



DCP Midstream
370 17th Street, Suite 2500
Denver, CO 80202
303-595-3331
303-605-2226 FAX

September 17, 2012

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

**RE: 2nd Quarter 2012 Groundwater Monitoring Results
DCP Midstream, LP J-4-2 Pipeline Release (1RP-1728)
Unit C, Section 27, Township 19 South, Range 35 East
Lea County, New Mexico**

Dear Mr. Lowe:

DCP Midstream, LP (DCP) is pleased to submit for your review, a copy of the 2nd Quarter 2012 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release located in Lea County, New Mexico (Unit C, Section 27, Township 19 South, Range 35 East).

If you have any questions regarding the report, please call at 303-605-1718 or e-mail me swweathers@dcpmidstream.com.

Sincerely

DCP Midstream, LP

A handwritten signature in black ink, appearing to read "Stephen Weathers".

Stephen Weathers, PG
Principal Environmental Specialist

cc: Geoffrey Leking, Hobbs District (Copy on CD)
Environmental Files

RECEIVED
2011 SEP 23 AM:02
CD

Second Quarter 2012 Groundwater Monitoring and Activities Summary Report

J-4-2 Pipeline Release Lea County, New Mexico 1RP-1728

Prepared for:



**370 17th St., Suite 2500
Denver, CO 80202**

2012 SEP 18 A 11:02

RECEIVED OOD

Prepared by:



Tasman Geosciences

**5690 Webster Street
Arvada, CO 80002**

August 1, 2012

Table of Contents

| | | |
|-----|---|---|
| 1. | Introduction | 1 |
| 2. | Site Location and Background..... | 1 |
| 3. | Groundwater Monitoring..... | 1 |
| 3.1 | Groundwater and LNAPL Elevation Monitoring..... | 2 |
| 3.2 | Groundwater Quality Monitoring | 2 |
| 3.3 | Data Quality Assurance / Quality Control..... | 3 |
| 4. | Remediation Activities | 3 |
| 4.1 | Vacuum Enhanced LNAPL Recovery | 3 |
| 4.2 | LNAPL Collection Bailer | 3 |
| 4.3 | LNAPL Trends | 4 |
| 5. | Conclusions | 5 |
| 6. | Recommendations | 6 |

Tables

- 1 Second Quarter 2012 Summary of Groundwater Elevation Data
- 2 Second Quarter 2012 Summary of BTEX and Chloride Concentrations in Groundwater

Figures

- 1 Site Location
- 2 Site Map
- 3 Second Quarter 2012 Groundwater Elevation Contour Map – June 5, 2012
- 4 Second Quarter 2012 Analytical Results Map

Appendices

- A Laboratory Analytical Results
- B Historical Groundwater Analytical Results

1. Introduction

This report summarizes the groundwater monitoring and remediation activities conducted during the second quarter of 2012 at the J-4-2 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 and assessing the presence of light non-aqueous phase liquid (LNAPL) hydrocarbons within the Site subsurface. The data collected during the reporting period were used to develop a groundwater elevation figure, an analytical results figure and LNAPL versus time and groundwater elevation graphs to evaluate current conditions at the Site.

2. Site Location and Background

The Site is located in the northeastern quarter of the northwestern quarter (Unit C) of Section 27, Township 19 South, Range 35 East approximately 3 miles south of the intersection of US Highway 82 and State Highway 483. The area is sparsely populated and land use is primarily associated with livestock grazing and oil and gas extraction and conveyance.

Based on findings from previous Site investigations, a natural gas condensate release was reported at the Site on August 3, 2005. Environmental Plus Incorporated (EPI) of Eunice, New Mexico, performed initial Site investigation activities. EPI reported that the spill was limited to an approximate area of 2,800 square feet and it did not migrate to any surface water features. EPI installed monitoring wells MW-1, MW-2, and MW-3 as a part of the initial soil and groundwater characterization effort in February 2006. Monitoring wells MW-4, MW-6, MW-7, and MW-8 were installed in September 2006 as part of a Site investigation completed by American Environmental Consulting. Installation of monitoring well MW-5 was not completed during this event due to refusal while advancing the borehole. Groundwater samples collected in 2006 from the newly installed wells indicated that dissolved phase petroleum hydrocarbons and chloride had impacted groundwater at the Site in the vicinity of monitoring wells MW-1 and MW-2. In addition, LNAPL was detected at monitoring wells MW-1 and MW-2.

3. Groundwater Monitoring

This section describes the field and laboratory activities performed during the second quarter 2012 groundwater monitoring event. Monitoring activities included Site-wide groundwater 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 and LNAPL levels were measured in order to evaluate hydraulic characteristics and provide information regarding seasonal fluctuations in groundwater elevations at the Site. During the second quarter 2012, groundwater levels were measured at seven monitoring well locations.

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). Groundwater level data were later converted to elevation (feet above mean sea level [AMSL]). LNAPL levels, where indicated by the IP, were also recorded.

Groundwater elevation measurements collected during the reporting period as well as historical elevations are presented in Table 1, and a second quarter 2012 groundwater elevation contour map is illustrated on Figure 3. Groundwater elevations ranged from 3,705.02 feet AMSL at monitoring well MW-8 to 3,709.32 feet AMSL at monitoring well MW-4. As illustrated on Figure 3, groundwater flow at the Site generally trends to the southeast with a gradient of approximately 0.006 foot per foot between monitoring wells MW-4 and MW-8.

Measurable levels of LNAPL were not detected at any of the seven monitoring wells during the second quarter 2012 sampling event; however 8 inches of LNAPL was recovered from a product recovery bailer located in MW-02.

3.2 Groundwater Quality Monitoring

Groundwater levels and total well depth were measured at each of the Site monitoring wells prior to collecting groundwater samples. A minimum of three well casing volumes of groundwater were purged from the subject well prior to the collection of 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 ($^{\circ}\text{C}$) for transportation. Groundwater samples were then shipped under chain-of-custody procedures to Accutest Laboratories (Accutest) in Wheat Ridge, Colorado, for analysis.

Water quality samples were collected from the seven wells and were submitted for analysis of benzene, toluene, ethylbenzene, and xylene (BTEX) by United States Environmental Protection Agency (USEPA) Method 8260B, and chloride by USEPA Method 300.

Table 2 summarizes BTEX and chloride concentrations in groundwater samples collected during the reporting period in addition to concentrations from the previous 4 quarters. Laboratory analytical reports for the event are included in Appendix A and historical analytical results up to and including the June 2012 event are contained in Appendix B. Analytical results are summarized on Figure 4. The groundwater samples collected from the Site monitoring wells did not contain concentrations of

dissolved phase BTEX above laboratory reporting limits. Chloride was detected in all seven of the sampled wells with concentrations ranging from 316 milligrams per liter (mg/L) in MW-8 to 2,480 mg/L in MW-1.

3.3 Data Quality Assurance / Quality Control

A trip blank, matrix spike or matrix spike duplicate (MS/MSD) and field duplicate (MW-4) were collected during the sampling event. 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. The trip blank was fully in control, having no detections of targets.

The duplicate sample collected at MW-4 was in compliance with the QA/QC standard. MW-4 and duplicate samples both returned results below laboratory detection limits.

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

4.1 Vacuum Enhanced LNAPL Recovery

During the second quarter 2012 event, Tasman conducted an eight hour vacuum enhanced LNAPL recovery event at monitoring well MW-2 utilizing a vacuum truck. LNAPL recovery was not conducted at MW-1 as product was not present in the well this reporting period. Prior to vacuum recovery, a light sheen was observed at MW-2 and approximately 8-inches of LNAPL was present in the product recovery bailer which is installed in the well.

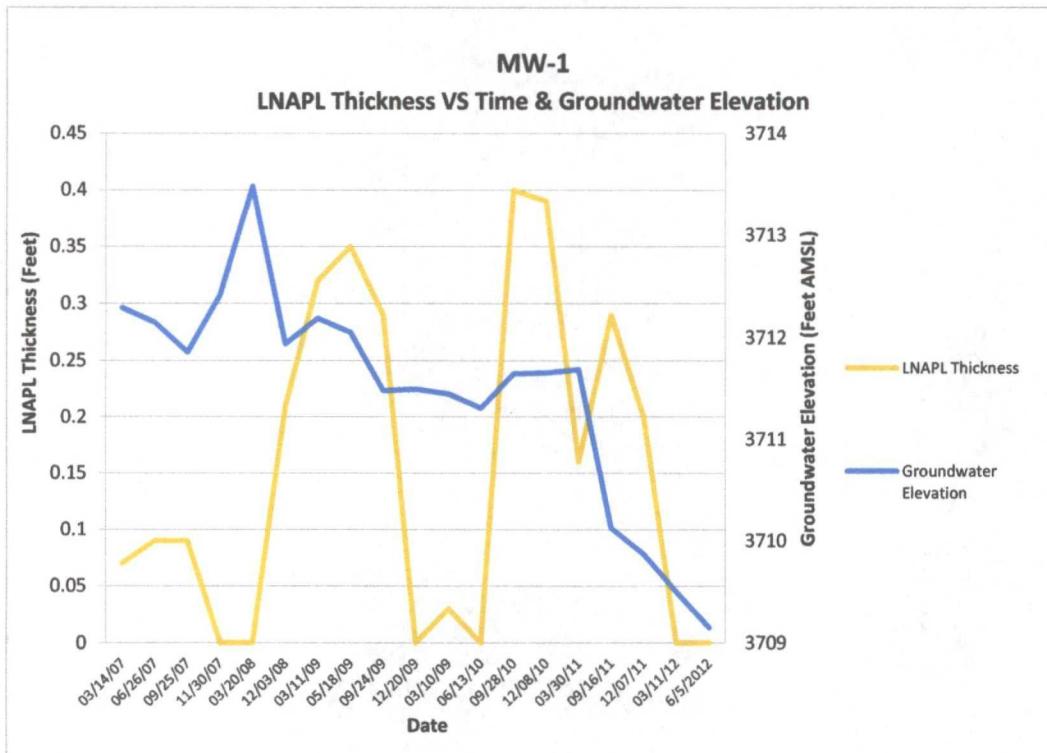
Approximately 84 gallons of mixed liquids were recovered during the vacuum event of which 3 gallons were LNAPL. The recovered liquids were subsequently transported to and disposed of at the Cooper Disposal Facility in Hobbs, New Mexico. Measurable LNAPL was not present at the MW-2 subsequent to the recovery event.

4.2 LNAPL Collection Bailer

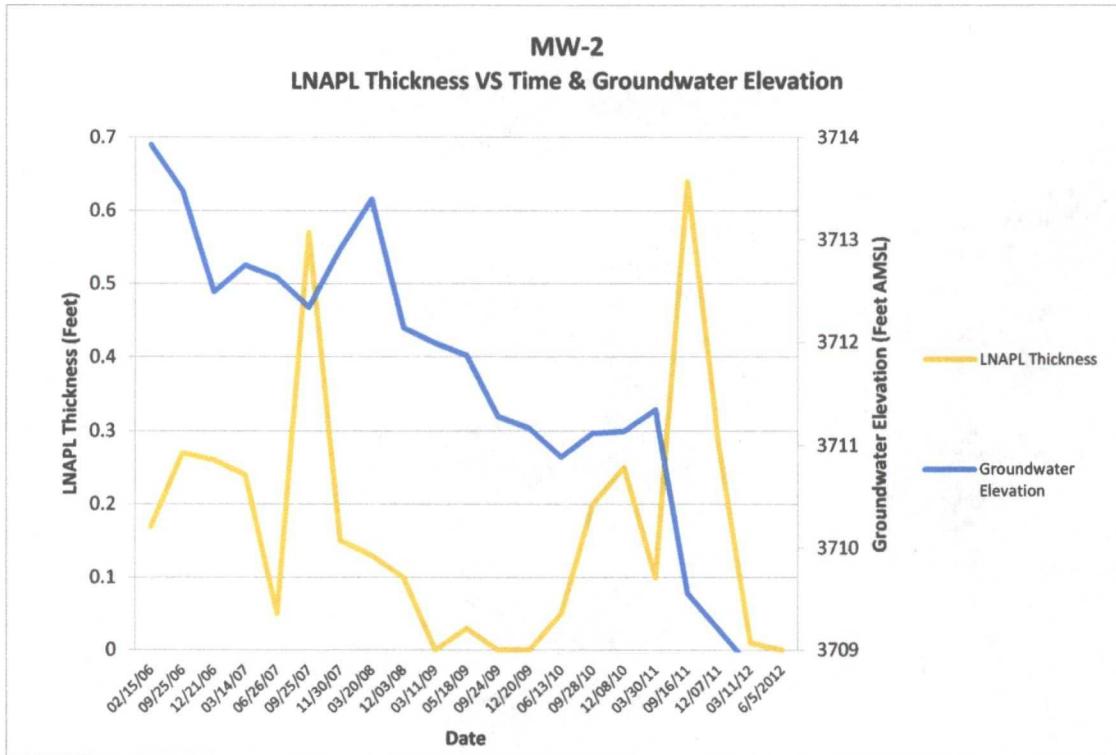
A passive LNAPL collection bailer is installed at monitoring well MW-2. During the second quarter 2012 groundwater monitoring event, approximately 8-inches of LNAPL was recorded in the collection bailer. The LNAPL collection bailer was emptied and set in the monitoring well at the level of groundwater elevation after the vacuum enhanced LNAPL recovery event was completed.

4.3 LNAPL Trends

As illustrated in the graphs below, the LNAPL thickness in MW-1 and MW-2 does not appear to exhibit any seasonal fluctuation trends or a relationship to groundwater levels.



Groundwater elevations have exhibited a steady decrease in elevation over time, whereas product thickness has fluctuated sporadically over time with no apparent correlation to groundwater elevation.



5. Conclusions

While the dissolved phase hydrocarbon impacts did not exceed the regulatory limits in any of the sampled monitoring wells during this event, LNAPL persists in the product bailer at MW-2. The first quarter and second quarter 2012 vacuum recovery events have been successful in removing LNAPL thickness and have allowed analytical sample collection from MW-01 and MW-02.

All groundwater monitoring wells sampled during the reporting period returned BTEX concentrations below New Mexico Water Quality Control Commission Groundwater Standards and, with the exception of MW-2, all groundwater samples were below laboratory detection limits. Results from MW-1 and MW-2 which have historically have had a measurable thickness of LNAPL, indicate that the first and second quarter 2012 vacuum enhanced LNAPL recovery events have been successful in removing constituents of concern from the groundwater.

Given the success of vacuum recovery events in decreasing benzene concentrations in MW-1 and LNAPL thickness in MW-2, additional recovery events are warranted.

Ongoing quarterly groundwater sampling will provide for continued monitoring of Site conditions, BTEX, and LNAPL trends.

6. Recommendations

Based on evaluation of second quarter 2012 and historical Site observations and monitoring results, recommendations for future activities include:

- Continue groundwater monitoring and sampling at the monitoring locations illustrated on Figure 2;
- Continue to conduct and evaluate the success of vacuum enhanced recovery of LNAPL at monitoring well MW-2 for an additional quarter, and;
- Continue use of the LNAPL recovery bailer at MW-2.

Tables

TABLE 1
SECOND QUARTER 2012
SUMMARY OF GROUNDWATER ELEVATION DATA
J-4-2 PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

| Location | Date | Depth to Groundwater (1) (feet) | Depth to Product (1) (feet) | Free Phase Hydrocarbon Thickness (feet) | Total Depth (2) (feet) | TOC Elevation (3) (feet amsl) | Groundwater Elevation (feet amsl) | Change in Groundwater Elevation Since Previous Event (4) (feet) |
|---|-----------|---------------------------------|-----------------------------|---|------------------------|-------------------------------|-----------------------------------|---|
| MW-1* | 6/11/2011 | 29.5 | 29.31 | 0.19 | | | 3711.09 | -0.60 |
| MW-1* | 9/16/2011 | 30.54 | 30.25 | 0.29 | 43.05 | 3740.45 | 3710.13 | -0.96 |
| MW-1* | 12/7/2011 | 30.73 | 30.53 | 0.2 | 43.05 | 3740.45 | 3709.87 | -0.26 |
| MW-1 | 3/11/2012 | 30.95 | | | 43.05 | 3740.45 | 3709.50 | -0.37 |
| MW-1 | 6/5/2012 | 31.30 | | | 43.05 | 3740.45 | 3709.15 | -0.35 |
| MW-2* | 6/11/2011 | 30.55 | 30.35 | 0.2 | | | 3710.22 | -1.13 |
| MW-2* | 9/16/2011 | 31.54 | 30.90 | 0.64 | 43.30 | 3740.62 | 3709.56 | -0.66 |
| MW-2* | 12/7/2011 | 31.63 | 31.35 | 0.28 | 43.30 | 3740.62 | 3709.20 | -0.36 |
| MW-2* | 3/11/2012 | 31.79 | 31.78 | 0.01 | 43.30 | 3740.62 | 3708.84 | -0.36 |
| MW-2 | 6/5/2012 | 32.05 | | | 43.30 | 3740.62 | 3708.57 | -0.27 |
| MW-3 | 6/11/2011 | 28.76 | | | | | 3710.63 | -0.62 |
| MW-3 | 9/16/2011 | 29.62 | | | 35.20 | 3739.39 | 3709.77 | -0.86 |
| MW-3 | 12/7/2011 | 30.1 | | | 35.20 | 3739.39 | 3709.29 | -0.48 |
| MW-3 | 3/11/2012 | 30.25 | | | 35.20 | 3739.39 | 3709.14 | -0.15 |
| MW-3 | 6/5/2012 | 30.54 | | | 35.20 | 3739.39 | 3708.85 | -0.29 |
| MW-4 | 6/11/2011 | 29.12 | | | | | 3711.12 | -0.65 |
| MW-4 | 9/16/2011 | 29.91 | | | 37.95 | 3740.24 | 3710.33 | -0.79 |
| MW-4 | 12/7/2011 | 30.46 | | | 37.95 | 3740.24 | 3709.78 | -0.55 |
| MW-4 | 3/11/2012 | 30.57 | | | 37.95 | 3740.24 | 3709.67 | -0.11 |
| MW-4 | 6/5/2012 | 30.92 | | | 37.95 | 3740.24 | 3709.32 | -0.35 |
| MW-6 | 6/11/2011 | 29.81 | | | | | 3710.15 | -0.76 |
| MW-6 | 9/16/2011 | 30.55 | | | 34.31 | 3739.96 | 3709.41 | -0.74 |
| MW-6 | 12/7/2011 | 30.09 | | | 34.31 | 3739.96 | 3709.87 | 0.46 |
| MW-6 | 3/11/2012 | 31.03 | | | 34.31 | 3739.96 | 3708.93 | -0.94 |
| MW-6 | 6/5/2012 | 31.41 | | | 34.31 | 3739.96 | 3708.55 | -0.38 |
| MW-7 | 6/11/2011 | 33.14 | | | | | 3707.59 | -0.77 |
| MW-7 | 9/16/2011 | 33.76 | | | 40.41 | 3740.73 | 3706.97 | -0.62 |
| MW-7 | 12/7/2011 | 34.04 | | | 40.41 | 3740.73 | 3706.69 | -0.28 |
| MW-7 | 3/11/2012 | 34.15 | | | 40.41 | 3740.73 | 3706.58 | -0.11 |
| MW-7 | 6/5/2012 | 34.51 | | | 40.41 | 3740.73 | 3706.22 | -0.36 |
| MW-8 | 6/11/2011 | 31.32 | | | | | 3706.00 | -0.69 |
| MW-8 | 9/16/2011 | 31.67 | | | 38.58 | 3737.32 | 3705.65 | -1.04 |
| MW-8 | 12/7/2011 | 31.83 | | | 38.58 | 3737.32 | 3705.49 | -0.16 |
| MW-8 | 3/11/2012 | 32.00 | | | 38.58 | 3737.32 | 3705.32 | -0.17 |
| MW-8 | 6/5/2012 | 32.30 | | | 38.58 | 3737.32 | 3705.02 | -0.30 |
| Average Change in groundwater elevation since the previous monitoring event | | | | | | | | -0.33 |

Notes:

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

2-Total depths were collected and recorded during the second quarter 2012 monitoring event. Total depths were not collected in wells that had LNAPL.

3-TOC elevations for monitoring wells MW-4, MW-6, MW-7, & MW-8 were calculated by adding the PVC stick-up length (in feet) to the surveyed ground surface elevations (in feet amsl).

4- Changes in groundwater elevation calculated by subtracting the measurement collected during the previous monitoring even from the measurement collected during the most recent Monitoring well location MW-5 was not installed due geologic refusal that was encountered during drilling activities.

Data presented for all other well locations includes previous four sampling events, when available. Historic groundwater elevation data for these locations may be found in Appendix B. Sample locations are shown on Figure 2 and a groundwater elevation contour map is shown on Figure 3.

amsl - feet above mean sea level.

TOC - top of casing

* Groundwater elevation was corrected for product thickness using the following calculation:

Groundwater elevation = (TOC Elevation - Measured Depth to Water) + (LNAPL Thickness in Well * LNAPL Density)

LNAPL density was assumed to be approximately 0.75 grams per cubic centimeter

TABLE 2
SECOND QUARTER 2012
SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
J-4-2 PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

| Location Identification | Sample Date | Benzene (mg/l) | Toluene (mg/l) | Ethylbenzene (mg/l) | Total Xylenes (mg/l) | Chlorides (mg/l) | Comments |
|--|-------------|----------------|----------------|---------------------|----------------------|------------------|----------------------------|
| New Mexico Water Quality Control Commission Groundwater Standards (mg/L) | | 0.01 | 0.75 | 0.75 | 0.62 | 250* | |
| MW-1 | 3/30/2011 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 9/16/2011 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 12/7/2011 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 3/11/2012 | <0.001 | <0.002 | <0.002 | <0.004 | 2970 | |
| MW-1 | 6/5/2012 | <0.001 | <0.002 | <0.002 | <0.003 | 2480 | |
| MW-2 | 3/30/2011 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 9/16/2011 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 12/7/2011 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 3/11/2012 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 6/5/2012 | 0.00043 | <0.002 | 0.0024 | 0.0069 | 2450 | |
| MW-3 | 6/11/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 2210 | |
| MW-3 | 9/16/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 2190 | Duplicate sample collected |
| MW-3 | 12/7/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 2230 | Duplicate sample collected |
| MW-3 | 3/11/2012 | <0.001 | <0.002 | <0.002 | <0.004 | 2210 | |
| MW-3 | 6/5/2012 | <0.001 | <0.002 | <0.002 | <0.003 | 2080 | |
| MW-4 | 6/11/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 2230 | |
| MW-4 | 9/16/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 1980 | |
| MW-4 | 12/7/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 2010 | |
| MW-4 | 3/11/2012 | <0.001 | <0.002 | <0.002 | <0.004 | 1960 | Duplicate sample collected |
| MW-4 | 6/5/2012 | <0.001 | <0.002 | <0.002 | <0.003 | 1790 | Duplicate sample collected |
| MW-6 | 6/11/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 503 | |
| MW-6 | 9/16/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 476 | |
| MW-6 | 12/7/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 526 | |
| MW-6 | 3/11/2012 | <0.001 | <0.002 | <0.002 | <0.004 | 522 | |
| MW-6 | 6/5/2012 | <0.001 | <0.002 | <0.002 | <0.003 | 532 | |
| MW-7 | 6/11/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 1210 | |
| MW-7 | 9/16/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 1170 | |
| MW-7 | 12/7/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 1200 | |
| MW-7 | 3/11/2012 | <0.001 | <0.002 | <0.002 | <0.004 | 1220 | |
| MW-7 | 6/5/2012 | <0.001 | <0.002 | <0.002 | <0.003 | 1120 | |
| MW-8 | 6/11/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 454 | |
| MW-8 | 9/16/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 368 | |
| MW-8 | 12/7/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 348 | |
| MW-8 | 3/11/2012 | <0.001 | <0.002 | <0.002 | <0.004 | 345 | |
| MW-8 | 6/5/2012 | <0.001 | <0.002 | <0.002 | <0.003 | 316 | |

Notes:

- 1.) The environmental cleanup standards for water that are applicable to this site are the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards.
- 2.) Monitoring well location MW-5 was not installed due geologic refusal that was encountered during drilling activities.
- 3.) Data presented for all other well locations includes previous four sampling events, when available. Historic groundwater analytical results for these locations may be found in Appendix B.

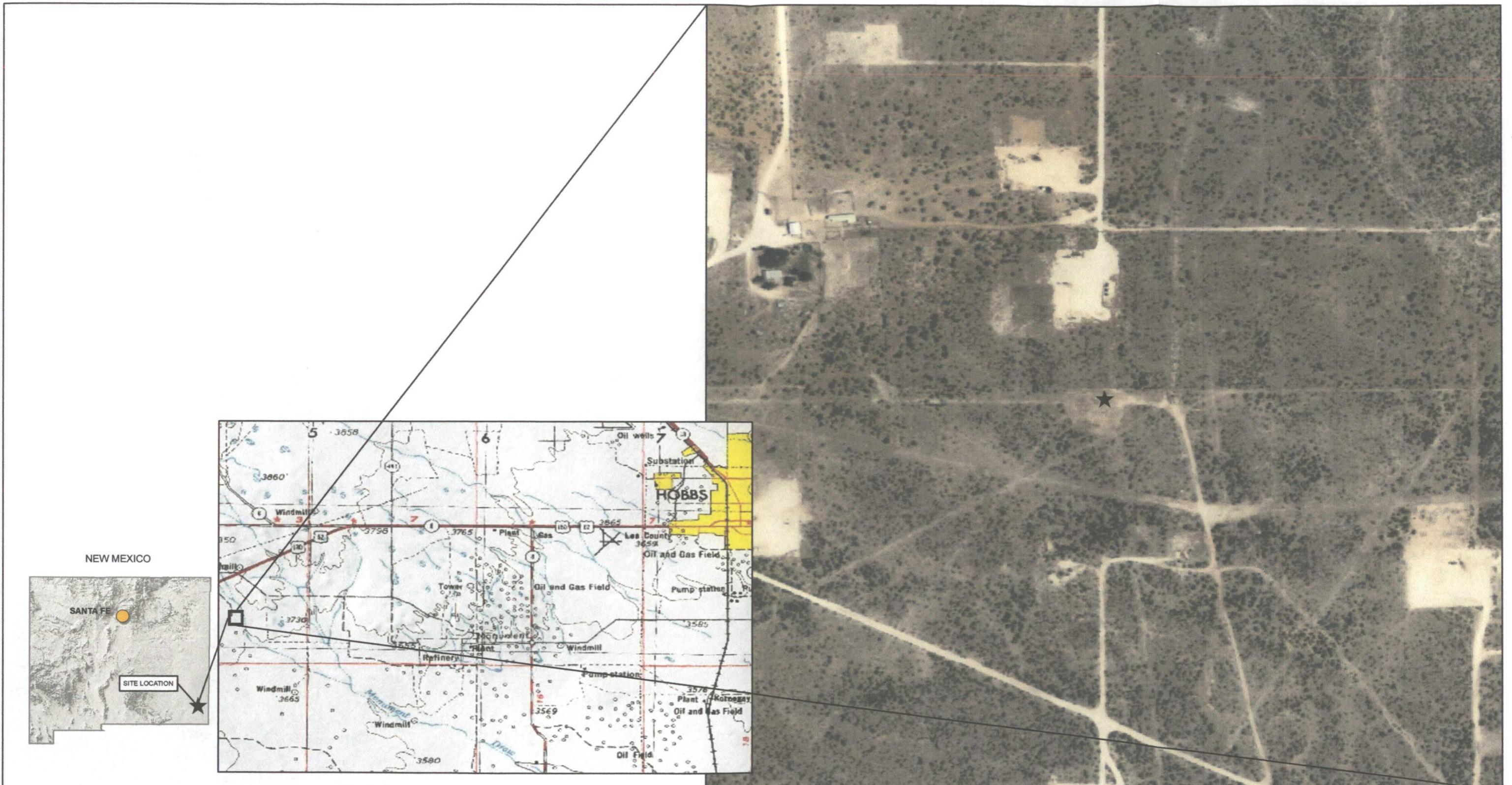
Sample locations are shown on Figure 2 and analytical results are illustrated on Figure 4.

* Chlorides are subject to the National Secondary Drinking Water Regulations (NSDWR) secondary maximum contaminant levels (SMCLs) and not an enforceable regulated constituent. The 250 mg/L standard is established only as a guideline to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor.

LNAPL = Light Non-Aqueous Phase Liquid

mg/L = milligrams per liter.

Figures



DESIGNED BY: C. Wasko
 DRAWN BY: J. Clonts
 SHEET CHK'D BY: _____
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 APPROVED BY: _____



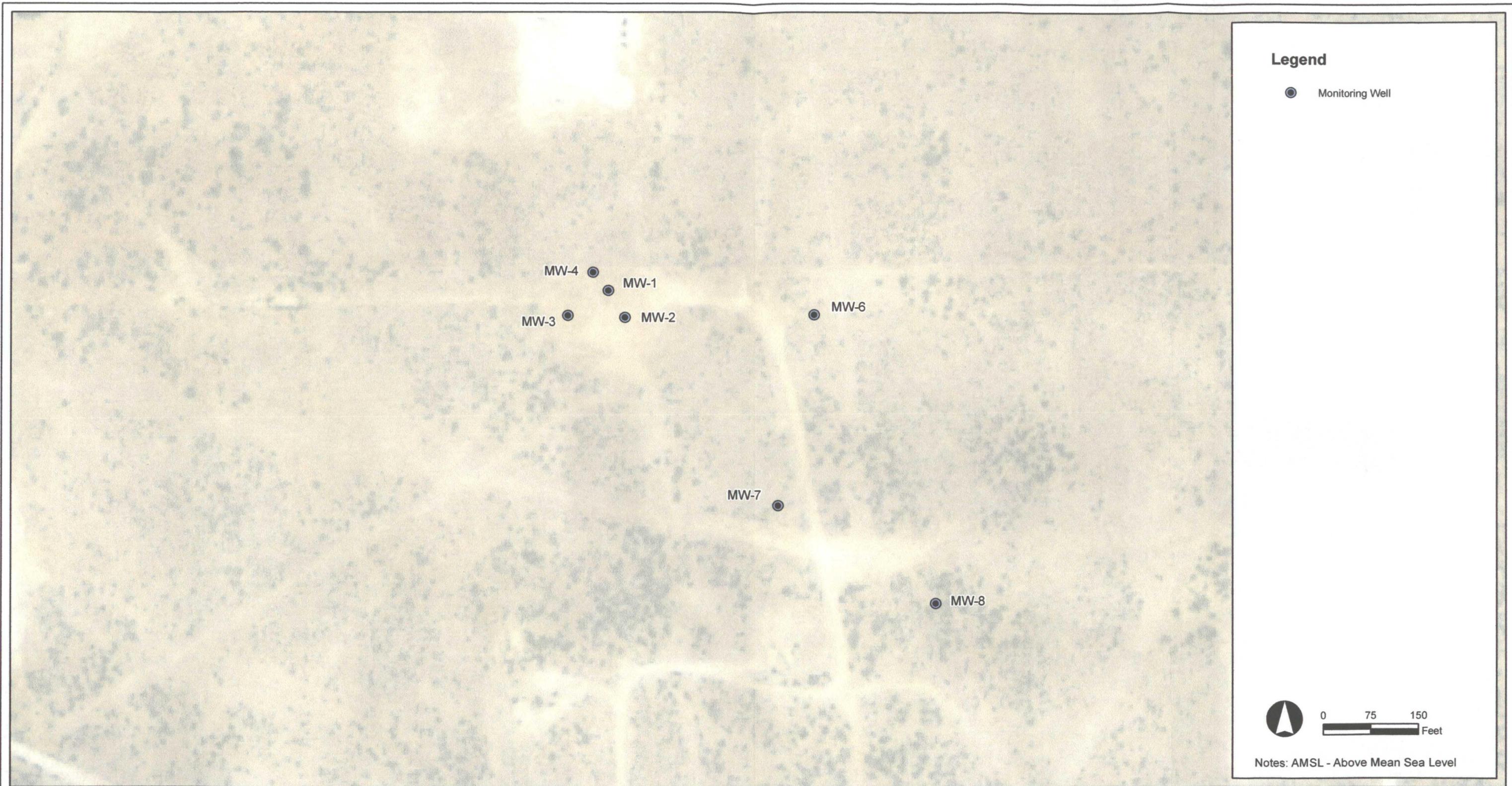
Tasman Geosciences, LLC
 5690 Webster St.
 Arvada, CO 80002
 720-988-2024

J-4-2 PIPELINE RELEASE

*Second Quarter 2012 Groundwater Monitoring
 Summary Report*

SITE LOCATION

FIGURE
 1



DESIGNED BY: C. Wasko
DRAWN BY: J. Clonts
SHEET CHK'D BY: _____
CROSS CHK'D BY: _____
APPROVED BY: _____
APPROVED BY: _____

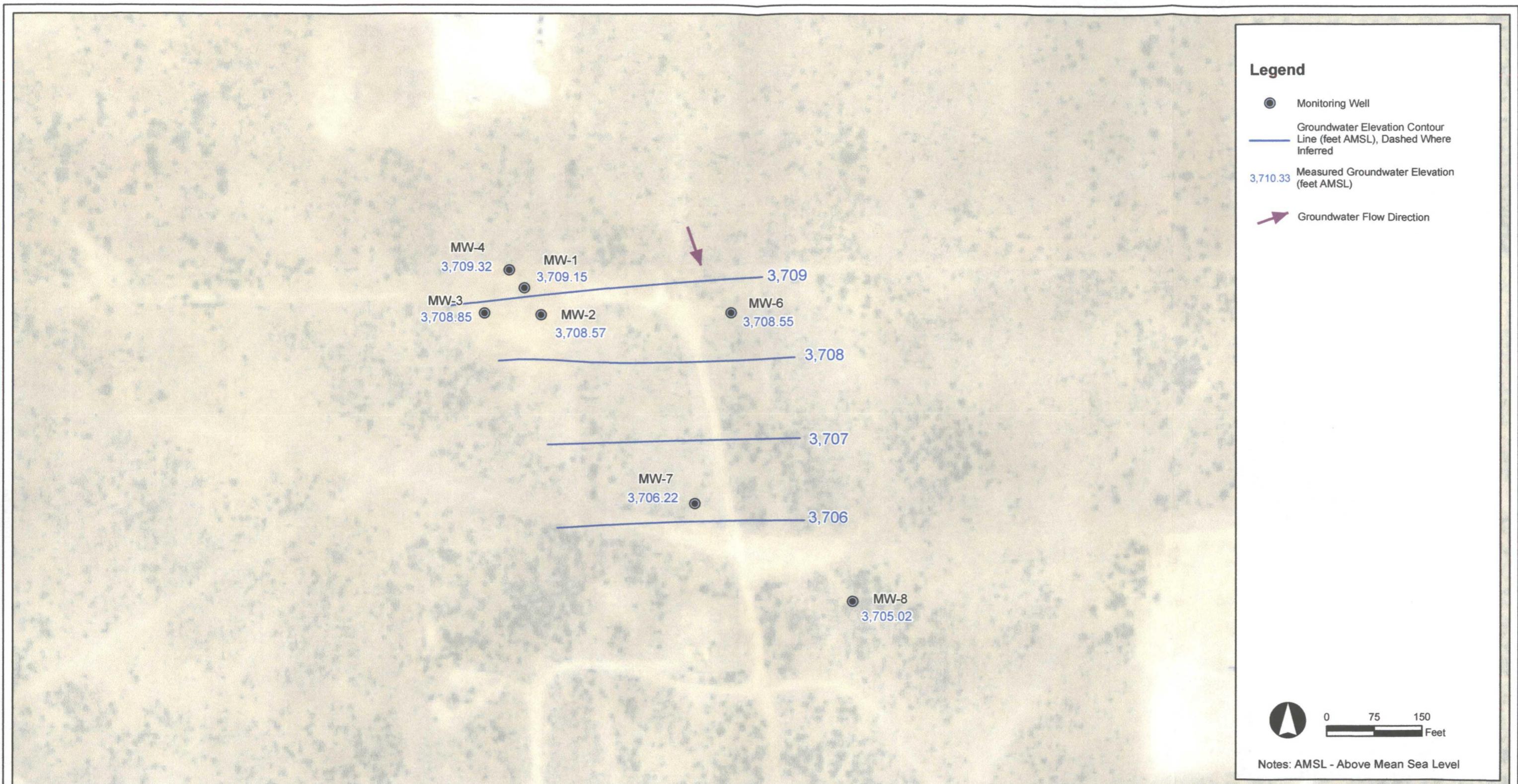


Tasman Geosciences, LLC
5690 Webster St.
Arvada, CO 8002
720-988-2024

J-4-2 PIPELINE RELEASE
*Second Quarter 2012 Groundwater Monitoring
Summary Report*

SITE MAP

**FIGURE
2**



DESIGNED BY: C. Wasko
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

J-4-2 PIPELINE RELEASE
*Second Quarter 2012 Groundwater Monitoring
Summary Report*

**GROUNWATER ELEVATION
CONTOUR MAP
(JUNE 5, 2012)**

**FIGURE
3**

| MW-4 | | |
|---------------|---------------------|--------------------|
| | 3/11/2012 (mg/L) | 6/5/2012 (mg/L) |
| Compound | | |
| Benzene | <0.001 | <0.001 |
| Toluene | <0.002 | <0.002 |
| Ethylbenzene | <0.002 | <0.002 |
| Total Xylenes | <0.004 | <0.003 |
| Chlorides | 1960 | 1790 |

| MW-1 | | |
|---------------|---------------------|--------------------|
| | 3/11/2012 (mg/L) | 6/5/2012 (mg/L) |
| Compound | | |
| Benzene | <0.001 | <0.001 |
| Toluene | <0.002 | <0.002 |
| Ethylbenzene | <0.002 | <0.002 |
| Total Xylenes | <0.004 | <0.003 |
| Chlorides | 2970 | 2480 |

| MW-6 | | |
|---------------|---------------------|--------------------|
| | 3/11/2012 (mg/L) | 6/5/2012 (mg/L) |
| Compound | | |
| Benzene | <0.001 | <0.001 |
| Toluene | <0.002 | <0.002 |
| Ethylbenzene | <0.002 | <0.002 |
| Total Xylenes | <0.004 | <0.003 |
| Chlorides | 522 | 532 |

| MW-3 | | |
|---------------|---------------------|--------------------|
| | 3/11/2012 (mg/L) | 6/5/2012 (mg/L) |
| Compound | | |
| Benzene | <0.001 | <0.001 |
| Toluene | <0.002 | <0.002 |
| Ethylbenzene | <0.002 | <0.002 |
| Total Xylenes | <0.004 | <0.003 |
| Chlorides | 2210 | 2080 |

| MW-2 | | |
|---------------|---------------------|--------------------|
| | 3/11/2012 (mg/L) | 6/5/2012 (mg/L) |
| Compound | | |
| Benzene | LNAPL | 0.00043 |
| Toluene | LNAPL | <0.002 |
| Ethylbenzene | LNAPL | 0.0024 |
| Total Xylenes | LNAPL | 0.0069 |
| Chlorides | LNAPL | 2450 |

| MW-8 | | |
|---------------|---------------------|--------------------|
| | 3/11/2012 (mg/L) | 6/5/2012 (mg/L) |
| Compound | | |
| Benzene | <0.001 | <0.001 |
| Toluene | <0.002 | <0.002 |
| Ethylbenzene | <0.002 | <0.002 |
| Total Xylenes | <0.004 | <0.003 |
| Chlorides | 345 | 316 |

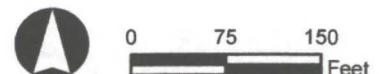
Legend

● Monitoring Well

Notes:

All aqueous analytical results are presented in milligrams per liter (mg/L)

LNAPL - Light Non Aqueous Phase Liquid



DESIGNED BY: C. Wasko
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

J-4-2 PIPELINE RELEASE
*Second Quarter 2012 Groundwater Monitoring
Summary Report*

ANALYTICAL RESULTS MAP

**FIGURE
4**

Appendix A
Laboratory Analytical Report

Appendix B

Historical Groundwater Analytical Results

APPENDIX B
HISTORICAL DATA
SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
J-4-2 PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

| Location Identification | Sample Date | Benzene (mg/l) | Toluene (mg/l) | Ethylbenzene (mg/l) | Total Xylenes (mg/l) | Chlorides (mg/l) | Comments |
|--|-------------|----------------|----------------|---------------------|----------------------|------------------|----------|
| New Mexico Water Quality Control Commission Groundwater Standards (mg/L) | | 0.01 | 0.75 | 0.75 | 0.62 | 250* | |
| MW-1 | 2/1/2006 | 0.139 | 0.326 | 0.34 | 0.31 | NA | |
| MW-1 | 9/1/2006 | 0.0487 | 0.0058 | 0.0284 | 0.0694 | NA | |
| MW-1 | 9/25/2006 | 0.042 | 0.025 | 0.0048 | 0.061 | | |
| MW-1 | 9/25/2006 | 0.056 | 0.032 | 0.0068 | 0.078 | | |
| MW-1 | 12/1/2006 | LNAPL | LNAPL | LNAPL | LNAPL | NA | |
| MW-1 | 3/1/2007 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 6/1/2007 | LNAPL | LNAPL | 0.004 | LNAPL | LNAPL | |
| MW-1 | 9/1/2007 | 0.011 | 0.003 | 0.04 | 0.098 | NA | |
| MW-1 | 1/1/2007 | 0.107 | 0.024 | 0.014 | 0.39 | NA | |
| MW-1 | 11/30/2007 | 0.107 | 0.0243 | 0.0401 | 0.39 | | |
| MW-1 | 3/1/2008 | 0.037 | 0.0155 | LNAPL | 0.215 | NA | |
| MW-1 | 3/20/2008 | 0.0416 | 0.0186 | 0.0177 | 0.26 | | |
| MW-1 | 6/1/2008 | LNAPL | LNAPL | LNAPL | LNAPL | NA | |
| MW-1 | 9/1/2008 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 12/1/2008 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 3/11/2009 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 3/11/2009 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-1 | 5/18/2009 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 9/24/2009 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 12/20/2009 | <0.002 | <0.002 | .0014J | 0.0418 | 2680 | |
| MW-1 | 12/20/2009 | <0.00050 | <0.00043 | 0.0014 | 0.0418 | | |
| MW-1 | 3/10/2010 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 6/13/2010 | 0.0016 | <0.001 | <0.0003 | 0.0095 | 1800 | |
| MW-1 | 6/14/2010 | 0.0016 | <1.0 | <0.30 | | | |
| MW-1 | 9/29/2010 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 12/8/2010 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 3/30/2011 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 9/16/2011 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 12/7/2011 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-1 | 3/11/2012 | <0.001 | <0.002 | <0.002 | <0.004 | 2970 | |
| MW-1 | 6/5/2012 | <0.001 | <0.002 | <0.002 | <0.003 | 2480 | |

APPENDIX B
HISTORICAL DATA
SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
J-4-2 PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

| Location Identification | Sample Date | Benzene (mg/l) | Toluene (mg/l) | Ethylbenzene (mg/l) | Total Xylenes (mg/l) | Chlorides (mg/l) | Comments |
|---|-------------|----------------|----------------|---------------------|----------------------|------------------|----------|
| New Mexico Water Quality Control Commission Groundwater Standards (mg/L) | | 0.01 | 0.75 | 0.75 | 0.62 | 250* | |
| MW-2 | 2/1/2006 | 0.026 | 0.038 | 0.04 | 0.335 | | |
| MW-2 | 9/1/2006 | 0.0045 | <0.001 | 0.0027 | 0.0471 | | |
| MW-2 | 12/1/2006 | 0.006 | 0.003 | 0.003 | 0.0613 | | |
| MW-2 | 3/1/2007 | 0.188 | 0.006 | 0.026 | 0.125 | | |
| MW-2 | 6/1/2007 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 9/1/2007 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 11/1/2007 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 11/30/2007 | 0.006 | 0.0033 | 0.0025 | 0.0613 | | |
| MW-2 | 3/1/2008 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 3/20/2008 | 0.188 | 0.0062 | 0.0262 | 0.125 | | |
| MW-2 | 6/1/2008 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 9/1/2008 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 12/1/2008 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 3/11/2009 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 5/18/2009 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 9/24/2009 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 12/20/2009 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 3/10/2010 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 6/13/2010 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 9/29/2010 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 12/8/2010 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 3/30/2011 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 9/16/2011 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 12/7/2011 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 3/11/2012 | LNAPL | LNAPL | LNAPL | LNAPL | LNAPL | |
| MW-2 | 6/5/2012 | 0.00043 | <0.002 | 0.0024 | 0.0069 | 2450 | |

APPENDIX B
HISTORICAL DATA
SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
J-4-2 PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

| Location Identification | Sample Date | Benzene (mg/l) | Toluene (mg/l) | Ethylbenzene (mg/l) | Total Xylenes (mg/l) | Chlorides (mg/l) | Comments |
|--|-------------|----------------|----------------|---------------------|----------------------|------------------|----------------------------|
| New Mexico Water Quality Control Commission Groundwater Standards (mg/L) | | 0.01 | 0.75 | 0.75 | 0.62 | 250* | |
| MW-3 | 2/1/2006 | <0.001 | <0.001 | <0.001 | <0.002 | NA | |
| MW-3 | 9/1/2006 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-3 | 9/25/2006 | <0.23 | <0.54 | <0.48 | <1.1 | | |
| MW-3 | 3/14/2007 | <0.00023 | <0.00054 | <0.00048 | <0.0011 | | |
| MW-3 | 11/30/2007 | 0.0011 | <0.00048 | <0.00045 | <0.0060 | | |
| MW-3 | 12/1/2006 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-3 | 3/1/2007 | <0.002 | <0.002 | <0.002 | <0.006 | 7800 | |
| MW-3 | 6/1/2007 | 0.003 | 0.005 | 0.002 | 0.01 | 10800 | |
| MW-3 | 9/1/2007 | <0.001 | <0.001 | <0.001 | <0.001 | NA | |
| MW-3 | 11/1/2007 | 0.0011J | <0.002 | <0.002 | <0.006 | NA | |
| MW-3 | 3/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-3 | 3/20/2008 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-3 | 6/1/2008 | <0.002 | <0.002 | <0.002 | 0.007 | NA | |
| MW-3 | 9/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | 4070 | |
| MW-3 | 12/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | 2625 | |
| MW-3 | 12/3/2008 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-3 | 3/11/2009 | <0.002 | <0.002 | <0.002 | <0.002 | 2860 | |
| MW-3 | 3/11/2009 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-3 | 5/18/2009 | <0.002 | <0.002 | <0.002 | <0.002 | 3270 | |
| MW-3 | 5/18/2009 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-3 | 9/24/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 3195 | |
| MW-3 | 9/24/2009 | <0.00050 | <0.00043 | <0.00055 | <0.0017 | | |
| MW-3 | 12/20/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 3605 | |
| MW-3 | 12/20/2009 | <0.00050 | <0.00043 | <0.00055 | <0.0017 | | |
| MW-3 | 3/10/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 3030 | |
| MW-3 | 3/10/2010 | <0.40 | <1.0 | <1.0 | - | | |
| MW-3 | 6/13/2010 | <0.0003 | <0.001 | <0.0003 | <0.0006 | 2130 | |
| MW-3 | 6/13/2010 | <0.30 | <1.0 | <0.30 | - | | |
| MW-3 | 9/29/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 2220 | |
| MW-3 | 9/29/2010 | <0.00030 | <0.0010 | <0.00030 | - | | |
| MW-3 | 12/8/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 2530 | |
| MW-3 | 12/8/2010 | <0.00030 | <0.0010 | <0.00030 | - | | |
| MW-3 | 3/30/2011 | <0.001 | <0.002 | <0.002 | <0.002 | 2230 | |
| MW-3 | 3/30/2011 | <0.00030 | <0.0010 | <0.00030 | <0.00060 | | |
| MW-3 | 6/11/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 2210 | |
| MW-3 | 6/20/2011 | <0.00025 | <0.0010 | <0.00050 | <0.0020 | | |
| MW-3 | 9/16/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 2190 | Duplicate sample collected |
| MW-3 | 12/7/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 2230 | Duplicate sample collected |
| MW-3 | 3/11/2012 | <0.001 | <0.002 | <0.002 | <0.004 | 2210 | |
| MW-3 | 6/5/2012 | <0.001 | <0.002 | <0.002 | <0.003 | 2080 | |

APPENDIX B
HISTORICAL DATA
SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
J-4-2 PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

| Location Identification | Sample Date | Benzene (mg/l) | Toluene (mg/l) | Ethylbenzene (mg/l) | Total Xylenes (mg/l) | Chlorides (mg/l) | Comments |
|--|-------------|----------------|----------------|---------------------|----------------------|------------------|----------------------------|
| New Mexico Water Quality Control Commission Groundwater Standards (mg/L) | | 0.01 | 0.75 | 0.75 | 0.62 | 250* | |
| MW-4 | 2/1/2006 | NI | NI | NI | NI | NA | |
| MW-4 | 6/1/2006 | 0.0086 | 0.0093J | 0.0092 | 0.0061 | NA | |
| MW-4 | 9/27/2006 | 0.0086 | 0.0092 | 0.00093 | 0.0061 | | |
| MW-4 | 12/1/2006 | 0.025 | 0.005 | <0.002 | 0.0065 | NA | |
| MW-4 | 3/1/2007 | 0.004 | 6E-04 | <0.002 | 0.003 | 1300 | |
| MW-4 | 3/14/2007 | 0.0044 | 0.0006 | <0.00048 | 0.0032 | | |
| MW-4 | 6/1/2007 | <0.001 | <0.001 | <0.001 | <0.001 | 1380 | |
| MW-4 | 9/1/2007 | <0.001 | <0.001 | <0.001 | <0.001 | NA | |
| MW-4 | 11/1/2007 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-4 | 11/30/2007 | <0.00046 | <0.00048 | <0.00045 | <0.0060 | | |
| MW-4 | 3/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-4 | 3/20/2008 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-4 | 6/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-4 | 9/1/2008 | <0.002 | <0.002 | <0.002 | .0041J | 1440 | |
| MW-4 | 12/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | 70 | |
| MW-4 | 12/3/2008 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-4 | 3/11/2009 | <0.002 | <0.002 | <0.002 | <0.002 | 1390 | |
| MW-4 | 5/18/2009 | <0.002 | <0.002 | <0.002 | <0.002 | 1440 | |
| MW-4 | 5/18/2009 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-4 | 9/24/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 1490 | |
| MW-4 | 9/24/2009 | <0.00050 | <0.00043 | <0.00055 | <0.0017 | | |
| MW-4 | 12/20/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 1740 | |
| MW-4 | 12/20/2009 | <0.00050 | <0.00043 | <0.00055 | <0.0017 | | |
| MW-4 | 3/10/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 1950 | |
| MW-4 | 3/10/2010 | <0.40 | <1.0 | <1.0 | - | | |
| MW-4 | 6/13/2010 | <0.0003 | <0.001 | <0.0003 | <0.0006 | 2150 | |
| MW-4 | 6/13/2010 | <0.30 | <1.0 | <0.30 | - | | |
| MW-4 | 9/29/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 2130 | |
| MW-4 | 9/29/2010 | <0.00030 | <0.0010 | <0.00030 | - | | |
| MW-4 | 12/8/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 2740 | |
| MW-4 | 12/8/2010 | <0.00030 | <0.0010 | <0.00030 | - | | |
| MW-4 | 3/30/2011 | <0.001 | <0.002 | <0.002 | <0.002 | 2300 | |
| MW-4 | 3/30/2011 | <0.00030 | <0.0010 | <0.00030 | <0.00060 | | |
| MW-4 | 6/11/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 2230 | |
| MW-4 | 6/20/2011 | <0.00025 | <0.0010 | <0.00050 | <0.0020 | | |
| MW-4 | 9/16/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 1980 | |
| MW-4 | 12/7/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 2010 | |
| MW-4 | 3/11/2012 | <0.001 | <0.002 | <0.002 | <0.004 | 1960 | Duplicate sample collected |
| MW-4 | 6/5/2012 | <0.001 | <0.002 | <0.002 | <0.003 | 1790 | Duplicate sample collected |

APPENDIX B
HISTORICAL DATA
SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
J-4-2 PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

| Location Identification | Sample Date | Benzene (mg/l) | Toluene (mg/l) | Ethylbenzene (mg/l) | Total Xylenes (mg/l) | Chlorides (mg/l) | Comments |
|--|-------------|----------------|----------------|---------------------|----------------------|------------------|----------|
| New Mexico Water Quality Control Commission Groundwater Standards (mg/L) | | 0.01 | 0.75 | 0.75 | 0.62 | 250* | |
| MW-6 | 2/1/2006 | NI | NI | NI | NI | NA | |
| MW-6 | 9/1/2006 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-6 | 9/27/2006 | <0.23 | <0.54 | <0.48 | <1.1 | | |
| MW-6 | 12/1/2006 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-6 | 3/1/2007 | <0.002 | <0.002 | <0.002 | <0.006 | 669 | |
| MW-6 | 3/14/2007 | <0.00023 | <0.00054 | <0.00048 | <0.0011 | | |
| MW-6 | 6/1/2007 | <0.001 | <0.001 | <0.001 | <0.001 | 544 | |
| MW-6 | 9/1/2007 | <0.001 | <0.001 | <0.001 | <0.001 | NA | |
| MW-6 | 11/1/2007 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-6 | 11/30/2007 | <0.00023 | <0.00054 | <0.00048 | <0.0011 | | |
| MW-6 | 3/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-6 | 3/20/2008 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-6 | 6/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-6 | 9/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | 537 | |
| MW-6 | 12/1/2008 | <0.002 | <0.002 | <0.002 | <0.002 | 391 | |
| MW-6 | 12/3/2008 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-6 | 3/11/2009 | <0.002 | <0.002 | <0.002 | <0.002 | 363 | |
| MW-6 | 3/11/2009 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-6 | 5/18/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 383 | |
| MW-6 | 5/18/2009 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-6 | 9/24/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 373 | |
| MW-6 | 9/24/2009 | <0.00050 | <0.00043 | <0.00055 | <0.0017 | | |
| MW-6 | 12/20/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 1090 | |
| MW-6 | 12/20/2009 | <0.00050 | <0.00043 | <0.00055 | <0.0017 | | |
| MW-6 | 3/10/2010 | NA | NA | NA | NA | NA | |
| MW-6 | 6/13/2010 | <0.0003 | <0.001 | <0.0003 | <0.006 | 533 | |
| MW-6 | 6/13/2010 | <0.30 | <1.0 | <0.30 | - | | |
| MW-6 | 9/29/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 445 | |
| MW-6 | 9/29/2010 | <0.00030 | <0.0010 | <0.00030 | - | | |
| MW-6 | 12/8/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 513 | |
| MW-6 | 12/8/2010 | <0.00030 | <0.0010 | <0.00030 | - | | |
| MW-6 | 3/30/2011 | <0.001 | <0.002 | <0.002 | <0.002 | 491 | |
| MW-6 | 3/30/2011 | <0.00030 | <0.0010 | <0.00030 | <0.00060 | | |
| MW-6 | 6/11/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 503 | |
| MW-6 | 6/20/2011 | <0.00025 | <0.0010 | <0.00050 | <0.0020 | | |
| MW-6 | 9/16/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 476 | |
| MW-6 | 12/7/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 526 | |
| MW-6 | 3/11/2012 | <0.001 | <0.002 | <0.002 | <0.004 | 522 | |
| MW-6 | 6/5/2012 | <0.001 | <0.002 | <0.002 | <0.003 | 532 | |

APPENDIX B
HISTORICAL DATA
SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
J-4-2 PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

| Location Identification | Sample Date | Benzene (mg/l) | Toluene (mg/l) | Ethylbenzene (mg/l) | Total Xylenes (mg/l) | Chlorides (mg/l) | Comments |
|---|-------------|----------------|----------------|---------------------|----------------------|------------------|----------|
| New Mexico Water Quality Control Commission | | 0.01 | 0.75 | 0.75 | 0.62 | 250 | |
| Groundwater Standards (mg/L) | | | | | | | |
| MW-7 | 2/1/2006 | NI | NI | NI | NI | NA | |
| MW-7 | 6/1/2006 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-7 | 9/27/2006 | <0.23 | <0.54 | <0.48 | <1.1 | | |
| MW-7 | 12/1/2006 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-7 | 3/1/2007 | <0.002 | <0.002 | <0.002 | <0.006 | 1230 | |
| MW-7 | 3/14/2007 | <0.00023 | <0.00054 | <0.00048 | <0.0011 | | |
| MW-7 | 6/1/2007 | <0.001 | <0.001 | <0.001 | 0.003 | 1150 | |
| MW-7 | 9/1/2007 | <0.001 | <0.001 | <0.001 | <0.001 | NA | |
| MW-7 | 11/1/2007 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-7 | 11/30/2007 | <0.00023 | <0.00054 | <0.00048 | <0.0011 | | |
| MW-7 | 3/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-7 | 3/20/2008 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-7 | 6/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-7 | 9/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | 1180 | |
| MW-7 | 12/1/2008 | <0.002 | <0.002 | <0.002 | <0.002 | 1050 | |
| MW-7 | 12/3/2008 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-7 | 3/11/2009 | <0.002 | <0.002 | <0.002 | <0.002 | 944 | |
| MW-7 | 3/11/2009 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-7 | 5/18/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 1090 | |
| MW-7 | 5/18/2009 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-7 | 9/24/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 1140 | |
| MW-7 | 9/24/2009 | <0.00050 | <0.00043 | <0.00055 | <0.0017 | | |
| MW-7 | 12/20/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 1440 | |
| MW-7 | 12/20/2009 | <0.00050 | <0.00043 | <0.00055 | <0.0017 | | |
| MW-7 | 3/10/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 1230 | |
| MW-7 | 3/10/2010 | <0.40 | <1.0 | <1.0 | - | | |
| MW-7 | 6/13/2010 | <0.0003 | <0.001 | <0.0003 | <0.006 | 1280 | |
| MW-7 | 6/13/2010 | <0.30 | <1.0 | <0.30 | - | | |
| MW-7 | 9/29/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 1210 | |
| MW-7 | 9/29/2010 | <0.00030 | <0.0010 | <0.00030 | - | | |
| MW-7 | 12/8/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 1180 | |
| MW-7 | 12/8/2010 | <0.00030 | <0.0010 | <0.00030 | - | | |
| MW-7 | 3/30/2011 | <0.001 | <0.002 | <0.002 | <0.002 | 1210 | |
| MW-7 | 3/30/2011 | <0.00030 | <0.0010 | <0.00030 | <0.00060 | | |
| MW-7 | 6/11/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 1210 | |
| MW-7 | 6/20/2011 | <0.00025 | <0.0010 | <0.00050 | <0.0020 | | |
| MW-7 | 9/16/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 1170 | |
| MW-7 | 12/7/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 1200 | |
| MW-7 | 3/11/2012 | <0.001 | <0.002 | <0.002 | <0.004 | 1220 | |
| MW-7 | 6/5/2012 | <0.001 | <0.002 | <0.002 | <0.003 | 1120 | |

APPENDIX B
HISTORICAL DATA
SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
J-4-2 PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

| Location Identification | Sample Date | Benzene (mg/l) | Toluene (mg/l) | Ethylbenzene (mg/l) | Total Xylenes (mg/l) | Chlorides (mg/l) | Comments |
|--|-------------|----------------|----------------|---------------------|----------------------|------------------|----------|
| New Mexico Water Quality Control Commission Groundwater Standards (mg/L) | | 0.01 | 0.75 | 0.75 | 0.62 | 250* | |
| MW-8 | 12/1/2006 | NI | NI | NI | NI | NA | |
| MW-8 | 9/1/2006 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-8 | 9/27/2006 | <0.23 | <0.54 | <0.48 | <1.1 | | |
| MW-8 | 12/1/2006 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-8 | 3/1/2007 | <0.002 | <0.002 | <0.002 | <0.006 | 609 | |
| MW-8 | 3/14/2007 | <0.00023 | <0.00054 | <0.00048 | <0.0011 | | |
| MW-8 | 3/14/2007 | - | - | - | - | | |
| MW-8 | 6/1/2007 | <0.001 | <0.001 | <0.001 | <0.001 | 617 | |
| MW-8 | 9/1/2007 | <0.001 | <0.001 | <0.001 | <0.001 | NA | |
| MW-8 | 11/1/2007 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-8 | 11/30/2007 | <0.00046 | <0.00048 | <0.00045 | <0.0060 | | |
| MW-8 | 3/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-8 | 3/20/2008 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-8 | 6/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | NA | |
| MW-8 | 9/1/2008 | <0.002 | <0.002 | <0.002 | <0.006 | 735 | |
| MW-8 | 12/1/2008 | <0.002 | <0.002 | <0.002 | <0.002 | 480 | |
| MW-8 | 12/3/2008 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-8 | 3/11/2009 | <0.002 | <0.002 | <0.002 | <0.002 | 417 | |
| MW-8 | 3/11/2009 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-8 | 5/18/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 378 | |
| MW-8 | 5/18/2009 | <0.00046 | <0.00048 | <0.00045 | <0.0014 | | |
| MW-8 | 9/24/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 403 | |
| MW-8 | 9/24/2009 | <0.00050 | <0.00043 | <0.00055 | <0.0017 | | |
| MW-8 | 12/20/2009 | <0.002 | <0.002 | <0.002 | <0.006 | 308 | |
| MW-8 | 12/20/2009 | <0.00050 | <0.00043 | <0.00055 | <0.0017 | | |
| MW-8 | 3/10/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 414 | |
| MW-8 | 3/10/2010 | <0.40 | <1.0 | <1.0 | - | | |
| MW-8 | 6/13/2010 | <0.0003 | <0.001 | <0.0003 | <0.006 | 415 | |
| MW-8 | 6/13/2010 | <0.30 | <1.0 | <0.30 | - | | |
| MW-8 | 9/29/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 347 | |
| MW-8 | 9/29/2010 | <0.00030 | <0.0010 | <0.00030 | - | | |
| MW-8 | 12/8/2010 | <0.001 | <0.002 | <0.002 | <0.004 | 336 | |
| MW-8 | 12/8/2010 | <0.00030 | <0.0010 | <0.00030 | - | | |
| MW-8 | 3/30/2011 | <0.001 | <0.002 | <0.002 | <0.002 | 383 | |
| MW-8 | 3/30/2011 | <0.00030 | <0.0010 | <0.00030 | <0.00060 | | |
| MW-8 | 6/11/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 454 | |
| MW-8 | 6/20/2011 | <0.00025 | <0.0010 | <0.00050 | <0.0020 | | |
| MW-8 | 9/16/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 368 | |
| MW-8 | 12/7/2011 | <0.001 | <0.002 | <0.002 | <0.004 | 348 | |
| MW-8 | 3/11/2012 | <0.001 | <0.002 | <0.002 | <0.004 | 345 | |
| MW-8 | 6/5/2012 | <0.001 | <0.002 | <0.002 | <0.003 | 316 | |

APPENDIX B
HISTORICAL DATA
SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
J-4-2 PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

| Location Identification | Sample Date | Benzene (mg/l) | Toluene (mg/l) | Ethylbenzene (mg/l) | Total Xylenes (mg/l) | Chlorides (mg/l) | Comments |
|---|-------------|----------------|----------------|---------------------|----------------------|------------------|----------|
| New Mexico Water Quality Control Commission Groundwater Standards (mg/L) | | 0.01 | 0.75 | 0.75 | 0.62 | 250* | |

Notes:

- 1.) The environmental cleanup standards for water that are applicable to this site are the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards.
 - 2.) Monitoring well location MW-5 was not installed due geologic refusal that was encountered during drilling activities.
 - 3.) Data presented for all other well locations includes previous four sampling events, when available. Historic groundwater analytical results for these locations may be found in Appendix B.
- Sample locations are shown on Figure 2 and analytical results are illustrated on Figure 4.
- * Chlorides are subject to the National Secondary Drinking Water Regulations (NSDWR) secondary maximum contaminant levels (SMCLs) and not an enforceably regulated
- LNAPL = Light Non-Aqueous Phase Liquid
- mg/L = milligrams per liter.