

3R - 212

2010 AGWMR

03/02/2011



BUILDING A BETTER WORLD

3R212

March 2, 2011

Mr. Glenn von Gonten
New Mexico Oil Conservation Division (NMOCD)
1220 South St., Francis Drive
Santa Fe, New Mexico 87505

RECEIVED OGD
2011 MAR -4 P 12:24

**RE: El Paso Tennessee Pipeline Company Pit Groundwater Remediation Sites
2010 Annual Reports**

Dear Mr. Von Gonten:

MWH Americas, Inc., on behalf of El Paso Tennessee Pipeline Company (EPTPC), is submitting the enclosed 2010 Annual Reports for each of EPTPC's 21 remaining San Juan River Basin pit groundwater remediation sites. The reports present the 2010 sampling and product recovery data and include recommendations for 2011 activities at these sites.

The 2010 Annual Reports are divided into three volumes based on location type. The volumes are as follows:

<u>Volume</u>	<u>Location Type</u>
1	Federal Land
2	Non-Federal Land (Excl. Navajo Nation)
3	Navajo Nation

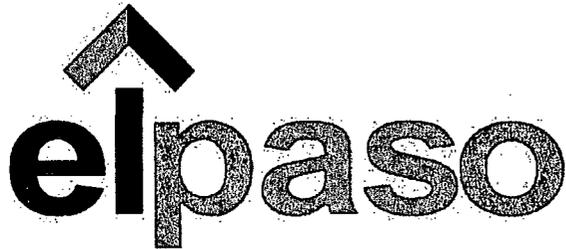
If you have any questions concerning the enclosed reports, please call either Ian Yanagisawa of EPTPC (713-420-7361) or myself (303-291-2276).

Sincerely,

Jed Smith
Project Manager

encl.

- cc: Bill Freeman – NNEPA, Shiprock, NM (Volume 3 Only)
- Bill Liese – BLM, Farmington, NM (Volume 1 Only)
- Brandon Powell – NMOCD, Aztec, NM (Volumes 1, 2, and 3)
- Ian Yanagisawa – EPTPC (Volumes 1, 2, and 3 - Electronic)



El Paso Tennessee
Pipeline Company

San Juan Basin Pit Program
Groundwater Sites Project

Final 2010 Annual Report
Federal Sites (Volume 1)

March 2011



MWH

1801 California Street, Suite 2900
Denver, Colorado 80202

**2010 ANNUAL GROUNDWATER REPORT
FEDERAL SITES VOLUME I
EL PASO TENNESSEE PIPELINE COMPANY**

TABLE OF CONTENTS

METER or LINE ID	NMOCD CASE NO.	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
87640	3RP-155-0	Canada Mesa #2	24N	06W	24	I
89961	3RP-170-0	Fields A#7A	32N	11W	34	E
73220	3RP-068-0	Fogelson 4-1 Com. #14	29N	11W	4	P
89894	3RP-186-0	Hammond #41A	27N	08W	25	O
97213	3RP-190-0	Hamner #9	29N	09W	20	A
94715	3RP-196-0	James F. Bell #1E	30N	13W	10	P
89232	3RP-202-0	Johnston Fed #6A	31N	09W	35	F
LD072	3RP-204-0	K27 LD072	25N	06W	4	E
LD174	3RP-212-0	LAT L 40	28N	04W	13	H
LD151	3RP-213-0	Lat 0-21 Line Drip	30N	09W	12	O
94810	3RP-223-0	Miles Fed 1A	26N	07W	5	F
89620	3RP-235-0	Sandoval GC A #1A	30N	09W	35	C

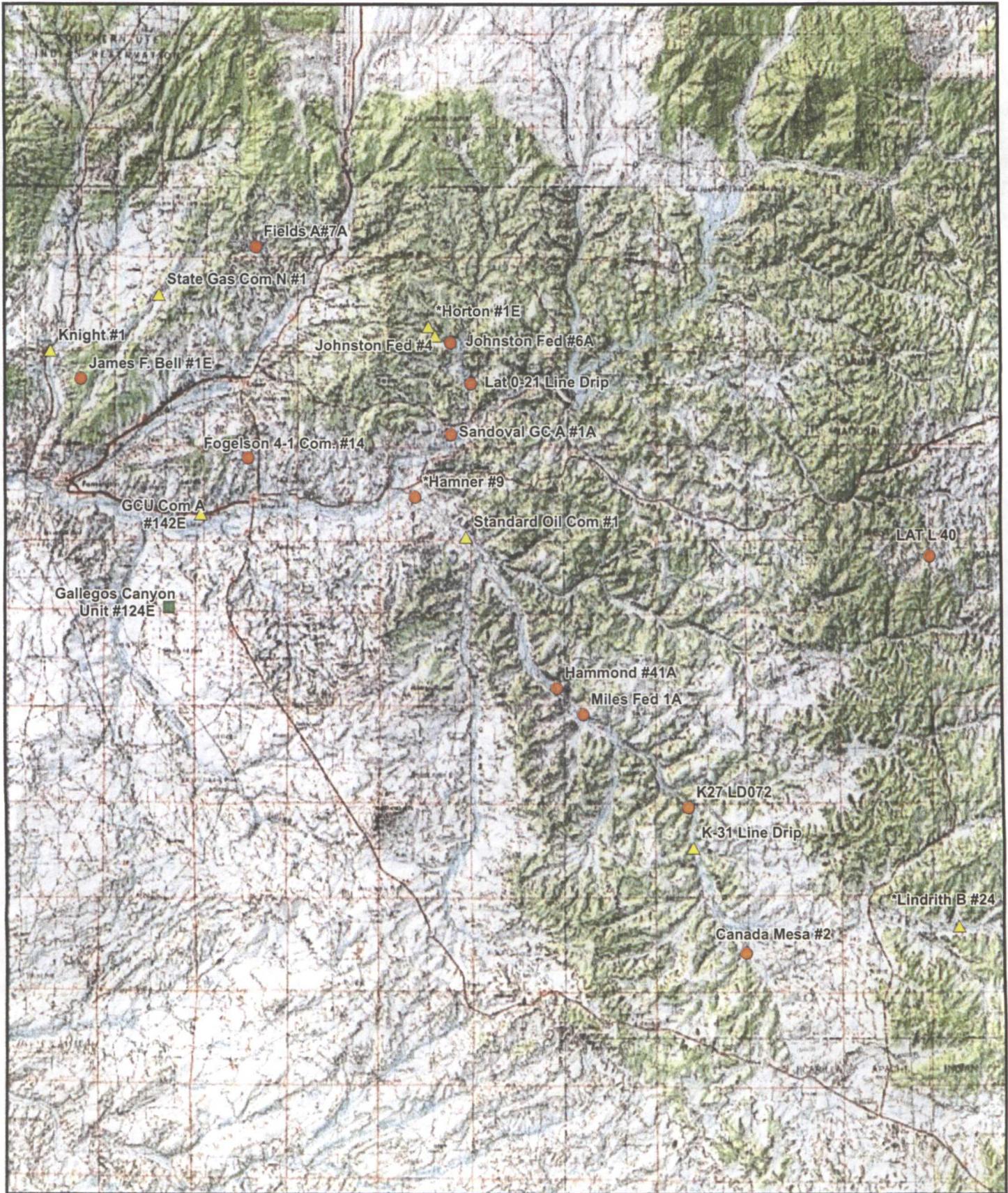
* The Hamner #9 site was submitted for closure in January 2009 and is pending approval from NMOCD. There were no monitoring activities for this site in 2010.



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LIST OF ACRONYMS

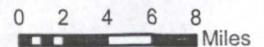
AMSL	above mean sea level
B	benzene
btoc	below top of casing
E	ethylbenzene
EPTPC	El Paso Tennessee Pipeline Company
ft	foot/feet
GWEL	groundwater elevation
ID	identification
MW	monitor well
NMWQCC	New Mexico Water Quality Control Commission
T	toluene
TOC	top of casing
NA	not applicable
NMOCD	New Mexico Oil Conservation Division
NS	not sampled
ORC	oxygen-releasing compound
µg/L	micrograms per liter
X	total xylenes



LEGEND

- Sites on Federal Land
- Sites on Navajo Nation Land
- ▲ Sites on State/Fee "Non-Federal" Lands

*Closure Request Pending with the NMOCD.



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PROJECT:	SAN JUAN RIVER BASIN
TITLE:	Site Locations, February 2011

FIGURE:	1
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**EPTPC GROUNDWATER SITES
2010 ANNUAL GROUNDWATER REPORT**

**Lat L-40
Meter Code: LD174**

SITE DETAILS

Legal Description:	Town: 28N	Range: 4W	Sec: 13	Unit: H
NMOCD Haz Ranking:	20	Land Type: Federal	Operator: Enterprise	

PREVIOUS ACTIVITIES

Site Assessment:	2/95	Excavation:	3/95	Soil Boring:	9/95
Monitor Well:	9/95	Geoprobe:	NA	Additional MWs:	*
Downgradient MWs:	*	Replace MW:	NA	Quarterly Initiated:	NA
ORC Nutrient Injection:	NA	Re-Excavation:	NA	PSH Removal Initiated:	1/98
Annual Initiated:	NA	Quarterly Resumed:	NA	PSH Removal in 2010?	No

* Attempts were made to install additional monitoring wells at this Site during July 2000. All efforts were met with refusal.

SUMMARY OF 2010 ACTIVITIES

MW-1: Annual groundwater sampling (June) and quarterly water level monitoring were performed during 2010.

Site-Wide Activities: No other activities were performed at this Site during 2010.

SITE MAP

A Site map (June) is attached as Figure 1.

SUMMARY TABLES AND GRAPHS

- Historical analytical and water level data are summarized in Table 1 and presented graphically in Figure 2. Where applicable, static water level elevations were corrected for measurable thicknesses of free-product (specific gravity of 0.8).
- Historical free-product recovery data are summarized in Table 2 and presented graphically in Figure 2.
- The 2010 laboratory report is presented in Attachment 1 (included on CD).
- The 2010 field documentation is presented in Attachment 2 (included on CD).

**EPTPC GROUNDWATER SITES
2010 ANNUAL GROUNDWATER REPORT**

Lat L-40
Meter Code: LD174

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at this Site during 2010.

DISPOSITION OF GENERATED WASTES

All purge water was taken to the El Paso Natural Gas Rio Vista Compressor Station.

ISOCONCENTRATION MAPS

No isoconcentration maps were prepared for this Site; however, the attached Site map presents the water level data collected during 2010.

RESULTS

- Free-product was not observed during the 2010 quarterly water level monitoring events. Free-product was most recently observed in July 2006 (i.e., hydrocarbon had been absorbed into the product recovery sock).
- Monitor well MW-1 was sampled in June 2010, and the benzene and total xylenes concentrations, 272 µg/L and 2,240 µg/L, respectively exceeded their NMWQCC standards. Toluene was not detected; and ethylbenzene was detected at 384 µg/L, which was below its standard. The observed BTEX concentrations are well below the highs observed in 1997 prior to the product recovery efforts implemented for this Site.

REMAINING CLOSURE REQUIREMENTS

- This site is being managed per the procedures set forth in the document entitled, "Remediation Plan for Groundwater Encountered During Pit Closure Activities" (El Paso Natural Gas Company / El Paso Field Services Company, 1995). This remediation plan was conditionally approved by the New Mexico Oil Conservation Division (OCD) in correspondence dated November 30, 1995; and the OCD approval conditions were adopted into El Paso's program methods.
- In order to meet the remaining closure requirements at this site, the following condition must be achieved: groundwater contaminant concentrations in the monitor well must meet the NMWQCC standards for at least 4 consecutive quarters. Alternatively, concentrations must be reduced to below background levels; however, there are no established background concentrations for the remaining constituents of concern. Currently, MW-1 requires additional monitoring. The remaining applicable standards are:

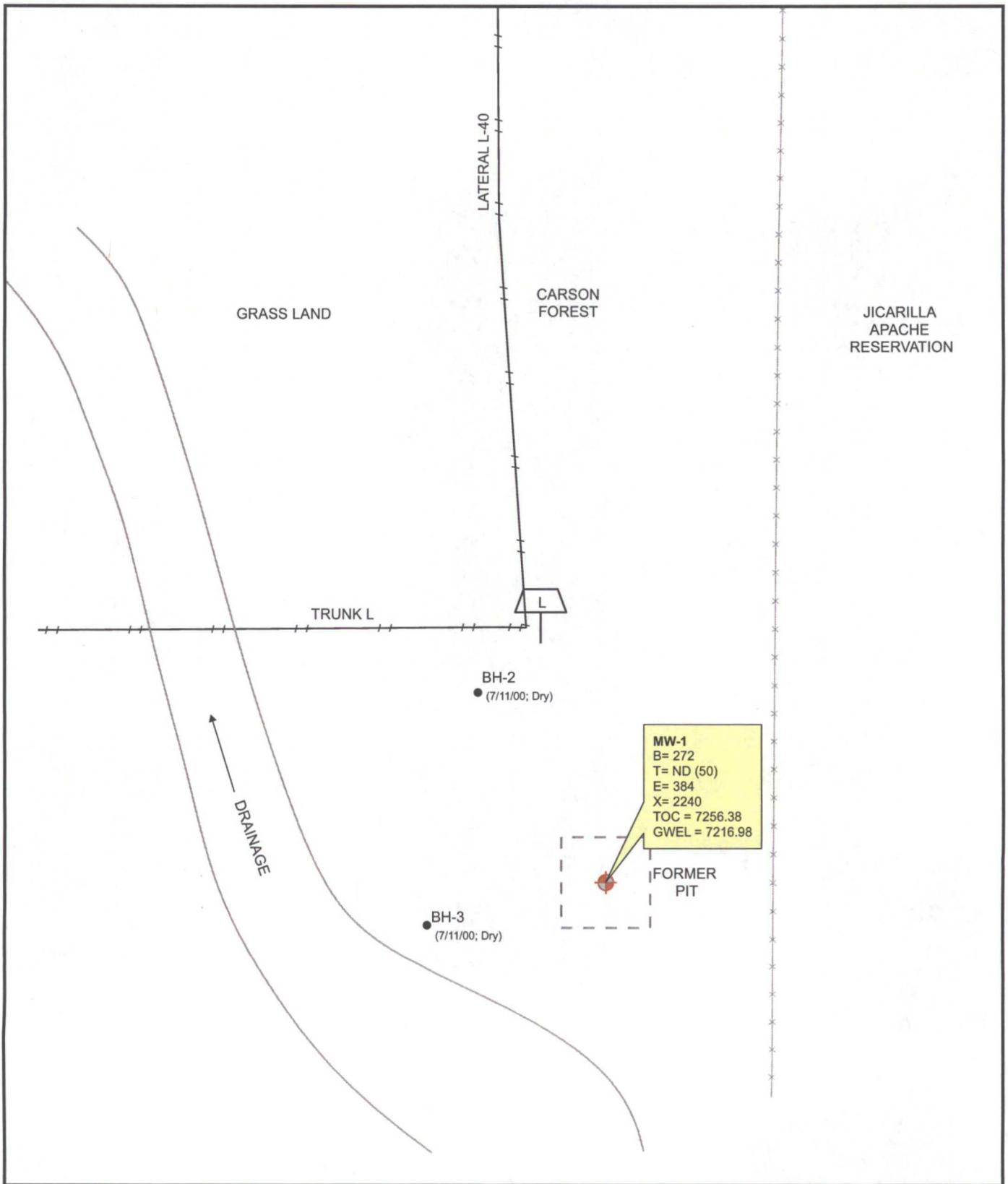
**EPTPC GROUNDWATER SITES
2010 ANNUAL GROUNDWATER REPORT**

**Lat L-40
Meter Code: LD174**

Constituent	NMWQCC GW Standard (µg/L)
Benzene	10
Toluene	750
Ethylbenzene	750
Total Xylenes	620

RECOMMENDATIONS

- EPTPC recommends quarterly water level monitoring to check for product re-appearance. If free-product is observed, oil absorbent sock use will be re-initiated.
- Unless product reappears, EPTPC will sample MW-1 on an annual basis until sample results meet the closure criteria. Sampling would then proceed at quarterly intervals until the closure criteria are met.

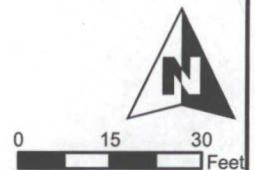


MW-1
 B= 272
 T= ND (50)
 E= 384
 X= 2240
 TOC = 7256.38
 GWEL = 7216.98

LEGEND

- MW-4 Existing Monitoring / Observation Well
- Groundwater Flow Direction
- Potentiometric Surface Contour (Inferred Where Dashed)
- ND Not Detected; Reporting Limit Shown In Parenthesis

- B Benzene (ug/L)
- T Toluene (ug/L)
- E Ethylbenzene (ug/L)
- X Total Xylenes (ug/L)
- TOC Top of Casing (ft. AMSL)
- GWEL Groundwater Elevation (ft. AMSL)



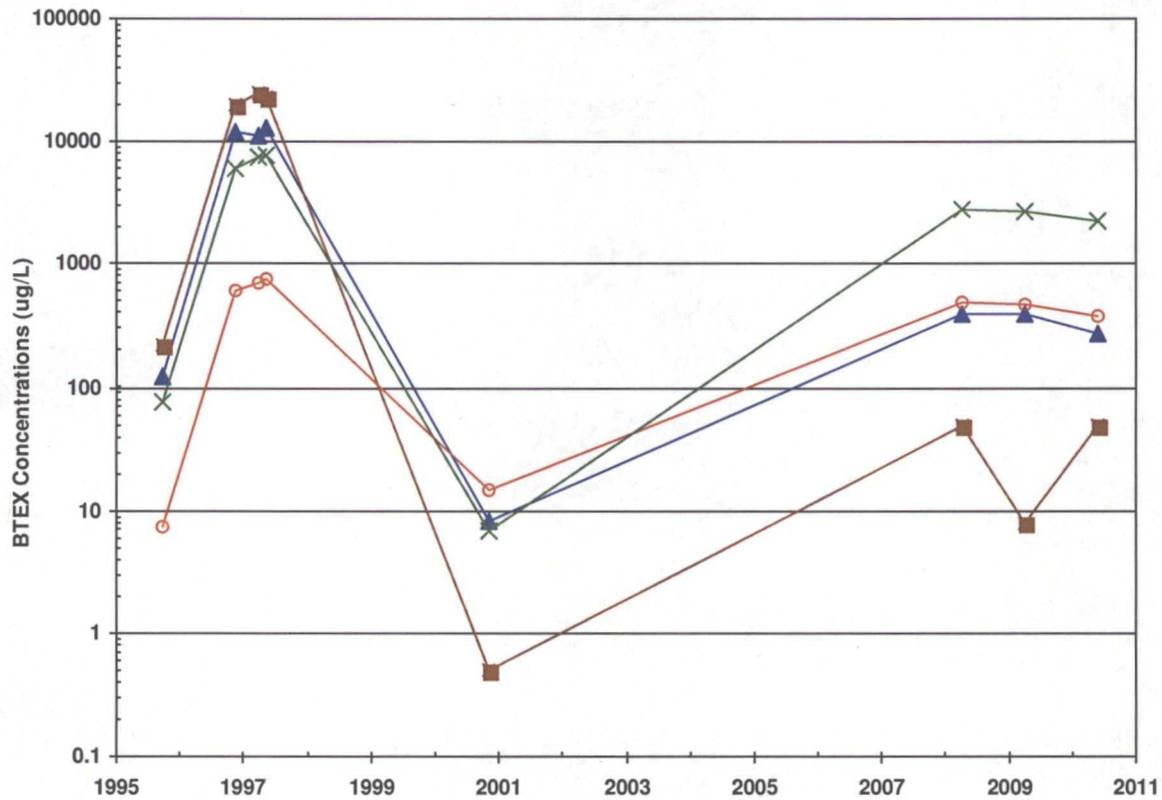
MWH



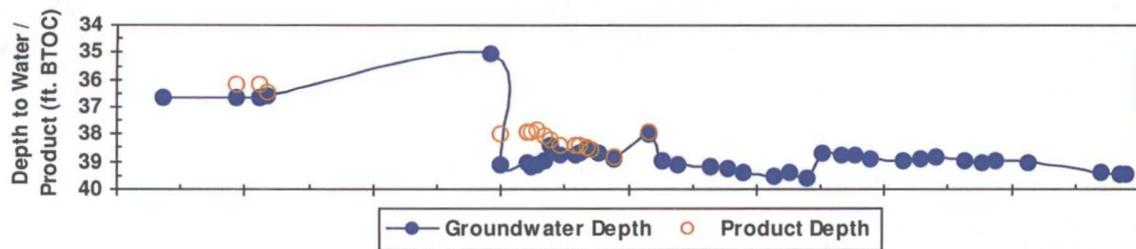
PROJECT: LATERAL L-40
 TITLE: Groundwater Potentiometric Surface Map,
 and BTEX Concentrations - June 3, 2010

FIGURE:
1

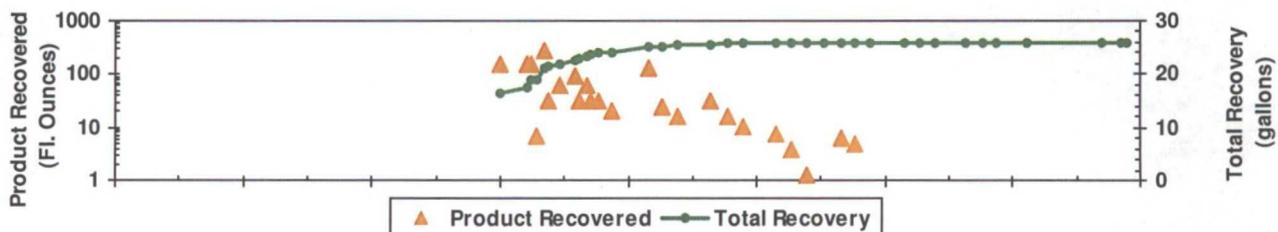
FIGURE 2
SUMMARY OF GROUNDWATER BTEX CONCENTRATIONS, FLUID LEVELS, AND PRODUCT RECOVERY
LAT L-40 (METER #LD174)
MW01



▲ Benzene (10 ug/L)
 ■ Toluene (750 ug/L)
 ○ Ethylbenzene (750 ug/L)
 × Total Xylenes (620 ug/L)



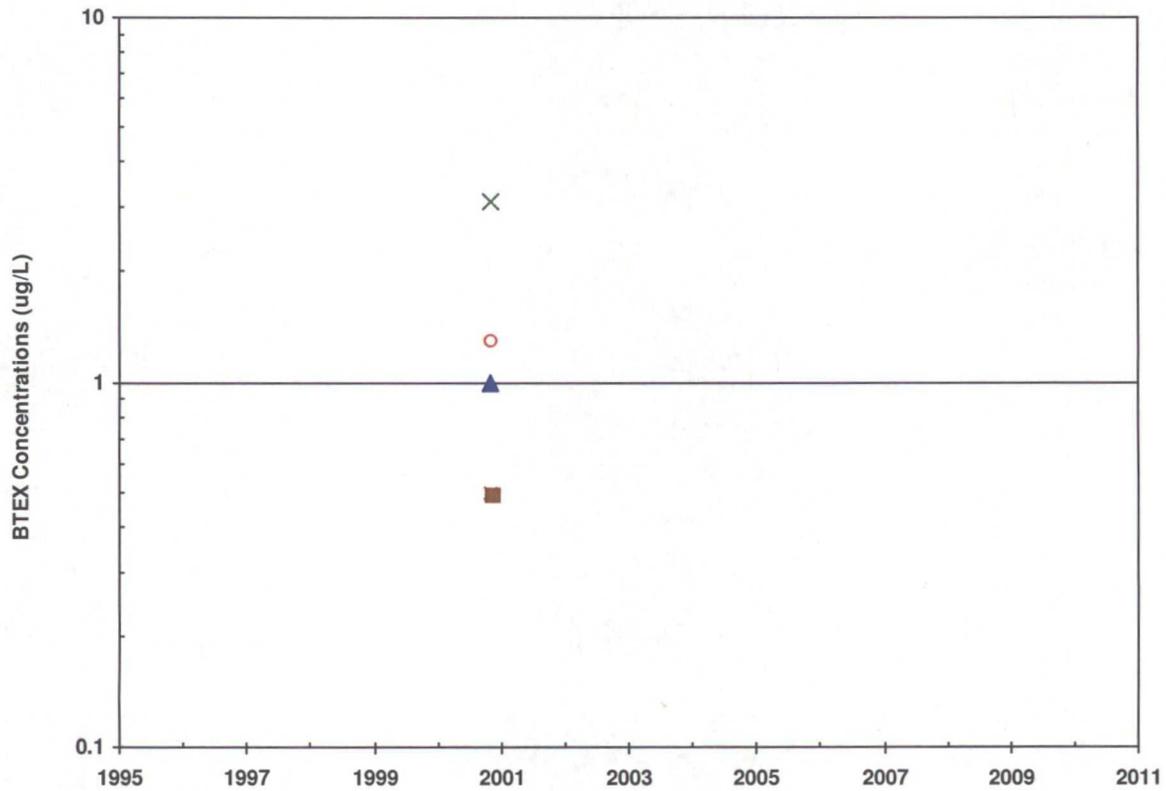
● Groundwater Depth
 ○ Product Depth



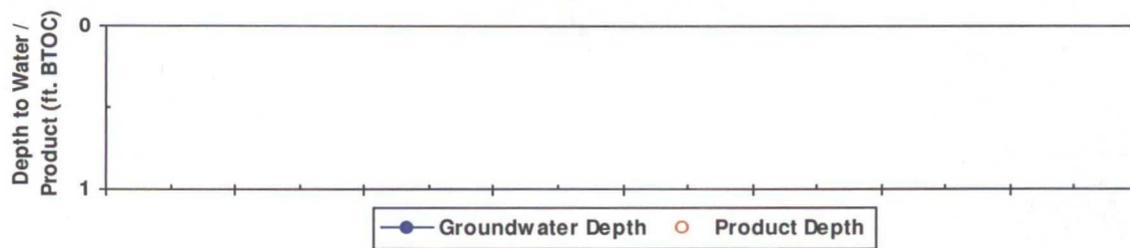
▲ Product Recovered
 ● Total Recovery

**In some cases, older recovery event data are not available. However, the cumulative totals still include all historic recovery.*

FIGURE 3
SUMMARY OF GROUNDWATER BTEX CONCENTRATIONS AND FLUID LEVELS
LAT L-40 (METER #LD174)
MW02



Benzene	Toluene	Ethylbenzene	Total Xylenes
NM Std.: (10 ug/L)	(750 ug/L)	(750 ug/L)	(620 ug/L)



Groundwater Depth	Product Depth
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TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
LAT L-40 (METER #LD174)

Monitor Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)	Corrected GW Elevation (ft AMSL)
NMWQCC GW Std.:		10	750	750	620		
MW01	9/26/1995	121	218	74	75.1	36.68	7219.70
MW01	11/11/1996	12000	20400	612	6075	36.62	7220.13
MW01	3/31/1997	11100	24700	702	7440	36.68	7220.10
MW01	5/9/1997	12900	22900	761	7730	36.57	7219.91
MW01	11/6/2000	8.2	<0.5	15	6.9	35.06	7221.32
MW01	4/17/2008	396	<50	484	2770	38.98	7217.40
MW01	4/8/2009	387	7.9J	466	2680	39.04	7217.34
MW01	6/3/2010	272	<50	384	2240	39.40	7216.98

Notes:

Results shown in bold typeface exceed their respective New Mexico Water Quality Control Commission standards.

"J" = result is qualified as estimated. See laboratory report and/or supplemental data validation report for further detail.

"<" = analyte was not detected at the indicated reporting limit.

Static groundwater elevations have been corrected for product thickness where applicable. Specific gravity of 0.8 used.

TABLE 2
SUMMARY OF FREE-PRODUCT REMOVAL
LAT L-40 (METER #LD174)

Monitor Well	Removal Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (feet)	Volume Removed (gallons)	Cumulative Removal (gallons)	Corrected GW Elevation (ft AMSL)
MW01	11/11/1996	36.16	36.62	0.46	NA	NA	7220.13
MW01	3/31/1997	36.18	36.68	0.50	NA	NA	7220.10
MW01	5/9/1997	36.45	36.57	0.12	NA	NA	7219.91
MW01	1/2/2001	37.95	39.08	1.13	1.25	16.43	7218.20
MW01	6/8/2001	37.89	39.00	1.11	1.25	17.68	7218.27
MW01	7/2/2001	37.93	39.14	1.21	1.25	18.93	7218.21
MW01	8/3/2001	37.83	39.10	1.27	0.05	18.98	7218.30
MW01	9/12/2001	38.02	38.96	0.94	2.25	21.23	7218.17
MW01	10/12/2001	38.19	38.43	0.24	0.25	21.48	7218.14
MW01	12/13/2001	38.40	38.75	0.35	0.50	21.98	7217.91
MW01	3/12/2002	38.42	38.76	0.34	0.75	22.73	7217.89
MW01	4/3/2002	38.39	38.66	0.27	0.25	22.98	7217.94
MW01	5/20/2002	38.46	38.56	0.10	0.50	23.48	7217.90
MW01	6/10/2002	38.51	38.56	0.05	0.25	23.73	7217.86
MW01	7/19/2002	--	38.64	0.00	0.25	23.98	7217.74
MW01	10/11/2002	38.84	38.87	0.03	0.16	24.14	7217.53
MW01	5/6/2003	37.94	37.97	0.03	1.00	25.14	7218.43
MW01	7/17/2003	--	38.95	0.00	0.20	25.34	7217.43
MW01	10/13/2003	--	39.06	0.00	0.13	25.47	7217.32
MW01	4/20/2004	--	39.18	0.00	0.24	25.71	7217.20
MW01	7/27/2004	--	39.22	0.00	0.13	25.84	7217.16
MW01	10/26/2004	--	39.35	0.00	0.08	25.92	7217.03
MW01	4/22/2005	--	39.52	0.00	0.06	25.98	7216.86
MW01	7/19/2005	--	39.34	0.00	0.03	26.01	7217.04
MW01	10/21/2005	--	39.57	0.00	0.01	26.02	7216.81
MW01	5/10/2006	--	38.72	0.00	0.05	26.07	7217.66
MW01	7/26/2006	--	38.72	0.00	0.04	26.11	7217.66

Notes:

"--" indicates either that product was not measurably detected or that product was not recovered.

"NA" indicates that the respective data point is not available.

Groundwater elevations may not be static due to removal of equipment. Corrections for product thickness utilize SG of 0.8.