobbs,  
NM 88240  
**Phone:** 505 397-4882      **FAX:** 505 397-4701

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		05/20/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	05/20/02	8260b	---	12.2	100.6	114.1	100
Ethylbenzene	<1	µg/L	1	<1	05/20/02	8260b	---	0.8	99	105.8	102.6
m,p-Xylenes	<1	µg/L	1	<1	05/20/02	8260b	---	2.4	100	108.4	102.1
o-Xylene	<1	µg/L	1	<1	05/20/02	8260b	---	0.8	99.2	104.7	103.4
Toluene	<1	µg/L	1	<1	05/20/02	8260b	---	12.7	107.7	107.2	106.6

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Respectfully Submitted,

*Richard Laster*  
Richard Laster

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Client:	Environmental Tech Group	Project ID:	Monument 11 EOT 2054C
Attn:	Ken Dutton	Sample Name:	EB 1

## REPORT OF SURROGATE RECOVERY

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	108	80-120	---
Toluene-d8	8260b	102	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

Report#/Lab ID#:	129596
Sample Matrix:	water



**AnalySys<sup>inc.</sup>****COPY**

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Client: Environmental Tech Group  
Attn: Ken Dutton  
Address: 2540 W. Marland  
Hobbs,  
NM 88240  
Phone: 505 397-4882 FAX: 505 397-4701

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		09/17/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	09/17/02	8260b	---	1.4	127.2	94.1	101.3
Ethylbenzene	<1	µg/L	1	<1	09/17/02	8260b	---	3.4	94	106.5	110
m,p-Xylenes	<1	µg/L	1	<1	09/17/02	8260b	---	3.3	91.5	103.2	107.5
o-Xylene	<1	µg/L	1	<1	09/17/02	8260b	---	2.9	90.5	103	107.2
Toluene	<1	µg/L	1	<1	09/17/02	8260b	---	2.5	96	95.5	101.5

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Richard Laster

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**Analysys**  
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Report#Lab ID#: 133493  
Sample Matrix: water

Project ID: Monument 11 EO 2054  
Sample Name: MW 1

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	91.8	80-120	---
Toluene-d8	8260b	101	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

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InC.

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**Client:** Environmental Tech Group  
**Attn:** Ken Dutton  
**Address:** 2540 W. Marland  
Hobbs,  
NM 88240  
**Phone:** 505 397-4882    **FAX:** 505 397-4701

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		09/17/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	09/17/02	8260b	---	1.4	127.2	94.1	101.3
Ethylbenzene	<1	µg/L	1	<1	09/17/02	8260b	---	3.4	94	106.5	110
m,p-Xylenes	<1	µg/L	1	<1	09/17/02	8260b	---	3.3	91.5	103.2	107.5
o-Xylene	<1	µg/L	1	<1	09/17/02	8260b	---	2.9	90.5	103	107.2
Toluene	<1	µg/L	1	<1	09/17/02	8260b	---	2.5	96	95.5	101.5

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Richard Laster

Richard Laster

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Client: Environmental Tech Group  
Attn: Ken Dutton

Project ID: Monument 11 EO 2054  
Sample Name: MW 2

Report#/Lab ID#: 133494  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	94.5	80-120	---
Toluene-d8	8260b	99.6	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

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Attn: Ken Dutton  
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NM 88240  
Phone: 505 397-4882 FAX: 505 397-4701

**REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---	µg/L	---	<1	09/17/02	8260b	J	1.4	127.2	94.1	101.3
Benzene	<1	µg/L	1	<1	09/17/02	8260b	---	3.4	94	106.5	110
Ethylbenzene	<1	µg/L	1	<1	09/17/02	8260b	---	3.3	91.5	103.2	107.5
m,p-Xylenes	<1	µg/L	1	<1	09/17/02	8260b	---	2.9	90.5	103	107.2
o-Xylene	<1	µg/L	1	<1	09/17/02	8260b	---	2.5	96	95.5	101.5
Toluene	<1	µg/L	1	<1	09/17/02	8260b	---	---	---	---	---

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Richard Laster

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Client: Environmental Tech Group  
Attn: Ken Dutton

Project ID: Monument 11 EO 2054  
Sample Name: MW 3

Report#/Lab ID#: 133495  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	96.4	80-120	---
Toluene-d8	8260b	101	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

## Exceptions Report:

Report #/Lab ID#: 133495	Matrix: water
Client: Environmental Tech Group	
Project ID: Monument 11 EO 2054	
Sample Name: MW 3	

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA, and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TNRCC-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (e.g. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
Benzene	J	See J-flag discussion above.

Notes:

# AnalySys Inc.

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Client: Environmental Tech Group  
Attn: Ken Dutton  
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Hobbs,  
NM 88240  
Phone: 505 397-4882 FAX: 505 397-4701

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		09/17/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	09/17/02	8260b	---	1.4	127.2	94.1	101.3
Ethylbenzene	<1	µg/L	1	<1	09/17/02	8260b	---	3.4	94	106.5	110
m,p-Xylenes	<1	µg/L	1	<1	09/17/02	8260b	---	3.3	91.5	103.2	107.5
o-Xylene	<1	µg/L	1	<1	09/17/02	8260b	---	2.9	90.5	103	107.2
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Richard Laster

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**Environ**

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Client: Environmental Tech Group  
Attn: Ken Dutton

Project ID: Monument 11 EO 2054  
Sample Name: EB 1

Report# /Lab ID#: 133496  
Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	92.7	80-120	---
Toluene-d8	8260b	101	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.



# FILE

**ANALYSIS**  
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Client: Environmental Tech Group  
Attn: Robert Edison  
Address: 2540 W. Marland Hobbs NM 88240  
Phone: 505 397-4882 FAX: 505 397-4701

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		11/22/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	11/22/02	8260b	---	5.9	72.9	93.8	87.8
Ethylbenzene	<1	µg/L	1	<1	11/22/02	8260b	---	1.4	116.2	110.4	114.3
m,p-Xylenes	<1	µg/L	1	<1	11/22/02	8260b	---	3.6	111.5	107.6	107.9
o-Xylene	<1	µg/L	1	<1	11/22/02	8260b	---	2	118.8	112	113.9
Toluene	<1	µg/L	1	<1	11/22/02	8260b	---	5.7	102.8	106.2	98.3

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*Richard Laster*  
Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL. B = Analyte detected in associated method blank(s). S1 = MS and/or MSD recovery exceed advisory limits. S2 = Post digestion spike (PDS) recovery exceeds advisory limit. S3 = MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

**GTI**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client:	Environmental Tech Group	Project ID: Monument 11 EO 2054	Report#/Lab ID#: 136622
Attn:	Robert Edison	Sample Name: MW 1	Sample Matrix: water

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	87.4	80-120	---
Toluene-d8	8260b	98.9	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**ANALYSYS**  
INC.

3512 Montopolis Drive, Austin, TX 78744 &  
 2209 N. Padre Island Dr., Corpus Christi, TX 78408  
 (512) 385-5886 • FAX (512) 385-7411

Client: Environmental Tech Group  
 Attn: Robert Edison  
 Address: 2540 W. Marland  
 Hobbs  
 Phone: 505 397-4882 FAX: 505 397-4701

## REPORT OF ANALYSIS

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---	<1	11/22/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	11/22/02	8260b	---	5.9	72.9	93.8	87.8
Ethylbenzene	<1	µg/L	1	<1	11/22/02	8260b	---	1.4	116.2	110.4	114.3
m,p-Xylenes	<1	µg/L	1	<1	11/22/02	8260b	---	3.6	111.5	107.6	107.9
o-Xylene	<1	µg/L	1	<1	11/22/02	8260b	---	2	118.8	112	113.9
Toluene	<1	µg/L	1	<1	11/22/02	8260b	---	5.7	102.8	106.2	98.3

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2000, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,

*Richard Laster*  
Richard Laster

1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%) difference between duplicate measurements. 3. Recovery (Recov.) is the percent (%) of analyte recovered from a spiked sample. 4. Calibration Verification (CCV) and Laboratory Control Sample (LCS) results are expressed as the percent (%) recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL), typically at or above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than ("<") values reflect nominal quantitation limits adjusted for any required dilutions. 7. Data Qualifiers are J = analyte potentially present between the PQL and the MDL, B = Analyte detected in associated method blank(s), S1 =MS and/or MSD recovery exceed advisory limits, S2 =Post digestion spike (PDS) recovery exceeds advisory limit, S3 =MS and/or MSD and PDS recoveries exceed advisory limits. P =Precision higher than advisory limit. M =Matrix interference.

**Q**UANT<sup>Y</sup> 5  
11/26

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Project ID: Monument 11 EO 2054  
Sample Name: MW 2

Report#/Lab ID#: 136623  
Sample Matrix: water

Client: Environmental Tech Group  
Attn: Robert Edison

**REPORT OF SURROGATE RECOVERY**

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	81	80-120	---
Toluene-d8	8260b	97.4	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

**AnalyS**  
Inc.

3512 Montopolis Drive, Austin, TX 78744 &  
 2209 N. Padre Island Dr., Corpus Christi, TX 78408  
 (512) 385-5886 • FAX (512) 385-7411

**Client:** Environmental Tech Group  
**Attn:** Robert Edisson  
**Address:** 2540 W. Maryland  
 Hobbs NM 88240  
**Phone:** 505 397-4882 **FAX:** 505 397-4701

**REPORT OF ANALYSIS****REPORT OF ANALYSIS**

Parameter	Result	Units	RQL <sup>5</sup>	Blank	Date	Method <sup>6</sup>	Data Qual <sup>7</sup>	Prec. <sup>2</sup>	Recov. <sup>3</sup>	CCV <sup>4</sup>	LCS <sup>4</sup>
Volatile organics-8260b/BTEX	---		---		11/22/02	8260b	---	---	---	---	---
Benzene	<1	µg/L	1	<1	11/22/02	8260b	J	5.9	72.9	93.8	87.8
Ethylbenzene	<1	µg/L	1	<1	11/22/02	8260b	---	1.4	116.2	110.4	114.3
m,p-Xylenes	<1	µg/L	1	<1	11/22/02	8260b	---	3.6	111.5	107.6	107.9
o-Xylene	<1	µg/L	1	<1	11/22/02	8260b	---	2	118.8	112	113.9
Toluene	<1	µg/L	1	<1	11/22/02	8260b	---	5.7	102.8	106.2	98.3

This analytical report is respectfully submitted by AnalySys, Inc. The enclosed results have been carefully reviewed and, to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2000, AnalySys, Inc., Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted,

*Richard Laster*  
Richard Laster

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**QUALITY ASSURANCE DATA<sup>1</sup>**

Report# / Lab ID#: 136624	Report Date: 11/26/02
Project ID: Monument 11 EO 2054	
Sample Name: MW 3	
Sample Matrix: water	
Date Received: 11/20/2002	Time: 13:00
Date Sampled: 11/15/2002	Time: 09:45

**CHROM**

3512 Montopolis Drive, Austin, TX 78744 &  
2209 N. Padre Island Dr., Corpus Christi, TX 78408  
(512) 385-5886 • FAX (512) 385-7411

Client:	Environmental Tech Group	Project ID:	Monument 11 EO 2054
Attn:	Robert Edison	Sample Name:	MW 3
REPORT OF SURROGATE RECOVERY			

Surrogate Compound	Method	Recovery	Recovery Limit	Data Qualifiers
1,2-Dichloroethane-d4	8260b	89.7	80-120	---
Toluene-d8	8260b	98.4	88-110	---

Data Qualifiers: D= Surrogates diluted and X= Surrogates outside advisory recovery limits.

Report#	136624
Sample Matrix:	water

## Exceptions Report:

Report #/Lab ID#: 136624	Matrix: water
Client: Environmental Tech Group	Attn: Robert Edison
Project ID: Monument 11 EO 2054	
Sample Name: MW 3	

### Sample Temperature/Condition <=6°C

The typical sample temperature criteria (except for metals by ICP, GFAA and AA and a very few other tests) is <= 6°C. Possible exceptions include samples submitted to laboratory within such a short time after sampling that cooling measures used in the field and during transport had insufficient time to achieve desired temperatures in the samples (see sample collection and sample receipt times) and samples where the temperature could not be measured due to sample submission in a manner precluding temperature measurement without impacting sample integrity (ex. in a bottle with no cooler).

### Sample Bottles & Preservation

- Sample received in appropriate container(s) and appear to be appropriately preserved.
- Sample received in appropriate container(s). State of sample preservation unknown.
- Sample received in inappropriate container(s) and/or with unknown state of preservation.

### J flag Discussion

A J flag data qualifier indicates (as required under TCEQ-TRRP reporting requirements) that the raw calculated analyte concentration in the sample (uncorrected for background levels/blanks and other potential sources of sampling and analytical contamination), though less than the Reported Quantitation Limit (RQL) is greater than the Detection Limit. Because the reported result is below the quantitation limit for this project/sample (or test procedure), GC/MS organics results may or MAY NOT have been verified as to the presence and relative ratio of target ions (eg. the material causing the J flag "hit" in such situations may be nothing more than background ion-fragment noise.)

### Comments pertaining to Data Qualifiers and QC data:

Parameter	Qualif	Comment
Benzene	J	See J-flag discussion above.

Notes:



• PB W/S

**ANNUAL MONITORING REPORT**

**EOTT PIPELINE COMPANY  
MONUMENT 11  
LEA COUNTY, NEW MEXICO**

*12 - 120*

**RECEIVED**

**MAY 09 2001**

**ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION**

**PREPARED FOR:**

**EOTT PIPELINE COMPANY  
5805 EAST HIGHWAY 80  
MIDLAND, TEXAS 79701**

**PREPARED BY:**

**ENVIRONMENTAL TECHNOLOGY GROUP, INC.  
2540 WEST MARLAND  
HOBBS, NEW MEXICO 88240**

**April 2001**

## TABLE OF CONTENTS

INTRODUCTION

FIELD ACTIVITIES

GROUND WATER GRADIENT

LABORATORY RESULTS

SUMMARY

### FIGURES

Figure 1 – Site Location Map

Figure 2 – Site Ground Water Gradient Map

### TABLES

Table 1 – Ground Water Elevation

Table 2 – Ground Water Chemistry

### APPENDICES

Appendix A – Laboratory Reports

## **INTRODUCTION**

Environmental Technology Group, Inc. (ETGI), on behalf of EOTT Energy Corp. (EOTT), prepared this annual report in compliance with the New Mexico Oil Conservation Division (OCD) letter of May 1998, requiring submittal of an annual report by April 1 of each year. The report presents the results of the quarterly ground water monitoring events only. For reference, the Site Location Map is provided as Figure 1.

Ground water monitoring was conducted during three quarterly events in calendar year 2000 to assess the levels and extent of dissolved phase and phase-separated petroleum hydrocarbon (PSH) constituents. The ground water monitoring events consisted of measuring static water levels in the monitoring wells, checking for the presence of PSH, and purging and sampling of each well exhibiting sufficient recharge. Monitoring wells containing measurable levels of PSH were not sampled.

## **FIELD ACTIVITIES**

The site monitoring wells were gauged and sampled on May 3, August 30, and November 17, 2000. During each sampling event, the monitoring wells, designated to be sampled, were purged of approximately 3 well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos Pump. Ground water was allowed to recharge and samples were obtained using disposable Teflon samplers. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a polystyrene tank and disposed of by Pate Trucking, Hobbs, New Mexico, utilizing a licensed disposal facility (OCD AO SWD-730).

## **GROUND WATER GRADIENT**

Locations of the monitoring wells and the inferred ground water gradient, as measured on November 17, 2000, are depicted on Figure 2, the Site Ground Water Gradient Map. The ground water elevation data are provided as Table 1. Ground water elevation contours, generated from the final quarterly event of calendar year 2000 water level measurements, indicated a general gradient of approximately 0.015 ft/ft to the southeast as measured between ground water monitoring wells MW-3 and MW-4. The depth to ground water, as measured from the top of the well casing, ranged between 23.61 to 27.04 feet for the shallow alluvial aquifer.

A measurable thickness of PSH was detected in monitoring well MW-4 during the annual monitoring period. A maximum thickness of 0.30 foot in monitoring well MW-4 was measured and is shown on Table 1.

## **LABORATORY RESULTS**

Ground water samples collected during the sampling events were hand delivered to Environmental Laboratory of Texas, Midland, Texas for determination of benzene, toluene, ethyl benzene and total xylenes (BTEX) concentrations by EPA Method SW846-8021B. The ground water chemistry data are provided as Table 2 and the Laboratory Reports are provided as Appendix A.

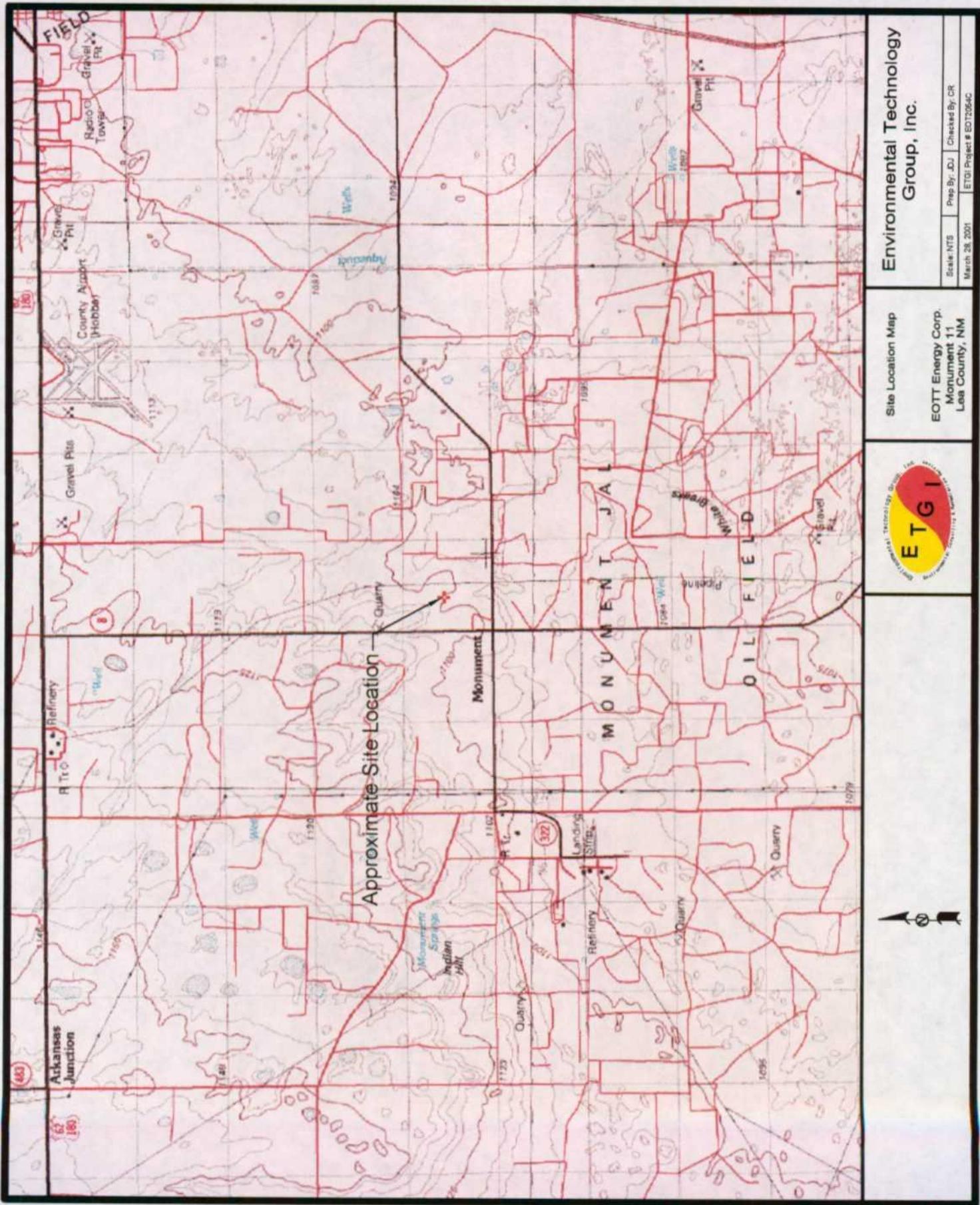
Laboratory results for all of the site ground water samples, obtained during the calendar year 2000 monitoring period, indicated that Benzene and BTEX concentrations were below method detection limits for monitoring wells MW-1 and MW-2. The Benzene and BTEX concentrations in the ground water samples collected from ground water monitoring well MW-3 were below regulatory standards.

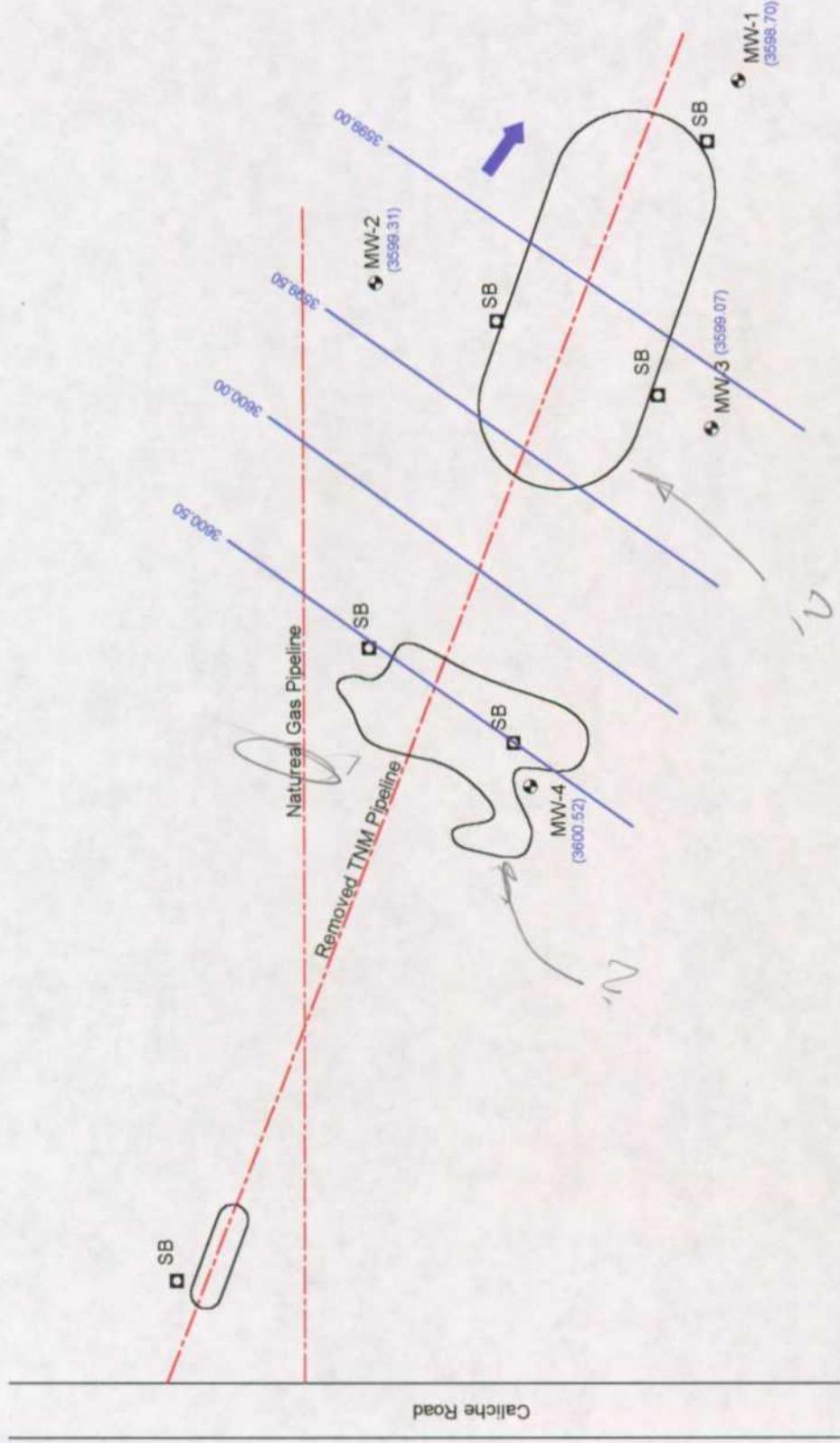
## **SUMMARY**

This report presents the results of monitoring activities for the annual monitoring period of calendar year 2000. A measurable thickness of PSH was detected in monitoring well MW-4 during the annual monitoring period. A maximum thickness of 0.30 foot in monitoring well MW-4 was measured in this monitoring well.

Ground water elevation contours, generated from the final quarterly event of calendar year 2000 water level measurements, indicated a general gradient of approximately 0.015 ft/ft to the southeast as measured between ground water monitoring wells MW-3 and MW-4.

Laboratory results for all of the site ground water samples, obtained during the calendar year 2000 monitoring period, indicated that Benzene and BTEX concentrations were below method detection limits for monitoring wells MW-1 and MW-2. The Benzene and BTEX concentrations in the ground water samples collected from ground water monitoring well MW-3 were below regulatory standards.





LEGEND:

- Pipeline (red dashed line)
- Groundwater Elevation Contour (blue line)
- (3600.52) (blue line)
- Soil Boring Location (square icon)
- Monitor Well Location (circle icon with cross)

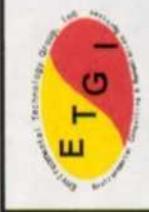


Figure 2  
Site Groundwater  
Gradient Map (11/17/00)

EOTT Energy Corp.  
Monument 11  
Lea County, NM

Scale: 1" = 40'  
Prep By: JDU Checked By: CR  
November 17, 2000 EOTT Project # EOTT2004C

Environmental Technology  
Group, Inc.

**TABLE 1**  
**GROUND WATER ELEVATION**  
**ANNUAL REPORT**  
**EOTT ENERGY CORPORATION**  
**MONUMENT 11**  
**LEA COUNTY, NEW MEXICO**  
**ETGI PROJECT # EOT2054C**

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 1	05/03/00	3,624.90	-	27.04	0.00	3,597.86
	08/30/00	3,624.90	-	26.19	0.00	3,598.71
	11/17/00	3,624.90	-	26.20	0.00	3,598.70
MW - 2	05/03/00	3,624.91	-	25.60	0.00	3,599.31
	08/30/00	3,624.91	-	25.55	0.00	3,599.36
	11/17/00	3,624.91	-	25.60	0.00	3,599.31
MW - 3	05/03/00	3,623.99	-	24.91	0.00	3,599.08
	08/30/00	3,623.99	-	24.88	0.00	3,599.11
	11/17/00	3,623.99	-	24.92	0.00	3,599.07
MW - 4	05/03/00	3,624.09	23.61	23.75	0.14	3,600.46
	08/30/00	3,624.09	23.31	23.61	0.30	3,600.74
	11/17/00	3,624.09	23.55	23.70	0.15	3,600.52

**TABLE 2**  
**GROUND WATER CHEMISTRY**  
**ANNUAL REPORT**

**EOTT ENERGY CORPORATION**  
**MONUMENT 11**  
**LEA COUNTY, NEW MEXICO**  
**ETGI Project # EOT 2054C**

*All concentrations are in mg/L*

SAMPLE LOCATION	SAMPLE DATE	SW 846-8021B, 5030				
		BENZENE	TOLUENE	ETHYL-BENZENE	M,P-XYLENES	O-XYLENES
MW - 1	05/03/00	<0.001	<0.001	<0.001	<0.001	<0.001
	08/30/00	<0.001	<0.001	<0.001	<0.001	<0.001
	11/17/00	<0.001	<0.001	<0.001	<0.001	<0.001
MW - 2	05/03/00	<0.001	<0.001	<0.001	<0.001	<0.001
	08/30/00	<0.001	<0.001	<0.001	<0.001	<0.001
	11/17/00	<0.001	<0.001	<0.001	<0.001	<0.001
MW - 3	05/03/00	0.004	0.002	0.001	<0.001	<0.001
	08/30/00	0.001	0.001	0.002	<0.001	<0.001
	11/17/00	<0.001	<0.001	<0.001	<0.001	<0.001

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.

ATTN: MR. JESSE TAYLOR  
P.O. BOX 4845  
MIDLAND, TEXAS 79704  
FAX: 915-520-4310  
FAX: 505-392-3760

Sample Type: Soil

Sampling Date: 05/03/00

Sample Condition: Intact/ Iced/ HCl/ 1 deg. C

Receiving Date: 05/03/00

Project #: EOT 1054R

Analysis Date: 05/05/00

Project Name: Monument 11

Project Location: Monument, N.M.

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	<i>o</i> -XYLENE mg/L
25496	MW 1	<0.001	<0.001	<0.001	<0.001	<0.001
25497	MW 2	<0.001	<0.001	<0.001	<0.001	<0.001
25498	MW 3	0.004	0.002	0.001	<0.001	<0.001
<hr/>						
% IA		106	100	103	113	102
% EA		101	96	98	105	97
BLANK		<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: SW 846-8021B.5030

Umesh Rao

Umesh Rao, Ph. D.

5/16/00

Date



# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.

ATTN: BETH ALDRICH

P.O. BOX 4845

MIDLAND, TEXAS 79704

FAX: 915-520-4310

Sample Type: Water

Sampling Date: 08/30/00

Sample Condition: Intact/ Iced/ HCl/ 30 deg. F

Receiving Date: 09/01/00

Project #: EOT 2054C

Analysis Date: 09/05/00

Project Name: Monument 11

Project Location: Monument, N.M.

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L	TOTAL BTEX mg/L
30303	MW 1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
30304	MW 2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
30305	MW 3	0.001	0.001	0.002	<0.001	<0.001	0.004
30306	EB 1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

% IA	103	100	103	106	99
% EA	104	104	106	110	102
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: SW 846-8021B,5030

Raland K. Tuttle  
Raland K. Tuttle

9-6-00  
Date



Nov 21 00 06:37p

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.

ATTN: BETH ALDRICH  
2540 WEST MARLAND  
HOBBS, N.M. 88240  
FAX: 915-520-4310  
FAX: 505-397-4701

Sample Type: Water

Sample Condition: Intact/ Iced/ HCl/ -1 deg. C

Project #: EOT 2054C

Project Name: Monument 11

Project Location: Monument, N.M.

Sampling Date: 11/17/00

Receiving Date: 11/18/00

Analysis Date: 11/20/00

ELT #	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	<i>o</i> -XYLENE mg/L
34084	MW-1	<0.001	<0.001	<0.001	<0.001	<0.001
34085	MW-2	<0.001	<0.001	<0.001	<0.001	<0.001
34086	MW-3	<0.001	<0.001	<0.001	<0.001	<0.001
34087	EB-1	<0.001	<0.001	<0.001	<0.001	<0.001

%IA	93	100	106	110	102
%EA	84	90	95	98	93
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle  
Raland K. Tuttle

11-21-00  
Date

