AP-7

Plains
Darr Angell #1

2013
Annual Report

PLAINS
ALL AMERICAN

March 18, 2014

Mr. Jim Griswold
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Plains All American – 2013 Annual Monitoring Reports
4 Sites in Lea County, New Mexico

Dear Mr. Griswold:

Plains All American is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Plains All American actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation Division (NMOCD). In accordance with the rules and regulations of the NMOCD, Plains All American hereby submits our Annual Monitoring reports for the following sites:

Darr Angell #1	AP-007	Section 11, Township 15 South, Range 37 East, Lea County
Darr Angell #2	AP-007	Section 11, Township 15 South, Range 37 East, Lea County Section 14, Township 15 South, Range 37 East, Lea County
Darr Angell #4	AP-007	Section 11, Township 15 South, Range 37 East, Lea County Section 02, Township 15 South, Range 37 East, Lea County
Denton Station	1R-0234	Section 14, Township 15 South, Range 37 East, Lea County

Conestoga-Rovers & Associates (CRA) prepared these documents and has vouched for their accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the documents and interviewed CRA personnel in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Reports for the above facilities.

If you have any questions or require further information, please contact me at (575) 441-1099.

Sincerely,

Camille Bryant
Remediation Coordinator
Plains All American

CC: Geoff Leking, NMOCD, Hobbs, NM

Enclosures

Original

CONESTOGA-ROVERS & ASSOCIATES

www.CRAworld.com

Final Report

2013 Annual Groundwater Monitoring Report

Darr Angell No. 1
NW 1/4, SE 1/4, Section 11, Township 15 South, Range 37 East
Plains SRS Number: Darr Angell 1
NMOCD Reference Number: AP-007
Lea County, New Mexico

Prepared For:
Mr. Jeff Dann
Plains All American Pipeline, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002

Conestoga-Rovers & Associates
2135 South Loop, 250 West
Midland, Texas 79703

March 2013 • 074683 • Report No. 4

Partners in Sustainability

Table of Contents

Page

List of Figures
(Following Text)

List of Tables
(Following Text)

List of Appendices

Section 1.0 Introduction

This 2013 Annual Groundwater Monitoring Report presents data collected at the Darr Angell No. 1 location (hereafter referred to as the "Site") by Conestoga-Rovers & Associates (CRA) on behalf of Plains Pipeline, L.P. (Plains) in compliance with the New Mexico Oil Conservation Division (NMOCD) correspondence dated May 1998. This report presents groundwater assessment and remediation activities associated with quarterly gauging and sampling events (March, May, August and November) and bi-weekly light non-aqueous phase liquid (LNAPL) abatement activities performed during the 2013 calendar year.

1.1 Site Location and History

The legal description of the site is NW1/4, SE1/4 of Section 11, Township 15 South, Range 37 East (Figure 1). The Darr Angell No. 1 Pipeline Release Site was formerly the responsibility of Enron Oil Trading and Transportation (EOTT); however, the Site is currently the responsibility of Plains. The release was discovered by EOTT employees and submitted on a Release Notification and Corrective Action Form (C-141) to the NMOCD on May 1, 1997. According to the release report, an estimated 25 barrels of crude oil was released and 15 barrels were recovered during initial response actions. The release was reported to have occurred from internal corrosion of an 8-inch EOTT pipeline. Beginning on May 29, 2004, project management responsibilities were assumed by NOVA. CRA assumed Site remediation and project management responsibilities on May 2, 2011.

Currently, there are 21 groundwater monitor wells (MW-1 through MW-21) and 11 product recovery wells (RW-1 through RW-11) on site.

1.2 Mobile Dual Phase Extraction (MDPE) System

The MDPE system that has operated at the Site combines two treatment technologies, soil vapor extraction and pumping, into one unit. This MDPE system generates a high vacuum, 20-29 in-Hg, which is applied to the recovery wells through a sealed well cap and drop tube. The drop tube, 1"-2" polyvinyl chloride (PVC), extends through the well seal and into the well to a depth at which the water table is to be drawn down to. The high vacuum generated by the dual phase extractor pulls water and any second phase product out of the well. When the water table is drawn down to the bottom of the drop tube, the well casing above the water table becomes exposed to the vacuum. Vapors are drawn out of the well and surrounding hydrocarbon-impacted soils.

Any additional water or product that enters the well due to recharge is immediately drawn into the drop tube and therefore the water level in the monitor wells is maintained at the bottom of the drop tube. The extracted water and second phase product are separated using gravity separation in a frac tank, the

product is collected and recycled, and the water is disposed of offsite at a nearby salt water disposal system. The vapor flows through a surface collection manifold and is vented to the atmosphere.

In early 2013, CRA started making efforts to install the MDPE system at the site. Monitor and recovery wells which exhibit LNAPL, but were not part of the automated recovery system, were recovered manually. Recovered product is periodically transported to Wasson Station facility for reinjection to the Plains Pipeline system and recovered groundwater is transported to a licensed disposal facility.

Section 2.0 Regulatory Framework

The New Mexico Oil Conservation Division (NMOCD) guidelines require groundwater to be analyzed for potential contaminants as defined by the New Mexico Water Quality Control Commission (NMWQCC) Standards 20.6.2.3103 Sections A. NMQCC 20.6.2.3103 Section A provides the Human Health Standards for Groundwater. The constituents of concern (COCs) in affected groundwater at the Site are LNAPL, benzene, toluene, ethylbenzene, and xylenes (BTEX). In this report, groundwater analytical results for the COCs are compared to the NMWQCC standards as shown in the following table:

ANALYTE	NMWQCC STANDARD FOR GROUNDWATER
20.6.2.3103 Section A – Human Health Standard	
Benzene	0.01 mg/L
Toluene	0.75 mg/L
Ethylbenzene	0.75 mg/L
Total Xylenes	0.62 mg/L

The table below is the site sampling schedule approved by the NMOCD in a correspondence dated April 28, 2004 and amended in NMOCD correspondences dated June 20, 2005 and April 11, 2006.

NMOCD Approved Sampling Schedule					
MW-1	Quarterly	MW-12	Quarterly	RW-1	Quarterly
MW-2	Quarterly	MW-13	Quarterly	RW-2	Quarterly
MW-3	Quarterly	MW-14	Quarterly	RW-3	Quarterly
MW-4	Annually	MW-15	Annually	RW-4	Quarterly
MW-5	Quarterly	MW-16	Annually	RW-5	Quarterly
MW-6	Quarterly	MW-17	Quarterly	RW-6	Quarterly
MW-7	Semi-Annually	MW-18	Annually	RW-7	Quarterly
MW-8	Quarterly	MW-19	Quarterly	RW-8	Quarterly
MW-9	Quarterly	MW-20	Annually	RW-9	Quarterly
MW-10	Quarterly	MW-21	Quarterly	RW10	Quarterly
MW-11	Annually			RW-11	Quarterly

Section 3.0 Groundwater Monitoring Activities

Quarterly groundwater monitoring event activities were conducted by CRA on March 5-7, May 28-30, August 27-29 and November 11-14, 2013. The Site is monitored with a network of 21 monitor wells and 11 recovery wells. Wells were sampled in accordance with the sampling schedule referred to in Section 2.0. Wells containing measureable amounts of LNAPL (>0.01 feet) were not sampled. A Site Details Map is presented as Figure 2.

3.1 Groundwater Monitoring Methodology

Prior to purging wells, static fluid levels were measured with an electronic interface probe to the nearest hundredth of a foot to obtain groundwater elevation data and assess for the presence of LNAPL. After recording fluid levels, wells not containing LNAPL were purged of three casing volumes of water and then groundwater samples were collected using clean, disposable PVC bailers. Laboratory-supplied sample containers were then filled directly from the bailers. Groundwater samples were then placed on ice in insulated coolers and chilled to a temperature of approximately 4°C (40°F). The coolers were prepared for delivery and proper chain-of-custody documentation accompanied the samples to TraceAnalysis, Inc. in Midland, Texas for analysis of BTEX by EPA Method 8021B. The groundwater fluids recovered during the Site activities were containerized on site in properly labeled poly tanks and disposed of by a third party subcontractor contracted directly by Plains at an approved water disposal (SWD) facility.

3.2 Groundwater Monitoring Results

All depth to groundwater measurements were recorded from the top of casing (TOC) of each well. The gauging data presented below represents calculated groundwater elevations corrected using a specific gravity of 0.81 for wells with measurable amounts of LNAPL and the elevation data obtained from professional surveying activities. Groundwater gauging data collected by CRA during the March, May, August and November groundwater monitoring events is presented in Table 1. Groundwater gradient maps for March, May, August and November 2013 are provided as Figures 3, 4, 5 and 6, respectively.

Corrected groundwater elevations ranged from 3,722.63 to 3,725.86 feet in March, from 3,722.94 to 3,726.17 feet in May, from 3,722.79 to 3,725.58 feet in August and from 3,722.63 to 3,725.43 feet in November. LNAPL was encountered in 19 wells during the March and August events, 18 wells during the May event and 20 wells during the November 2013 groundwater monitoring events. Thicknesses ranged from 0.75 to 7.84 feet in March, from 0.01 to 9.17 feet in May, from 0.34 to 8.17 feet in August and from 0.03 to 7.39 feet in November 2013. The groundwater flow direction is toward the southeast and appears to be consistent with historical data. The average groundwater gradient observed at the Site during the 2013 groundwater monitoring events was approximately 0.004 feet/foot.

During the March 2013 groundwater sampling event, two wells were sampled, of which one well (MW-6) detected benzene concentrations above the NMWQCC Standard (0.01 mg/L). During the May 2013 sampling event, three wells were sampled, of which no wells detected benzene concentrations above the NMWQCC Standard. During the August 2013 sampling event, two wells were sampled, of which one well (MW-6) detected benzene concentrations above the NMWQCC Standard. During the November 2013 sampling event, three wells were sampled, of which no wells detected benzene concentration above the NMWQCC Standard. Groundwater BTEX analytical results are summarized in Table 2. No Polycyclic Aromatic Hydrocarbons (PAH) detections in past years needed re-sampling in 2013; but, the historic data on the PAH results are summarized in Table 3. Groundwater BTEX concentration maps for the March, May, August and November 2013 groundwater sampling events are presented as Figures 7, 8, 9 and 10, respectively. Copies of the certified laboratory reports and chain-of-custody documentation are attached in Appendix A.

Section 4.0 LNAPL Remediation

The MDPE system included four AP4 bottom loading pumps, a vapor /liquid separator, an air compressor, a vacuum extraction manifold and a product storage tank. All the remedial equipment is secured and enclosed inside the mobile trailer. The remediation trailer operates on four wells at a time. Initially, the system started on April 10, 2013 and it extracted from wells MW-1, RW-4, RW-6 and RW-8. The recovery system was then moved to MW-5, MW-9, RW-7 and RW-10 on June 25, 2013. Then on

September 4, 2013, the system extracted from wells MW-2, RW-2, RW-5 and RW-11. Late in the fourth quarter, in order to increase the optimum LNAPL recovery, the rotation of pumps was moved to a 2-week rotation schedule and this was initiated on November 19, 2013. Pumps remained in wells MW-2, RW-2, RW-5 and RW-11 and recovered product through December 3, 2013. Pumps were then installed in wells MW-1, MW-5, MW-9 and MW-8 from December 3 through 17, 2013. Then pumps were moved to wells RW-4, RW-7, RW-6 and RW-10 from December 17 through 30, 2013, and pumps were subsequently moved to wells MW-5, MW-8, RW-5 and RW-9 on December 30, 2013.

Remediation System 2013 Recovery Well Configurations	
Date	***Well Configurations***
4-10-13 to 6-25-13	MW-1, RW-4, RW-6 and RW-8
6-25-13 to 9-4-13	MW-5, MW-9, RW-7 and RW-10
9-4-13 to 12-3-13	MW-2, RW-2, RW-5 and RW-11
12-3-13 to 12-17-13	MW-1, MW-5, MW-9 and MW-8
12-17-13 to 12-30-13	RW-4, RW-7, RW-6 and RW-10
12-30-13	MW-5, MW-8, RW-5 and RW-9

CRA mobilized to the Site twice a week to gauge and manually bail recovery wells that were not included in the automated LNAPL recovery system, but had product present in the fluids column. Inspections and maintenance of the operating systems on Site were also conducted weekly. This included inspections and maintenance of the compressor (i.e. oil changes, drain water), total fluids pumps (i.e. cleaning) and any other "housekeeping" needed at the Site to maintain the most efficient product recovery system possible. Periodically and as needed, CRA personnel adjusted the total fluids pump intervals in the wells as an effort to increase LNAPL recovery and minimize water recovery. From January to December 2013, approximately 5,460 gallons (130 barrels) of product were recovered from the Site. Approximately 69,670 gallons (1,659 barrels) of product have been recovered from the start of the product abatement program.

Air Sampling Results: Two air samples were collected from remedial system on December 4, 2013. Based on analytical results of TPH (57,900 mg/m^3), well flow (40 scfm), and operating time of 365 days, the estimated emission rate for VOCs is 8.64 lbs/hr (less than 10 lbs per hour), which meets the applicability thresholds of 20.2.72 and 20.2.73.200 NMAC.

Section 5.0 Summary of Findings

Based on groundwater assessment, monitoring and remedial activities performed by CRA at the Site in 2013, the following summary of findings is presented:

- CRA assumed remediation responsibility of the Site on May 2, 2011.
- The Site is monitored with a network of 21 groundwater monitor wells (MW-1 through MW-21) and 11 product recovery wells (RW-1 through RW-11). Select monitor and recovery wells are equipped with a total fluid pump for LNAPL recovery. The MPDE trailer has four pumps that are periodically relocated depending on LNAPL thickness and product recovery rates in an effort to maximize product recovery at the Site.
- The groundwater flow direction at the Site is to the southeast and appears to be consistent with historical data. The average groundwater gradient observed at the Site during the 2013 groundwater monitoring events was approximately 0.004 feet/foot.
- LNAPL was encountered in 19 wells during the March and August events, 18 wells during the May event and 20 wells during the November 2013 groundwater monitoring events. LNAPL thicknesses ranged from 0.75 to 7.84 feet in March, from 0.01 to 9.17 feet in May, from 0.34 to 8.17 feet in August and from 0.03 to 7.39 feet in November 2013.
- During the March 2013 groundwater sampling event, two wells were sampled, of which one well (MW-6) detected benzene concentrations above the NMWQCC Standard (0.01 mg/L).
- During the May 2013 sampling event, three wells were sampled, no wells detected benzene concentrations above the NMWQCC Standard.
- During the August 2013 sampling event, two wells were sampled, of which one well (MW-6) detected benzene concentrations above the NMWQCC Standard.
- During the November 2013 sampling event, three wells were sampled, of which no well detected benzene concentrations above the NMWQCC Standard.
- CRA performed weekly inspections and maintenance of the product recovery system on Site. Wells which contain measurable product, but are not equipped with a total fluids pump, are bailed for product bi-weekly.
- Two air samples were collected from remedial system on December 4, 2013. Based on analytical results of TPH (57,900 mg/m^3), well flow (40 scfm), and operating time of 365 days, the estimated emission rate for VOCs is 8.64 lbs/hr (less than 10 lbs per hour), which meets the applicability thresholds of 20.2.72 and 20.2.73.200 NMAC.
- From January to December 2013, approximately 5,460 gallons (130 barrels) of product were recovered from the Site. Approximately 69,670 gallons (1,159 barrels) of product have been recovered from the start of the product abatement program.

Section 6.0 Recommendations

Based upon the data and conclusions presented in this report, the following is recommended:

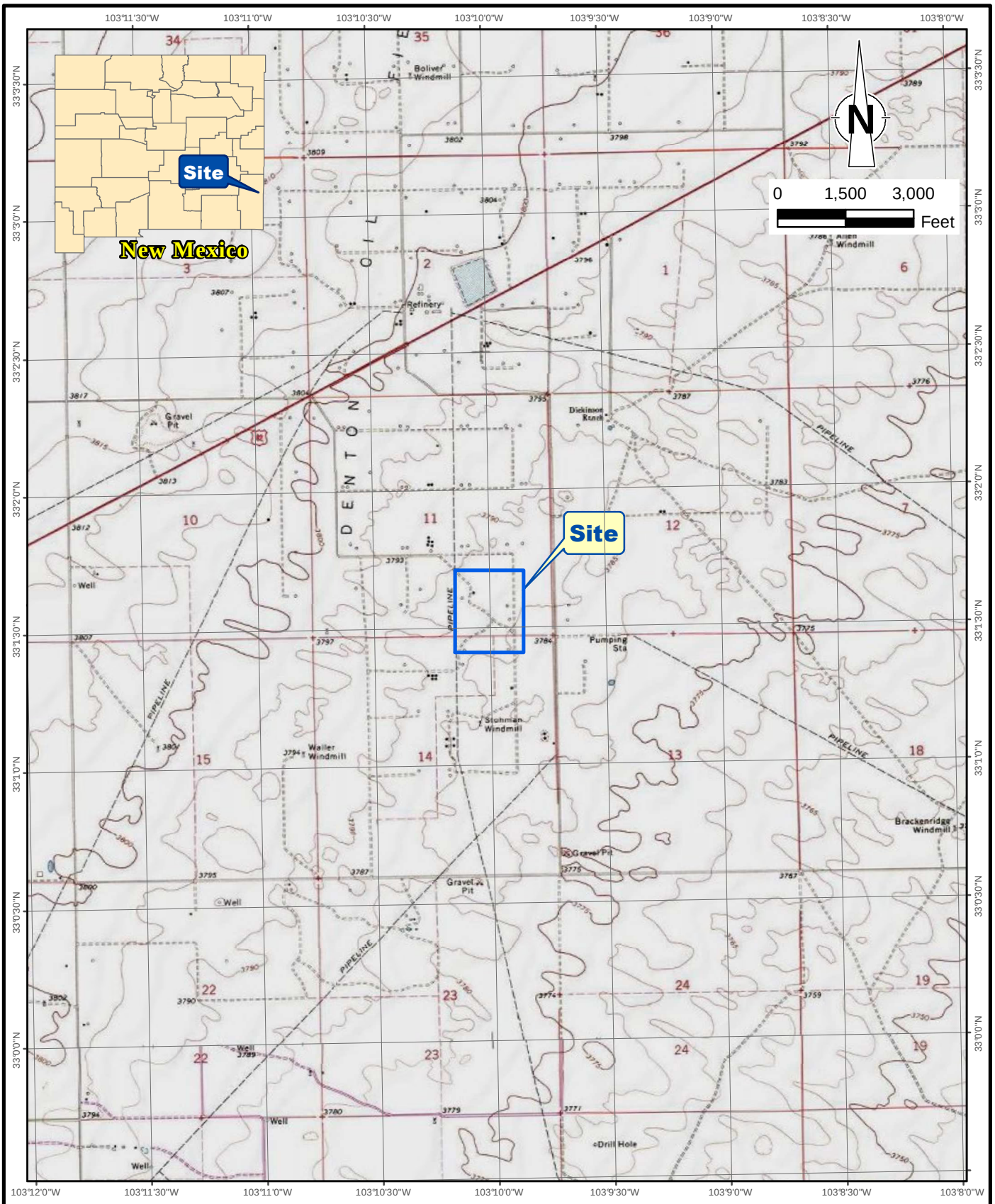
- Continue quarterly groundwater monitoring events in 2014 with annual reporting to the NMOCD.
- Continue bi-weekly LNAPL abatement in 2014. This includes continued operations and maintenance of the MDPE system and moving total fluids pumps and adjusting product recovery schedules to maximize product recovery.
- Collection of two air samples semi-annually from the sampling port and analyze for VOCs using the EPA TO-14 method. After completion of data evaluation, estimate emission rate for VOCs at the Site.
- Replace two dry wells (MW-15R and MW-20R) and install additional recovery wells (RW-13 and RW-14) to increase product recovery at the Site.

All of which is Respectfully Submitted,
CONESTOGA-ROVERS & ASSOCIATES

Kimberly Lambert
Project Manager

Thomas C. Larson, PG
Principal, Midland Operations Manager

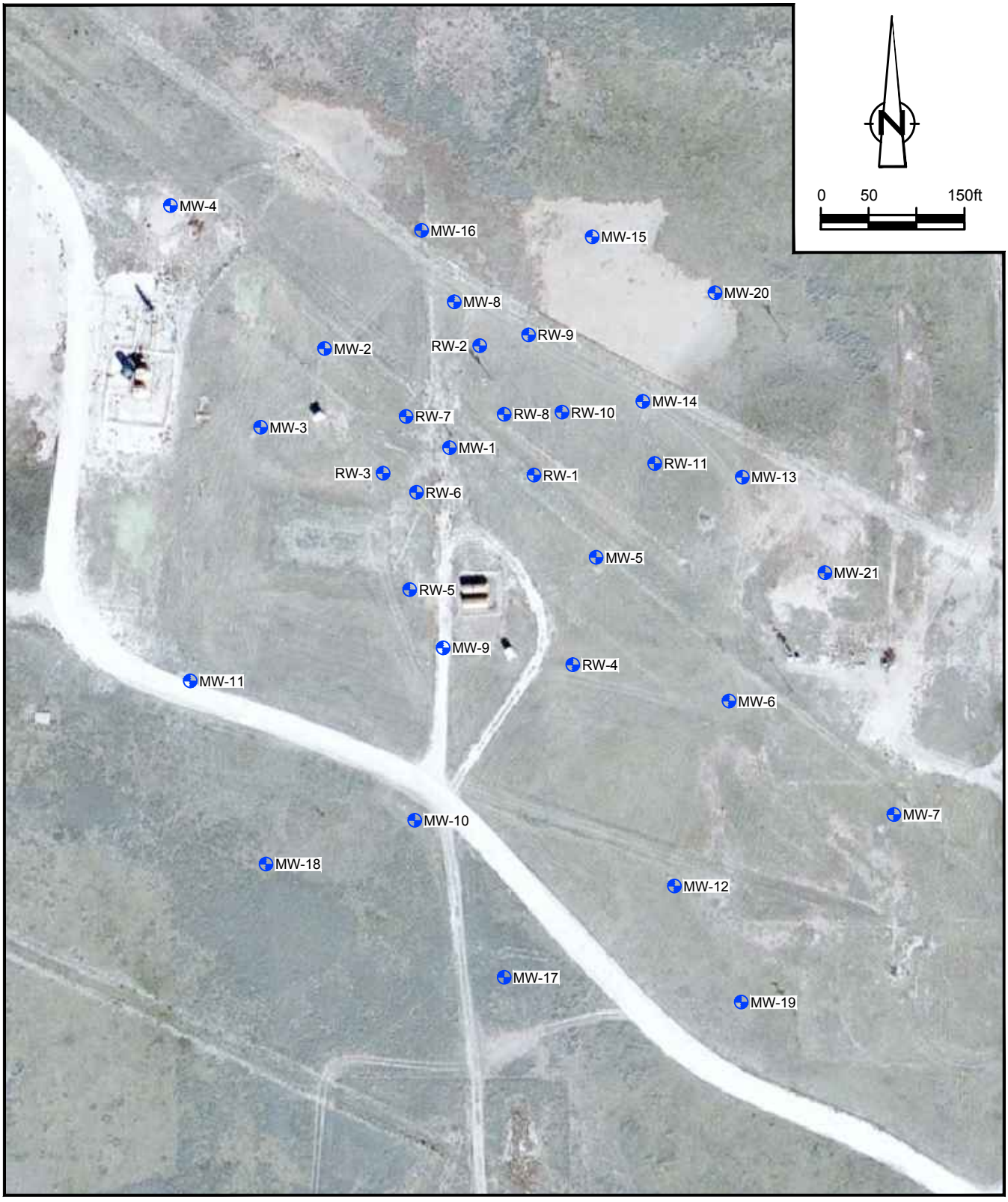
Figures



RE: USGS 7.5 Minute Topographic Maps.

figure 1
SITE LOCATION MAP
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074683-11(002)PR-BR001 Apr 9/2012



LEGEND
Well Location

figure 2

SITE DETAILS MAP
DARR ANGELL No.1
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074683-02(003)GN-DL001 JAN 14/2013

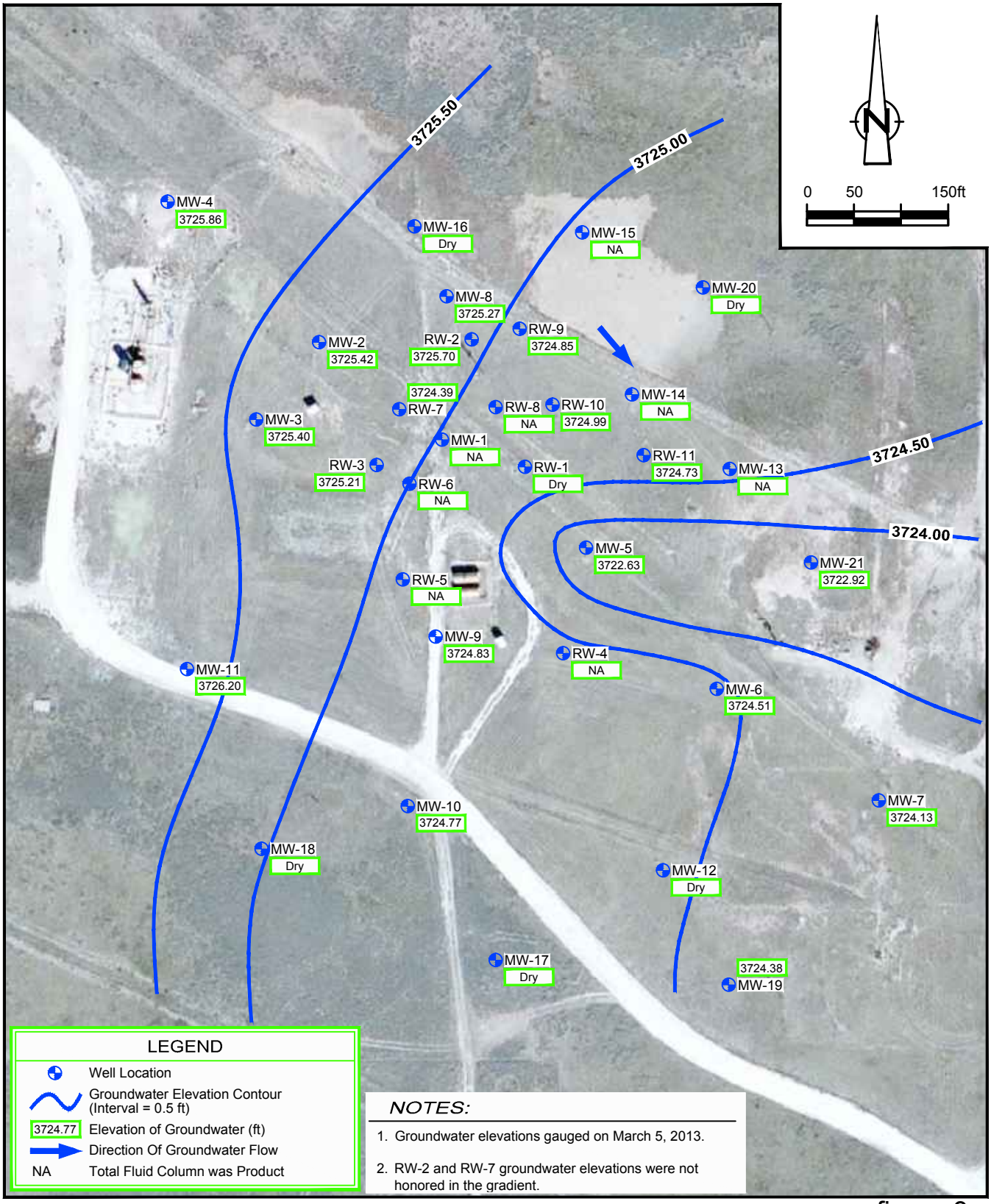


figure 3

GROUNDWATER GRADIENT MAP - MARCH 2013
DARR ANGELL No.1
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

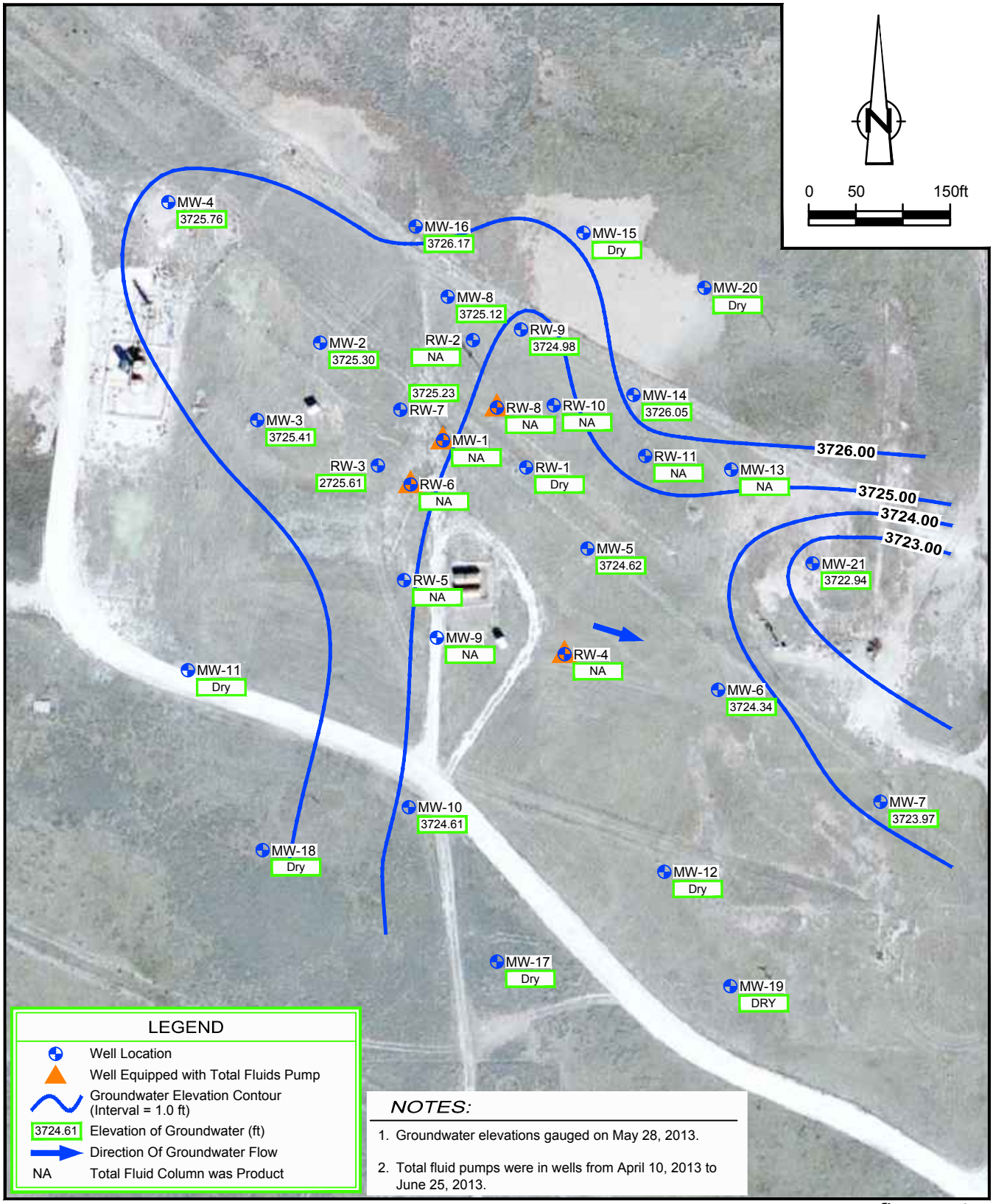


figure 4

GROUNDWATER GRADIENT MAP - MAY 2013
DARR ANGELL No.1
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

CRA

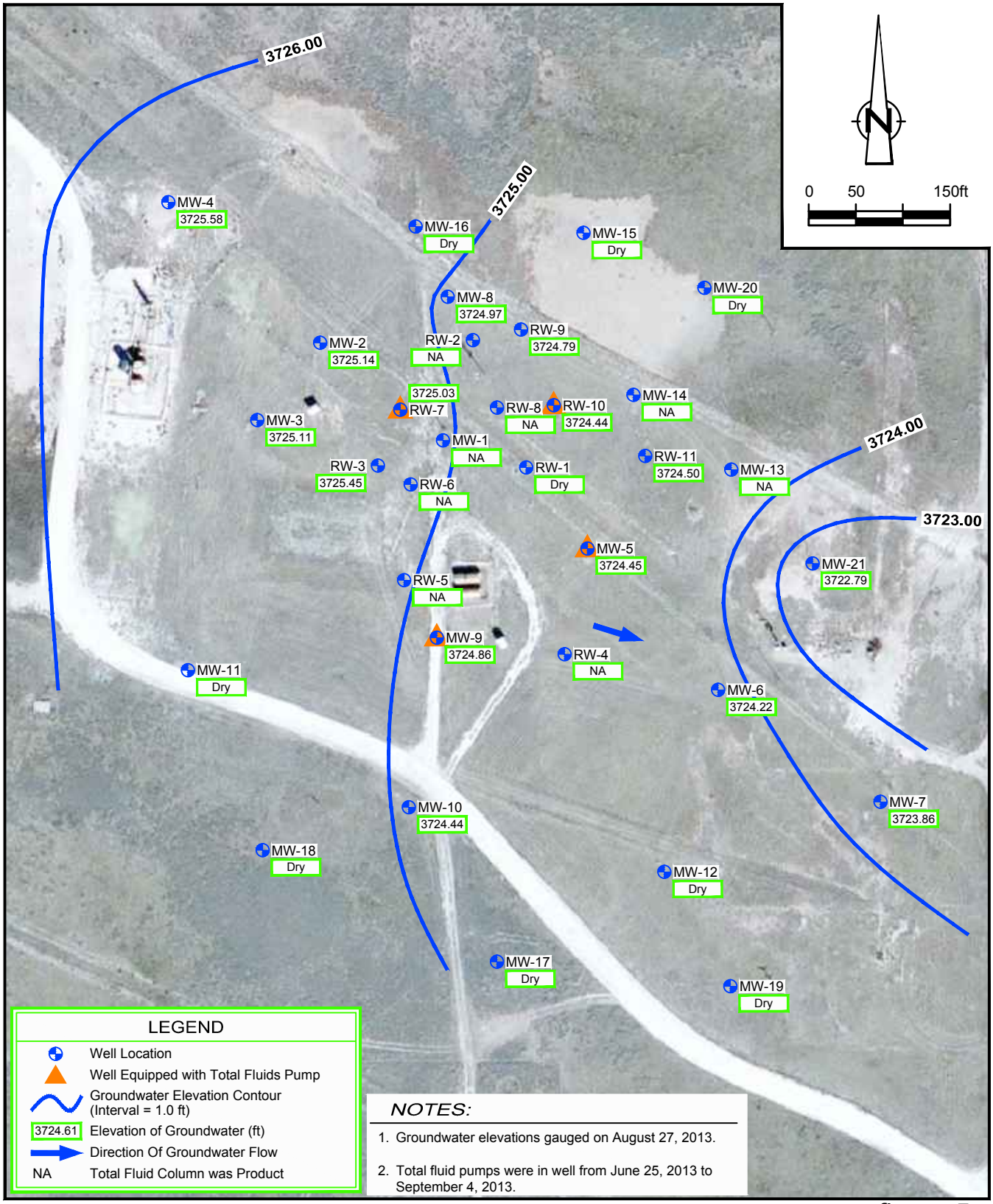


figure 5

GROUNDWATER GRADIENT MAP - AUGUST 2013
DARR ANGELL No.1
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

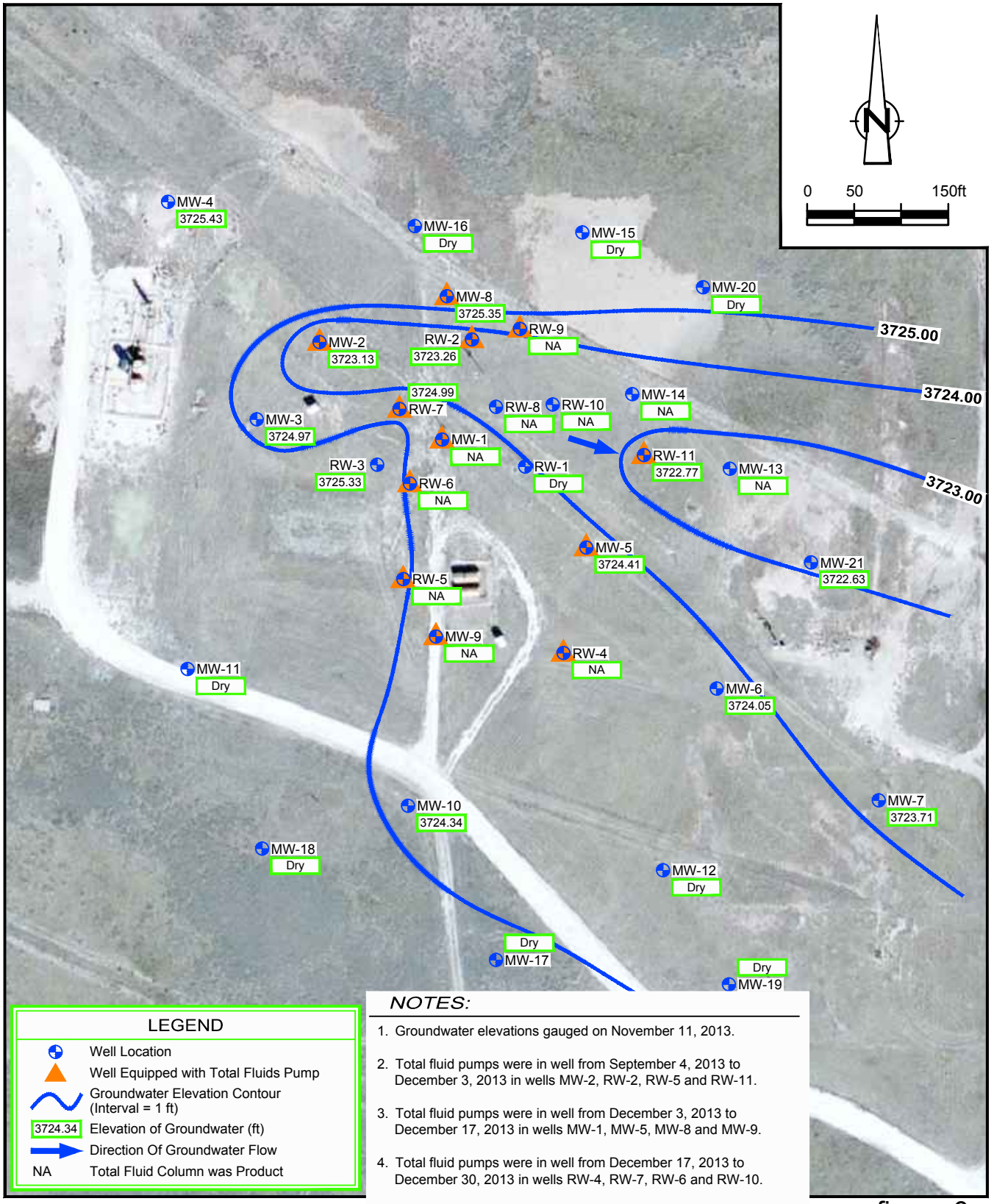


figure 6

GROUNDWATER GRADIENT MAP - NOVEMBER 2013
DARR ANGELL No.1
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074683-02(004)GN-DL001 MAR 6/2014

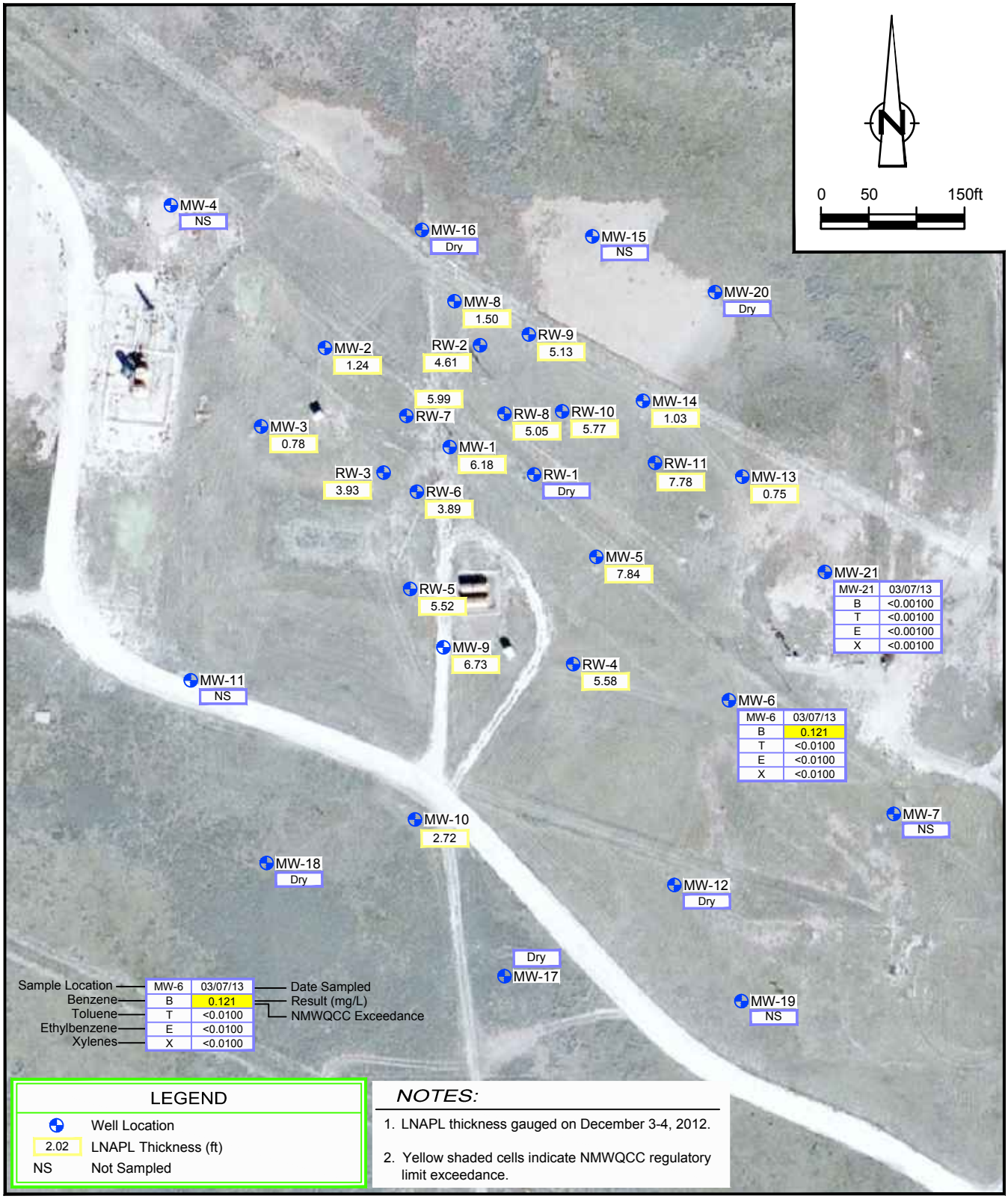


figure 7

LNAPL THICKNESS AND BTEX CONCENTRATION MAP - MARCH 2013
DARR ANGELL No.1
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

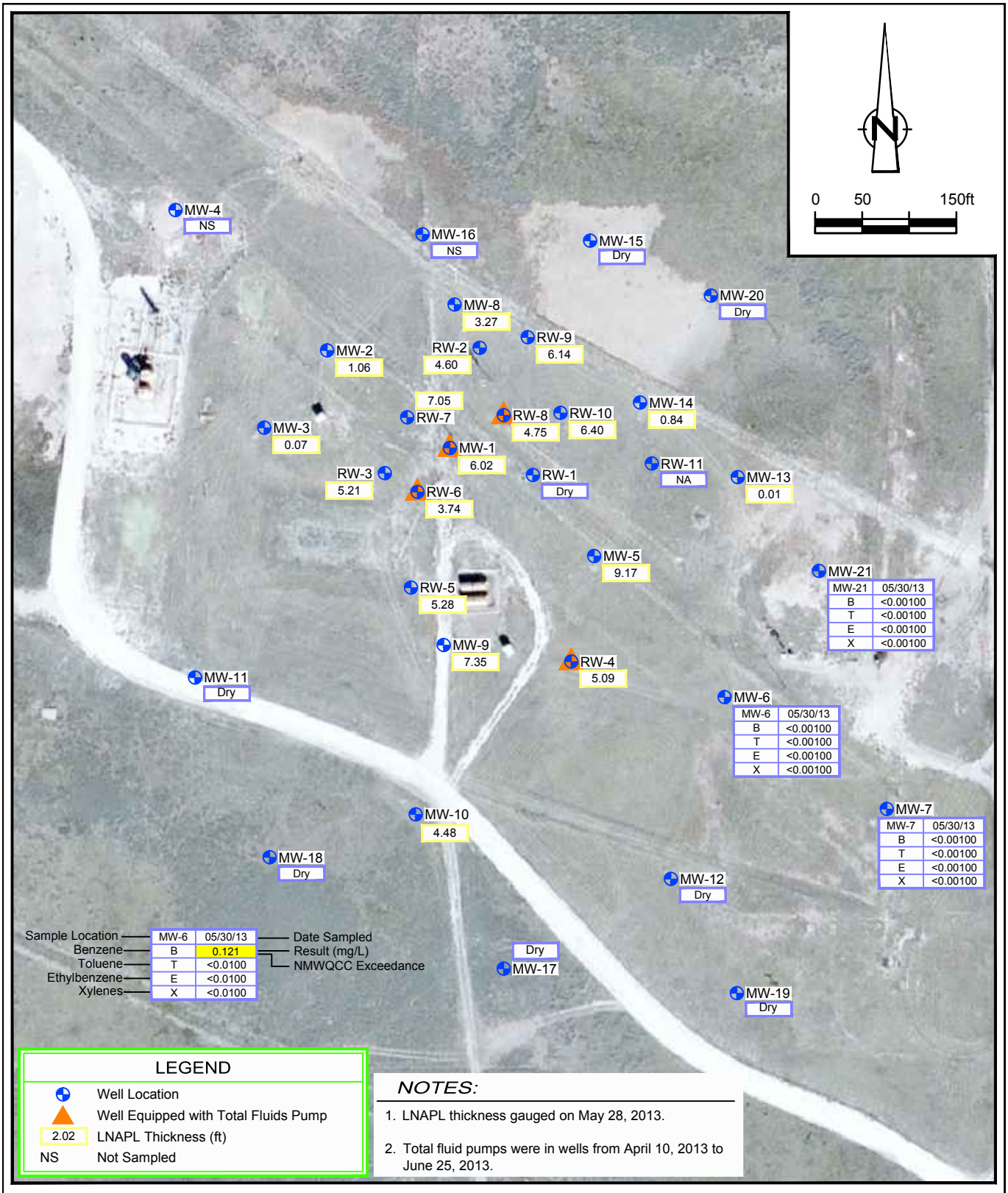


figure 8

LNAPL THICKNESS AND BTEX CONCENTRATION MAP - MAY 2013
DARR ANGELL No.1
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074683-02(004)GN-DL001 MAR 4/2014

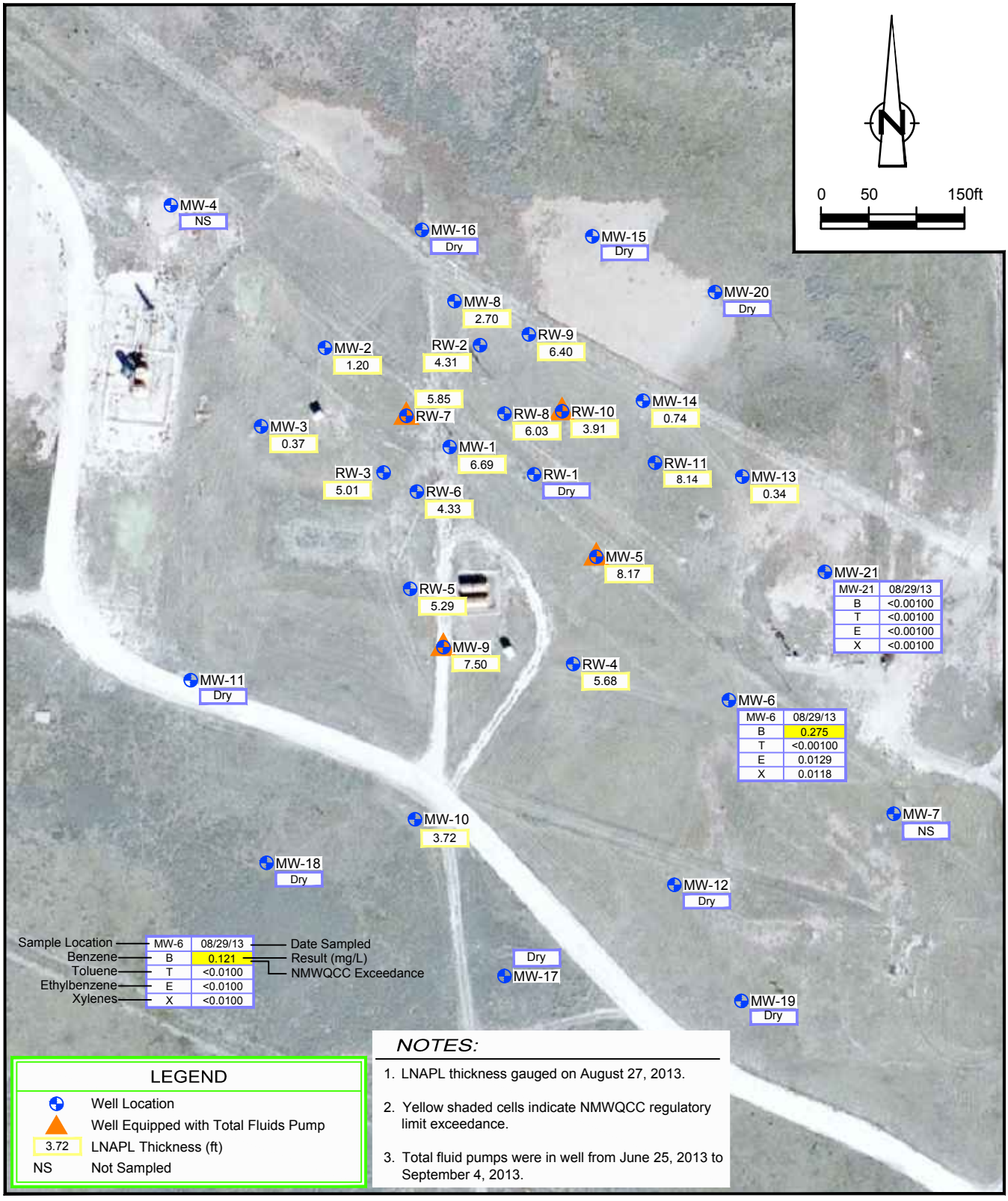


figure 9

LNAPL THICKNESS AND BTEX CONCENTRATION MAP - AUGUST 2013
DARR ANGELL No.1
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074683-02(004)GN-DL001 MAR 4/2014

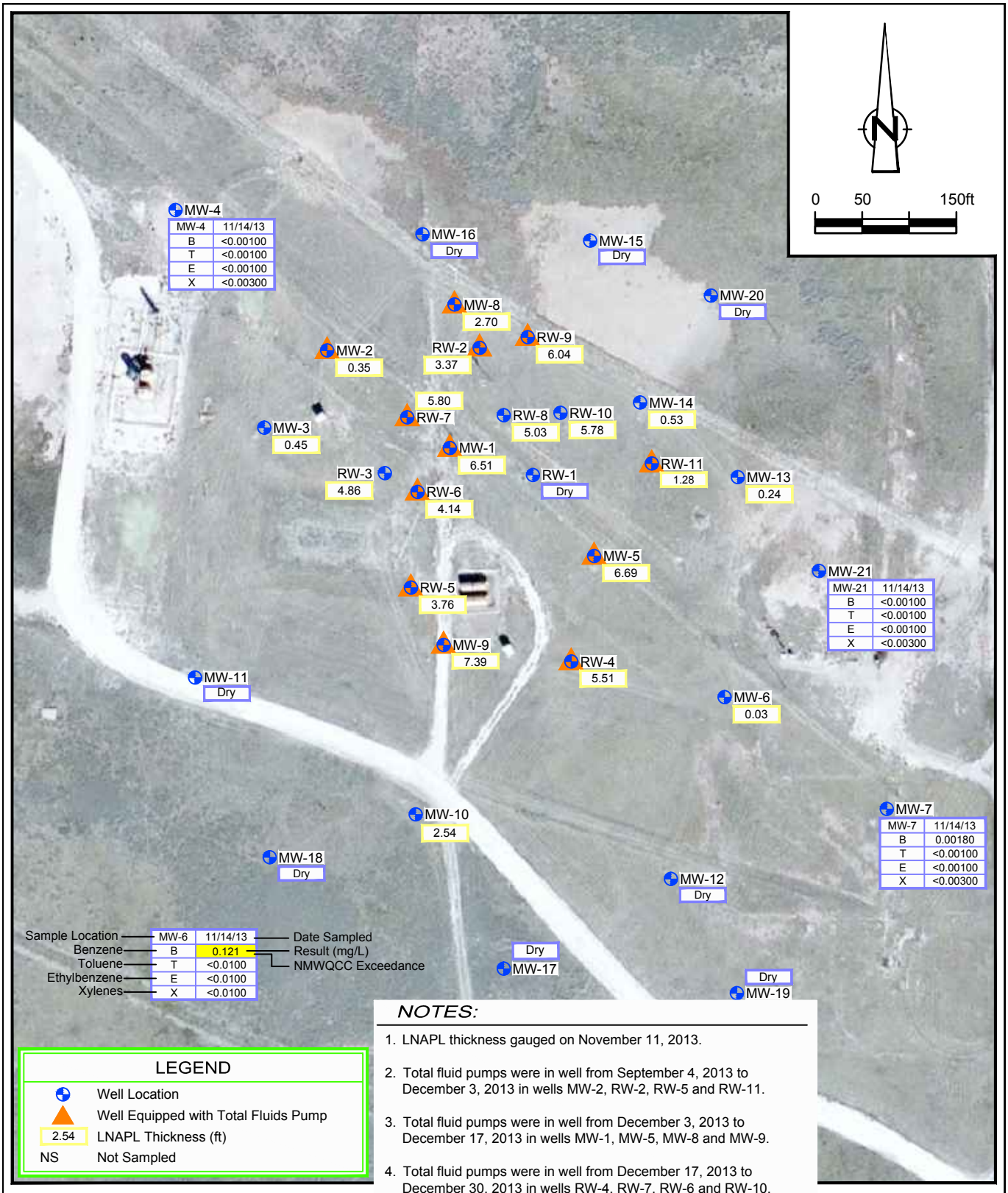


figure 10

LNAPL THICKNESS AND BTEX CONCENTRATION MAP - NOVEMBER 2013
DARR ANGELL No.1
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

Tables

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Well ID *TOC Elevation*	*Collection Date*	*Depth to Groundwater (ft TOC)*	*Depth to LNAPL (ft TOC)*	*LNAPL Thickness (ft)*	*Corrected Groundwater Elevation (ft)*	*Well Depth (ft TOC)*	*Well Screen Interval (ft bgs) Well Size (in)*
MW-1	6/15/11	67.62	60.03	7.59	3726.15	68.10	50-70
3787.62	9/7/11	---	60.00	8.10	NA*	68.10	*4*
	11/29/11	---	60.15	7.96	NA*	68.11	
	3/5/12	---	60.30	7.95	NA*	68.25	
	6/5/12	---	60.42	7.75	NA*	68.17	
	9/11/12	68.52	60.61	7.91	3725.51	---	
	12/4/12	---	62.73	5.42	NA*	68.15	
	3/5/13	---	63.80	6.18	NA*	69.98	
	6/4/13	---	63.96	6.02	NA*	69.98	
	8/27/13	---	61.64	6.69	NA*	68.33	
	11/11/13	---	61.84	6.51	NA*	68.35	
MW-2	6/15/11	62.37	61.46	0.91	3726.56	71.98	50-70
3788.19	9/7/11	62.40	61.72	0.68	3726.34	72.00	*4*
	11/29/11	62.74	61.85	0.89	3726.17	72.35	
	3/5/12	62.60	62.06	0.54	3726.03	72.35	
	6/5/12	62.82	62.18	0.64	3725.89	---	
	9/11/12	63.31	62.03	1.28	3725.92	71.4	
	12/4/12	63.25	62.45	0.80	3725.59	---	
	3/5/13	63.77	62.53	1.24	3725.42	---	
	5/28/13	63.75	62.69	1.06	3725.30	---	
	8/27/13	64.02	62.82	1.20	3725.14	---	
	11/11/13	65.34	64.99	0.35	3723.13	---	
MW-3	6/15/11	62.71	62.48	0.23	3726.51	70.73	50-70
3789.03	9/7/11	62.97	62.25	0.72	3726.64	70.70	*4*
	11/29/11	63.27	62.77	0.50	3726.17	71.91	
	3/5/12	63.40	62.90	0.50	3726.04	71.91	
	6/5/12	63.53	63.05	0.48	3725.89	70.73	
	9/11/12	63.81	63.10	0.71	3725.80	70.84	
	12/4/12	64.02	63.35	0.67	3725.55	---	
	3/5/13	64.26	63.48	0.78	3725.40	---	
	5/28/13	63.68	63.61	0.07	3725.41	---	
	8/27/13	64.22	63.85	0.37	3725.11	---	
	11/11/13	64.42	63.97	0.45	3724.97	---	
MW-4	6/15/11	63.04	---	---	3727.02	73.12	50-70
3790.06	9/7/11	63.27	---	---	3726.79	73.20	*4*
	11/29/11	63.46	---	---	3726.60	73.12	
	3/5/12	63.55	---	---	3726.51	73.13	
	6/5/12	63.70	---	---	3726.36	73.45	
	9/11/12	63.91	---	---	3726.15	73.11	
	12/3/12	64.01	---	---	3726.05	73.12	
	3/5/13	64.20	---	---	3725.86	73.17	
	5/28/13	64.30	---	---	3725.76	---	
	8/27/13	64.48	---	---	3725.58	71.10	
	11/11/13	64.63	---	---	3725.43	73.84	
MW-5	6/15/11	68.50	60.05	8.45	3725.81	71.43	50-70
3787.47	9/7/11	68.62	60.70	7.92	3725.27	71.75	*4*
	11/29/11	69.38	60.34	9.04	3725.41	71.85	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Well ID TOC Elevation	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft)	Well Depth (ft TOC)	Well Screen Interval (ft bgs) Well Size (in)
MW-5 (cont.)	3/5/12	69.42	60.42	9.00	3725.34	71.85	
	6/5/12	69.84	61.71	8.13	3724.22	---	
	9/11/12	69.15	60.80	8.35	3725.08	---	
	12/4/12	69.03	61.11	7.92	3724.86	---	
	3/5/13	71.19	63.35	7.84	3722.63	---	
	5/28/13	70.28	61.11	9.17	3724.62	---	
	8/27/13	69.64	61.47	8.17	3724.45	---	
	11/11/13	68.48	61.79	6.69	3724.41	---	
MW-6	6/15/11	61.23	---	---	3725.58	71.42	50-70
3786.81	9/7/11	61.46	---	---	3725.35	71.55	*4*
	11/29/11	61.60	---	---	3725.21	71.60	
	3/5/12	61.70	---	---	3725.11	71.61	
	6/5/12	61.84	---	---	3724.97	71.80	
	9/11/12	62.01	----	---	3724.80	71.55	
	12/3/12	62.24	----	---	3724.57	70.45	
	3/5/13	62.30	---	---	3724.51	71.50	
	5/28/13	62.47	---	---	3724.34	71.61	
	8/27/13	62.59	---	---	3724.22	71.40	
	11/11/13	62.76	62.73	0.03	3724.05	---	
MW-7	6/15/11	61.65	---	---	3725.17	73.31	50-70
3786.82	9/7/11	61.81	---	---	3725.01	73.32	*4*
	11/29/11	61.95	---	---	3724.87	73.24	
	3/5/12	62.09	---	---	3724.73	73.26	
	6/5/12	62.23	---	---	3724.59	73.40	
	9/11/12	62.42	---	---	3724.40	73.33	
	12/3/12	62.51	---	---	3724.31	73.40	
	3/5/13	62.69	---	---	3724.13	73.35	
	5/28/13	62.85	---	---	3723.97	73.41	
	8/27/13	62.96	---	---	3723.86	73.20	
	11/11/13	63.11	---	---	3723.71	73.27	
MW-8	6/15/11	65.17	61.09	4.08	3726.37	72.74	50-70
3788.24	9/7/11	64.59	61.53	3.06	3726.13	72.74	*4*
	11/29/11	63.78	61.89	1.89	3725.99	72.87	
	3/5/12	63.52	62.06	1.46	3725.90	72.84	
	6/5/12	63.51	62.28	1.23	3725.73	---	
	9/11/12	65.00	62.15	2.85	3725.55	72.85	
	12/4/12	64.11	62.51	1.60	3725.43	---	
	3/5/13	64.19	62.69	1.50	3725.27	---	
	5/28/13	65.77	62.50	3.27	3725.12	---	
	8/27/13	65.46	62.76	2.70	3724.97	---	
	11/11/13	65.08	63.02	2.70	3725.35	---	
MW-9	6/15/11	---	60.70	6.90	NA*	67.60	50-70
3788.33	9/7/11	---	60.78	6.83	NA*	67.61	*4*
	11/29/11	---	60.94	7.74	NA*	68.68	
	3/5/12	---	61.03	6.66	NA*	68.69	
	6/5/12	---	61.15	7.00	NA*	68.15	
	9/11/12	68.61	61.82	6.79	3725.22	68.82	
	12/4/12	---	61.81	7.19	NA*	69.00	
	3/5/13	68.95	62.22	6.73	3724.83	---	
	5/28/13	---	61.72	7.35	NA*	69.07	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Well ID *TOC Elevation*	*Collection Date*	*Depth to Groundwater (ft TOC)*	*Depth to LNAPL (ft TOC)*	*LNAPL Thickness (ft)*	*Corrected Groundwater Elevation (ft)*	*Well Depth (ft TOC)*	*Well Screen Interval (ft bgs) Well Size (in)*
MW-9 (cont.)	8/27/13	69.55	62.05	7.50	3724.86	---	
	11/11/13	---	62.17	7.39	NA*	69.56	
MW-10	6/15/11	66.54	61.77	4.77	3725.78	68.64	40-65
3788.46	9/7/11	65.75	62.14	3.61	3725.63	68.70	*2*
	11/29/11	64.78	62.52	2.26	3725.51	68.80	
	3/5/12	65.28	62.57	2.71	3725.38	68.79	
	6/5/12	64.83	62.81	2.02	3725.27	---	
	9/11/12	66.33	62.71	3.62	3725.06	68.75	
	12/3/12	64.65	63.26	1.39	3724.94	---	
	3/5/13	65.89	63.17	2.72	3724.77	---	
	5/28/13	67.48	63.00	4.48	3724.61	---	
	8/27/13	67.03	63.31	3.72	3724.44	---	
	11/11/13	66.18	63.64	2.54	3724.34	---	
MW-11	6/15/11	63.13	---	---	3726.42	63.40	35-60
3789.55	9/7/11	63.18	---	---	3726.37	63.43	*2*
	11/29/11	63.02	---	---	3726.53	63.44	
	3/5/12	63.32	---	---	3726.23	63.44	
	6/5/12	63.30	---	---	3726.25	63.36	
	9/11/12	63.32	---	---	3726.23	63.41	
	12/3/12			DRY		63.45	
	3/5/13	63.35	---	---	3726.20	63.42	
	5/28/13			DRY		63.43	
	8/27/13			DRY		63.44	
	11/11/13			DRY		63.43	
MW-12	6/15/11	62.36	---	---	3725.45	63.54	35-60
3787.81	9/7/11	62.52	---	---	3725.29	63.58	*2*
	11/29/11	62.68	---	---	3725.13	64.02	
	3/5/12	62.81	---	---	3725.00	63.59	
	6/5/12	62.95	---	---	3724.86	63.61	
	9/11/12	63.11	---	---	3724.70	63.60	
	12/4/12			DRY			
	3/5/13			DRY		63.59	
	5/28/13			DRY		63.51	
	8/27/13			DRY		63.59	
	11/11/13			DRY		63.60	
MW-13	6/15/11	---	61.69	1.60	NA*	63.29	35-60
3788.55	9/7/11	63.09	61.90	1.19	3726.42	63.31	*2*
	11/29/11	---	62.01	3.34	NA*	65.35	
	3/5/12	---	62.11	3.20	NA*	65.31	
	6/5/12	---	62.23	1.11	NA*	63.34	
	9/11/12	---	62.38	1.10	NA*	63.48	
	12/3/12	---	62.51	0.80	NA*	63.31	
	3/5/13	---	62.68	0.75	NA*	63.43	
	5/28/13	---	62.81	0.01	NA*	62.82	
	8/27/13	---	62.96	0.34	NA*	63.30	
	11/11/13	---	63.09	0.24	NA*	63.33	
MW-14	6/15/11	---	62.29	1.08	NA*	63.37	35-60
3788.72	9/7/11	---	61.45	1.97	NA*	63.42	*2*

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Well ID TOC Elevation	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft)	Well Depth (ft TOC)	Well Screen Interval (ft bgs) Well Size (in)
MW-14 (cont.)	11/29/11	---	61.65	1.71	NA*	63.36	
	3/5/12	---	61.77	1.54	NA*	63.31	
	6/5/12	---	61.91	1.46	NA*	63.37	
	9/11/12	---	61.03	1.24	NA*	63.27	
	12/3/12	---	62.24	1.17	NA*	63.41	
	3/5/13	---	62.38	1.03	NA*	63.41	
	5/28/13	63.35	62.51	0.84	3726.05	---	
	8/27/13	---	62.68	0.74	NA*	63.42	
	11/11/13	---	62.89	0.53	NA*	63.42	
MW-15	6/15/11	62.68	---	---	3726.27	63.50	35-60
3788.95	9/7/11	62.84	---	---	3726.11	63.53	*2*
	11/29/11	63.01	---	---	3725.94	64.14	
	3/5/12	63.10	---	---	3725.85	64.14	
	6/5/12	63.25	---	---	3725.70	63.50	
	9/11/12	63.36	---	---	3725.59	63.56	
	12/3/12			DRY		63.53	
	3/5/13	63.48	---	---	NA	63.55	
	5/28/13			DRY		63.53	
	8/27/13			DRY		63.53	
	11/11/13			DRY		63.53	
MW-16	6/15/11	63.08	---	---	3726.53	63.45	35-60
3789.61	9/7/11	63.25	---	---	3726.36	63.50	*2*
	11/29/11	63.03	---	---	3726.58	64.24	
	3/5/12			DRY		63.44	
	6/5/12			DRY		63.50	
	9/11/12			DRY		63.50	
	12/3/12			DRY		63.51	
	3/5/13			DRY		63.47	
	5/28/13	63.44			3726.17		
	8/27/13			DRY		63.48	
	11/11/13			DRY		63.47	
MW-17	6/15/11	62.30	---	---	3725.65	63.00	35-60
3787.95	9/7/11	62.47	---	---	3725.48	63.00	*2*
	11/29/11	62.62	---	---	3725.33	62.94	
	3/5/12	---	62.75	0.26	NA*	63.01	
	6/5/12	62.90	---	---	3725.05	63.00	
	9/11/12			DRY		63.03	
	12/4/12			DRY		63.40	
	3/5/13			DRY		63.03	
	5/28/13			DRY		63.00	
	8/27/13			DRY		63.03	
	11/11/13			DRY		63.02	
MW-18	6/15/11	62.80	---	---	3726.02	63.42	35-60
3788.82	9/7/11	62.98	---	---	3725.84	63.44	*2*
	11/29/11	63.14	---	---	3725.68	64.00	
	3/5/12			DRY		63.48	
	6/5/12	63.40	---	---	3725.42	63.43	
	9/11/12			DRY		63.45	
	12/4/12			DRY		63.43	
	3/5/13			DRY		63.44	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Well ID *TOC Elevation*	*Collection Date*	*Depth to Groundwater (ft TOC)*	*Depth to LNAPL (ft TOC)*	*LNAPL Thickness (ft)*	*Corrected Groundwater Elevation (ft)*	*Well Depth (ft TOC)*	*Well Screen Interval (ft bgs) Well Size (in)*
MW-18 (cont.)	5/28/13			DRY		63.42	
	8/27/13			DRY		63.45	
	11/11/13			DRY		63.74	
MW-19	6/15/11	62.31	---	---	3725.20	63.33	35-60
3787.51	9/7/11	62.48	---	---	3725.03	63.35	*2*
	11/29/11	62.63	---	---	3724.88	63.91	
	3/5/12	62.74	---	---	3724.77	63.95	
	6/5/12			DRY		63.67	
	9/11/12	62.83	---	---	3724.68	63.36	
	12/4/12			DRY			
	3/5/13	63.13	---	---	3724.38	63.37	
	5/28/13			DRY		63.34	
	8/27/13			DRY		63.58	
	11/11/13			DRY		49.31	???
MW-20	6/15/11	62.52	---	---	3726.01	63.36	35-60
3788.53	9/7/11	62.68	---	---	3725.85	63.38	*2*
	11/29/11	62.82	---	---	3725.71	63.97	
	3/5/12	62.94	---	---	3725.59	63.33	
	6/5/12	63.11	---	---	3725.42	63.40	
	9/11/12	60.26	---	---	3728.27	63.34	
	12/3/12			DRY		63.35	
	3/5/13			DRY		63.33	
	5/28/13			DRY		63.33	
	8/27/13			DRY		63.32	
	11/11/13			DRY		63.35	
MW-21	6/15/11	62.35	---	---	3724.11	68.31	45-65
3786.46	9/7/11	62.52	---	---	3723.94	68.30	*2*
	11/29/11	62.66	---	---	3723.80	68.28	
	3/5/12	62.78	---	---	3723.68	68.21	
	6/5/12	62.92	---	---	3723.54	68.39	
	9/11/12	63.18	---	---	3723.28	68.31	
	12/3/12	63.25	---	---	3723.21	68.35	
	3/5/13	63.54	---	---	3722.92	68.34	
	5/28/13	63.52	---	---	3722.94	68.30	
	8/27/13	63.67	---	---	3722.79	68.30	
	11/11/13	63.83	---	---	3722.63	68.35	
RW-1	6/15/11	---	60.67	0.01	NA*	60.68	40-65
3788.33	9/7/11			DRY		60.68	*6*
	11/29/11			DRY		60.68	
	3/5/12			DRY		---	
	6/5/12			DRY		60.65	
	9/11/12			DRY		60.82	
	12/4/12	---	62.72	7.19	NA*	69.91	
	3/5/13			DRY		60.66	
	5/28/13			DRY		60.66	
	8/27/13			DRY		60.65	
	11/11/13			DRY		60.61	
RW-2	6/15/11	66.75	61.69	5.06	3726.33	67.45	40-65
3788.98	9/7/11	---	61.54	5.56	NA*	67.10	*4*

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Well ID *TOC Elevation*	*Collection Date*	*Depth to Groundwater (ft TOC)*	*Depth to LNAPL (ft TOC)*	*LNAPL Thickness (ft)*	*Corrected Groundwater Elevation (ft)*	*Well Depth (ft TOC)*	*Well Screen Interval (ft bgs) Well Size (in)*
RW-2 (cont.)	11/29/11	67.02	61.70	5.32	3726.27	69.98	
	3/5/12	67.86	61.85	6.01	3725.99	69.97	
	6/5/12	67.03	62.00	5.03	3726.02	---	
	9/11/12	---	62.40	4.00	NA*	67.00	
	12/4/12	69.91	67.03	2.88	3721.40	---	
	3/5/13	67.01	62.40	4.61	3725.70	---	
	5/28/13	---	62.51	4.60	NA*	67.11	
	8/27/13	---	62.73	4.31	NA*	67.04	
	11/11/13	68.45	65.08	3.37	3723.26	---	
RW-3	6/15/11	---	61.04	6.78	NA*	67.82	40-65
3788.95	9/7/11	67.26	61.82	5.44	3726.10	67.90	*6*
	11/29/11	65.04	62.05	2.99	3726.33	---	
	3/5/12	65.38	62.58	2.80	3725.84	67.88	
	6/5/12	64.31	63.08	1.23	3725.64	---	
	9/11/12	66.45	62.77	3.68	3725.48	68.9	
	12/4/12	66.51	62.48	4.03	3725.70	---	
	3/5/13	66.92	62.99	3.93	3725.21	---	
	5/28/13	67.56	62.35	5.21	3725.61	---	
	8/27/13	67.56	62.55	5.01	3725.45	---	
	11/11/13	67.56	62.70	4.86	3725.33	---	
RW-4	6/15/11	---	61.00	6.31	NA*	67.31	50-70
3788.15	9/7/11	---	60.97	6.43	NA*	67.40	*4*
	11/29/11	---	61.11	7.83	NA*	68.97	
	3/5/12	---	61.20	6.25	NA*	67.45	
	6/5/12	---	61.72	6.03	NA*	67.75	
	9/11/12	---	61.64	6.51	NA*	68.15	
	12/4/12	69.18	63.41	5.77	3723.64	---	
	3/5/13	---	63.60	5.58	NA*	69.18	
	6/4/13	---	64.06	5.09	NA*	69.15	
	8/27/13	---	62.72	5.68	NA*	68.40	
	11/11/13	---	62.88	5.51	NA*	68.39	
RW-5	6/15/11	Pump Stuck in Well					47-67
3788.83	9/7/11	---	61.61	3.57	NA*	65.18	*4*
	11/29/11	---	61.71	7.83	NA*	69.57	
	3/5/12	---	61.85	6.40	NA*	68.25	
	6/5/12	---	62.00	5.25	NA*	67.25	
	9/11/12	---	62.15	5.06	NA*	67.21	
	12/4/12	67.98	62.37	5.61	3725.39	---	
	3/5/13	---	62.45	5.52	NA*	67.97	
	5/28/13	---	62.60	5.28	NA*	67.88	
	8/27/13	---	62.76	5.29	NA*	68.03	
	11/11/13	---	64.34	3.76	NA*	68.1	
RW-6	6/15/11	67.38	61.11	6.27	3726.63	67.55	46-66
3788.93	9/7/11	---	61.22	6.33	NA*	67.55	*4*
	11/29/11	67.58	61.39	6.19	3726.36	---	
	3/5/12	---	61.48	6.12	NA*	67.60	
	6/5/12	67.33	61.65	5.68	3726.20	---	
	9/11/12	---	61.91	5.50	NA*	67.41	
	12/4/12	68.03	69.00	4.03	3724.16	---	
	3/5/13	---	64.36	3.89	NA*	68.25	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Well ID *TOC Elevation*	*Collection Date*	*Depth to Groundwater (ft TOC)*	*Depth to LNAPL (ft TOC)*	*LNAPL Thickness (ft)*	*Corrected Groundwater Elevation (ft)*	*Well Depth (ft TOC)*	*Well Screen Interval (ft bgs) Well Size (in)*
RW-6 (cont.)	6/4/13	---	64.45	3.74	NA*	68.19	
	8/27/13	---	62.97	4.33	NA*	67.30	
	11/11/13	---	63.16	4.14	NA*	67.30	
RW-7	6/15/11	---	60.52	7.80	NA*	68.32	48-68
3789.07	9/7/11	---	61.38	6.98	NA*	68.36	*4*
	11/29/11	---	61.54	8.22	NA*	---	
	3/5/12	---	61.70	8.12	NA*	69.82	
	6/5/12	---	61.85	6.90	NA*	69.75	
	9/11/12	69.33	62.21	7.12	3725.51	69.66	
	12/4/12	67.70	62.51	5.19	3725.57	---	
	3/5/13	69.53	63.54	5.99	3724.39	---	
	5/28/13	69.55	62.50	7.05	3725.23	---	
	8/27/13	68.78	62.93	5.85	3725.03	---	
	11/11/13	68.78	62.98	5.80	3724.99	---	
RW-8	6/15/11	---	61.09	7.85	NA*	68.94	47-67
3788.84	9/7/11	---	61.19	7.62	NA*	68.81	*4*
	11/29/11	---	61.45	6.42	NA*	67.87	
	3/5/12	---	61.17	6.35	NA*	67.52	
	6/5/12	---	61.32	6.38	NA*	67.7	
	9/11/12	---	61.61	5.90	NA*	67.51	
	12/4/12	68.85	63.63	5.22	3724.22	---	
	3/5/13	---	63.91	5.05	NA*	68.96	
	6/4/13	---	62.94	4.75	NA*	67.69	
	8/27/13	---	62.34	6.03	NA*	68.37	
	11/11/13	---	62.54	5.03	NA*	67.57	
RW-9	6/15/11	64.82	62.20	2.62	3726.22	71.11	49-69
3788.92	9/7/11	65.00	62.41	2.59	3726.02	71.24	*4*
	11/29/11	65.61	62.47	3.14	3725.85	71.22	
	3/5/12	67.30	62.26	5.04	3725.70	71.20	
	6/5/12	67.21	62.49	4.72	3725.53	---	
	9/11/12	65.01	63.13	1.88	3725.43	71.18	
	12/4/12	67.21	62.85	4.36	3725.24	---	
	3/5/13	68.23	63.10	5.13	3724.85	---	
	5/28/13	68.91	62.77	6.14	3724.98	---	
	8/27/13	69.31	62.91	6.40	3724.79	---	
	11/11/13	69.13	63.09	6.04	3724.68	---	
RW-10	6/15/11	---	61.25	5.17	NA*	66.42	49-69
3788.72	9/7/11	63.82	62.70	1.12	3725.81	68.72	*4*
	11/29/11	---	61.58	8.26	NA*	69.84	
	3/5/12	---	61.77	4.69	NA*	66.46	
	6/5/12	67.09	62.35	4.74	3725.47	---	
	9/11/12	---	61.98	6.57	NA*	68.85	
	12/4/12	---	62.44	6.27	NA*	68.71	
	3/5/13	68.40	62.63	5.77	3724.99	---	
	5/28/13	---	62.38	6.40	NA*	68.78	
	8/27/13	67.45	63.54	3.91	3724.44	---	
	11/11/13	---	63.17	5.78	NA*	68.95	
RW-11	6/15/11	67.97	61.28	6.69	3725.88	71.27	50-70
3788.43	9/7/11	68.61	61.35	7.26	3725.70	71.18	*4*
	11/29/11	68.93	61.51	7.42	3725.51	71.30	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Well ID TOC Elevation	*Collection Date*	*Depth to Groundwater (ft TOC)*	*Depth to LNAPL (ft TOC)*	*LNAPL Thickness (ft)*	*Corrected Groundwater Elevation (ft)*	*Well Depth (ft TOC)*	*Well Screen Interval (ft bgs) Well Size (in)*
RW-11 (cont.)	3/5/12	68.21	61.78	6.43	3725.43	71.28	
	6/5/12	---	---	---	---	---	
	9/11/12	Pump Running					
	12/4/12	69.81	62.10	7.71	3724.87	---	
	3/5/13	70.00	62.22	7.78	3724.73	---	
	5/28/13	Pump Running					
	8/27/13	70.52	62.38	8.14	3724.50	---	
	11/11/13	66.70	65.42	1.28	3722.77	---	

Notes:

1. TOC - Top of Casing.
2. LNAPL - Light non-aqueous phase liquid.
3. bgs - below ground surface.
4. Corrected groundwater elevations were calculated using an LNAPL specific gravity of 0.81.
5. NA - Total fluid column in well was LNAPL.

TABLE 2
GROUNDWATER BTEX ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Sample ID	*Sample Date*	*Benzene*	*Toluene*	*Ethyl-Benzene*	*Total Xylenes*	*Total BTEX*
New Mexico Oil Conservation Division Regulatory Limits						
		0.01	*0.75*	*0.75*	*0.62*	*0.05*
MW-3	3/3/11	**0.0924**	<0.0100	**0.256**	**0.668**	**1.0164**
MW-4	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	12/6/12	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00300	<0.00300
MW-6	3/3/11	**0.849**	<0.0100	<0.0100	<0.0100	**0.849**
	6/15/11	**0.760**	<0.0100	<0.0100	<0.0100	**0.760**
	9/13/11	**0.530**	<0.0100	<0.0100	<0.0100	**0.530**
	12/1/11	**0.206**	**0.00110**	**0.0356**	**0.0430**	**0.286**
	3/7/12	**0.220**	<0.00100	**0.0457**	**0.0515**	**0.317**
	6/7/12	**0.322**	<0.0500	<0.0500	<0.0500	**0.322**
	9/12/12	**0.299**	<0.0500	<0.0500	<0.0500	**0.299**
	12/6/12	**0.238**	<0.0100	**0.0694**	**0.0743**	**0.081**
	3/7/13	**0.121**	<0.0100	<0.0100	<0.0100	**0.121**
	5/30/13	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	8/29/13	**0.275**	<0.00100	**0.0129**	**0.0118**	**0.300**
MW-7	6/15/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	6/7/12	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	12/6/12	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	5/30/13	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	**0.00180**	<0.00100	<0.00100	<0.00300	**0.00180**
MW-12	3/3/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	6/15/11	**0.0372**	<0.00100	<0.00100	<0.00100	**0.0372**
	9/13/11	**0.00770**	<0.00100	<0.00100	<0.00100	**0.00770**
	12/1/11	**0.0763**	<0.00100	<0.00100	<0.00100	**0.0763**
	3/7/12	**0.0095**	<0.00100	<0.00100	<0.00100	**0.010**
	6/7/12	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-15	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-17	3/3/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	6/15/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	9/13/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-19	3/3/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	6/15/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	9/13/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100

TABLE 2
GROUNDWATER BTEX ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Sample ID	*Sample Date*	*Benzene*	*Toluene*	*Ethyl-Benzene*	*Total Xylenes*	*Total BTEX*
New Mexico Oil Conservation Division Regulatory Limits						
		0.01	*0.75*	*0.75*	*0.62*	*0.05*
MW-20	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-21	3/3/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	6/15/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	9/13/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/12	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	6/7/12	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	9/12/12	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/13	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	5/30/13	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	8/29/13	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00300	<0.00300

Notes:

1. Shaded cells indicate New Mexico Oil Conservation Division Regulatory Limit exceedance.
2. **Bold** indicates detection.
3. BTEX analyses by EPA Method 8021B.
4. Results shown in mg/L.
5. March 2011 results collected by NOVA.

TABLE 3
GROUNDWATER ANALYTICAL SUMMARY
PAHs
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Acenaphthlene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	Napthalene	1-Methylnapthalene	2-Methylnapthalene	Dibenzofuran
NMWQCC Drinking Water Standards Section 1-101.UU and 3-103.A																				
					0.001	**0.007**	**0.002**		**0.002**	**0.002**	**0.003**			**0.004**			**0.03**			
MW-1	11/24/08	<0.000183	**0.00485**	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.0167**	<0.000183	**0.0205**	<0.000183	**0.122**	**0.173**	**0.250**	**0.0106**
	12/08/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0164**	<0.000922	<0.000922	**0.0719**	<0.000922	**0.106**	<0.000922	**0.350**	**0.748**	**1.09**	**0.0436**
	11/22/10	Not Sampled as Part of Quarterly Monitoring Event																		
MW-2	11/24/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.00255**	<0.000183	**0.00282**	<0.000183	**0.0285**	**0.0234**	**0.0302**	**0.00174**
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00482**	<0.000184	**0.00625**	<0.000184	**0.0435**	**0.0536**	**0.0528**	**0.00314**
	11/22/10	Not Sampled for PAH due to Presence of PSH																		
MW-3	11/24/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00377**	<0.000184	**0.0037**	<0.000184	**0.0601**	**0.0455**	**0.0625**	**0.00292**
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00242**	<0.000184	**0.00262**	<0.000184	**0.0372**	**0.0396**	**0.0451**	**0.00191**
	11/22/10	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	**0.00899**	<0.000186	**0.0136**	<0.000186	**0.0673**	**0.0915**	**0.115**	**0.00579**
MW-4	11/24/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-5	11/24/08	<0.000917	**0.0806**	**0.0424**	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0326**	<0.000917	**0.0427**	<0.000917	**0.136**	**0.261**	**0.372**	**0.0201**
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00262**	<0.000184	<0.000184	**0.0122**	<0.000184	**0.0172**	<0.000184	**0.0779**	**0.137**	**0.194**	**0.00767**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-6	11/24/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00321**	<0.000184	**0.00322**	<0.000184	**0.0217**	**0.0339**	**0.015**	**0.00251**
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00129**	<0.000184	**0.00144**	<0.000184	**0.00437**	**0.0133**	**0.00426**	**0.00125**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
	12/01/11	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	**0.000962**	<0.000186	**0.00131**	<0.000186	**0.00345**	**0.00676**	**0.00328**	**0.00152**
	12/06/12	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	**0.00346**	<0.000190	**0.00406**	<0.000190	**0.0126**	**0.0206**	**0.0207**	**0.00398**
MW-7	11/24/08	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-8	11/25/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.135**	<0.000184	**0.188**	<0.000184	**0.529**	**1.26**	**1.86**	**0.0861**
	12/08/09	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0165**	<0.000917	<0.000917	**0.0789**	<0.000917	**0.113**	<0.000917	**0.359**	**0.839**	**1.14**	**0.0566**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		

TABLE 3
GROUNDWATER ANALYTICAL SUMMARY
PAHs
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Acenaphthlene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	Napthalene	1-Methylnapthalene	2-Methylnapthalene	Dibenzofuran
NMWQCC Drinking Water Standards Section 1-101.UU and 3-103.A					**0.001**	**0.007**	**0.002**		**0.002**	**0.002**	**0.003**			**0.004**			**0.03**			
MW-9	11/25/08	<0.000184	0.00163	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00172**	<0.000184	<0.000184	**0.00846**	<0.000184	**0.0104**	<0.000184	**0.0641**	**0.0851**	**0.112**	**0.00578**
	12/07/09	Not sampled due to insufficient water volume																		
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-10	11/24/08	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0382**	<0.000922	**0.0512**	<0.000922	**0.212**	**0.382**	**0.537**	**0.0286**
	12/08/09	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0357**	<0.000917	<0.000917	**0.172**	<0.000917	**0.245**	<0.000917	**0.856**	**1.89**	**2.64**	**0.112**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-11	11/24/08	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-12	11/24/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.000696	<0.000183	<0.000183	<0.000183	**0.000648**	0.000372	<0.000183	**0.00145**
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.000615**	<0.000184	<0.000184	**0.000706**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
	12/01/11	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.000302**	<0.000183	**0.000228**
MW-13	11/24/08	Not sampled due to insufficient water volume																		
	12/07/09	Not sampled due to insufficient water volume																		
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-14	11/24/08	Not sampled due to insufficient water volume																		
	12/07/09	Not sampled due to insufficient water volume																		
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-15	11/24/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-16	11/24/08	<0.000185	<0.000185	**0.000888**	**0.000959**	**0.000847**	**0.000814**	**0.00102**	**0.000879**	**0.000958**	<0.000185	**0.0013**	**0.000417**	**0.001**	**0.00076**	**0.0012**	<0.000185	**0.000216**	**0.000313**	<0.000185
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		

TABLE 3
GROUNDWATER ANALYTICAL SUMMARY
PAHs
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Acenaphthlene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	Napthalene	1-Methylnapthalene	2-Methylnapthalene	Dibenzofuran
NMWQCC Drinking Water Standards Section 1-101.UU and 3-103.A					**0.001**	**0.007**	**0.002**		**0.002**	**0.002**	**0.003**			**0.004**			**0.03**			
MW-17	11/24/08	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-18	11/24/08	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	**0.000216**	**0.000245**	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-19	11/24/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-20	11/24/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
MW-21	11/24/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	12/07/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
RW-1	11/24/08	Not sampled due to insufficient water volume																		
	12/07/09	Not sampled due to insufficient water volume																		
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
RW-2	11/25/08	Not sampled due to insufficient water volume																		
	12/08/09	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	**0.0379**	<0.00184	<0.00184	**0.162**	<0.00184	**0.256**	<0.00184	**0.798**	**1.74**	**2.60**	**0.0964**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
RW-3	11/25/08	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0218**	<0.000917	<0.000917	**0.0966**	<0.000917	**0.129**	<0.000917	**0.400**	**0.888**	**1.31**	**0.0633**
	12/08/09	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	**0.0506**	<0.00183	<0.00183	**0.210**	<0.00183	**0.321**	<0.00183	**1.02**	**2.27**	**3.29**	**0.130**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
RW-4	11/25/08	Not sampled due to insufficient water volume																		
	12/08/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.00224**	<0.000183	<0.000183	**0.011**	<0.000183	**0.0161**	<0.000183	**0.0801**	**0.134**	**0.184**	**0.00772**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		

TABLE 3
GROUNDWATER ANALYTICAL SUMMARY
PAHs
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 1
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Acenaphthlene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	Napthalene	1-Methylnapthalene	2-Methylnapthalene	Dibenzofuran
NMWQCC Drinking Water Standards Section 1-101.UU and 3-103.A					**0.001**	**0.007**	**0.002**		**0.002**	**0.002**	**0.003**			**0.004**				**0.03**		
RW-5	11/25/08	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0218**	<0.000917	**0.0273**	<0.000917	**0.132**	**0.17**	**0.254**	**0.013**
	12/08/09	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0166**	<0.000917	<0.000917	**0.0726**	<0.000917	**0.105**	<0.000917	**0.338**	**0.726**	**1.07**	**0.0426**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
RW-6	11/25/08	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0286**	<0.000917	<0.000917	**0.126**	<0.000917	**0.167**	<0.000917	**0.564**	**1.33**	**1.93**	**0.0751**
	12/08/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0110**	<0.000922	<0.000922	**0.0330**	<0.000922	**0.0456**	<0.000922	**0.175**	**0.327**	**0.462**	**0.0180**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
RW-7	11/25/08	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0254**	<0.000922	<0.000922	**0.106**	<0.000922	**0.143**	<0.000922	**0.477**	**1.07**	**1.55**	**0.0709**
	12/08/09	<0.00862	<0.00862	<0.00862	<0.00862	<0.00862	<0.00862	<0.00862	<0.00862	**0.191**	<0.00862	<0.00862	**0.844**	<0.00862	**1.28**	<0.00862	**3.95**	**9.15**	**13.1**	**0.0531**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
RW-8	11/25/08	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	**0.342**	<0.00459	**0.436**	<0.00459	**1.17**	**2.87**	**4.15**	**0.214**
	12/08/09	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	**0.116**	<0.00461	<0.00461	**0.480**	<0.00461	**0.704**	<0.00461	**2.16**	**5.04**	**7.19**	**0.294**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
RW-9	11/25/08	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.064**	<0.000917	**0.0838**	<0.000917	**0.294**	**0.587**	**0.841**	**0.0488**
	12/08/09	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	**0.0186**	<0.00183	<0.00183	**0.0795**	<0.00183	**0.117**	<0.00183	**0.402**	**0.890**	**1.24**	**0.0576**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
RW-10	11/25/08	Not sampled due to insufficient water volume																		
	12/08/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.00496	<0.000183	**0.00643**	<0.000183	**0.0478**	**0.0674**	**0.0898**	**0.00344**
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		
RW-11	11/25/08	**0.0062**	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0105**	<0.000917	<0.000917	**0.0426**	<0.000917	**0.0571**	<0.000917	**0.145**	**0.322**	**0.441**	**0.0269**
	12/08/09	Not sampled due to pump stuck in well.																		
	11/22/10	Not sampled as part of Quarterly Monitoring Event																		

Notes:

1. Shaded cells indicate NMWQCC Drinking Water Standards Section 1-101.UU and 3-103.A excedance.
2. **Bold** indicates detection.
3. BTEX analyses by EPA Method 8021B.
4. Results shown in mg/L.
5. 2008 through 2010 results collected by NOVA.

Appendices

Appendix A
Certified Laboratory Reports

Summary Report

Todd Wells
CRA-Midland
2135 South Loop 250 West
Midland, TX 79703

Report Date: March 14, 2013

Work Order: 13030731

Project Location: Lea Co., NM
Project Name: Darr Angel #1
Project Number: 074683

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
322753	MW-6 030713	water	2013-03-07	12:45	2013-03-07
322754	MW-21 030713	water	2013-03-07	12:50	2013-03-07

	BTEX			
	Benzene	Toluene	Ethylbenzene	Xylene
Sample - Field Code	(mg/L)	(mg/L)	(mg/L)	(mg/L)
322753 - MW-6 030713	**0.121**	<0.0100	<0.0100	<0.0100
322754 - MW-21 030713	<0.00100	<0.00100	<0.00100	<0.00100

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Todd Wells
CRA-Midland
2135 South Loop 250 West
Midland, TX, 79703

Report Date: March 14, 2013

Work Order: 13030731

Project Location: Lea Co., NM
Project Name: Darr Angel #1
Project Number: 074683

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
322753	MW-6 030713	water	2013-03-07	12:45	2013-03-07
322754	MW-21 030713	water	2013-03-07	12:50	2013-03-07

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Darr Angel #1 were received by TraceAnalysis, Inc. on 2013-03-07 and assigned to work order 13030731. Samples for work order 13030731 were received intact without headspace and at a temperature of 19.7 C. Samples were received straight the from field on ice.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	84441	2013-03-13 at 13:51	99671	2013-03-13 at 13:52

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 13030731 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 322753 - MW-6 030713

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	99671	Date Analyzed:	2013-03-13	Analyzed By:	AH
Prep Batch:	84441	Sample Preparation:	2013-03-12	Prepared By:	AH

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		1	**0.121**	mg/L	10	0.00100
Toluene	U	1	<0.0100	mg/L	10	0.00100
Ethylbenzene	U	1	<0.0100	mg/L	10	0.00100
Xylene	U	1	<0.0100	mg/L	10	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.968	mg/L	10	1.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.936	mg/L	10	1.00	94	70 - 130

Sample: 322754 - MW-21 030713

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	99671	Date Analyzed:	2013-03-13	Analyzed By:	AH
Prep Batch:	84441	Sample Preparation:	2013-03-12	Prepared By:	AH

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0959	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0890	mg/L	1	0.100	89	70 - 130

Method Blanks

Method Blank (1) QC Batch: 99671

QC Batch:	99671	Date Analyzed:	2013-03-13	Analyzed By:	AH
Prep Batch:	84441	QC Preparation:	2013-03-13	Prepared By:	AH

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000200	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000400	mg/L	0.001
Xylene		1	<0.00120	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0974	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0908	mg/L	1	0.100	91	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 99671 | Date Analyzed: 2013-03-13 | Analyzed By: AH
Prep Batch: 84441 | QC Preparation: 2013-03-13 | Prepared By: AH

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.103	mg/L	1	0.100	<0.000200	103	70 - 130
Toluene		1	0.101	mg/L	1	0.100	<0.000300	101	70 - 130
Ethylbenzene		1	0.102	mg/L	1	0.100	<0.000400	102	70 - 130
Xylene		1	0.302	mg/L	1	0.300	<0.00120	101	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.111	mg/L	1	0.100	<0.000200	111	70 - 130	8	20
Toluene		1	0.109	mg/L	1	0.100	<0.000300	109	70 - 130	8	20
Ethylbenzene		1	0.110	mg/L	1	0.100	<0.000400	110	70 - 130	8	20
Xylene		1	0.327	mg/L	1	0.300	<0.00120	109	70 - 130	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0974	0.0970	mg/L	1	0.100	97	97	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0922	0.0912	mg/L	1	0.100	92	91	70 - 130

Matrix Spike (MS-1) Spiked Sample: 322756

QC Batch: 99671 | Date Analyzed: 2013-03-13 | Analyzed By: AH
Prep Batch: 84441 | QC Preparation: 2013-03-13 | Prepared By: AH

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.108	mg/L	1	0.100	<0.000200	108	70 - 130
Toluene		1	0.105	mg/L	1	0.100	<0.000300	105	70 - 130
Ethylbenzene		1	0.105	mg/L	1	0.100	<0.000400	105	70 - 130
Xylene		1	0.313	mg/L	1	0.300	<0.00120	104	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.106	mg/L	1	0.100	<0.000200	106	70 - 130	2	20
Toluene		1	0.104	mg/L	1	0.100	<0.000300	104	70 - 130	1	20
Ethylbenzene		1	0.105	mg/L	1	0.100	<0.000400	105	70 - 130	0	20
Xylene		1	0.312	mg/L	1	0.300	<0.00120	104	70 - 130	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0967	0.0969	mg/L	1	0.1	97	97	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0922	0.0917	mg/L	1	0.1	92	92	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 99671 | Date Analyzed: 2013-03-13 | Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0892	89	80 - 120	2013-03-13
Toluene		1	mg/L	0.100	0.0876	88	80 - 120	2013-03-13
Ethylbenzene		1	mg/L	0.100	0.0878	88	80 - 120	2013-03-13
Xylene		1	mg/L	0.300	0.261	87	80 - 120	2013-03-13

Standard (CCV-2)

QC Batch: 99671 | Date Analyzed: 2013-03-13 | Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0846	85	80 - 120	2013-03-13
Toluene		1	mg/L	0.100	0.0830	83	80 - 120	2013-03-13
Ethylbenzene		1	mg/L	0.100	0.0834	83	80 - 120	2013-03-13
Xylene		1	mg/L	0.300	0.248	83	80 - 120	2013-03-13

Standard (CCV-3)

QC Batch: 99671 | Date Analyzed: 2013-03-13 | Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.107	107	80 - 120	2013-03-13
Toluene		1	mg/L	0.100	0.105	105	80 - 120	2013-03-13
Ethylbenzene		1	mg/L	0.100	0.106	106	80 - 120	2013-03-13
Xylene		1	mg/L	0.300	0.317	106	80 - 120	2013-03-13

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 130307 31

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name: CRA	**Phone #:** 432-686-0086
Address: (Street, City, Zip) 2135 S. Loop 250 W. Midland TX 79703	**Fax #:** 686-0186
Contact Person: Todd Wells	**E-mail:** twells@cramail.com
Invoice to: (If different from above) Plains Pipeline SRS# Darr Angell #1 Saxon Henry	
Project #: 074683	**Project Name:** Darr Angell #1
Project Location (including state): Lea County NM	**Sampler Signature:**

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
322753	MW-6 030713	3	40mL	X				X						3-7-13	1245
754	MW-21 030713	3	40mL	X				X						3-7-13	1250

MTBE 8021 / 602 / 8260 / 624	BTEX 8021B / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
	X																								
	X																								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
	CRA	3-7-13	1548		TA	3/7/13	15:48
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

INST 1K-1 / OBS 19.7 °C / COR 19.7 °C

INST ____ / OBS ____ °C / COR ____ °C

INST ____ / OBS ____ °C / COR ____ °C

LAB USE ONLY

Intact Y / N

Headspace Y / N / NA

Log-in-Review

REMARKS: Draeger from field Midland all

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Carrier #

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

ORIGINAL COPY

Summary Report

Todd Wells
CRA-Midland
2135 South Loop 250 West
Midland, TX 79703

Report Date: June 13, 2013

Work Order: 13053126

Project Location: Lea Co., NM
Project Name: Darr Angel #1
Project Number: 074683

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
330669	MW-6 053013	water	2013-05-30	15:30	2013-05-31
330670	MW-7 053013	water	2013-05-30	15:40	2013-05-31
330671	MW-21 053013	water	2013-05-30	15:50	2013-05-31

	BTEX			
Sample - Field Code	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
330669 - MW-6 053013	<0.00100	<0.00100	<0.00100	<0.00100
330670 - MW-7 053013	<0.00100	<0.00100	<0.00100	<0.00100
330671 - MW-21 053013	<0.00100	<0.00100	<0.00100	<0.00100

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Todd Wells
CRA-Midland
2135 South Loop 250 West
Midland, TX, 79703

Report Date: June 13, 2013

Work Order: 13053126

Project Location: Lea Co., NM
Project Name: Darr Angel #1
Project Number: 074683

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
330669	MW-6 053013	water	2013-05-30	15:30	2013-05-31
330670	MW-7 053013	water	2013-05-30	15:40	2013-05-31
330671	MW-21 053013	water	2013-05-30	15:50	2013-05-31

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Darr Angel #1 were received by TraceAnalysis, Inc. on 2013-05-31 and assigned to work order 13053126. Samples for work order 13053126 were received intact without headspace and at a temperature of 3.1 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	86628	2013-06-10 at 15:30	102245	2013-06-13 at 10:32

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 13053126 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 330669 - MW-6 053013

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	102245	Date Analyzed:	2013-06-13	Analyzed By:	KC
Prep Batch:	86628	Sample Preparation:	2013-06-10	Prepared By:	KC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0830	mg/L	1	0.100	83	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0846	mg/L	1	0.100	85	70 - 130

Sample: 330670 - MW-7 053013

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	102245	Date Analyzed:	2013-06-13	Analyzed By:	KC
Prep Batch:	86628	Sample Preparation:	2013-06-10	Prepared By:	KC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0781	mg/L	1	0.100	78	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0796	mg/L	1	0.100	80	70 - 130

Sample: 330671 - MW-21 053013

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	102245	Date Analyzed:	2013-06-13	Analyzed By:	KC
Prep Batch:	86628	Sample Preparation:	2013-06-10	Prepared By:	KC

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzene	U	1	<0.00100		mg/L	1	0.00100
Toluene	U	1	<0.00100		mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100		mg/L	1	0.00100
Xylene	U	1	<0.00100		mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0782	mg/L	1	0.100	78	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0764	mg/L	1	0.100	76	70 - 130

Method Blanks

Method Blank (1) QC Batch: 102245

QC Batch: 102245 | Date Analyzed: 2013-06-13 | Analyzed By: KC
Prep Batch: 86628 | QC Preparation: 2013-06-10 | Prepared By: KC

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000200	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000400	mg/L	0.001
Xylene		1	<0.00120	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0832	mg/L	1	0.100	83	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0844	mg/L	1	0.100	84	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 102245 | Date Analyzed: 2013-06-13 | Analyzed By: KC
Prep Batch: 86628 | QC Preparation: 2013-06-10 | Prepared By: KC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0899	mg/L	1	0.100	<0.000200	90	70 - 130
Toluene		1	0.0923	mg/L	1	0.100	<0.000300	92	70 - 130
Ethylbenzene		1	0.0889	mg/L	1	0.100	<0.000400	89	70 - 130
Xylene		1	0.259	mg/L	1	0.300	<0.00120	86	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0917	mg/L	1	0.100	<0.000200	92	70 - 130	2	20
Toluene		1	0.0937	mg/L	1	0.100	<0.000300	94	70 - 130	2	20
Ethylbenzene		1	0.0907	mg/L	1	0.100	<0.000400	91	70 - 130	2	20
Xylene		1	0.265	mg/L	1	0.300	<0.00120	88	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0859	0.0822	mg/L	1	0.100	86	82	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0883	0.0862	mg/L	1	0.100	88	86	70 - 130

Matrix Spike (MS-1) Spiked Sample: 330651

QC Batch: 102245 | Date Analyzed: 2013-06-13 | Analyzed By: KC
Prep Batch: 86628 | QC Preparation: 2013-06-10 | Prepared By: KC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0742	mg/L	1	0.100	<0.000200	74	70 - 130
Toluene		1	0.0758	mg/L	1	0.100	<0.000300	76	70 - 130
Ethylbenzene		1	0.0730	mg/L	1	0.100	<0.000400	73	70 - 130
Xylene		1	0.213	mg/L	1	0.300	<0.00120	71	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0900	mg/L	1	0.100	<0.000200	90	70 - 130	19	20
Toluene		1	0.0926	mg/L	1	0.100	<0.000300	93	70 - 130	20	20
Ethylbenzene		1	0.0891	mg/L	1	0.100	<0.000400	89	70 - 130	20	20
Xylene		1	0.260	mg/L	1	0.300	<0.00120	87	70 - 130	20	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0794	0.0786	mg/L	1	0.1	79	79	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0851	0.0828	mg/L	1	0.1	85	83	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 102245 | Date Analyzed: 2013-06-13 | Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0836	84	80 - 120	2013-06-13
Toluene		1	mg/L	0.100	0.0868	87	80 - 120	2013-06-13
Ethylbenzene		1	mg/L	0.100	0.0841	84	80 - 120	2013-06-13
Xylene		1	mg/L	0.300	0.245	82	80 - 120	2013-06-13

Standard (CCV-2)

QC Batch: 102245 | Date Analyzed: 2013-06-13 | Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0885	88	80 - 120	2013-06-13
Toluene		1	mg/L	0.100	0.0909	91	80 - 120	2013-06-13
Ethylbenzene		1	mg/L	0.100	0.0881	88	80 - 120	2013-06-13
Xylene		1	mg/L	0.300	0.256	85	80 - 120	2013-06-13

Standard (CCV-3)

QC Batch: 102245 | Date Analyzed: 2013-06-13 | Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0884	88	80 - 120	2013-06-13
Toluene		1	mg/L	0.100	0.0916	92	80 - 120	2013-06-13
Ethylbenzene		1	mg/L	0.100	0.0885	88	80 - 120	2013-06-13
Xylene		1	mg/L	0.300	0.257	86	80 - 120	2013-06-13

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 13053126

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name:	CRA
Phone #:	432-686-0086
Address: (Street, City, Zip)	2135 S. Loop 250 W Midland TX
Fax #:	686-0186
Contact Person:	Todd Wells
E-mail:	twells@craworld.com
Invoice to: (If different from above)	Jason Henry w/ Plains All American SR# Darr Angel #1
Project #:	074683
Project Name:	DARR Angell #1
Project Location (including state):	Lea County NM
Sampler Signature:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
330669	MW-6 053013	3	40 mL	X				X						5-30-13	1530		X																								
330670	MW-7 053013	3	40 mL	X				X						5-30-13	1540		X																								
330671	MW-21 053013	3	40 mL	X				X						5-30-13	1550		X																								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
C. LEMA	CRA	5/31/13	9:15	Chase Williams	T/A	5/31/13	9:15	INST ___ OBS 3.1 °C COR ___ °C
								INST ___ OBS ___ °C COR ___ °C
								INST ___ OBS ___ °C COR ___ °C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review

REMARKS:

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # ___

ORIGINAL COPY

Work Order Receipt

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Work Order Receipt

Order

Work Order	13053126
Receive Date	2013-05-31 at 09:15
Requestor	Todd Wells - CRA
Invoicing	ENV-00 Accounts Payable - Plains All American Pipeline, L. P.
Purchase Order	N/A
Project	074683
	Project Location = Lea Co., NM
	Project Name = Darr Angel #1
	Project Number = 074683
Information	
	Intact = yes
	Headspace = no
	Temperature = 3.1
	Air Bill = carry in
	Report = Regular Report
Comment	N/A

Samples

Sample	Field Code	Priority	Matrix	Collect Date	Collect Time	Quantity
330669	MW-6 053013	Normal	water	2013-05-30	15:30	1
330670	MW-7 053013	Normal	water	2013-05-30	15:40	1
330671	MW-21 053013	Normal	water	2013-05-30	15:50	1

Sample	Test	Method	Prep	Priority
330669	BTEX	S 8021B	S 5030B	Normal
330670	BTEX	S 8021B	S 5030B	Normal
330671	BTEX	S 8021B	S 5030B	Normal

LAB Order ID # 13053126

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name:	CRA
Phone #:	432-686-0086
Address: (Street, City, Zip)	2135 S. Loop 250 W Midland TX
Fax #:	686-0186
Contact Person:	Todd Wells
E-mail:	twells@craworld.com
Invoice to: (If different from above)	Jason Henry w/ Plains All American SR# Darr Angel #1
Project #:	074683
Project Name:	DARR Angell #1
Project Location (including state):	Lea County NM
Sampler Signature:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
330669	MW-6 053013	3	40 mL	X				X						5-30-13	1530		X																								
330670	MW-7 053013	3	40 mL	X				X						5-30-13	1540		X																								
330671	MW-21 053013	3	40 mL	X				X						5-30-13	1550		X																								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
C. LEMA	CRA	5/31/13	9:15	Chase Williams	T/A	5/31/13	9:15	INST ___ OBS 3.1 °C COR ___ °C
								INST ___ OBS ___ °C COR ___ °C
								INST ___ OBS ___ °C COR ___ °C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review

REMARKS:

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # ___

ORIGINAL COPY

Summary Report

Todd Wells
CRA-Midland
2135 South Loop 250 West
Midland, TX 79703

Report Date: September 13, 2013

Work Order: 13083036

Project Location: Lea Co., NM
Project Name: Darr Angel #1
Project Number: 074683

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
340682	MW-6 082913	water	2013-08-29	12:00	2013-08-30
340683	MW-21 082913	water	2013-08-29	12:15	2013-08-30

	BTEX			
Sample - Field Code	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
340682 - MW-6 082913	**0.275** Qr,Qs	<0.00100 Qr,Qs	**0.0129** Qr,Qs	**0.0118** Qr,Qs
340683 - MW-21 082913	<0.00100	<0.00100	<0.00100	<0.00100

This is only a summary. Please, refer to the complete report package for quality control data.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Todd Wells
CRA-Midland
2135 South Loop 250 West
Midland, TX, 79703

Report Date: September 13, 2013

Work Order: 13083036

Project Location: Lea Co., NM
Project Name: Darr Angel #1
Project Number: 074683

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
340682	MW-6 082913	water	2013-08-29	12:00	2013-08-30
340683	MW-21 082913	water	2013-08-29	12:15	2013-08-30

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Darr Angel #1 were received by TraceAnalysis, Inc. on 2013-08-30 and assigned to work order 13083036. Samples for work order 13083036 were received intact without headspace and at a temperature of 7.9 C. Samples were received on ice.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	88826	2013-09-09 at 12:32	104917	2013-09-11 at 07:38
BTEX	S 8021B	88969	2013-09-12 at 14:21	105017	2013-09-13 at 07:38

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 13083036 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 340682 - MW-6 082913

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	105017	Date Analyzed:	2013-09-13	Analyzed By:	AK
Prep Batch:	88969	Sample Preparation:	2013-09-12	Prepared By:	AK

Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene	Qr,Qs	1	**0.275**	mg/L	1	0.00100
Toluene	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,Qs	1	**0.0129**	mg/L	1	0.00100
Xylene	Qr,Qs	1	**0.0118**	mg/L	1	0.00100

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	[1] Qsr	Qsr		0.0361	mg/L	1	0.100	36	70 - 130
4-Bromofluorobenzene (4-BFB)	[2] Qsr	Qsr		0.0537	mg/L	1	0.100	54	70 - 130

Sample: 340683 - MW-21 082913

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	104917	Date Analyzed:	2013-09-11	Analyzed By:	AK
Prep Batch:	88826	Sample Preparation:	2013-09-09	Prepared By:	AK

Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.104	mg/L	1	0.100	104	70 - 130
4-Bromofluorobenzene (4-BFB)			0.100	mg/L	1	0.100	100	70 - 130

Method Blanks

Method Blank (1) QC Batch: 104917

QC Batch: 104917 | Date Analyzed: 2013-09-11 | Analyzed By: AK
Prep Batch: 88826 | QC Preparation: 2013-09-09 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000200	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000400	mg/L	0.001
Xylene		1	<0.00120	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0920	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0906	mg/L	1	0.100	91	70 - 130

Method Blank (1) QC Batch: 105017

QC Batch: 105017 | Date Analyzed: 2013-09-13 | Analyzed By: AK
Prep Batch: 88969 | QC Preparation: 2013-09-12 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000200	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000400	mg/L	0.001
Xylene		1	<0.00120	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0986	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0964	mg/L	1	0.100	96	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 104917 | Date Analyzed: 2013-09-11 | Analyzed By: AK
Prep Batch: 88826 | QC Preparation: 2013-09-09 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0882	mg/L	1	0.100	<0.000200	88	70 - 130
Toluene		1	0.0879	mg/L	1	0.100	<0.000300	88	70 - 130
Ethylbenzene		1	0.0832	mg/L	1	0.100	<0.000400	83	70 - 130
Xylene		1	0.255	mg/L	1	0.300	<0.00120	85	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0910	mg/L	1	0.100	<0.000200	91	70 - 130	3	20
Toluene		1	0.0903	mg/L	1	0.100	<0.000300	90	70 - 130	3	20
Ethylbenzene		1	0.0864	mg/L	1	0.100	<0.000400	86	70 - 130	4	20
Xylene		1	0.264	mg/L	1	0.300	<0.00120	88	70 - 130	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0957	0.0967	mg/L	1	0.100	96	97	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0980	0.0964	mg/L	1	0.100	98	96	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 105017 | Date Analyzed: 2013-09-13 | Analyzed By: AK
Prep Batch: 88969 | QC Preparation: 2013-09-12 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0810	mg/L	1	0.100	<0.000200	81	70 - 130
Toluene		1	0.0809	mg/L	1	0.100	<0.000300	81	70 - 130
Ethylbenzene		1	0.0781	mg/L	1	0.100	<0.000400	78	70 - 130
Xylene		1	0.239	mg/L	1	0.300	<0.00120	80	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0902	mg/L	1	0.100	<0.000200	90	70 - 130	11	20
Toluene		1	0.0909	mg/L	1	0.100	<0.000300	91	70 - 130	12	20
Ethylbenzene		1	0.0875	mg/L	1	0.100	<0.000400	88	70 - 130	11	20
Xylene		1	0.268	mg/L	1	0.300	<0.00120	89	70 - 130	11	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0792	0.0991	mg/L	1	0.100	79	99	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0828	0.107	mg/L	1	0.100	83	107	70 - 130

Matrix Spike (xMS-1) Spiked Sample: 340547

QC Batch: 104917 | Date Analyzed: 2013-09-11 | Analyzed By: AK
Prep Batch: 88826 | QC Preparation: 2013-09-09 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	4.56	mg/L	50	5.00	<0.0100	91	70 - 130
Toluene		1	4.53	mg/L	50	5.00	<0.0150	91	70 - 130
Ethylbenzene		1	4.30	mg/L	50	5.00	<0.0200	86	70 - 130
Xylene		1	13.1	mg/L	50	15.0	<0.0600	87	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	4.23	mg/L	50	5.00	<0.0100	85	70 - 130	15	20
Toluene		1	4.21	mg/L	50	5.00	<0.0150	84	70 - 130	7	20
Ethylbenzene		1	4.00	mg/L	50	5.00	<0.0200	80	70 - 130	7	20
Xylene		1	12.1	mg/L	50	15.0	<0.0600	81	70 - 130	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	4.84	4.70	mg/L	50	5	97	94	70 - 130
4-Bromofluorobenzene (4-BFB)	4.96	4.80	mg/L	50	5	99	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 341033

QC Batch:	105017	Date Analyzed:	2013-09-13	Analyzed By:	AK
Prep Batch:	88969	QC Preparation:	2013-09-12	Prepared By:	AK

Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	Qs	Qs	1	0.0180	mg/L	1	0.100	<0.000200	18	70 - 130
Toluene	Qs	Qs	1	0.0189	mg/L	1	0.100	<0.000300	19	70 - 130
Ethylbenzene	Qs	Qs	1	0.0196	mg/L	1	0.100	<0.000400	20	70 - 130
Xylene	Qs	Qs	1	0.0593	mg/L	1	0.300	<0.00120	20	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param		F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qr,Qs	Qr,Qs	1	0.00740	mg/L	1	0.100	<0.000200	7	70 - 130	84	20
Toluene	Qr,Qs	Qr,Qs	1	0.0100	mg/L	1	0.100	<0.000300	10	70 - 130	62	20
Ethylbenzene	Qr,Qs	Qr,Qs	1	0.0129	mg/L	1	0.100	<0.000400	13	70 - 130	41	20
Xylene	Qr,Qs	Qr,Qs	1	0.0396	mg/L	1	0.300	<0.00120	13	70 - 130	40	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	Qsr	Qsr	0.0146	0.0259	mg/L	1	0.1	15	26	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	0.0166	0.0263	mg/L	1	0.1	17	26	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 104917 | Date Analyzed: 2013-09-11 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0850	85	80 - 120	2013-09-11
Toluene		1	mg/L	0.100	0.0860	86	80 - 120	2013-09-11
Ethylbenzene		1	mg/L	0.100	0.0813	81	80 - 120	2013-09-11
Xylene		1	mg/L	0.300	0.248	83	80 - 120	2013-09-11

Standard (CCV-2)

QC Batch: 104917 | Date Analyzed: 2013-09-11 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0902	90	80 - 120	2013-09-11
Toluene		1	mg/L	0.100	0.0896	90	80 - 120	2013-09-11
Ethylbenzene		1	mg/L	0.100	0.0850	85	80 - 120	2013-09-11
Xylene		1	mg/L	0.300	0.259	86	80 - 120	2013-09-11

Standard (CCV-3)

QC Batch: 104917 | Date Analyzed: 2013-09-11 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0860	86	80 - 120	2013-09-11
Toluene		1	mg/L	0.100	0.0861	86	80 - 120	2013-09-11
Ethylbenzene		1	mg/L	0.100	0.0825	82	80 - 120	2013-09-11
Xylene		1	mg/L	0.300	0.252	84	80 - 120	2013-09-11

Standard (CCV-1)

QC Batch: 105017 | Date Analyzed: 2013-09-13 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0839	84	80 - 120	2013-09-13
Toluene		1	mg/L	0.100	0.0844	84	80 - 120	2013-09-13
Ethylbenzene		1	mg/L	0.100	0.0809	81	80 - 120	2013-09-13
Xylene		1	mg/L	0.300	0.247	82	80 - 120	2013-09-13

Standard (CCV-2)

QC Batch: 105017 | Date Analyzed: 2013-09-13 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0815	82	80 - 120	2013-09-13
Toluene		1	mg/L	0.100	0.0823	82	80 - 120	2013-09-13
Ethylbenzene		1	mg/L	0.100	0.0800	80	80 - 120	2013-09-13
Xylene		1	mg/L	0.300	0.246	82	80 - 120	2013-09-13

Standard (CCV-3)

QC Batch: 105017 | Date Analyzed: 2013-09-13 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0922	92	80 - 120	2013-09-13
Toluene		1	mg/L	0.100	0.0918	92	80 - 120	2013-09-13
Ethylbenzene		1	mg/L	0.100	0.0878	88	80 - 120	2013-09-13
Xylene		1	mg/L	0.300	0.266	89	80 - 120	2013-09-13

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

1 Sample confirmed by reanalysis, surrogates failed due to matrix effect.
2 Sample confirmed by reanalysis, surrogates failed due to matrix effect.

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 13083036

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name: CRA

Phone #: 432-686-0086

Address: (Street, City, Zip) 2135 S. Loop 250 W. Midland TX 79703

Fax #: 686-0186

Contact Person: Todd Wells

E-mail: twells@craworld.com

Invoice to: (If different from above) Jason Henry w/ Plains All American

Project #: 07 4683

Project Name: DARR Angell #1

Project Location (including state): Lea County NM.

Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
340682	MW-6 082913	3	40mL	X				X						8-29-13	1200
683	MW-2 082913	3	40mL	X				X						8-29-13	1215

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
	X																								
	X																								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
[signature]	CRA	8-30-13	1303	Chelsea Williams	T/A	8/30/13	1303	INST 15 / OBS 5.0 °C / COR 7.9 °C
								INST ____ / OBS ____ °C / COR ____ °C
								INST ____ / OBS ____ °C / COR ____ °C

LAB USE ONLY

Intact Y / N

Headspace Y / N / NA

Log-in-Review CW

REMARKS: Midland - all on ice

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # Courier In

ORIGINAL COPY

Summary Report

Kimberly Vining Lambert
CRA-Midland
2135 South Loop 250 West
Midland, TX 79703

Report Date: November 21, 2013

Work Order: 13111540

Project Location: Lea Co., NM
Project Name: Darr Angel #1
Project Number: 074683

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
346766	MW7 111413	water	2013-11-14	13:30	2013-11-15
346767	MW21 111413	water	2013-11-14	13:45	2013-11-15
346768	MW4 111413	water	2013-11-14	14:00	2013-11-15
346769	Dup3 111413	water	2013-11-14	00:00	2013-11-15

	BTEX			
Sample - Field Code	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
346766 - MW7 111413	**0.00180** Qr,Qs	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00300 Qr,Qs
346767 - MW21 111413	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00300 Qr,Qs
346768 - MW4 111413	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00300 Qr,Qs
346769 - Dup3 111413	**0.00180** Qr,Qs	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00300 Qr,Qs

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Kimberly Vining Lambert
CRA-Midland
2135 South Loop 250 West
Midland, TX, 79703

Report Date: November 21, 2013

Work Order: 13111540

Project Location: Lea Co., NM
Project Name: Darr Angel #1
Project Number: 074683

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
346766	MW7 111413	water	2013-11-14	13:30	2013-11-15
346767	MW21 111413	water	2013-11-14	13:45	2013-11-15
346768	MW4 111413	water	2013-11-14	14:00	2013-11-15
346769	Dup3 111413	water	2013-11-14	00:00	2013-11-15

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Darr Angel #1 were received by TraceAnalysis, Inc. on 2013-11-15 and assigned to work order 13111540. Samples for work order 13111540 were received intact without headspace and at a temperature of 12.0 C. Samples on ice.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	90494	2013-11-19 at 10:50	106930	2013-11-20 at 15:25

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 13111540 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 346766 - MW7 111413

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	106930	Date Analyzed:	2013-11-20	Analyzed By:	AK
Prep Batch:	90494	Sample Preparation:	2013-11-19	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr,Qs	1	**0.00180**	mg/L	1	0.00100
Toluene	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Xylene	Qr,Qs,U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0978	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0865	mg/L	1	0.100	86	70 - 130

Sample: 346767 - MW21 111413

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	106930	Date Analyzed:	2013-11-20	Analyzed By:	AK
Prep Batch:	90494	Sample Preparation:	2013-11-19	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Toluene	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Xylene	Qr,Qs,U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0925	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0872	mg/L	1	0.100	87	70 - 130

Sample: 346768 - MW4 111413

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	106930	Date Analyzed:	2013-11-20	Analyzed By:	AK
Prep Batch:	90494	Sample Preparation:	2013-11-19	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Toluene	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Xylene	Qr,Qs,U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0953	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0867	mg/L	1	0.100	87	70 - 130

Sample: 346769 - Dup3 111413

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	106930	Date Analyzed:	2013-11-20	Analyzed By:	AK
Prep Batch:	90494	Sample Preparation:	2013-11-19	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr,Qs	1	**0.00180**	mg/L	1	0.00100
Toluene	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Xylene	Qr,Qs,U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0960	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0875	mg/L	1	0.100	88	70 - 130

Method Blanks

Method Blank (1) QC Batch: 106930

QC Batch:	106930	Date Analyzed:	2013-11-20	Analyzed By:	AK
Prep Batch:	90494	QC Preparation:	2013-11-19	Prepared By:	AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000600	mg/L	0.001
Toluene		1	<0.000400	mg/L	0.001
Ethylbenzene		1	<0.000600	mg/L	0.001
Xylene		1	<0.00130	mg/L	0.003

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0980	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0857	mg/L	1	0.100	86	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 106930 | Date Analyzed: 2013-11-20 | Analyzed By: AK
Prep Batch: 90494 | QC Preparation: 2013-11-19 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.104	mg/L	1	0.100	<0.000600	104	70 - 130
Toluene		1	0.102	mg/L	1	0.100	<0.000400	102	70 - 130
Ethylbenzene		1	0.107	mg/L	1	0.100	<0.000600	107	70 - 130
Xylene		1	0.325	mg/L	1	0.300	<0.00130	108	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.104	mg/L	1	0.100	<0.000600	104	70 - 130	0	20
Toluene		1	0.105	mg/L	1	0.100	<0.000400	105	70 - 130	3	20
Ethylbenzene		1	0.111	mg/L	1	0.100	<0.000600	111	70 - 130	4	20
Xylene		1	0.337	mg/L	1	0.300	<0.00130	112	70 - 130	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.101	0.102	mg/L	1	0.100	101	102	70 - 130
4-Bromofluorobenzene (4-BFB)	0.105	0.105	mg/L	1	0.100	105	105	70 - 130

Matrix Spike (MS-1) Spiked Sample: 346766

QC Batch: 106930 | Date Analyzed: 2013-11-20 | Analyzed By: AK
Prep Batch: 90494 | QC Preparation: 2013-11-19 | Prepared By: AK

Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	Qs	Qs	1	0.0535	mg/L	1	0.100	0.0018	52	70 - 130
Toluene	Qs	Qs	1	0.0497	mg/L	1	0.100	<0.000400	50	70 - 130
Ethylbenzene	Qs	Qs	1	0.0497	mg/L	1	0.100	<0.000600	50	70 - 130
Xylene	Qs	Qs	1	0.151	mg/L	1	0.300	<0.00130	50	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param		F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qr	Qr	1	0.0802	mg/L	1	0.100	0.0018	78	70 - 130	40	20
Toluene	Qr	Qr	1	0.0774	mg/L	1	0.100	<0.000400	77	70 - 130	44	20
Ethylbenzene	Qr	Qr	1	0.0807	mg/L	1	0.100	<0.000600	81	70 - 130	48	20
Xylene	Qr	Qr	1	0.245	mg/L	1	0.300	<0.00130	82	70 - 130	48	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.101	0.101	mg/L	1	0.1	101	101	70 - 130
4-Bromofluorobenzene (4-BFB)	0.100	0.102	mg/L	1	0.1	100	102	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 106930 | Date Analyzed: 2013-11-20 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.101	101	80 - 120	2013-11-20
Toluene		1	mg/L	0.100	0.100	100	80 - 120	2013-11-20
Ethylbenzene		1	mg/L	0.100	0.106	106	80 - 120	2013-11-20
Xylene		1	mg/L	0.300	0.321	107	80 - 120	2013-11-20

Standard (CCV-2)

QC Batch: 106930 | Date Analyzed: 2013-11-20 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.102	102	80 - 120	2013-11-20
Toluene		1	mg/L	0.100	0.101	101	80 - 120	2013-11-20
Ethylbenzene		1	mg/L	0.100	0.106	106	80 - 120	2013-11-20
Xylene		1	mg/L	0.300	0.322	107	80 - 120	2013-11-20

Standard (CCV-3)

QC Batch: 106930 | Date Analyzed: 2013-11-20 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0975	98	80 - 120	2013-11-20
Toluene		1	mg/L	0.100	0.0956	96	80 - 120	2013-11-20
Ethylbenzene		1	mg/L	0.100	0.101	101	80 - 120	2013-11-20
Xylene		1	mg/L	0.300	0.304	101	80 - 120	2013-11-20

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-13-7	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 13111540

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

Company Name: CRA Inc
Phone #: 432 · 686 · 0086
Address: (Street, City, Zip) 2135 South Loop, 250 West Midland, TX 79703
Fax #: 432 · 686 · 0186
Contact Person: Kim Lambert
E-mail: klambert@craworld.com
Invoice to: (If different from above)
Project #: 074683
Project Name: Darr Angell #1
Project Location (including state): Lovington, NM
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
346766	MW7111413	3		X				X				X		11/14/13	1330		X																							
767	MW2111413	3		X				X				X		11/14/13	1345		X																							
768	MW4111413	3		X				X				X		11/14/13	1400		X																							
769	DUP3111413	3		X				X				X		11/14/13			X																							

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
	CRA	11-15-13	14:43		TA	11/15/13	14:45

INST 4°C
OBS 12.5°C
COR 12.5°C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review PRC

REMARKS: Rush ICE
Midland add
346766 - labeled as MW6 on Samples -

- Dry Weight Basis Required
- TRRP Report Required
- Check If Special Reporting Limits Are Needed

Carrier #

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

ORIGINAL COPY

TRACEANALYSIS, INC.
6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Work Order Receipt

Order

Work Order	13111540
Receive Date	2013-11-15 at 14:40
Requestor	Kimberly Vining Lambert - CRA
Invoicing	ENV-00 Accounts Payable - Plains All American Pipeline, L. P.
Purchase Order	N/A
Project	074683
	Project Location = Lea Co., NM
	Project Name = Darr Angel #1
	Project Number = 074683
Information	
	Intact = Yes
	Headspace = No
	Temperature = 12.0
	Air Bill = Carry in
	Sampling Comment = Samples on ice.
	Report = Regular Report
Comment	N/A

Samples

Sample	Field Code	Priority	Matrix	Collect Date	Collect Time	Quantity
346766	MW7 111413	Normal	water	2013-11-14	13:30	1
346767	MW21 111413	Normal	water	2013-11-14	13:45	1
346768	MW4 111413	Normal	water	2013-11-14	14:00	1
346769	Dup3 111413	Normal	water	2013-11-14	00:00	1

Sample	Test	Method	Prep	Priority
346766	BTEX	S 8021B	S 5030B	Normal
346767	BTEX	S 8021B	S 5030B	Normal

Work Order Receipt

Sample	Test	Method	Prep	Priority
346768	BTEX	S 8021B	S 5030B	Normal
346769	BTEX	S 8021B	S 5030B	Normal

LAB Order ID # 1311540

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

Company Name: CRA Inc

Phone #: 432·686·8086

Address: (Street, City, Zip) 2135 South Loop, 250 West Midland, TX 79703

Fax #: 432·686·0186

Contact Person: Kim Lambert

E-mail: klambert@craworld.com

Invoice to: (If different from above)

Project #: 074683

Project Name: Darr Angell #1

Project Location (including state): Lovington, NM

Sampler Signature: [signature]

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
346766	MW7111413	3		X				X				X		11/14/13	1330		X																			
767	MW2111413	3		X				X				X		11/14/13	1345		X																			
768	MW4111413	3		X				X				X		11/14/13	1400		X																			
769	DUP3111413	3		X				X				X		11/14/13			X																			

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
[signature]	CRA	11-15-13	14:43	[signature]	TA	11/15/13	14:4[illegible]	INST IR-1 OBS 12.1 °C COR 12.0 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ___ OBS ___ °C COR ___ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ___ OBS ___ °C COR ___ °C

LAB USE ONLY
Intact (Y) / N
Headspace Y / N / (NA)
Log-in-Review RK

REMARKS: on ice
'Midland all
346766 - labeled as MW6 on Samples -

☐ Dry Weight Basis Required
☐ TRRP Report Required
☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier #

ORIGINAL COPY