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

June 11, 2012

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

RE: 1st Quarter 2012 Groundwater Results
DCP Midstream, LP RR Ext. Pipeline Release (AP #55)
Unit C, Section 19, Township 20 South, Range 37 East
Lea County, New Mexico

Dear Mr. Lowe:

DCP Midstream, LP (DCP) is pleased to submit for your review, one copy of the 1st Quarter 2012 Groundwater Results for the DCP RR Ext. Pipeline Release located in Lea County, New Mexico (Unit C, Section 19, Township 20 South, Range 37 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

Stephen Weathers, PG
Principal Environmental Specialist

cc: Larry Johnson, OCD Hobbs District Office (Copy on CD)
Environmental Files

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First Quarter 2012 Groundwater Monitoring Summary Report

RR Extension Pipeline Release
Lea County, New Mexico
AP #55

Prepared for:

dcp Midstream.

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

Prepared by:

Tasman Geosciences

5690 Webster Street
Arvada, CO 80002

May 4, 2012

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1. Introduction

Tasman Geosciences, LLC (Tasman) is submitting to DCP Midstream (DCP) the results of the first quarter 2012 groundwater monitoring activities conducted on March 10, 2012 at the RR-Extension pipeline release (Site) in Lea County, New Mexico (Figure 1). The field activities were conducted 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. Current Site conditions were evaluated from field data and analytical laboratory results collected during the reporting period.

2. Site Location and Background

The Site is located in the northeastern quarter of the northwestern quarter of Section 19, Township 20 South, Range 37 East (approximate coordinates 32.562339 degrees north and 103.291739 degrees west). It is approximately 4.25 miles south of the intersection of US Highway 322 and County Road 41. The area is sparsely populated and land use is primarily associated with livestock grazing and oil and gas extraction and conveyance.

Based on information included in historical Site investigation reports, a natural gas condensate release of approximately 30 barrels (bbl) was reported on December 13, 2006. Subsequent to preliminary investigation and characterization activities, an excavation was conducted at the Site (November 10, 2008 to December 7, 2008) whereby approximately 11,356 cubic yards of impacted material were removed. The excavation extended to approximately 20-feet below ground surface over a surface area of approximately 14,800 square feet. Backfill material was placed into the excavation and surface restoration was completed by January 12, 2009. These activities are described within the document *Closure Report – RR Extension Release Site* dated February 2009 prepared by Environmental Plus, Inc.

LNAPL has been identified immediately above the water table, which is at a depth of approximately 30-feet below the ground surface. LNAPL continues to be observed at monitoring well locations to the south and east of the original release and excavation limits.

Investigation activities conducted at the Site include installation of groundwater monitoring wells and excavation during the time periods listed below:

- MW-1 through MW-5: Installed March 2008.
- MW-6 through MW-8: Installed June 2008.
- Excavation and Backfill: Initiated – November 10, 2008; Completed – January 12, 2009.
- MW-9 through MW-12: Installed June 2010.
- MW-13 through MW-16: Installed January 2011.

Ongoing monitoring and sampling of the Site wells listed above has been conducted on an approximate quarterly basis following installation. The historical monitoring data indicate the presence of LNAPL and

dissolved-phase impacts in the area of the original release. Progressive installation of monitoring wells has delineated the area in which these impacts are observed.

Boring logs for the Site monitoring wells indicate that the subsurface geology is typical of unconsolidated fine-grained sand, silt, and clay sediments. This general characteristic has been utilized in evaluating the historic and current LNAPL behavior.

3. Groundwater Monitoring

This section describes the groundwater field and laboratory activities performed during the first quarter 2012 monitoring event. Monitoring activities included Site-wide groundwater gauging, LNAPL measurements, 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 first quarter 2012, groundwater levels were measured at sixteen Site 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]). Measured groundwater levels and calculated groundwater elevation data are presented in Table 1 and a first quarter 2012 groundwater elevation contour map is illustrated on Figure 3. LNAPL levels, where detected by the IP, are also presented in Table 1.

Groundwater elevations ranged from 3,504.59 feet AMSL at monitoring well MW-4 to 3,505.27 feet AMSL at monitoring well MW-13. As illustrated on Figure 3, groundwater flow at the Site generally trends to the southeast with a gradient of approximately 0.0012 foot per foot between monitoring wells MW-8 and MW-11.

Groundwater elevations from the highest and lowest measured wells were not used in calculating hydraulic gradient due to the presence of LNAPL and corrections required. The selected elevations were directly measured and are representative of the general observed gradient and flow direction.

LNAPL was detected at the following locations, with measured thickness indicated in parenthesis:

- MW-3 (0.57-ft)
- MW-4 (0.78-ft)
- MW-5 (0.90-ft)
- MW-9 (0.91-ft)
- MW-10 (0.21-ft)

3.2 Groundwater Quality Monitoring

Subsequent to collection of groundwater level measurements at each monitoring well, groundwater samples were collected for each of the eleven monitoring wells that did not contain measurable LNAPL.

During sampling, a minimum of three well casing volumes of groundwater were purged from each monitoring 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 (^{0}C) for transportation to the laboratory. Groundwater samples were then shipped under chain-of-custody procedures to Accutest Laboratories (Accutest) in Wheat Ridge, Colorado, for analysis.

Water quality samples 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.

Detections/observations which exceed the applicable remediation standard are summarized below:

- Benzene was the only constituent detected at concentrations in excess of the New Mexico Water Quality Control Commission (NMWQCC) Standard of 0.01 milligrams per liter (mg/L) at two locations:
    - **MW-1**: 0.029 mg/L.
    - **MW-2:** 1.04 mg/L.
- LNAPL was detected at five locations as indicated in Section 3.1 above.

Figure 4 displays analytical results from the first quarter 2012 event as well as the fourth quarter 2011 analytical results.

In addition, Table 2 presents first quarter 2012 monitoring data along with data collected during previous monitoring events. Laboratory analytical reports for the event are included as Appendix A.

Chloride was detected in all eleven of the sampled wells with concentrations ranging from 308 mg/L in MW-15 to 528 mg/L in MW-8 and MW-14. Chloride values in all of the wells exceeded the NMWQCC suggested guideline of 250 mg/L.

Water quality parameters were collected during the first quarter 2012 monitoring event and were used to confirm groundwater stabilization prior to sample collection. Monitoring wells did not require collection of more than three purge volumes to achieve parameter stabilization. As such, the analytical data are considered to be representative of Site conditions in that a minimum 3 purge volumes were evacuated from all sampled monitoring wells during the first quarter 2012 event.

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-1 were collected during the sampling event. The trip blank was fully in control, having no detections of targets.

The duplicate sample collected at MW-1 was in compliance with QA/QC standards. MW-1 and duplicate sample returned results for benzene of 0.0290 µg/l and 0.0252 µg/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

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.

There were no remediation activities performed during the first quarter 2012 event due to ongoing assessment of the LNAPL bail-down and recovery test conducted in the third quarter 2011.

5. Conclusions

Comparison of the first quarter 2012 monitoring data and historic information provides the following general observations:

Based on historic groundwater elevations, the groundwater elevation surface beneath the Site has remained stable with minor seasonal and annual fluctuations since monitoring was initiated in 2008. There was no significant deviation from this trend during the first quarter 2012.

Dissolved phase BTEX continues to be observed at MW-1 and MW-2 with steadily decreasing concentrations.

- The observed LNAPL and dissolved phase detections (current and historic) indicate that the contaminant mass has continued migrating towards the southeast in the direction of the approximate groundwater gradient.
- Dissolved-phase impacts precede LNAPL observations over a relatively short period of time with minor lateral dispersion. This indicates that the dissolved phase BTEX plume has not extended

well in advance of the LNAPL, possibly due to attenuation, low permeability aquifer material, low hydraulic gradient, and/or a combination of these factors.

6. Recommendations

Based on evaluation of the first 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.

Tables

TABLE 1
FIRST QUARTER 2012
SUMMARY OF GROUNDWATER ELEVATION DATA
RR-EXTENSION 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 (feet amsl)	Groundwater Elevation* (feet amsl)	Change in Groundwater Elevation Since Previous Event (3) (feet)
MW-1	12/9/2010					3534.57	3505.31	0.24
MW-1	3/30/2011	29.01				3534.57	3505.56	0.25
MW-1	6/22/2011	29.16				3534.57	3505.41	-0.15
MW-1	9/17/2011	29.46			39.05	3534.57	3505.11	-0.30
MW-1	12/8/2011	29.61			39.05	3534.57	3504.96	-0.15
MW-1	3/10/2012	29.55			39.05	3534.57	3505.02	0.06
MW-2	12/9/2010					3535.18	3504.13	-0.75
MW-2	3/30/2011	29.90				3535.18	3505.28	1.15
MW-2	6/22/2011	29.91				3535.18	3505.27	-0.01
MW-2	9/17/2011	30.23			39.81	3535.18	3504.95	-0.32
MW-2	12/8/2011	30.35			39.81	3535.18	3504.83	-0.12
MW-2	3/10/2012	30.30			39.81	3535.18	3504.88	0.05
MW-3*	12/9/2010					3536.57	3505.25	0.21
MW-3*	3/30/2011	31.53	31.05	0.48		3536.57	3505.40	0.15
MW-3*	6/22/2011	31.45	31.01	0.44		3536.57	3505.45	0.05
MW-3*	9/17/2011	31.82	31.27	0.55		3536.57	3505.16	-0.29
MW-3*	12/8/2011	31.85	31.41	0.44		3536.57	3505.05	-0.11
MW-3*	3/10/2012	32.00	31.43	0.57		3536.57	3505.00	-0.05
MW-4*	12/9/2010			1.06		3535.20	3504.58	-0.07
MW-4*	3/30/2011	30.58	30.03	0.55		3535.20	3505.03	0.45
MW-4*	6/22/2011	30.40	30.01	0.39		3535.20	3505.09	0.06
MW-4*	9/17/2011	30.94	30.28	0.66		3535.20	3504.76	-0.34
MW-4*	12/8/2011	31.02	30.35	0.67		3535.20	3504.68	-0.07
MW-4*	3/10/2012	31.20	30.42	0.78		3535.20	3504.59	-0.10
MW-5	12/9/2010			1.07		3535.92	3504.62	-0.06
MW-5*	3/30/2011	31.20	30.75	0.45		3535.92	3505.06	0.44
MW-5*	6/22/2011	31.14	30.71	0.43		3535.92	3505.10	0.05
MW-5*	9/17/2011	31.83	30.91	0.92		3535.92	3504.78	-0.32
MW-5*	12/8/2011	31.99	31.00	0.99		3535.92	3504.67	-0.11
MW-5*	3/10/2012	31.92	31.02	0.90		3535.92	3504.68	0.01
MW-6	12/9/2010					3536.16	3504.76	0.21
MW-6	3/30/2011	31.19				3536.16	3504.97	0.21
MW-6	6/22/2011	31.21				3536.16	3504.95	-0.02
MW-6	9/17/2011	31.48			40.35	3536.16	3504.68	-0.27
MW-6	12/8/2011	31.55			40.35	3536.16	3504.61	-0.07
MW-6	3/10/2012	31.56			40.35	3536.16	3504.60	-0.01
MW-7	12/9/2010					3537.09	3509.98	5.24
MW-7	3/30/2011	31.89				3537.09	3505.20	-4.78
MW-7	6/22/2011	31.95				3537.09	3505.14	-0.06
MW-7	9/17/2011	32.22			40.25	3537.09	3504.87	-0.27
MW-7	12/8/2011	32.41			40.25	3537.09	3504.68	-0.19
MW-7	3/10/2012	32.30			40.25	3537.09	3504.79	0.11

TABLE 1
FIRST QUARTER 2012
SUMMARY OF GROUNDWATER ELEVATION DATA
RR-EXTENSION 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 (feet amsl)	Groundwater Elevation* (feet amsl)	Change in Groundwater Elevation Since Previous Event (3) (feet)
MW-8	12/9/2010					3536.41	3505.43	0.27
MW-8	3/30/2011	30.84				3536.41	3505.57	0.14
MW-8	6/22/2011	30.89				3536.41	3505.52	-0.05
MW-8	9/17/2011	31.19			39.42	3536.41	3505.22	-0.30
MW-8	12/8/2011	31.26			39.42	3536.41	3505.15	-0.07
MW-8	3/10/2012	31.25			39.42	3536.41	3505.16	0.01
MW-9*	12/9/2010			1.10		3534.20		
MW-9*	3/30/2011	29.53	28.50	1.03		3534.20	3505.44	
MW-9*	6/22/2011	29.38	28.50	0.88		3535.20	3506.48	1.04
MW-9*	9/17/2011	28.82	28.80	0.02		3534.20	3505.40	-1.09
MW-9*	12/8/2011	29.91	28.91	1.00		3534.20	3505.04	-0.35
MW-9*	3/10/2012	29.81	28.90	0.91		3534.20	3505.07	0.03
MW-10*	3/30/2011	29.49	28.59	0.90		3534.21	3505.40	
MW-10*	6/22/2011	29.97	28.60	1.37		3534.21	3505.27	-0.13
MW-10*	9/17/2011	30.43	28.91	1.52		3534.21	3504.92	-0.35
MW-10*	12/8/2011	29.72	29.31	0.41		3534.21	3504.80	-0.12
MW-10*	3/10/2012	29.52	29.31	0.21		3534.21	3504.85	0.05
MW-11	3/30/2011	31.05				3536.19	3505.14	
MW-11	6/22/2011	31.10				3536.19	3505.09	-0.05
MW-11	9/17/2011	31.55			39.69	3536.19	3504.64	-0.45
MW-11	12/8/2011	31.50			39.69	3536.19	3504.69	0.05
MW-11	3/10/2011	31.47			39.69	3536.19	3504.72	0.03
MW-12	3/30/2011	29.28				3534.47	3505.19	
MW-12	6/22/2011	29.31				3534.47	3505.16	-0.03
MW-12	9/17/2011	29.67			38.56	3534.47	3504.80	-0.36
MW-12	12/8/2011	29.77			38.56	3534.47	3504.70	-0.10
MW-12	3/10/2012	29.74			38.56	3534.47	3504.73	0.03
MW-13	3/30/2011	30.44				3536.08	3505.64	
MW-13	6/22/2011	30.46				3536.08	3505.62	-0.02
MW-13	9/17/2011	30.75			39.31	3536.08	3505.33	-0.29
MW-13	12/8/2011	30.84			39.31	3536.08	3505.24	-0.09
MW-13	3/10/2012	30.81			39.31	3536.08	3505.27	0.03
MW-14	3/30/2011	29.48				3534.96	3505.48	
MW-14	6/22/2011	29.59				3534.96	3505.37	-0.11
MW-14	9/17/2011	29.90			42.05	3534.96	3505.06	-0.31
MW-14	12/8/2011	30.00			42.05	3534.96	3504.96	-0.10
MW-14	3/10/2012	29.95			42.05	3534.96	3505.01	0.05
MW-15	3/30/2011	29.66				3534.90	3505.24	
MW-15	6/22/2011	29.90				3534.90	3505.00	-0.24
MW-15	9/17/2011	30.10			36.55	3534.90	3504.80	-0.20
MW-15	12/8/2011	30.19			36.55	3534.90	3504.71	-0.09
MW-15	3/10/2012	30.16			36.55	3534.90	3504.74	0.03

TABLE 1
FIRST QUARTER 2012
SUMMARY OF GROUNDWATER ELEVATION DATA
RR-EXTENSION 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 (feet amsl)	Groundwater Elevation* (feet amsl)	Change in Groundwater Elevation Since Previous Event (3) (feet)
MW-16	3/30/2011	28.53				3533.68	3505.15	
MW-16	6/22/2011	28.74				3533.68	3504.94	-0.21
MW-16	9/17/2011	28.93			42.91	3533.68	3504.75	-0.19
MW-16	12/8/2011	29.04			42.91	3533.68	3504.64	-0.11
MW-16	3/10/2012	29.00			42.91	3533.68	3504.68	0.04
Average Change in groundwater elevation since the previous monitoring event								0.02

Notes:

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

2- Total depths were collected and recorded during the first quarter 2012 monitoring event (with the exception of wells that contained LNAPL).

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

Data presented for well locations includes previous four sampling events, when available. Historic groundwater elevation data for these locations are available upon request.

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

NM - not measured

* For wells that contained LNAPL, 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
FIRST QUARTER 2012
SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
RR-EXTENSION 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	**0.0241**	<0.001	0.0136	0.0055	457	
MW-1	6/22/2011	**0.0735**	<0.01	0.0293	<0.02	467	
MW-1	9/17/2011	**0.144**	0.038	0.0069	0.0087	472	Duplicate sample collected
MW-1	12/8/2011	**0.076**	0.002	0.0227	0.0024	462	Duplicate sample collected
MW-1	3/10/2012	**0.029**	<0.002	0.0072	<0.004	497	Duplicate sample collected
MW-2	3/30/2011	**16.6**	0.165	0.403	0.116	320	
MW-2	6/22/2011	**9.21**	0.0231	0.377	<0.4	370	
MW-2	9/17/2011	**4.07**	0.415	0.329	0.203	375	
MW-2	12/8/2011	**1.5**	0.0436	0.33	0.0254	392	
MW-2	3/10/2012	**1.04**	<0.04	0.134	<0.08	444	
MW-3	3/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	6/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	9/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	12/8/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-3	3/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	3/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	6/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	9/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	12/8/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-4	3/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	3/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	6/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	9/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	12/8/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-5	3/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-6	3/30/2011	<0.001	<0.002	<0.002	<0.002	386	
MW-6	6/22/2011	<0.001	<0.002	<0.002	<0.004	376	
MW-6	9/17/2011	<0.001	<0.002	<0.002	<0.004	383	
MW-6	12/8/2011	<0.0005	<0.001	<0.001	<0.001	372	
MW-6	3/10/2012	<0.001	<0.002	<0.002	<0.004	406	
MW-7	3/30/2011	<0.001	<0.002	<0.002	<0.002	382	
MW-7	6/22/2011	<0.001	<0.002	<0.002	<0.004	390	
MW-7	9/17/2011	<0.001	<0.002	<0.002	<0.004	374	
MW-7	12/8/2011	<0.0005	<0.001	<0.001	<0.001	376	
MW-7	3/10/2012	<0.001	<0.002	<0.002	<0.004	392	
MW-8	3/30/2011	<0.001	<0.002	<0.002	<0.002	529	
MW-8	6/22/2011	<0.001	<0.002	<0.002	<0.004	524	
MW-8	9/17/2011	<0.001	<0.002	<0.002	<0.004	507	
MW-8	12/8/2011	<0.0005	<0.001	<0.001	<0.001	521	
MW-8	3/10/2012	<0.001	<0.002	<0.002	<0.004	528	
MW-9	3/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	6/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	9/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	12/8/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-9	3/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	

TABLE 2
FIRST QUARTER 2012
SUMMARY OF BTEX AND CHLORIDE CONCENTRATIONS IN GROUNDWATER
RR-EXTENSION PIPELINE RELEASE
LEA COUNTY, NEW MEXICO

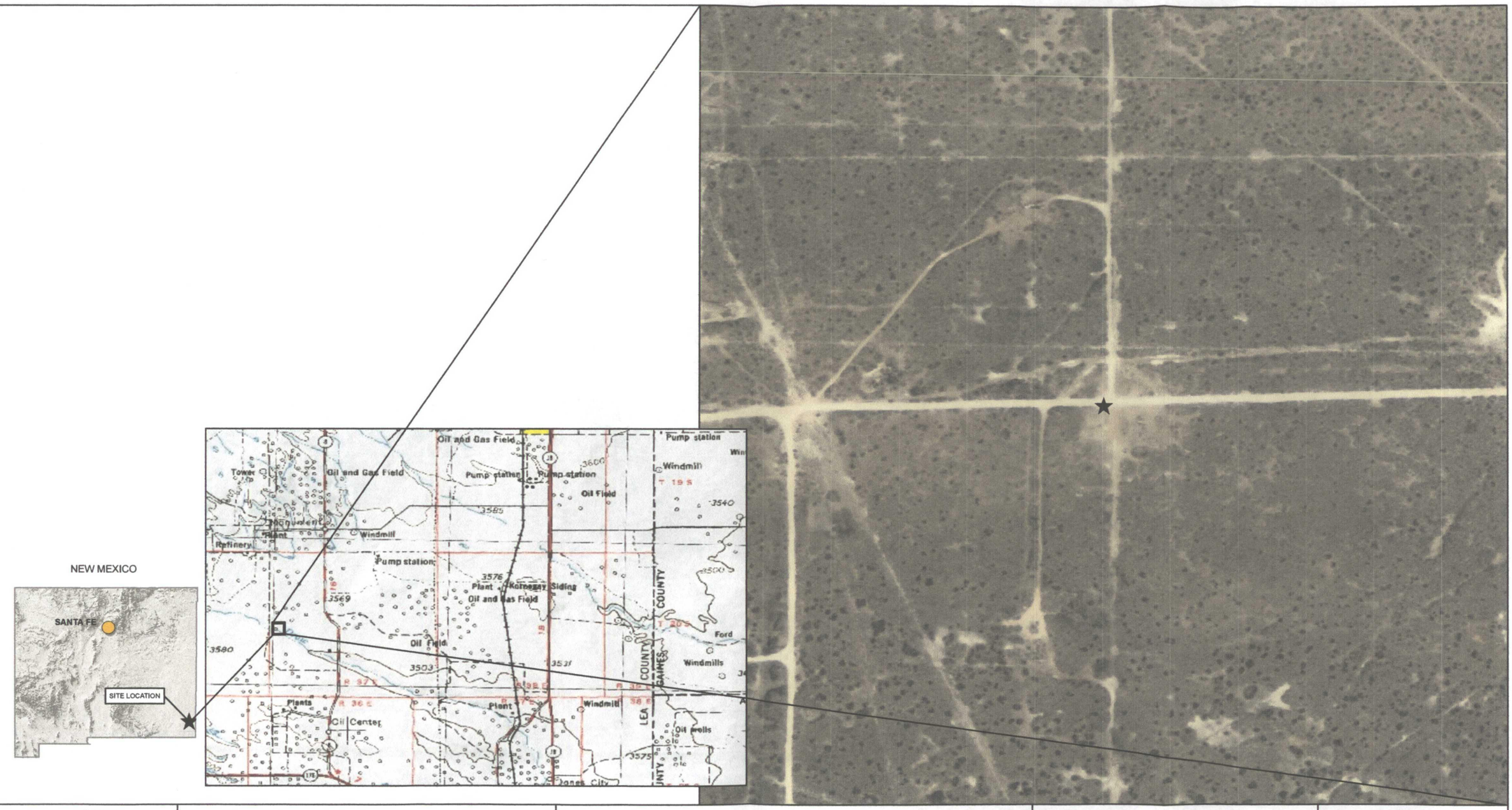
Location Identification	Sample Date	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)	Chlorides* (mg/l)	Comments
New Mexico Water Quality Control Commission Groundwater Standards (mg/L)		**0.01**	**0.75**	**0.75**	**0.62**	**250**	
MW-10	3/30/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	6/22/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	9/17/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	12/8/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-10	3/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	
MW-11	3/30/2011	<0.001	<0.002	<0.002	<0.002	406	
MW-11	6/22/2011	<0.001	<0.002	<0.002	<0.004	405	
MW-11	9/17/2011	<0.001	<0.002	<0.002	<0.004	390	
MW-11	12/8/2011	<0.0005	<0.001	<0.001	<0.001	399	
MW-11	3/10/2012	<0.001	<0.002	<0.002	<0.004	403	
MW-12	3/30/2011	<0.001	<0.002	<0.002	<0.002	498	
MW-12	6/22/2011	<0.001	<0.002	<0.002	<0.004	497	
MW-12	9/17/2011	<0.001	<0.002	<0.002	<0.004	493	
MW-12	12/8/2011	<0.0005	<0.001	<0.001	<0.001	493	
MW-12	3/10/2012	<0.001	<0.002	<0.002	<0.004	513	
MW-13	3/30/2011	<0.001	<0.002	<0.002	<0.002	326	
MW-13	6/22/2011	<0.001	<0.002	<0.002	<0.004	340	
MW-13	9/17/2011	<0.001	<0.002	<0.002	<0.004	317	
MW-13	12/8/2011	<0.0005	<0.001	<0.001	<0.001	328	
MW-13	3/10/2012	<0.001	<0.002	<0.002	<0.004	331	
MW-14	3/30/2011	<0.001	<0.002	<0.002	<0.002	520	
MW-14	6/22/2011	<0.001	<0.002	<0.002	<0.004	494	
MW-14	9/17/2011	<0.001	<0.002	<0.002	<0.004	478	
MW-14	12/8/2011	<0.0005	<0.001	<0.001	<0.001	521	
MW-14	3/10/2012	<0.001	<0.002	<0.002	<0.004	528	
MW-15	3/30/2011	<0.001	<0.002	<0.002	<0.002	303	
MW-15	6/22/2011	<0.001	<0.002	<0.002	<0.004	297	
MW-15	9/17/2011	<0.001	<0.002	<0.002	<0.004	294	
MW-15	12/8/2011	<0.0005	<0.001	<0.001	<0.001	288	
MW-15	3/10/2012	<0.001	<0.002	<0.002	<0.004	308	
MW-16	3/30/2011	<0.001	<0.002	<0.002	<0.002	295	
MW-16	6/22/2011	<0.001	<0.002	<0.002	<0.004	292	
MW-16	9/17/2011	<0.001	<0.002	<0.002	<0.004	295	
MW-16	12/8/2011	<0.0005	<0.001	<0.001	<0.001	313	
MW-16	3/10/2012	<0.001	<0.002	<0.002	<0.004	322	

Notes:

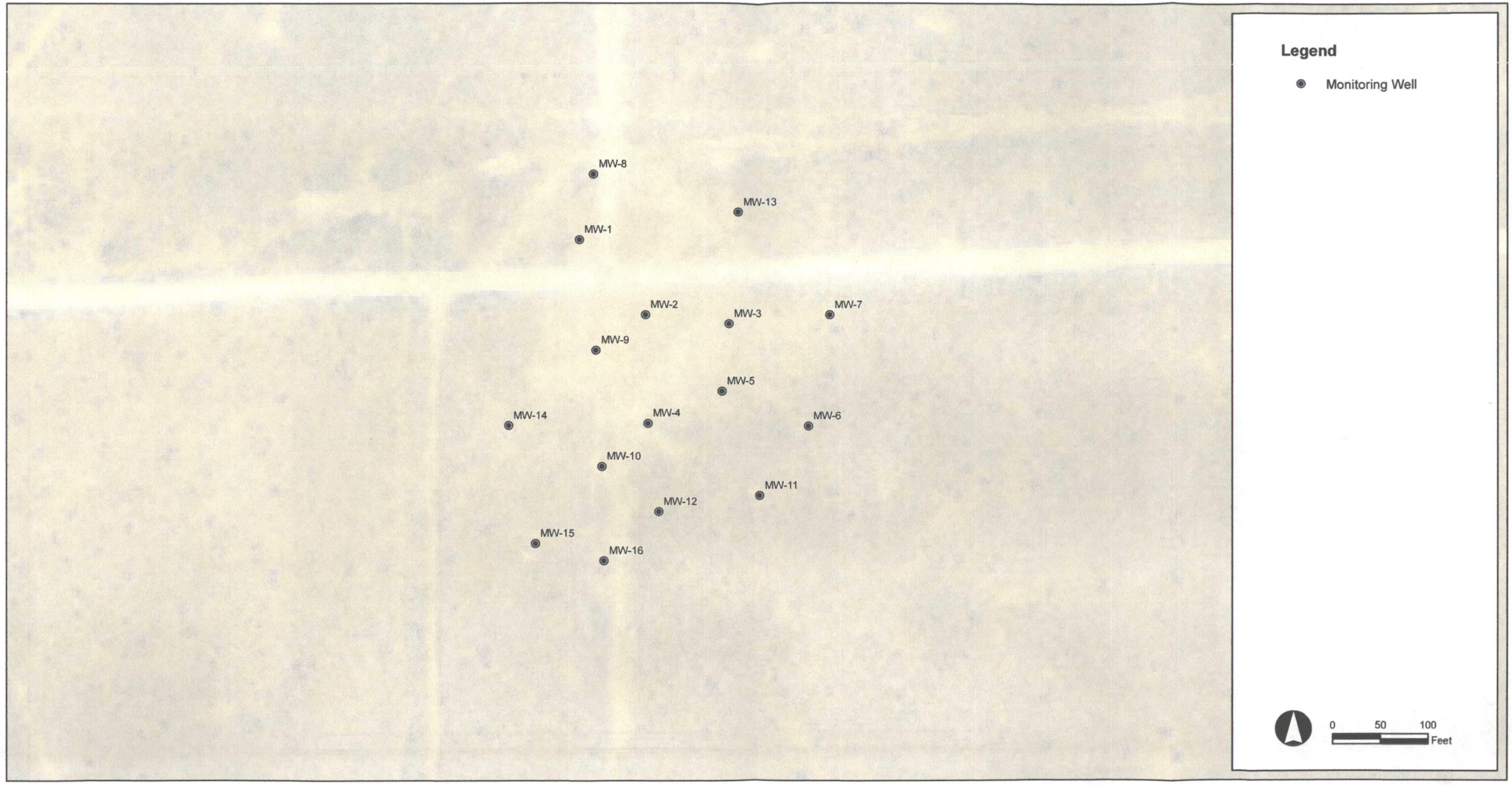
1.) The environmental cleanup standards for water that are applicable to this Site are the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards.
2.) Data presented for all well locations includes previous four sampling events, when available. Historic groundwater analytical results 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.
* Chlorides are subject to the National Secondary Drinking Water Regulations (NSDWR) secondary maximum contaminant levels (SMCLs) and not an enforceably 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
NM = Not measured.
mg/L = milligrams per liter.

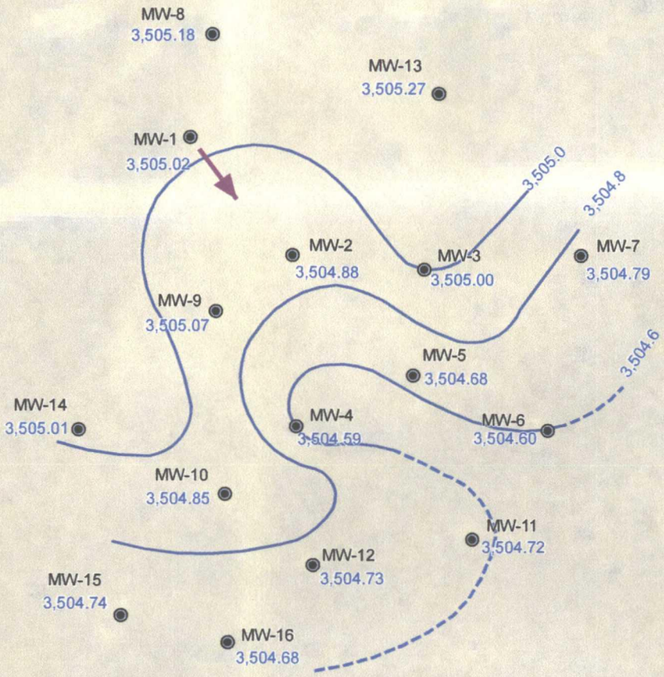
Figures



DESIGNED BY: C. Wasko DRAWN BY: J. Clonts SHEET CHK'D BY: CROSS CHK'D BY: APPROVED BY: APPROVED BY:	Tasman Geosciences Tasman Geosciences, LLC 5690 Webster St. Arvada, CO 8002 720-988-2024	**RR - EXTENSION PIPELINE RELEASE** *First 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 Tasman Geosciences, LLC 5690 Webster St. Arvada, CO 8002 720-988-2024	**RR - EXTENSION PIPELINE RELEASE** *First Quarter 2012 Groundwater Monitoring Summary Report*	SITE MAP	FIGURE 2



Legend

- Monitoring Well
- Groundwater Elevation Contour Line (feet AMSL), Dashed Where Inferred
- 3,710.33 Measured Groundwater Elevation (feet AMSL)
- Groundwater Flow Direction

Notes:
AMSL - Above Mean Sea Level

0 50 100 Feet

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GROUNDWATER ELEVATION CONTOUR MAP (MARCH 10, 2012)

FIGURE 3

MW-1		
Compound	12/8/2011 (mg/L)	3/10/2012 (mg/L)
Benzene	0.076	0.029
Toluene	0.002	<0.002
Ethylbenzene	0.0227	0.0072
Total Xylenes	0.0024	<0.004
Chlorides	462	497

MW-2		
Compound	12/8/2011 (mg/L)	3/10/2012 (mg/L)
Benzene	1.5	1.04
Toluene	0.0436	<0.04
Ethylbenzene	0.33	0.134
Total Xylenes	0.254	<0.08
Chlorides	392	444

MW-14		
Compound	12/8/2011 (mg/L)	3/10/2012 (mg/L)
Benzene	<0.0005	<0.001
Toluene	<0.001	<0.002
Ethylbenzene	<0.001	<0.002
Total Xylenes	<0.001	<0.004
Chlorides	521	528

MW-15		
Compound	12/8/2011 (mg/L)	3/10/2012 (mg/L)
Benzene	<0.0005	<0.001
Toluene	<0.001	<0.002
Ethylbenzene	<0.001	<0.002
Total Xylenes	<0.001	<0.004
Chlorides	288	308

MW-8		
Compound	12/8/2011 (mg/L)	3/10/2012 (mg/L)
Benzene	<0.0005	<0.001
Toluene	<0.001	<0.002
Ethylbenzene	<0.001	<0.002
Total Xylenes	<0.001	<0.004
Chlorides	521	528

MW-16		
Compound	12/8/2011 (mg/L)	3/10/2012 (mg/L)
Benzene	<0.0005	<0.001
Toluene	<0.001	<0.002
Ethylbenzene	<0.001	<0.002
Total Xylenes	<0.001	<0.004
Chlorides	295	322

MW-13		
Compound	12/8/2011 (mg/L)	3/10/2012 (mg/L)
Benzene	<0.0005	<0.001
Toluene	<0.001	<0.002
Ethylbenzene	<0.001	<0.002
Total Xylenes	<0.001	<0.004
Chlorides	328	331

MW-12		
Compound	12/8/2011 (mg/L)	3/10/2012 (mg/L)
Benzene	<0.0005	<0.001
Toluene	<0.001	<0.002
Ethylbenzene	<0.001	<0.002
Total Xylenes	<0.001	<0.004
Chlorides	493	513

MW-7		
Compound	12/8/2011 (mg/L)	3/10/2012 (mg/L)
Benzene	<0.0005	<0.001
Toluene	<0.001	<0.002
Ethylbenzene	<0.001	<0.002
Total Xylenes	<0.001	<0.004
Chlorides	376	392

MW-6		
Compound	12/8/2011 (mg/L)	3/10/2012 (mg/L)
Benzene	<0.0005	<0.001
Toluene	<0.001	<0.002
Ethylbenzene	<0.001	<0.002
Total Xylenes	<0.001	<0.004
Chlorides	372	406

MW-11		
Compound	12/8/2011 (mg/L)	3/10/2012 (mg/L)
Benzene	<0.0005	<0.001
Toluene	<0.001	<0.002
Ethylbenzene	<0.001	<0.002
Total Xylenes	<0.001	<0.004
Chlorides	399	403

MW-3 (0.57)

MW-9 (0.91)

MW-5 (0.90)

MW-4 (0.78)

MW-10 (0.21)

Legend

- Monitoring Well
- (0.02) Measured LNAPL Thickness

Notes:

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

LNAPL - Light Non-Aqueous Phase Liquid

0 50 100 Feet

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ANALYTICAL RESULTS MAP

FIGURE 4

Appendix A

Laboratory Analytical Reports