



January 14, 2013

Mr. Leonard Lowe Environmental Engineer New Mexico Oil Conservation Division 1220 S. St. Francis Dr. Santa Fe, NM 87505

# RE: 2nd 2012 Semi Annual Groundwater Monitoring Results DCP C-Line Pipeline Release (1RP-401-0) Lea County, NM (Unit O Section 31, T19S, R37E)

Dear Mr. Lowe:

DCP Midstream, LP (DCP) is pleased to submit for your review, one copy of the 2nd 2012 Semi Annual Groundwater Monitoring Results for the DCP C-Line Pipeline Release Site located in Lea County, New Mexico (Unit O Section 31, T19S, R37E, Latitude 32° 31' 29.7" N Longitude 103° 17' 11.7 W).

If you have any questions regarding the report, please call me at 303-605-1718.

Sincerely

**DCP Midstream, LP** 

Stephen Weathers, PG Principal Environmental Specialist

cc: Geoffrey Leking, OCD Hobbs District Office (Copy on CD) Environmental Files ۵.

Second Half 2012 Semi-Annual Groundwater Monitoring Summary Report

> C-Line 50602 Pipeline Release Lea County, New Mexico 1RP-401-0

> > Prepared for:



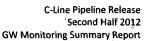
370 17<sup>th</sup> St., Suite 2500 Denver, CO 80202

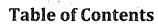
#### Prepared by:



6899 Pecos Street, Unit C Denver, CO 80221

# November 1, 2012





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C-Line Pipeline Release Second Half 2012 GW Monitoring Summary Report



## **1.** Introduction

This report summarizes the semi-annual groundwater monitoring and remediation activities conducted September 8, 2012, at the C-Line 50602 Pipeline Release (Site) in Lea County, New Mexico (Figure 1). Tasman Geosciences, LLC (Tasman) conducted these activities on behalf of DCP Midstream, LP (DCP). The field activities described herein were performed with the purpose of monitoring groundwater flow and quality conditions and assessing the presence of light non-aqueous phase liquid (LNAPL) hydrocarbons in the Site subsurface. The data collected herein were used to develop groundwater elevation maps, and benzene concentration versus time graphs to evaluate current conditions at the Site.

# 2. Site Location and Background

The Site is located in the southeastern quarter of the southeastern quarter of Section 31, Township 20 South, Range 37 East approximately 6.25 miles south and 1.25 miles west of the town of Monument in Lea County, New Mexico. The approximate field coordinates are 32,5250 degrees north, 103,2867 degrees west. The surrounding area is predominantly uninhabited and used for oil and gas extraction and some ranching. Several underground pipelines traverse the Site, two of which are owned by DCP (Figure 2).

Based on review of historical reports from previous site investigations, the original condensate release occurred in early 2002. Environmental Plus Incorporated (EPI) completed remediation activities between April and June 2002, which included excavation of impacted soil, compacted clay barrier installation, and investigative soil boring advancements. These activities were conducted at three Site locations described as C-Line 50602, C-line 52102, and C-Line 52302. Monitoring well MW-1 was installed at or near the original C-Line 50602 pipeline release location to delineate the vertical extent of hydrocarbon impacts. Additional remediation activities including down-gradient monitoring well installation (MW-2 through MW-6), groundwater monitoring and sampling, and investigative remediation tests to evaluate LNAPL removal were conducted between November and December 2002. These activities are described in detail in the February 6, 2003 *Characterization Report: C-Line 50602, 52102, and 52302 Releases* submitted by Remediacon Incorporated.

During the spring of 2003, three additional monitoring wells (MW-7, MW-8 and MW-9) were installed to the southeast of the original release location to further delineate the extent of hydrocarbon migration. MW-1 was also re-drilled and converted from a two-inch diameter to a four-inch diameter LNAPL recovery well. An LNAPL recovery system was installed in mid-November 2003 and operation was initiated on November 26, 2003. In early October 2004 a soil vapor extraction (SVE) system was added to the LNAPL recovery system at MW-1 to facilitate recovery of vapor phase hydrocarbons. Between November 2003 and December 2004 a reported 1,212 gallons of LNAPL was extracted by the recovery system. In 2005, LNAPL recovery and SVE was expanded to MW-4 to further enhance remediation at the Site. Through 2006 a significant decline in LNAPL recovery was observed in wells MW-1 and MW-4

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C-Line Pipeline Release Second Half 2012 GW Monitoring Summary Report

and the remediation system was shut down on June 26, 2006. Ancillary components of the system remain in place and MW-1 and MW-4 are currently utilized as monitoring well locations.

# 3. Groundwater Monitoring

This section describes the groundwater field and laboratory activities performed during the second half 2012 semi-annual monitoring event. Monitoring activities included Site-wide groundwater gauging, LNAPL gauging, and groundwater sampling. Figure 2 illustrates the groundwater monitoring network utilized to perform these activities at the Site.

### 3.1 Groundwater and LNAPL Elevation Monitoring

Groundwater levels were measured in order to evaluate hydraulic characteristics and provide information regarding seasonal fluctuations in groundwater elevations at the Site. During the second half 2012, groundwater levels were measured at eight Site monitoring well locations. LNAPL was not detected within any Site monitoring wells.

Groundwater levels were measured on the north side of the well casing to the nearest 0.01-foot using an oil-water interface probe (IP). Measured groundwater levels are presented in Table 1. Groundwater level data were later converted to elevation (feet above mean sea level [AMSL]) by subtracting the measured groundwater level from top of casing elevation survey datum.

Groundwater elevation measurements collected during the second half 2012 monitoring event are presented in Table 1, and a second half 2012 groundwater elevation contour map is illustrated on Figure 3. Groundwater elevations ranged from 3,449.08 feet AMSL at monitoring well MW-8 to 3,451.29 feet AMSL at monitoring well MW-2. As illustrated on Figure 3, groundwater flow at the Site generally trends to the east-southeast with a gradient of approximately 0.0055 foot per foot between monitoring wells MW-2 and MW-9.

# **3.2 Groundwater Quality Monitoring**

Depth to groundwater and total well depth were measured at each of the Site monitoring wells as previously described. A minimum of three well casing volumes of groundwater, (calculated from total depth of the well and groundwater level measurements) were purged from the subject well prior to collecting groundwater samples. Groundwater samples were collected using dedicated polyethylene bailers, placed in clean laboratory-supplied containers for the selected analytical methods, packed in an ice-filled cooler, and maintained at approximately four (4) degrees Celsius (<sup>0</sup>C) for transportation. Groundwater samples were then shipped under chain-of-custody procedures to Accutest Laboratories (Accutest) in Wheat Ridge, Colorado, for analysis.

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Groundwater samples were collected from monitoring wells MW-1 through MW-5, and MW-7 through MW-9. Water quality samples were submitted to be analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) by United States Environmental Protection Agency (USEPA) Method 8260B.

Table 2 summarizes BTEX concentrations in groundwater samples collected during the second half 2012 event. Laboratory analytical reports for the event are included in Appendix B, and analytical results are summarized on Figure 4.

Benzene was detected in monitoring well MW-1 at a concentration of 0.0463 mg/L and MW-3 at 0.012 mg/L, both of which exceed the New Mexico Water Quality Control Commission (NMWQCC) groundwater standard of 0.01 mg/L. Toluene and ethylbenzene were also detected in MW-1, but concentrations did not exceed their respective NMWQCC standard.

Water quality parameters were collected during the second half 2012 sampling event. Since Site monitoring wells did not require collection of more than three (3) purge volumes to achieve parameter stabilization, the analytical data are considered representative of Site conditions in that a minimum of three purge volumes were removed from all monitoring wells.

# 3.3 Data Quality Assurance / Quality Control

The data were reviewed for compliance with the analytical method and the associated quality assurance/quality control (QA/QC) procedures. All samples were analyzed using the correct analytical methods and within the correct holding times. Chain of custody forms were in order and properly executed and indicate that samples were received at the proper temperature with no headspace. All data were reported using the correct method number and reporting units. A trip blank, matrix spike or matrix spike duplicate (MS/MSD) and field duplicate sample from well MW-3 were collected during the sampling event. The trip blank was fully in control, having no detections of targets.

The duplicate sample collected at MW-3 was in compliance with QA/QC standards. MW-3 and associated duplicate sample returned results for benzene of 0.0098 mg/l and 0.012 mg/l respectively.

The overall QA/QC assessment of the data, based on the data review, indicate that both field precision and overall data precision and accuracy are acceptable.

# 4. **Remediation Activities**

LNAPL recovery and SVE at the Site appears to have sufficiently addressed hydrocarbon impacts so that dissolved phase concentrations in groundwater are stable and/or decreasing over time. Natural attenuation continues to provide effective control of the groundwater plume on Site, as evidenced by the sampling results for point of compliance (POC) wells MW-7, MW-8 and MW-9, which continue to exhibit non-detect dissolved-phase BTEX concentrations in groundwater.



# 5. Conclusions

While the dissolved phase benzene impacts exceeded the NMWQCC standard in two of the sampled monitoring wells (MW-1 and MW-3), BTEX concentrations continue to decline across the Site. Benzene concentrations versus time and groundwater elevation graphs are included in Appendix A for monitoring wells MW-1, MW-3, and MW-4. As illustrated by the graphs in Appendix A, it does not appear that there is a relationship between groundwater elevation and the presence of LNAPL or fluctuations in benzene concentrations. These graphs also illustrate that benzene concentrations continue to decline across the Site. Comparison of the second half 2012 monitoring data and historic information provides the following general observations:

- LNAPL has not been detected in any of the monitoring wells since March 14, 2007.
- Based on historic groundwater elevations, the potentiometric surface beneath the Site has shown a declining trend since monitoring was initiated. There has not been significant deviation from this trend during the second half semi-annual monitoring event.
- Dissolved phase benzene concentrations slightly above regulatory standards continue to be observed at MW-1 and MW-3 with steady or decreasing concentrations.
- Dissolved phase BTEX concentrations have continued to decrease over time, likely due to previous LNAPL recovery and SVE, as well as attenuation factors.

# 6. **Recommendations**

Based on evaluation of the second half 2012 and historical Site observations and monitoring results, recommendations have been developed for future activities, as included below:

- Continue semi-annual groundwater monitoring and sampling at monitoring well locations MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, and MW-9.
- Evaluation of a near-term Site closure strategy that may include implementation of a polishing technique to decrease residual dissolved phase benzene concentrations to below regulatory thresholds.

# Tables

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#### TABLE 1 SECOND HALF 2012 SEMI-ANNUAL SUMMARY OF GROUNDWATER ELEVATION DATA C-LINE 50602 PIPELINE RELEASE, LEA COUNTY, NEW MEXICO

		Depth to Groundwater (1)	Depth to Product	Free Phase Hydrocarbon Thickness	Total Depth (2)	TOC Elevation	Groundwater Elevation	Change in Groundwater Elevation Since Previous Event (3)
Location	Date	(feet)	(feet)	(feet)	(feet)	(feet amsl)	(feet amsl)	(feet)
MW-1	9/16/2010					3541.21	3451.31	-0.16
MW-1	4/25/2011	91.25				3541.21	3449.96	-1.35
MW-1	9/18/2011	91.57			99.80	3541.21	3449.64	-0.32
MW-1	3/12/2012	91.63			99.80	3541.21	3449.58	-0.06
MW-1	9/8/2012	91.65			99.80	3541.21	3449.56	-0.02
MW-2	9/16/2010	an she a ta she ta s	A. R. D. M. T. A. T. 19994	7 8779. Subarata an Anta	Carl Mark 25 Mar 1988	3540.91	3451.55	-0.18
MW-2	4/25/2011	89.24		1		3540.91	3451.67	0.12
MW-2	9/18/2011	89.44			99.86	3540.91	3451.47	-0.2
MW-2	3/12/2012	89.57	•		99.86	3540.91	3451.34	-0.13
MW-2	9/8/2012	89.62			99.86	3540.91	3451.29	-0.05
MW-3	9/16/2010					3541.41	3450.96	-0.06
MW-3	4/25/2011	90.41				3541.41	3451.00	0.04
MW-3	9/18/2011	90.84			102.40	3541.41	3450.57	-0.43
MW-3	3/12/2012	90.86			102.40	3541.41	3450.55	-0.02
MW-3	9/8/2012	91.03			102.40	3541.41	3450.38	-0.17
MW-4	9/16/2010	Caller 2 - 20 Table 10 Bar 1, 7,3	19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		VIET IN ILL'EXPERIMENT DAMA	3541.40	3450.8	-0.46
MW-4	4/25/2011	90.34	<u> </u>	1		3541.40	3451.06	0.26
MW-4	9/18/2011	90.84		1	99.10	3541.40	3450.56	-0.5
MW-4	3/12/2012	90.90		1	99.10	3541.40	3450.50	-0.06
MW-4	9/8/2012	91.18			99.10	3541.40	3450.22	-0.28
MW-5	9/16/2010	an a she and a she want the	ومروق عريمهم بالمرور	ier operations were and a second s	0) 87, 3 4 7, 3 4 7, 3 4 7, 48, 7, 48, 70 1	3541.45	3450.69	-0.28
MW-5	4/25/2011	90.40				3541.45	3451.05	0.36
MW-5	9/18/2011	90.92			101.35	3541.45	3450.53	-0.52
MW-5	3/12/2012	90.98			101.35	3541.45	3450.47	-0.06
MW-5	9/8/2012	91.31			101.35	3541.45	3450.14	-0.33
MW-6	9/16/2010		1	natur at the state while of the in-	terne of the second second	3543.98	3447.85	-0.04
MW-6	4/25/2011	95.78			NM	3543.98	3448.20	0.35
MW-6	9/18/2011	NM			NM	3543.98	NM	NM
MW-6	3/12/2012	NM			NM	3543.98	NM	NM
MW-6	9/8/2012	NM	Contraction of the second of	Carrier and Contract Control	NM	3543.98	NM	NM
MW-7	9/16/2010					3542.42	3450.28	-0.19
MW-7	4/25/2011	91.95				3542.42	3450.47	0.19
MW-7	9/18/2011	92.23			100.34	3542.42	3450.19	-0.28
MW-7	3/12/2012	92.45			100.34	3542.42	3449.97	-0.22
MW-7	9/8/2012	92.63	en - 1. 1941 (1947)	PROMATE SOUTH	100.34	3542.42	3449.79	-0.18
MW-8	9/16/2010					3540.29	3450.28	-0.19
MW-8	4/25/2011	90.24		ļ	100.60	3540.29	3450.05	-0.23
MW-8	9/18/2011	90.64			100.60	3540.29	3449.65	-0.4
MW-8 MW-8	3/12/2012 9/8/2012	<u>90.76</u> 91.21			100.60	3540.29 3540.29	3449.53 3449.08	-0.12
· The state of the state of the state	ごみ 経営 たま キー・ 第二字	91.21	a a that shair was	SELLANDARY INC. S. P. C.		Carlor and the rate of the	We had a start of the	-0.45
MW-9	9/16/2010					3539.62	3449.66	-0.08
MW-9	4/25/2011	89.51				3539.62	3450.11	0.45
<u>MW-9</u>	9/18/2011	89.95			100.52	3539.62	3449.67	-0.44
MW-9 MW-9	3/12/2012 9/8/2012	90.13		Į	100.52	3539.62	3449.49	-0.18
111 11-19	9/0/2012	90.53	Average	hange in groundw	100.52	3539.62	3449.09	-0.4 -0.23

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#### TABLE 1 SECOND HALF 2012 SEMI-ANNUAL SUMMARY OF GROUNDWATER ELEVATION DATA C-LINE 50602 PIPELINE RELEASE, LEA COUNTY, NEW MEXICO

Notes:

1- Depths measured from the north edge of the well casing.

2- Total depths were collected and recorded during the second half 2012 semi-annual monitoring event.

3- Changes in groundwater elevation calculated by subtracting the measurement collected during the previous monitoring even from the measurement collected during the most recent monitoring event.

Monitoring well location MW-6 has been removed from the sampling program due to exhibiting non-detect concentrations. Appendix B.

Sample locations are shown on Figure 2 and and a groundwater elevation contour map is shown on Figure 3.

amsl - feet above mean sea level.

TOC - top of casing.

NM - Not Measured.

#### TABLE 2 SECOND HALF 2012 SEMI-ANNUAL SUMMARY OF BTEX CONCENTRATIONS IN GROUNDWATER C-LINE 50602 PIPELINE RELEASE, LEA COUNTY, NEW MEXICO

Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	Comments
New Mexico Water Quality				A REAL OF		
Control Commission Groundwater Standards (mg/L)		0.01	0.75	0.75	0.62	
MW-1	9/16/2010	0.127	0.0319	0.0334	0.0399	under het in der einen die einen der einer der einer die der der der der der eine der die der der der der der d
MW-1	4/25/2011	0.125	0.0416	0.0315	0.171	
MW-1	9/18/2011	0.0638	< 0.002	0.0105	0.0093	· · · ·
MW-1	3/12/2012	0.089	0.0024	0.0333	0.0246	
MW-1	9/8/2012	0.0463	<0.002	0.0066	0.0049	
MW-2	9/16/2010	< 0.001	<0.002	<0.002	< 0.004	n yn en hjelen e ser i gwernen skanne gaarweiten kannen je en een herder yn de ser yn de ser af de ser een de s Nederlânder it de seren waarde gebeure it de seren waarde gebeure it de seren it de seren de seren de seren de s
MW-2	4/25/2011	< 0.001	< 0.002	< 0.002	< 0.002	· · · · · · · · · · · · · · · · · · ·
MW-2	9/18/2011	< 0.001	< 0.002	< 0.002	< 0.004	· · · · · · · · · · · · · · · · · · ·
MW-2	3/12/2012	< 0.001	<0.002	< 0.002	< 0.004	
MW-2	9/8/2012	<0.001	<0.002	< 0.002	< 0.003	
MW-3	9/16/2010	0.9555	0.1785	0.0916	0.1197	Partie An an a fairt an an Anna Anna Anna Anna Anna Anna An
MW-3	4/25/2011	0.0798	< 0.02	0.0111	0.0249	
MW-3	9/18/2011	0.0219	< 0.002	< 0.002	< 0.004	Duplicate sample collected
MW-3	3/12/2012	0.0071	< 0.002	< 0.002	< 0.004	Duplicate sample collected
MW-3	9/8/2012	0.012	< 0.002	<0.002	< 0.003	Duplicate sample collected
MW-4	9/16/2010	<0.001	<0.002	<0.002	0.0921	an an i the strategy and the second
MW-4	4/25/2011	0.00925	0.02905	0.00365	0.102	· · · · · · · · · · · · · · · · · · ·
MW-4	9/18/2011	0.00925	<0.004	< 0.00303	<0.008	······································
	3/12/2012	0.00041	<0.002	<0.002	<0.000	
MW-4	9/8/2012	< 0.001	< 0.002	<0.002	<0.003	······································
MW-5	9/16/2010	< 0.001	<0.002	<0.002	<0.004	a the state of the State State State of the
	4/25/2011	0.0017	0.002	0.00043	0.0109	
MW-5	9/18/2011	<0.001	<0.002	<0.002	< 0.004	l
	3/12/2012	< 0.001	< 0.002	<0.002	<0.004	
MW-5	9/8/2012	< 0.001	< 0.002	< 0.002	< 0.003	
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MW-6	9/16/2010	NS (0.001	NS	NS	NS	
<u>MW-6</u> MW-6	4/25/2011 9/18/2011	<0.001 NS	<0.002 NS	<0.002 NS	<0.002 NS	·
MW-6	3/12/2012	NS NS	NS NS	NS NS	NS NS	· · · · · · · · · · · · · · · · · · ·
	9/8/2012	NS	NS	NS	NS	
MW-7	9/16/2010	<0.001	<0.002	<0.002	< 0.004	a ha in the constant of the second of the
MW-7	4/25/2011	<0.001	<0.002	<0.002	<0.004	
MW-7	9/18/2011	<0.001	<0.002	<0.002	< 0.002	
MW-7	3/12/2012	<0.001	<0.002	<0.002	<0.004	
MW-7	9/8/2012	< 0.001	< 0.002	<0.002	< 0.003	
MW-8	9/16/2010	<0.001	<0.002	<0.002	<0.004	الاستجهار بالالالا المالية الاستهام والمستجري والمراجر المراجر المراجع المراجع المراجع المراجع المراجع المراجع
MW-8	4/25/2011	< 0.001	<0.002	<0.002	<0.004	······
MW-8	9/18/2011	< 0.001	< 0.002	< 0.002	< 0.002	
MW-8	3/12/2012	< 0.001	< 0.002	< 0.002	< 0.004	
MW-8	9/8/2012	< 0.001	< 0.002	<0.002	<0.003	······································
MW-9	9/16/2010	< 0.001	< 0.002	<0.002	< 0.004	a latente eneret el servicional e tre receptionale attactivatione de la contra de la contra de la contra de la
MW-9	4/25/2011	< 0.001	<0.002	<0.002	<0.004	
MW-9	9/18/2011	< 0.001	< 0.002	< 0.002	<0.002	· · · · · · · · · · · · · · · · · · ·
MW-9	3/12/2012	< 0.001	< 0.002	<0.002	< 0.004	
MW-9	9/8/2012	< 0.001	< 0.002	< 0.002	< 0.003	· · · · · · · · · · · · · · · · · · ·

Notes:

1.) The environmental cleanup standards for groundwater that are applicable to the C-Line Pipeline Release site are the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards.

2.) Monitoring well location MW-6 has been removed from the sampling program due to exhibiting non-detect concentrations.

3.) Data presented for all well locations includes previous four sampling events, when available. Historic groundwater analytical results for these locations may be found in Appendix B.

Bold red values indicate an exceedance of the NMWQCC groundwater standards for the Site.

Sample locations are shown on Figure 2 and analytical results are illustrated on Figure 4.

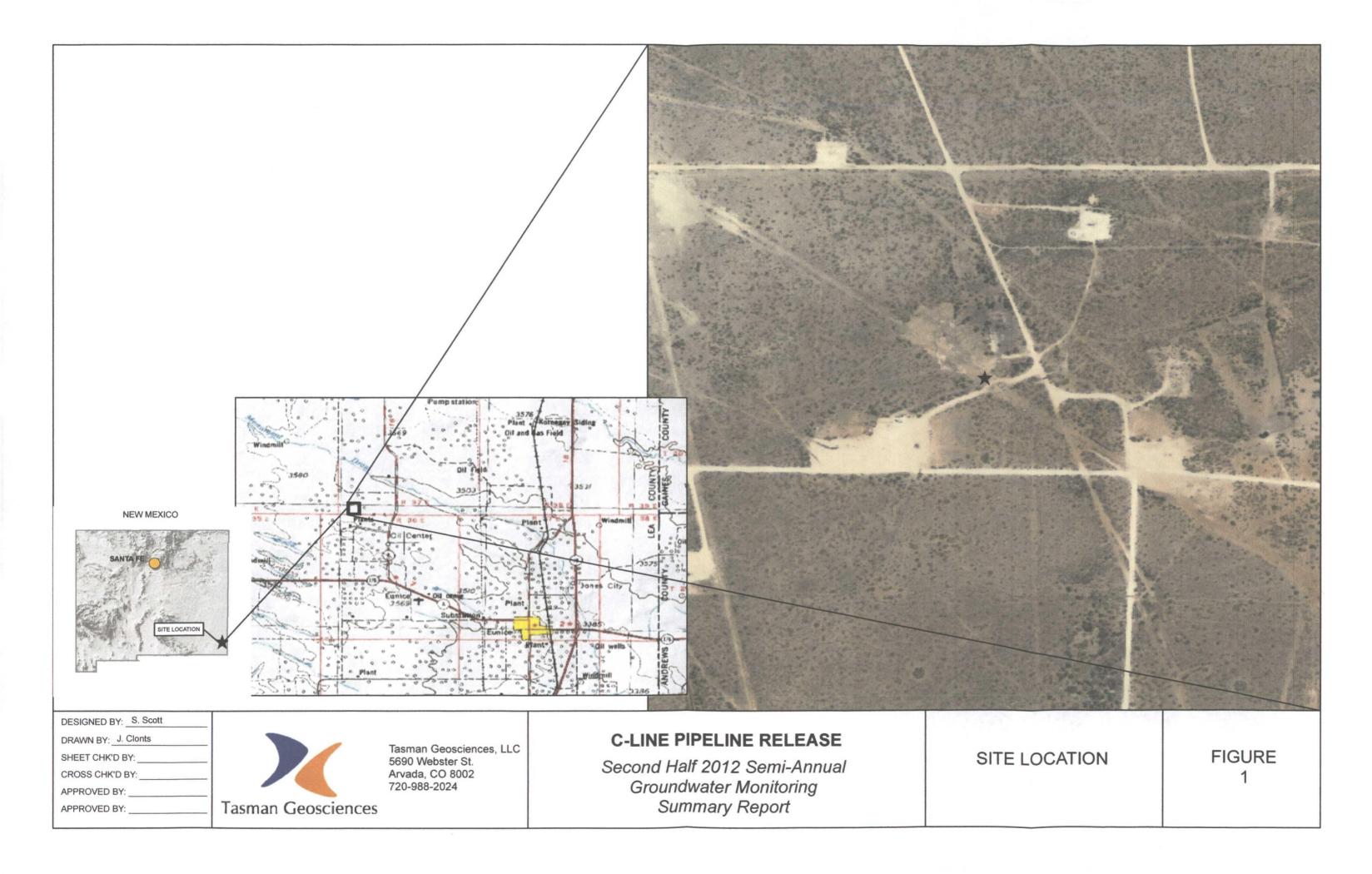
LNAPL = Light Non-Aqueous Phase Liquid

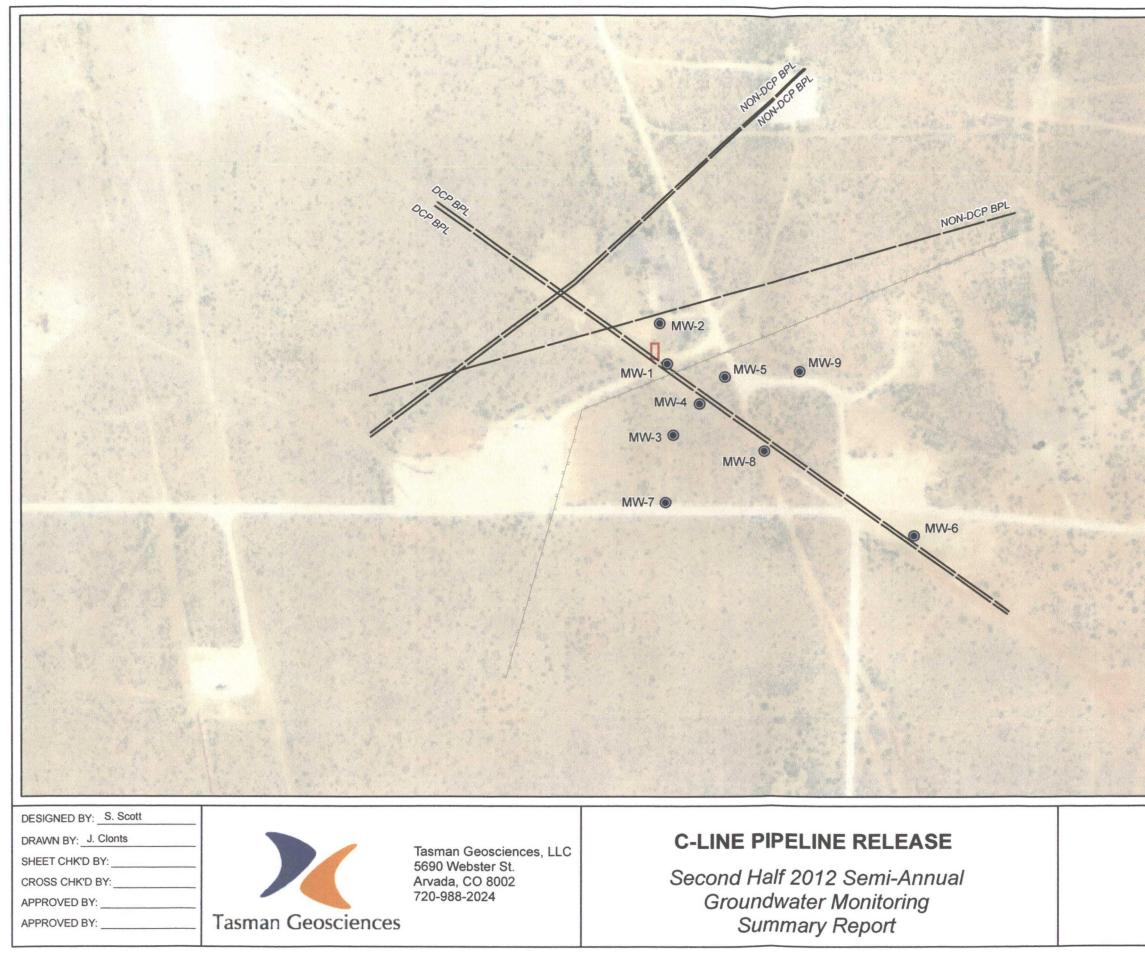
NS = Not sampled.

mg/L = milligrams per liter.

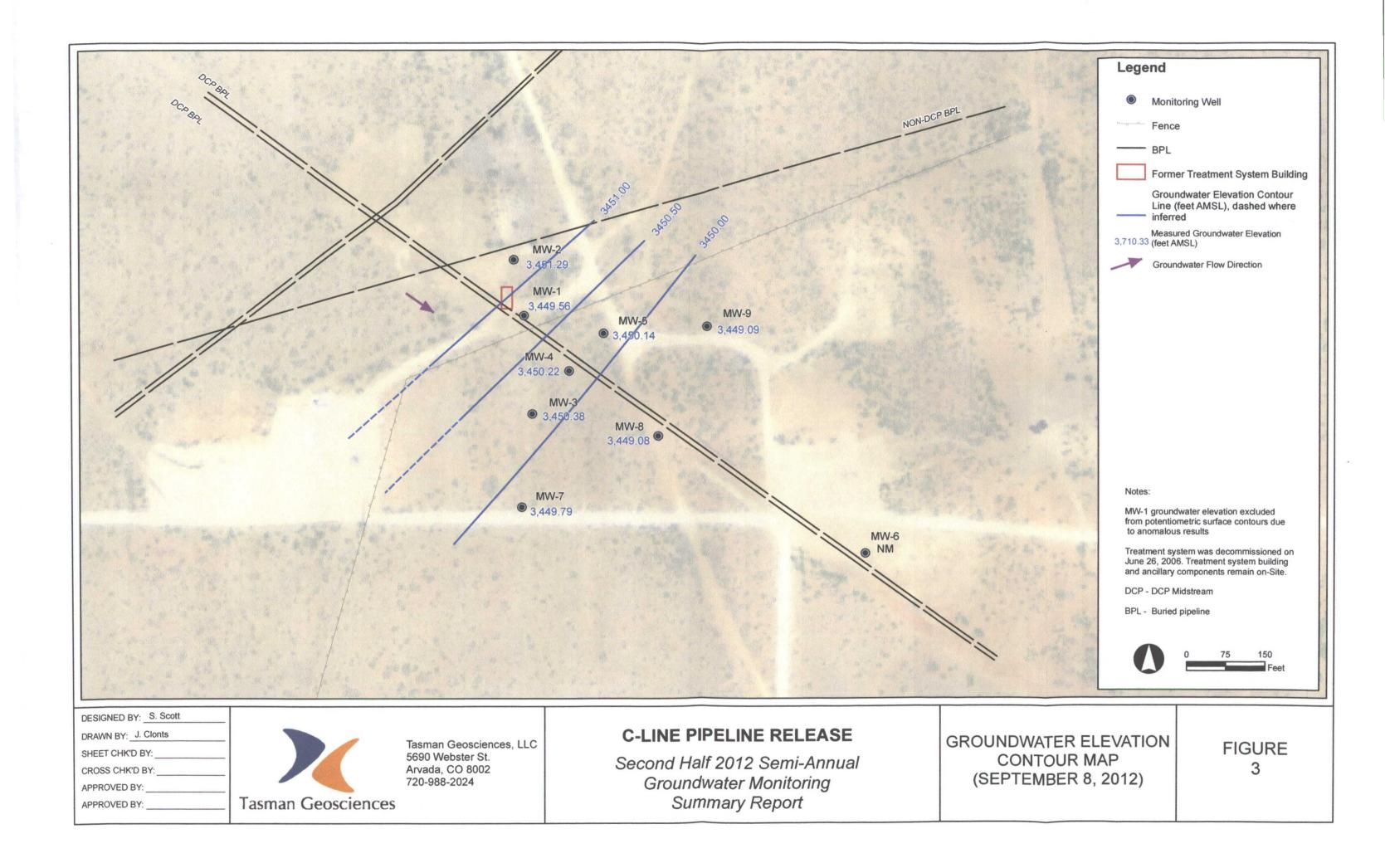
# Figures

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a she the set	June 26, 2006. Treatment system building and ancillary components remain on-Site.	
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	MW-2	
	3/12/2012	9/8/2012
Compound	(mg/L)	(mg/L)
Benzene	< 0.001	< 0.001
Toluene	< 0.002	< 0.002
Ethylbenzene	< 0.002	< 0.002
Total Xylenes	< 0.004	< 0.003

	MW-1	
	3/12/2012	9/8/2012
Compound	(mg/L)	(mg/L)
Benzene	0.089	0.0463
Toluene	0.0024	< 0.002
Ethylbenzene	0.0333	0.0066
Total Xylenes	0.0246	0.0049

	MW-4		
	3/12/2012	9/8/2012	
Compound	(mg/L)	(mg/L)	
Benzene	0.00041	< 0.001	
Toluene	< 0.002	< 0.002	
Ethylbenzene	< 0.002	< 0.002	
Total Xylenes	< 0.004	< 0.003	

MW-3				
	3/12/2012	9/8/2012		
Compound	(mg/L)	(mg/L)		
Benzene	0.0071	0.012		
Toluene	< 0.002	< 0.002		
Ethylbenzene	< 0.002	< 0.002		
Total Xylenes	< 0.004	< 0.003		

	MW-7	
	3/12/2012	9/8/2012
Compound	(mg/L)	(mg/L)
Benzene	< 0.001	< 0.001
Toluene	< 0.002	< 0.002
Ethylbenzene	< 0.002	< 0.002
Total Xylenes	< 0.004	< 0.003

	MW-5	
	3/12/2012	9/8/2012
Compound	(mg/L)	(mg/L)
Benzene	< 0.001	< 0.001
Toluene	< 0.002	< 0.002
Ethylbenzene	< 0.002	< 0.002
Total Xylenes	< 0.004	< 0.003

and the second states		
	MW-9	
	3/12/2012   und (mg/L)   ne <0.001	
Compound	(mg/L)	
Benzene	< 0.001	
Toluene	< 0.002	
Ethylbenzene	< 0.002	
Total Xylenes	< 0.004	

MW-6 NS

MW-8									
	3/12/2012	9/8/2012							
Compound	(mg/L)	(mg/L)							
Benzene	< 0.001	< 0.001							
Toluene	< 0.002	< 0.002							
Ethylbenzene	< 0.002	< 0.002							
Total Xylenes	< 0.004	< 0.003							

DESIGNED BY: S. Scott	
DRAWN BY: J. Clonts	
SHEET CHK'D BY:	
CROSS CHK'D BY:	
APPROVED BY:	

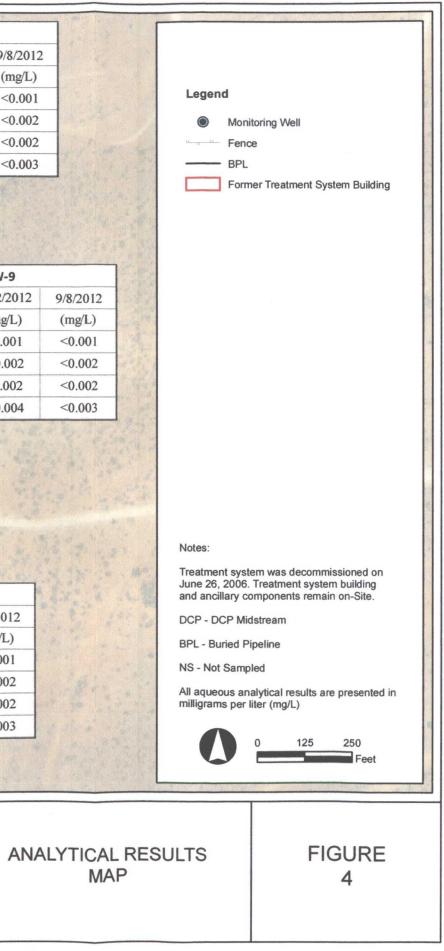
APPROVED BY:



Tasman Geosciences, LLC 5690 Webster St. Arvada, CO 8002 720-988-2024

# **C-LINE PIPELINE RELEASE**

Second Half 2012 Semi-Annual Groundwater Monitoring Summary Report

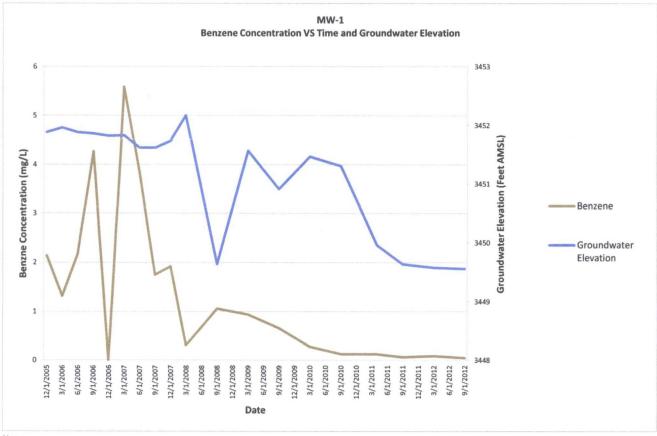


Appendix A

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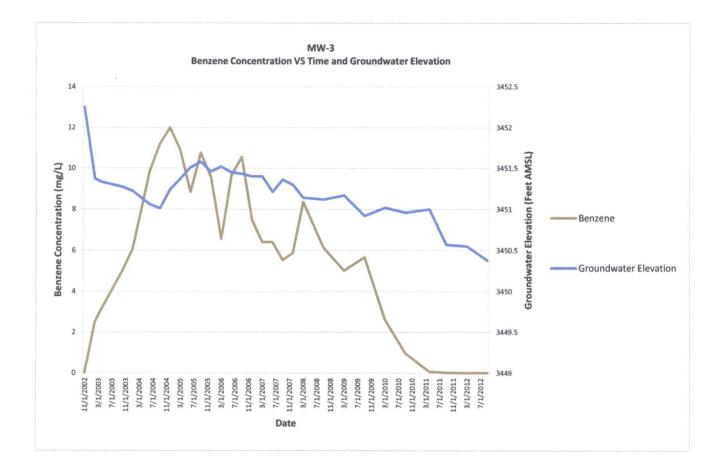
Benzene Concentration versus Time and Groundwater Elevation Graphs

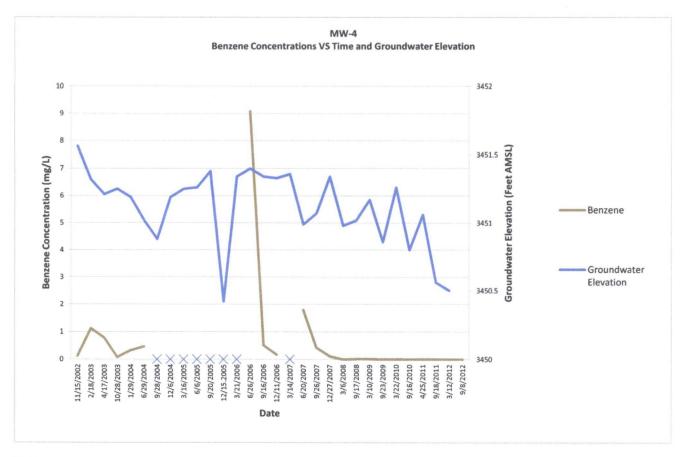
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Note:

LNAPL had been historically detected in MW-1 between November 15, 2002 and September 20, 2005.





#### Note:

Dates marked with an X indicate that LNAPL was detected in the well and therefore no sample was collected.

Appendix B

# Laboratory Analytical Report

# Appendix C

# Historical Analytical Results

		F	<del></del>	r	lotal	
Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	
Identification	Sample Date	(mg/l)	(mg/l)	(mg/l)		Comments
New Mexico Water Quality			(mg/1)	Sec. 1		Comments
Control Commission		0.01	0.75	0.75	0.62	
Groundwater Standards (mg/L)						
MW-1	11/15/2002	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	2/18/2003	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	4/17/2003	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	10/28/2003	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	1/29/2004	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	6/29/2004	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	9/28/2004	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	12/6/2004	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	3/16/2005	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	6/6/2005	LNAPL	LNAPL	LNAPL	LNAPL	
MW-1	9/20/2005	LNAPL	LNAPL	. LNAPL	LNAPL	
MW-1	12/15/2005	2.14	1.37	0.313	1.334	
MW-1	3/21/2006	1.32	0.931	0.419	1.379	
MW-1	6/26/2006	2.17	1.42	0.534	1.722	
MW-1	9/16/2006	4.27	0.508	0.153	0.323	
MW-1	12/11/2006	< 0.001	<0.001	< 0.001	< 0.001	
MW-1	3/14/2007	5.59	0.232	0.453	0.27	
MW-1	6/20/2007	3.82	0.43	0.4	0.79	
MW-1	9/26/2007	1.75	0.097	0.37	0.47	
MW-1	12/27/2007	1.92	0.0372	0.278	0.0736	
MW-1	3/6/2008	0.31	0.07	0.94	1.58	
MW-1	9/17/2008	1.06	0.0555	0.239	0.0751	
MW-1	3/10/2009	0.942	0.0178	0.224	0.0926	
MW-1	9/23/2009	0.658	0.0197	0.112	0.103	
MW-1	3/22/2010	0.276	0.016	0.0147	0.0557	
MW-1	9/16/2010	0.127	0.0319	0.0334	0.0399	
MW-1	4/25/2011	0.125	0.0416	0.0315	0.171	
MW-1	9/18/2011	0.0638	< 0.002	0.0105	0.0093	
	3/12/2012	0.089	0.0024	0.0333	0.0246	
MW-1	9/8/2012	0.0463	< 0.002	0.0066	0.0049	

			· · · · · · · · · · · · · · · · · · ·		lotal	· · · · · · · · · · · · · · · · · · ·
Location ·	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	
Identification		(mg/l)	(mg/l)	(mg/l)	(mg/l)	Comments
New Mexico Water Quality						
Control Commission		0.01	0.75	0.75	0.62	
Groundwater Standards (mg/L)	AND A CALL			ster in Burning	11 a M & M & M & M & M & M & M & M & M & M	
MW-2	11/15/2002	< 0.001	<0.001	< 0.001	< 0.001	
MW-2	2/18/2003	0.29	0.014	0.001	0.001	
MW-2	4/17/2003	0.175	0.007	< 0.001	< 0.001	
MW-2	10/28/2003	0.018	0.001	<0.001	< 0.001	
MW-2	1/29/2004	0.0848	0.035	0.00292	0.00474	
MW-2	6/29/2004	0.0582	0.000219	0.00534	0.001	
MW-2	9/28/2004	0.329	0.0174	<0.001	< 0.001	
MW-2	12/6/2004	0.0355	0.0017	<0.001	< 0.001	
MW-2	3/16/2005	0.00523	< 0.001	< 0.001	< 0.001	
MW-2	6/6/2005	0.0017	<0.001	<0.001	< 0.001	
MW-2	9/20/2005	< 0.001	< 0.001	<0.001	< 0.001	
MW-2	12/15/2005	< 0.001	<0.001	< 0.001	< 0.001	
MW-2	3/21/2006	< 0.001	<0.001	< 0.001	< 0.001	
MW-2	6/26/2006	< 0.001	< 0.001	< 0.001	<0.001	
MW-2	9/16/2006	< 0.001	< 0.001	< 0.001	< 0.001	
MW-2	12/11/2006	< 0.001	< 0.001	< 0.001	<0.001	
MW-2	3/14/2007	< 0.001	< 0.001	< 0.001	< 0.001	· · · · · · · · · · · · · · · · · · ·
MW-2	6/20/2007	< 0.001	< 0.001	< 0.001	< 0.002	
MW-2	9/26/2007	< 0.001	< 0.001	< 0.001	< 0.002	
MW-2	12/27/2007	< 0.002	< 0.002	< 0.002	< 0.006	
MW-2	3/6/2008	< 0.002	< 0.002	< 0.002	< 0.006	
MW-2	3/7/2008	< 0.00046	< 0.00048	< 0.00045	< 0.0014	
MW-2	9/17/2008	< 0.002	< 0.002	< 0.002	< 0.006	
MW-2	3/10/2009	< 0.002	< 0.002	< 0.002	< 0.006	······································
MW-2	3/10/2009	< 0.00046	< 0.00048	< 0.00045	< 0.0014	· · · · · · · · · · · · · · · · · · ·
MW-2	9/23/2009	< 0.00050	< 0.00043	< 0.00055	< 0.0017	
MW-2	9/23/2009	< 0.002	< 0.002	< 0.002	< 0.006	· · · · · · · · · · · · · · · · · · ·
MW-2	3/22/2010	< 0.002	< 0.002	< 0.002	< 0.006	
MW-2	9/16/2010	< 0.001	< 0.002	< 0.002	< 0.004	· · · · · · · · · · · · · · · · · · ·
MW-2	4/25/2011	< 0.001	< 0.002	<0.002	<0.002	··· ·· · · · · · · · · · · · · · · · ·
MW-2	9/18/2011	< 0.001	< 0.002	<0.002	< 0.002	
MW-2	3/12/2012	< 0.001	< 0.002	<0.002	< 0.004	· · · · · · · · · · · · · · · · · · ·
MW-2	9/8/2012	< 0.001	<0.002	<0.002	< 0.003	

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Location		Benzene	Toluene	Ethylbenzene	I otal Xylenes	an an an Anna an Anna Anna Anna Anna An
Identification	Sample Date	(mg/l)	(mg/l)	Etnyidenzene (mg/l)	(mg/l)	Comments
New Mexico Water Quality						
Control Commission			0.75	0.75	···· 0.62	
Groundwater Standards (mg/L)						a state of the state of the state of the
MW-3	11/15/2002	0.017	0.005	<0.001	< 0.001	· · · · · · · · · · · · · · · · · · ·
MW-3	2/18/2003	2.52	0.634	0.021	0.064	
MW-3	4/17/2003	3.18	0.513	0.028	0.1	
MW-3	10/28/2003	5.01	0.275	0.031	0.083	
MW-3	1/29/2004	6.06	0.506	0.0679	0.0849	
MW-3	6/29/2004	9.84	0.0917	0.0873	0.02404	
MW-3	9/28/2004	11.2	0.0218	0.105	0.0213	
MW-3	12/6/2004	12	0.0438	0.154	0.0237	
MW-3	3/16/2005	10.9	0.013	0.15	0.02842	
MW-3	6/6/2005	8.83	0.056	0.1535	0.0502	
MW-3	9/20/2005	10.75	0.1355	0.288	0.221	
MW-3	12/15/2005	9.57	0.414	0.173	0.177	
MW-3	3/21/2006	6.55	1.575	0.4085	0.9015	
MW-3	6/26/2006	9.67	2.93	0.0333	0.414	·
MW-3	9/16/2006	10.55	3.48	0.288	0.384	
MW-3	12/11/2006	7.49	3.35	0.391	0.557	
MW-3	3/14/2007	6.41	2.75	0.3185	0.501	
MW-3	6/20/2007	6.41	3.49	0.52	0.78	
MW-3	9/26/2007	5.54	2.555	0.35	0.515	· · · · · · · · · · · · · · · · · · ·
MW-3	12/27/2007	5.89	2.81	0.316	0.4615	· · · · · · · · · · · · · · · · · · ·
MW-3	3/6/2008	8.36	4.36	0.57	0.99	
MW-3	3/7/2008	8.22	4.3	0.581	1.03	
MW-3	9/17/2008	6.14	3.3	0.386	0.674	
MW-3	3/10/2009	5.03	2.5	0.3945	0.913	
MW-3	3/10/2009	5.25	2.6	0.3	0.907	
MW-3	9/23/2009	5.68	4.32	0.549	1.36	
MW-3	3/22/2010	2.615	1.475	0.218	0.5415	· · · · · · · · · · · · · · · · · · ·
MW-3	9/16/2010	0.9555	0.1785	0.0916	0.1197	
MW-3	4/25/2011	0.0798	< 0.02	0.0111	0.0249	
MW-3	9/18/2011	0.0219	< 0.002	< 0.002	< 0.004	Duplicate sample collected
MW-3	3/12/2012	0.0071	< 0.002	< 0.002	< 0.004	Duplicate sample collected
MW-3	9/8/2012	0.012	<0.002	< 0.002	< 0.003	Duplicate sample collected

			l		I otal	
Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	
Identification	•	(mg/l)	(mg/l)	(mg/l)	(mg/l)	Comments
New Mexico Water Quality						
Control Commission		0.01	0.75	0.75	0.62	
Groundwater Standards (mg/L)		2 12 2 2			er and the	
MW-4	11/15/2002	0.114	0.039	0.002	0.003	
MW-4	2/18/2003	1.12	0.436	0.022	0.032	
MW-4	4/17/2003	0.782	0.45	0.029	0.055	
MW-4	10/28/2003	0.077	0.029	0.002	0.008	
MW-4	1/29/2004	0.32	0.169	0.0203	0.053	
MW-4	6/29/2004	0.461	0.0202	0.352	0.074	
MW-4	9/28/2004	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/6/2004 -	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	3/16/2005	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	6/6/2005	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	9/20/2005	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/15.05	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	3/21/2006	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	6/26/2006	9.08	5.73	1.03	5.69	
MW-4	9/16/2006	0.51	0.0415	0.21	1.028	
MW-4	12/11/2006	0.17	0.139	0.111	0.466	
MW-4	3/14/2007	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	6/20/2007	1.8	0.98	0.61	2.65	<u>, , , , , , , , , , , , , , , , , , , </u>
MW-4	9/26/2007	0.43	0.35	0.19	0.93	
MW-4	12/27/2007	0.11	0.145	0.0837	0.425	
MW-4	3/6/2008	< 0.002	< 0.002	< 0.002	< 0.006	
	9/17/2008	0.0146	0.0068	0.0703	0.081	
MW-4	3/10/2009	0.0141	0.0178	0.0618	0.0863	
MW-4	9/23/2009	0.0022	< 0.002	0.0243	0.0186	
	3/22/2010	0.0129	0.0255	0.0107	0.0574	· · · · · · · · · · · · · · · · · · ·
	9/16/2010	< 0.001	< 0.002	< 0.002	0.0921	······································
	4/25/2011	0.00925	0.02905	0.00365	0.102	
	9/18/2011	0.0024	< 0.004	< 0.004	< 0.008	
	3/12/2012	0.00041	< 0.002	< 0.002	< 0.004	
	9/8/2012	< 0.001	< 0.002	< 0.002	<0.003	
STATE TRANSPORT						NAM BUTTIN THE FULL BUTTING THE MERICAL SECTION

		r	T		Iotal		
Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes		
Identification	•	(mg/l)	(mg/l)	(mg/l)	(mg/l)	Comments	
New Mexico Water Quality							
Control Commission		€÷,0.01	0.75	0.75	}≓≍0.62		
Groundwater Standards (mg/L)							
MW-5	11/15/2002	<0.001	<0.001	<0.001	<0.001		
MW-5	2/18/2003	0.328	0.056	0.004	0.004		
MW-5	4/17/2003	0.128	0.007	<0.001	< 0.001		
MW-5	10/28/2003	0.164	0.048	0.002	0.004		
MW-5	1/29/2004	0.226	0.064	0.00404	0.0074		
MW-5	6/29/2004	0.249	0.00172	0.0603	0.004	· · · · · · · · · · · · · · · · · · ·	
MW-5	9/28/2004	0.0336	0.00281	< 0.001	<0.001		
MW-5	12/6/2004	0.0137	0.00318	<0.001	< 0.001		
MW-5	3/16/2005	0.00371	0.00038	< 0.001	< 0.001		
MW-5	6/6/2005	0.00169	<0.001	<0.001	< 0.001		
MW-5	9/20/2005	<0.001	<0.001	<0.001	<0.001		
MW-5	12/15.05	< 0.001	<0.001	<0.001	< 0.001		
MW-5	3/21/2006	< 0.001	<0.001	<0.001	< 0.001		
MW-5	6/26/2006	< 0.001	<0.001	< 0.001	< 0.001		
MW-5	9/16/2006	<0.001	<0.001	<0.001	<0.001		
MW-5	12/11/2006	< 0.001	< 0.001	<0.001	<0.001		
MW-5	3/14/2007	< 0.001	< 0.001	<0.001	< 0.001		
MW-5	6/20/2007	< 0.001	< 0.001	<0.001	< 0.002		
MW-5	9/26/2007	< 0.001	< 0.001	< 0.001	< 0.002		
MW-5	12/27/2007	< 0.002	< 0.002	< 0.002	<0.006		
MW-5	3/6/2008	< 0.002	< 0.002	< 0.002	< 0.006		
MW-5	9/17/2008	0.00073	0.0007	<0.002	< 0.006		
MW-5	3/10/2009	.0005J	< 0.002	< 0.002	< 0.006		
MW-5	9/23/2009	< 0.002	< 0.002	< 0.002	< 0.006		
MW-5	3/22/2010	< 0.002	0.0037	< 0.002	0.0076		
MW-5	9/16/2010	<0.001	< 0.002	< 0.002	< 0.004		
MW-5	4/25/2011	0.0017	0.0028	0.00043	0.0109	· · · · · · · · · · · · · · · · · · ·	
MW-5	9/18/2011	<0.001	< 0.002	< 0.002	< 0.004		
MW-5	3/12/2012	< 0.001	< 0.002	< 0.002	< 0.004		
MW-5	9/8/2012	< 0.001	< 0.002	< 0.002	< 0.003		

Location	Sample Date	Benzene	Toluene	Ethylbenzene	l otal Xylenes	<u> </u>
Identification	· · · · · · · · · · · · · · · · · · ·	(mg/l)	(mg/l)	(mg/l)	(mg/l)	Comments
New Mexico Water Quality			0.75			
Control Commission Groundwater Standards (mg/L)		0.01		0.75	0.62	
MW-6	11/15/2002	<0.001	<0.001	<0.001	< 0.001	
MW-6	2/18/2003	0.001	<0.001	< 0.001	<0.001	
MW-6	4/17/2003	0.001	< 0.001	< 0.001	< 0.001	- · · · · · · · · · · · · · · · · · · ·
MW-6	10/28/2003	<0.002	< 0.001	<0.001	< 0.001	· · · · · · · · · · · · · · · · · · ·
MW-6	1/29/2004	0.00382	0.001	0.001	0.00194	
MW-6	6/29/2004	< 0.00019	< 0.0014	< 0.00133		
Mw-6	9/28/2004	< 0.0019	< 0.0014	<0.0013	<0.0002 <0.001	
Mw-6	9/28/2004	< 0.001	< 0.001	<0.001	<0.001	
MW-6	3/16/2005	<0.001	< 0.001	<0.001	<0.001	
MW-6	6/6/2005	< 0.001				
MW-6			<0.001	<0.001	< 0.001	· · · · · · · · · · · · · · · · · · ·
MW-6	9/20/2005	<0.001	<0.001	<0.001	< 0.001	
	12/15.05	< 0.001	<0.001	<0.001	< 0.001	
MW-6	3/21/2006	< 0.001	<0.001	<0.001	< 0.001	
MW-6	6/26/2006	< 0.001	< 0.001	< 0.001	< 0.001	
MW-6	9/16/2006	< 0.001	<0.001	<0.001	< 0.001	
MW-6	12/11/2006	< 0.001	<0.001	< 0.001	< 0.001	
MW-6	3/14/2007	< 0.001	<0.001	< 0.001	< 0.001	
MW-6	6/20/2007	NS	NS	NS	NS	
MW-6	9/26/2007	NS	NS	NS	NS	
MW-6	12/27/2007	NS	NS	NS	NS	
MW-6	3/6/2008	NS	NS	NS	NS	
MW-6	9/17/2008	NS	NS	NS	NS	
MW-6	3/10/2009	NS	NS	NS	NS	
MW-6	9/23/2009	NS	NS	NS	NS	
MW-6	3/22/2010	NS	NS	NS	NS	
MW-6	9/16/2010	· NS	NS	NS	NS	
MW-6	4/25/2011	<0.001	< 0.002	< 0.002	< 0.002	
MW-6	9/18/2011	NS	NS	NS	NS	
MW-6	3/12/2012	NS	NS	NS	NS	
MW-6	9/8/2012	NS	NS	NS	NS	· THE HORD · JP THINGPARE OF THE MEDIAL APPENDING APPEND

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Location	Samula Data	Benzene	Toluene	Ethylbenzene	i ofal Xylenes	
Identification	Sample Date	(mg/l)	(mg/l)	(mg/l)	(mg/l)	Comments
New Mexico Water Quality						
Control Commission		0.01	0.75	2. 0.75	a 9 <b>.62</b>	22 W - 28 - 28 - 28 - 28 - 28 - 28 - 28
Groundwater Standards (mg/L)						
MW-7	10/28/2003	< 0.001	< 0.001	< 0.001	< 0.001	
MW-7	1/29/2004	<0.001	<0.001	<0.001	< 0.001	
MW-7	6/29/2004	0.000456	< 0.00014	<0.00013	< 0.0002	
MW-7	9/28/2004	< 0.001	<0.001	<0.001	< 0.001	
MW-7	12/6/2004	< 0.001	< 0.001	< 0.001	< 0.001	
MW-7	3/16/2005	< 0.001	<0.001	< 0.001	< 0.001	
MW-7	6/6/2005	0.000695	<0.001	<0.001	< 0.001	
MW-7	9/20/2005	< 0.001	<0.001	<0.001	< 0.001	
MW-7	12/15.05	< 0.001	< 0.001	< 0.001	< 0.001	
MW-7	3/21/2006	< 0.001	<0.001	< 0.001	< 0.001	
MW-7	6/26/2006	< 0.001	< 0.001	<0.001	< 0.001	
MW-7	9/16/2006	< 0.001	< 0.001	<0.001	< 0.001	
MW-7	12/11/2006	< 0.001	< 0.001	< 0.001	< 0.001	· · · · · · · · · · · · · · · · · · ·
MW-7	3/14/2007	< 0.001	<0.001	< 0.001	< 0.001	
MW-7	6/20/2007	< 0.001	<0.001	< 0.001	< 0.002	
MW-7	9/26/2007	< 0.001	< 0.001	< 0.001	< 0.002	
MW-7	12/27/2007	< 0.002	< 0.002	< 0.002	< 0.006	
MW-7	3/6/2008	< 0.002	< 0.002	< 0.002	< 0.006	· · · · · · · · · · · · · · · · · · ·
MW-7	9/17/2008	< 0.002	< 0.002	< 0.002	< 0.006	
MW-7	3/10/2009	< 0.002	< 0.002	< 0.002	< 0.006	
MW-7	9/23/2009	< 0.002	< 0.002	< 0.002	<sup>•</sup> <0.006	
MW-7	3/22/2010	< 0.002	< 0.002	< 0.002	< 0.006	· · · · · · · · · · · · · · · · · · ·
MW-7	9/16/2010	< 0.001	< 0.002	< 0.002	< 0.004	
MW-7	4/25/2011	< 0.001	< 0.002	< 0.002	< 0.002	
MW-7	9/18/2011	< 0.001	< 0.002	< 0.002	< 0.004	. <u> </u>
MW-7	3/12/2012	< 0.001	< 0.002	< 0.002	< 0.004	
MW-7	9/8/2012	< 0.001	<0.002	<0.002	< 0.003	

	l	I	T	T	Iotal	
Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	
Identification		(mg/l)	(mg/l)	(mg/l)	(mg/l)	Comments
New Mexico Water Quality						
Control Commission		0.01	0.75	0.75	-0.62	
Groundwater Standards (mg/L)		State - State				
MW-8	10/28/2003	<0.001	<0.001	<0.001	<0.001	
MW-8	1/29/2004	0.00139	0.00109	0.00112	0.00217	
MW-8	6/29/2004	0.00248	< 0.00014	0.000633	< 0.0002	
MW-8	9/28/2004	<0.001	<0.001	<0.001	< 0.001	
MW-8	12/6/2004	< 0.001	< 0.001	<0.001	<0.001	
MW-8	3/16/2005	< 0.001	< 0.001	< 0.001	< 0.001	
MW-8	6/6/2005	0.000955	< 0.001	< 0.001	< 0.001	
MW-8	9/20/2005	< 0.001	< 0.001	<0.001	< 0.001	
MW-8	12/15.05	< 0.001	< 0.001	< 0.001	< 0.001	
MW-8	3/21/2006	< 0.001	< 0.001	< 0.001	< 0.001	
MW-8	6/26/2006	< 0.001	< 0.001	< 0.001	< 0.001	
MW-8	9/16/2006	< 0.001	< 0.001	< 0.001	< 0.001	
MW-8	12/11/2006	< 0.001	< 0.001	< 0.001	< 0.001	
MW-8	3/14/2007	< 0.001	< 0.001	< 0.001	<0.001	
MW-8	6/20/2007	< 0.001	< 0.001	< 0.001	< 0.002	
MW-8	9/26/2007	< 0.001	< 0.001	< 0.001	< 0.002	
MW-8	12/27/2007	< 0.002	< 0.002	< 0.002	< 0.006	
MW-8	3/6/2008	< 0.002	< 0.002	< 0.002	< 0.006	
MW-8	9/17/2008	< 0.002	< 0.002	< 0.002	< 0.006	
MW-8	3/10/2009	< 0.002	< 0.002	< 0.002	< 0.006	
MW-8	9/23/2009	< 0.002	< 0.002	< 0.002	< 0.006	
MW-8	3/22/2010	< 0.002	< 0.002	< 0.002	< 0.006	
MW-8	9/16/2010	< 0.001	< 0.002	< 0.002	< 0.004	
MW-8	4/25/2011	< 0.001	< 0.002	< 0.002	< 0.002	
MW-8	9/18/2011	< 0.001	< 0.002	< 0.002	< 0.004	
MW-8	3/12/2012	< 0.001	< 0.002	< 0.002	< 0.004	· · · · · · · · · · · · · · · · · · ·
MW-8	9/8/2012	< 0.001	< 0.002	< 0.002	< 0.003	

Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	l otal Xylenes (mg/l)	Comments
New Mexico Water Quality		. 0.01	0.75	0.75	0.62	
Groundwater Standards (mg/L)	Served X					
MW-9	10/28/2003	< 0.001	< 0.001	< 0.001	<0.001	· ·
MW-9	1/29/2004	< 0.001	< 0.001	< 0.001	< 0.001	
MW-9	6/29/2004	< 0.00019	< 0.00014	< 0.00013	< 0.0002	
MW-9	9/28/2004	< 0.001	< 0.001	< 0.001	< 0.001	
MW-9	12/6/2004	< 0.001	< 0.001	< 0.001	< 0.001	
MW-9	3/16/2005	< 0.001	< 0.001	< 0.001	< 0.001	
MW-9	6/6/2005	< 0.001	< 0.001	< 0.001	< 0.001	
MW-9	9/20/2005	< 0.001	<0.001	< 0.001	0.00105	
MW-9	12/15.05	< 0.001	< 0.001	< 0.001	< 0.001	
MW-9	3/21/2006	< 0.001	< 0.001	< 0.001	< 0.001	
MW-9	6/26/2006	< 0.001	< 0.001	< 0.001	<0.001	
MW-9	9/16/2006	< 0.001	< 0.001	< 0.001	< 0.001	· · · · · · · · · · · · · · · · · · ·
MW-9	12/11/2006	< 0.001	<0.001	< 0.001	< 0.001	
MW-9	3/14/2007	< 0.001	< 0.001	< 0.001	< 0.001	
MW-9	6/20/2007	< 0.001	<0.001	< 0.001	< 0.002	
MW-9	9/26/2007	< 0.001	< 0.001	< 0.001	< 0.002	
MW-9	12/27/2007	< 0.002	< 0.002	< 0.002	<0.006	
MW-9	3/6/2008	< 0.002	< 0.002	< 0.002	< 0.006	
MW-9	9/17/2008	< 0.002	< 0.002	< 0.002	< 0.006	
MW-9	3/10/2009	< 0.002	< 0.002	< 0.002	< 0.006	
MW-9	9/23/2009	< 0.002	< 0.002	< 0.002	<0.006	
MW-9	3/22/2010	< 0.002	< 0.002	< 0.002	< 0.006	
MW-9	9/16/2010	< 0.001	< 0.002	< 0.002	< 0.004	
MW-9	4/25/2011	< 0.001	< 0.002	< 0.002	< 0.002	
MW-9	9/18/2011	< 0.001	< 0.002	< 0.002	< 0.004	
MW-9	3/12/2012	< 0.001	< 0.002	< 0.002	< 0.004	
MW-9	9/8/2012	< 0.001	< 0.002	< 0.002	< 0.003	

Notes:

1.) The environmental cleanup standards for groundwater that are applicable to the C-Line Pipeline Release site are the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards.

2.) Monitoring well location MW-6 has been removed from the sampling program due to exhibiting non-detect concentrations.

3.) Data presented for all other well locations includes previous four sampling events, when available. Historic groundwater analytical results for these locations are available upon request.

Bold red values indicate an exceedance of the NMWQCC groundwater standards for the Site.

Sample locations are shown on Figure 2 and analytical results are illustrated on Figure 4.

LNAPL = Light Non-Aqueous Phase Liquid

NS = Not sampled.

mg/L = milligrams per liter.