AP-7

Plains
Darr Angell #2

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

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Final Report

2013 Annual Groundwater Monitoring Report

Darr Angell No. 2
SW 1/4, SE 1/4, Section 11, Township 15 South, Range 37 East
NW 1/4, NE 1/4, Section 14, Township 15 South, Range 37 East
Plains SRS No. LF 1999-62
NMOCD No. AP 007
Lea County, New Mexico

Prepared For:
Mr. Jeff Dann
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Houston, Texas 77002

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2135 South Loop, 250 West
Midland, Texas 79703

March 2014 • 074685 • Report No. 4

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Section 1.0 Introduction

This 2013 Annual Groundwater Monitoring Report presents data collected at the Darr Angell No. 2 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 SW1/4, SE1/4, Section 11, Township 15 South, Range 37 East and NW1/4, NE1/4, Section 14, Township 15 South, Range 37 East. The Site coordinates are latitude 33º 01' 47.0" north and longitude 103º 10' 10.7" west (Figure 1). The 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 July 29, 1999. According to the release report, an estimated 60 barrels of crude oil was released, of which no barrels were recovered. The release was reported to have occurred from an 8-inch EOTT pipeline and was attributed to external pipeline corrosion.

Initial Site remediation activities began in August 1999 and consisted of 40 soil borings within and around the area of surface staining. In April and May 2000, a previous contractor excavated the area identified by the soil boring investigation as impacted to a depth of approximately 4.5 feet below ground surface (bgs). Impacted soils were stockpiled on site. Excavation activities resumed in April and May 2001, with the removal of approximately 3,000 cubic yards of impacted soil. This material was added to soil previously stockpiled on site. According to available information, on various dates between April 2000 and December 2002, monitor wells MW-1 through MW-10 and recovery wells RW-1 through RW-7 were installed. Partial backfilling of the open excavation reportedly occurred subsequent to NMOCD approval of a backfill request submitted on March 11, 2002. Backfill materials consisted of previously excavated caliche which had been separated from other excavated material by mechanical screening.

In October 2003, approximately 3,100 cubic yards of excavated soils were placed into a treatment area which was 2'-3' feet in depth. Quarterly mechanical tilling of this stockpile occurred throughout 2004. Analytical results detailed in the *Site Restoration Work Plan and Proposed Soil Closure Strategy,* dated January 2006 indicate total petroleum hydrocarbons (TPH) concentrations within the soil treatment cell

were below NMOCD regulatory standards. In a letter from the NMOCD dated April 5, 2006, Plains received approval to backfill the excavation at the Site. In June 2006, the excavation was backfilled with remediated soils contained in the soil treatment cell and contoured to grade. *A Soil Closure Request* was submitted to the NMOCD, and on February 19, 2010, Plains received an email approving the soil closure request.

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 ten groundwater monitor wells (MW-1 through MW-4 and MW-6 through MW-11) and seven product recovery wells (RW-1 through RW-7) on site. Monitor well MW-5 was plugged and abandoned with NMOCD approval on September 14, 2005. RW-2, RW-3, RW-4 and MW-2 were equipped with total fluid pumps for LNAPL recovery. All pumps are compressor driven and are periodically relocated depending on LNAPL thickness and product recovery rates in an effort to maximize product abatement at the Site. Monitor and recovery wells which exhibit LNAPL, but were not part of the automated recovery system, had LNAPL removed using manual methods and were stored onsite. 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 Section 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 correspondence dated April 28, 2004 and amended in a NMOCD correspondence dated June 20, 2005.

NMOCD APPROVED SAMPLING SCHEDULE					
Location	***Schedule***	***Location***	***Schedule***	***Location***	***Schedule***
MW-1	Annually	MW-7	Annually	RW-2	Quarterly
MW-2	Quarterly	MW-8	Annually	RW-3	Quarterly
MW-3	Semi-Annually	MW-9	Annually	RW-4	Quarterly
MW-4	Semi-Annually	MW-10	Annually	RW-5	Quarterly
MW-5	Plugged / Abandoned	MW-11	Quarterly	RW-6	Quarterly
MW-6	Annually	RW-1	Quarterly	RW-7	Quarterly

Section 3.0 Groundwater Monitoring Activities

Quarterly groundwater monitoring event activities were conducted by CRA on March 4-7, May 28-30, August 27-29 and November 12-14, 2013. The Site is monitored with a network of ten monitor wells and seven 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 electric 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. In addition, during the December 2012 sampling event, one well (MW-3) was also analyzed for Polycyclic Aromatic Hydrocarbons (PAH) by 8270B. The groundwater fluids recovered during the Site activities were containerized on site in properly labeled and sealed drums or poly tanks and disposed of at a licensed disposal 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 corrected calculated groundwater elevations 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 3,722.66 to 3,724.57 feet in March, from 3,722.78 to 3,724.44 feet in May, from 3,723.04 to 3,724.28 feet in August and from 3,723.22 to 3,724.14 feet in November 2013. LNAPL was encountered in nine wells during the March event and seven wells for the May, August and November 2013 events, and those wells were not sampled. The LNAPL thicknesses ranged from 0.001 to 6.98 feet in March, from 2.95 to 8.34 feet in May, from 3.31 to 8.32 feet in August and from 3.61 to 8.00 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 0.0036 feet/foot.

During the March and August 2013 groundwater sampling events, one well (MW-11) was sampled, which did not detect benzene concentrations above the NMWQCC Standard (0.01 mg/L) in the two events. Also during May 2013 groundwater sampling event, two wells (MW-3 and MW-11) were sampled, of which neither detected benzene concentrations above the NMWQCC Standard (0.01 mg/L). During the November 2013 sampling event, eight wells were sampled, of which one well (MW-3) detected benzene concentration above the NMWQCC Standard (0.01 mg/L). For all wells sampled in 2013, except for MW-3, BTEX results were below laboratory detection limits. During all of the 2013 quarterly sampling events, monitor wells MW-4 and RW-7 were dry. Groundwater BTEX analytical results are summarized in Table 2. No Polycyclic Aromatic Hydrocarbons (PAH) samples were analyzed in 2013. However, PAH analysis may be performed in the future on select wells (e.g. MW-3) which previously detected PAH compounds. 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 Corrective Action

CRA mobilized to the Site twice a week to gauge and manually recover fluids from wells that were not included in the automated LNAPL recovery system, but had product present in the fluids column. Wells

which were equipped with total fluids pumps each quarter are identified on Figures 7, 8, 9 and 10. 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.

The 2013 abatement program has recovered approximately 1,057 gallons (25 barrels) of product. Approximately 23,189 gallons (552 barrels) of product have been recovered from the start of the product abatement program.

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:

- The initial release was discovered by EOTT employees and submitted on a Release Notification and Corrective Action Form (C-141) to the NMOCD on July 29, 1999. According to the release report, an estimated 60 barrels of crude oil was released of which no barrels were recovered.
- CRA assumed operation and maintenance of the LNAPL recovery system of the Site on May 2, 2011.
- The Site is monitored with a network of ten groundwater monitor wells (MW-1 through MW-4 and MW-6 through MW-11) and seven product recovery wells (RW-1 through RW-7). Monitor well MW-5 was plugged and abandoned with NMOCD approval on September 14, 2005. Select monitor and recovery wells are equipped with a total fluid pump for LNAPL recovery. All pumps are compressor driven and 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 0.0036 feet/foot.
- Corrected groundwater elevations ranged from 3,722.66 to 3,724.57 feet in March, from 3,722.78 to 3,724.44 feet in May, from 3,723.04 to 3,724.28 feet in August and from 3,723.22 to 3,724.14 feet in November 2013.
- LNAPL was encountered in nine wells during the March event and in seven wells for the May, August and November 2013 events and those wells were not sampled. The LNAPL thicknesses ranged from 0.001 to 6.98 feet in March, from 2.95 to 8.34 feet in May, from 3.31 to 8.32 feet in August and from 3.61 to 8.00 feet in November 2013.

- During the March and August 2013 groundwater sampling events, one well (MW-11) was sampled, and no benzene concentrations above the NMWQCC Standard (0.01 mg/L) were detected in the two events.
- During May 2013 groundwater sampling event, two wells (MW-3 and MW-11) were sampled, of which neither detected benzene concentrations above the NMWQCC Standard (0.01 mg/L).
- During the November 2013 sampling event, eight wells were sampled, of which one well (MW-3) detected benzene concentration above the NMWQCC Standard (0.01 mg/L).
- During all of the 2013 quarterly sampling events, monitor wells MW-4 and RW-7 were dry.
- No Polycyclic Aromatic Hydrocarbons (PAH) samples were taken this year, but due to detections in past years, MW-3 may be re-sampled next year.
- CRA performed weekly inspections and maintenance of the product recovery system on Site.
- Wells which contain measureable product, but are not equipped with a total fluids pump, are manually recovered for product bi-weekly.
- The 2013 abatement program has recovered approximately 1,057 gallons (25 barrels) of product. Approximately 23,189 gallons (552 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:

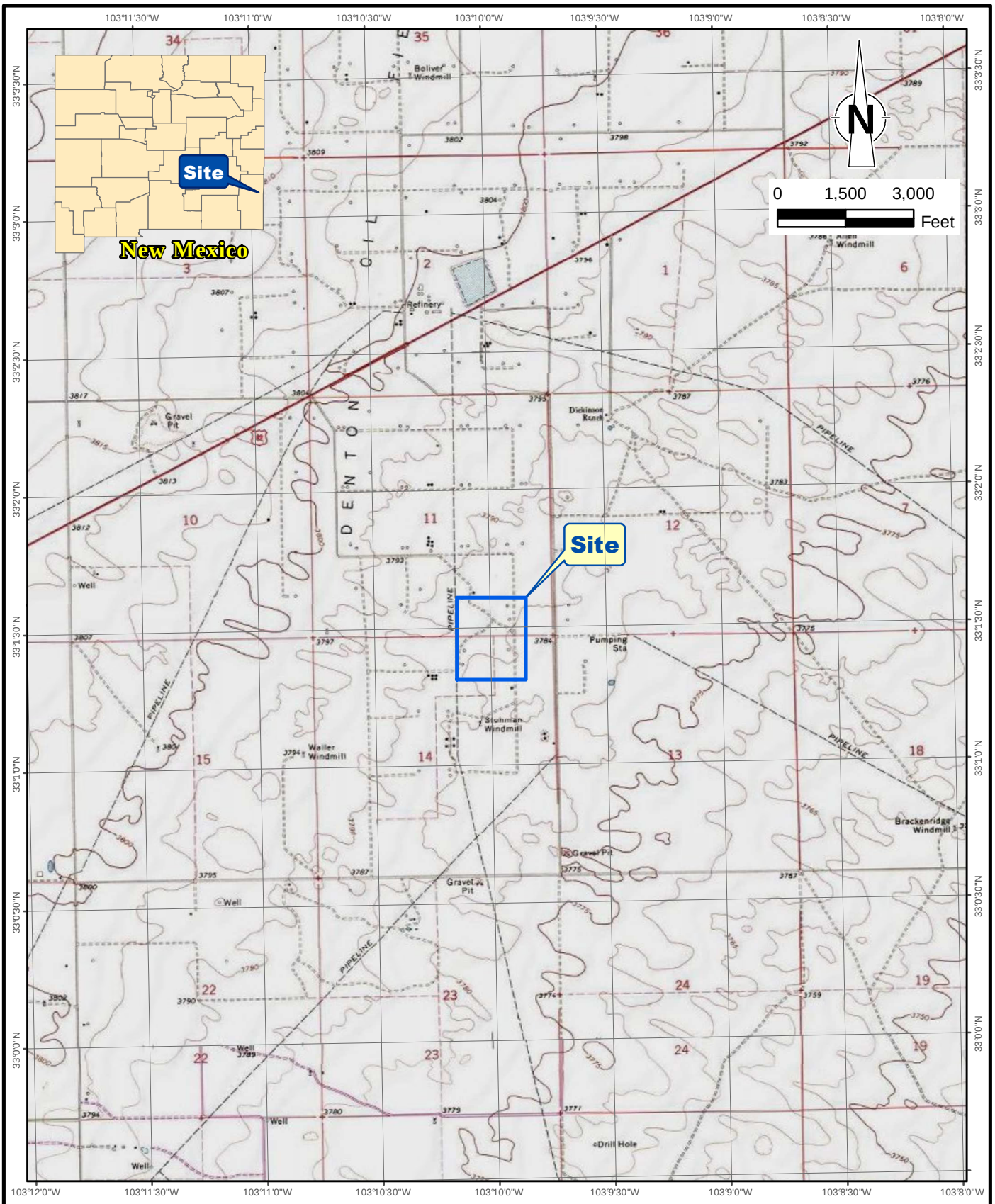
- Continue quarterly groundwater monitoring events in 2014 with annual reporting to the NMOCD.
- Continue bi-weekly LNAPL abatement in 2014.
- Conduct quarterly rotations at the site with the Mobile Dual Phase Extraction (MDPE) trailer on all recovery wells with standing product.
- Install an additional recovery well to replace a well that has gone dry (RW-7R) and to aid in the recovery of product and impacted groundwater, add three new wells (RW-8, RW-9 and RW-10).
- Once LNAPL thickness in wells has declined to <0.01 feet, these new wells will be placed on a quarterly monitoring schedule and sampled for BTEX and PAH.

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. 2
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

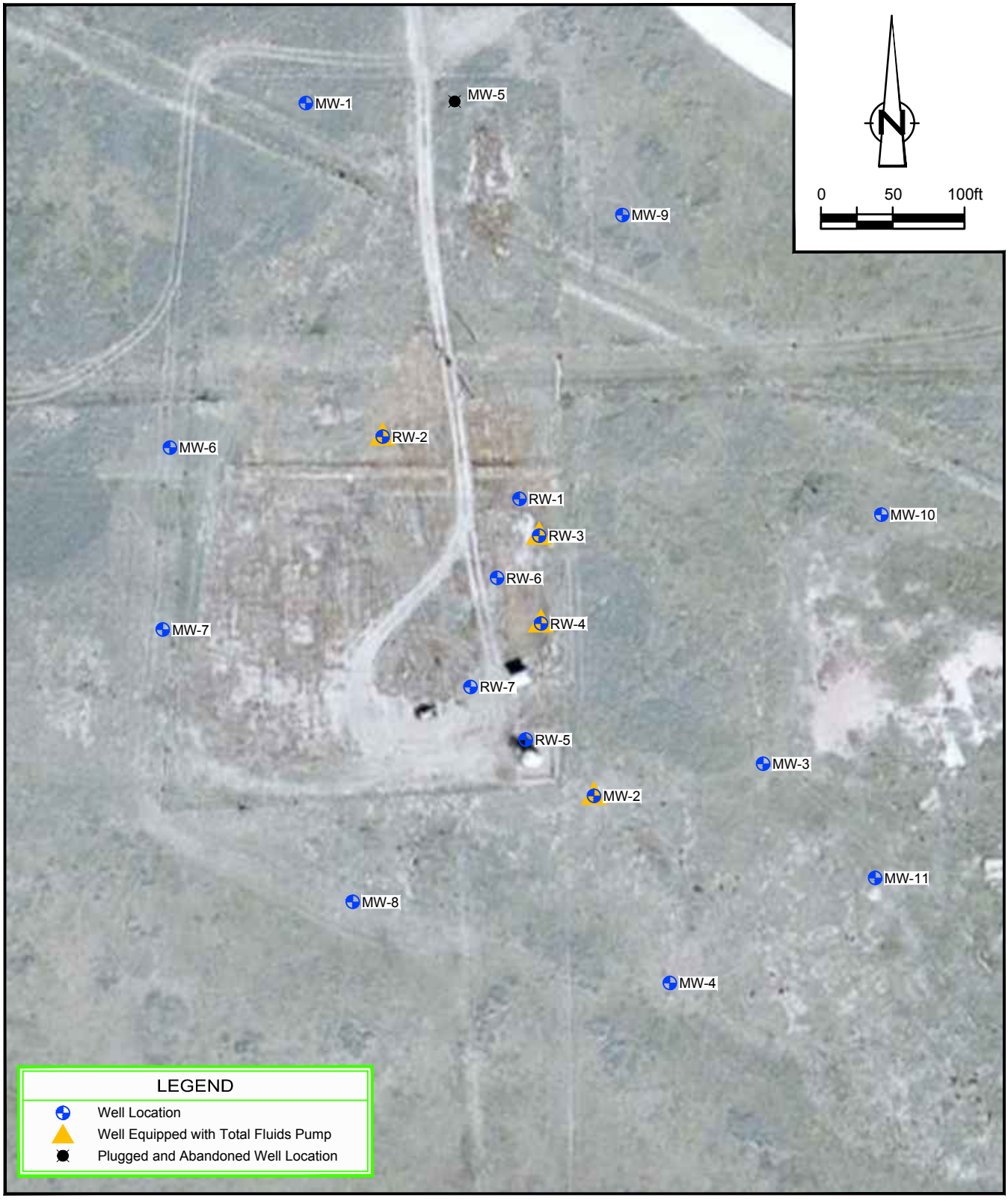


figure 2

SITE DETAILS MAP
DARR ANGELL No.2
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074685-02(004)GN-DL001 MAR 14/2014

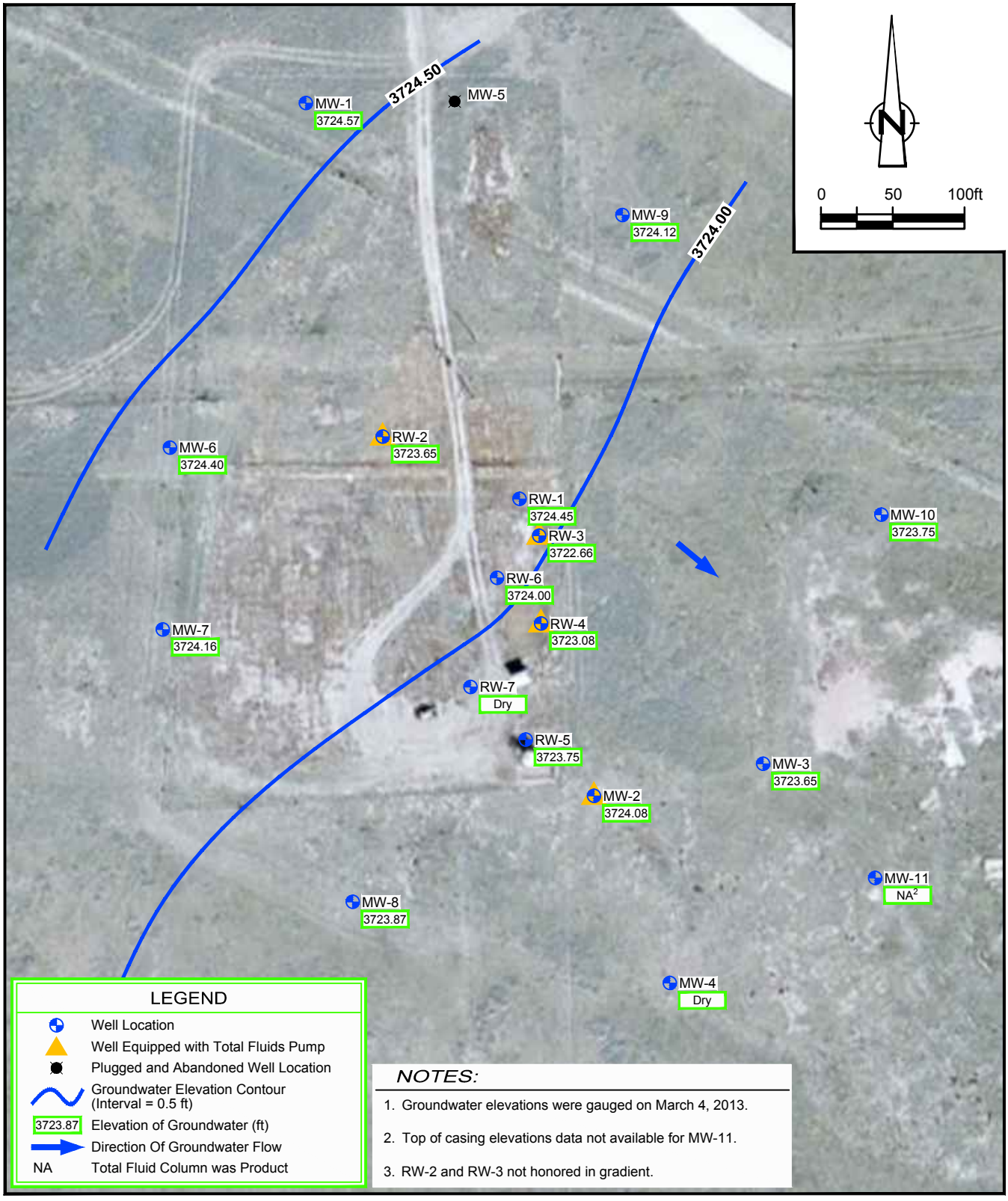


figure 3

GROUNDWATER GRADIENT MAP - MARCH 2013
DARR ANGELL No.2
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

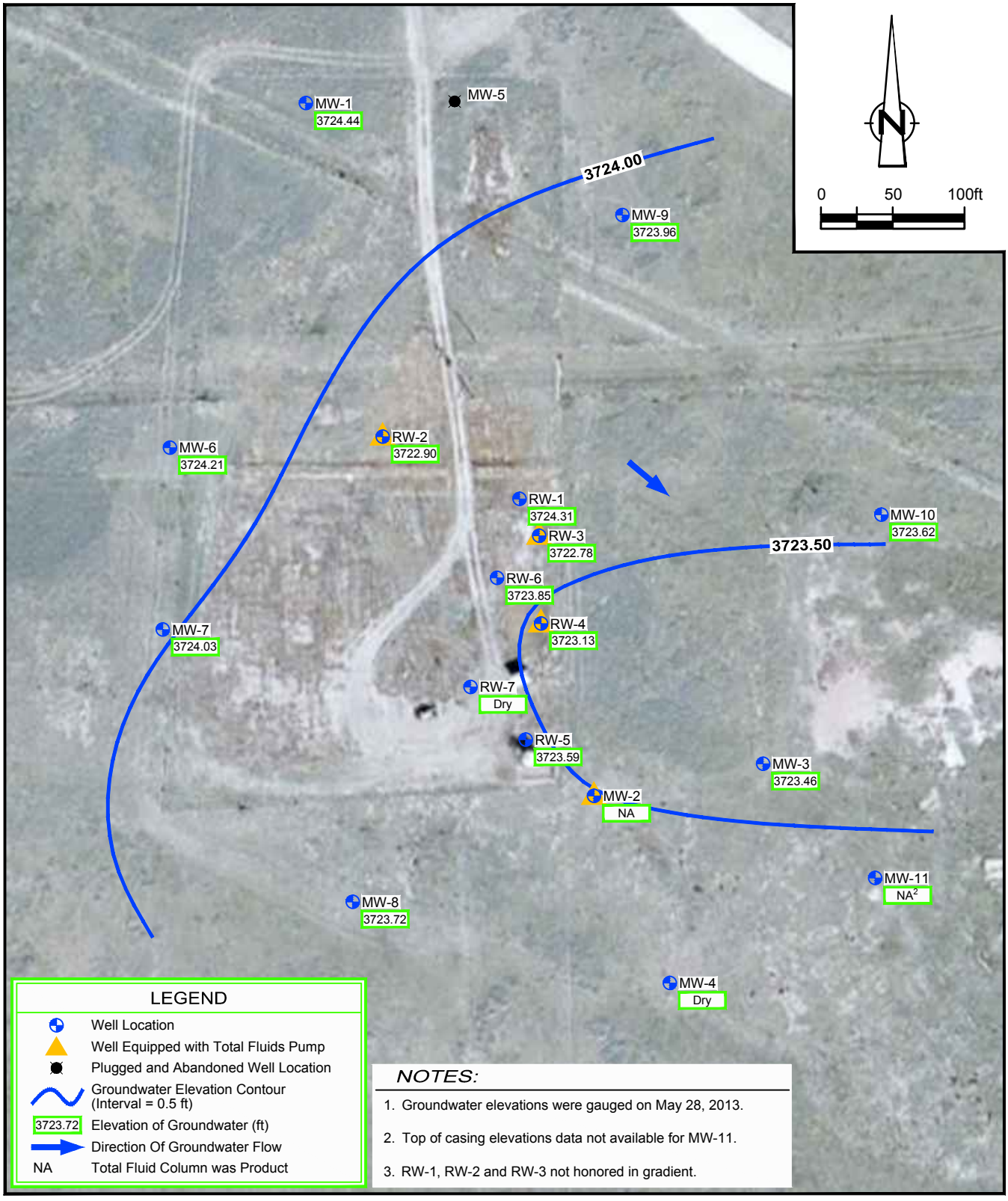


figure 4

GROUNDWATER GRADIENT MAP - MAY 2013
DARR ANGELL No.2
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

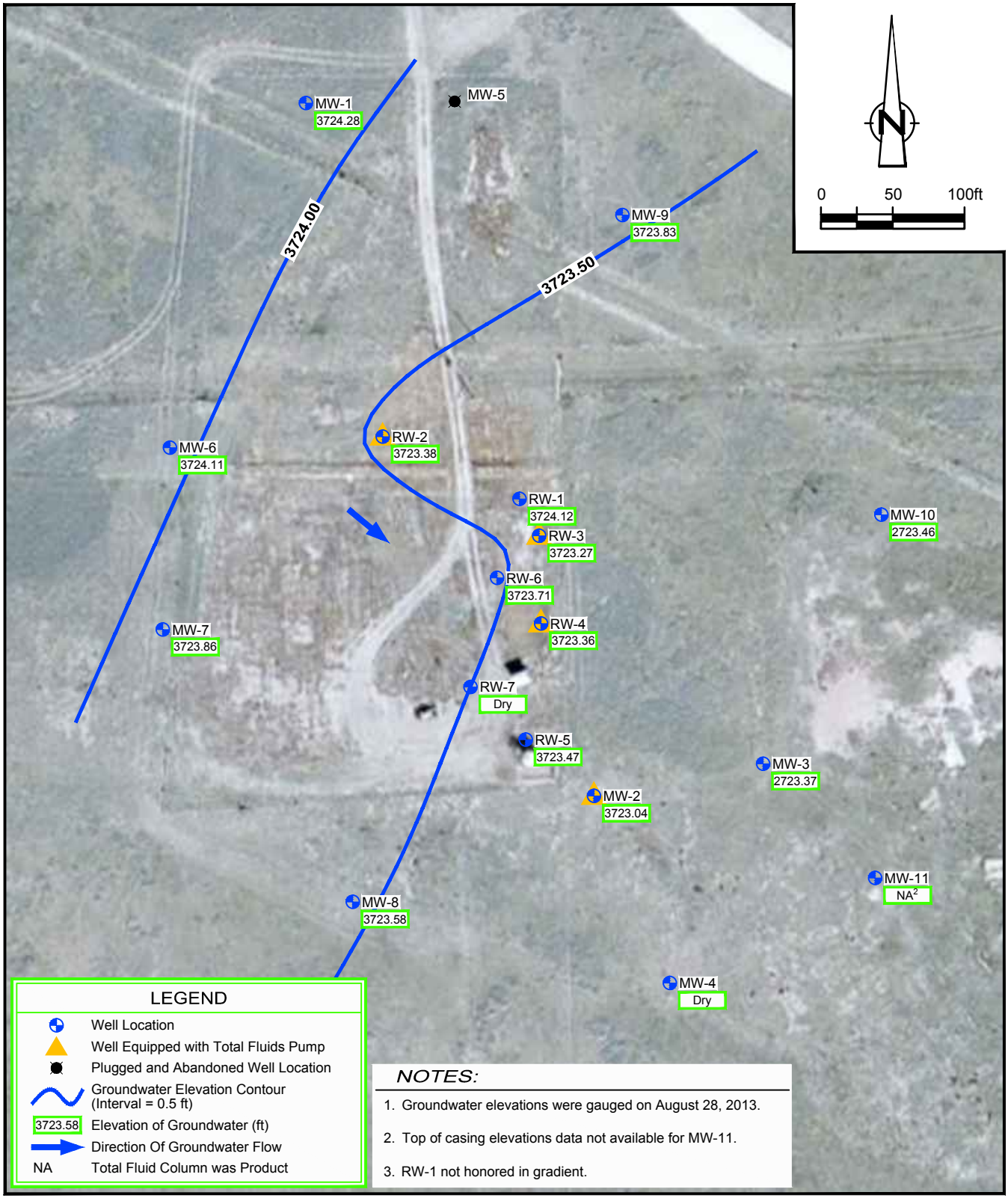


figure 5

GROUNDWATER GRADIENT MAP - AUGUST 2013
DARR ANGELL No.2
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

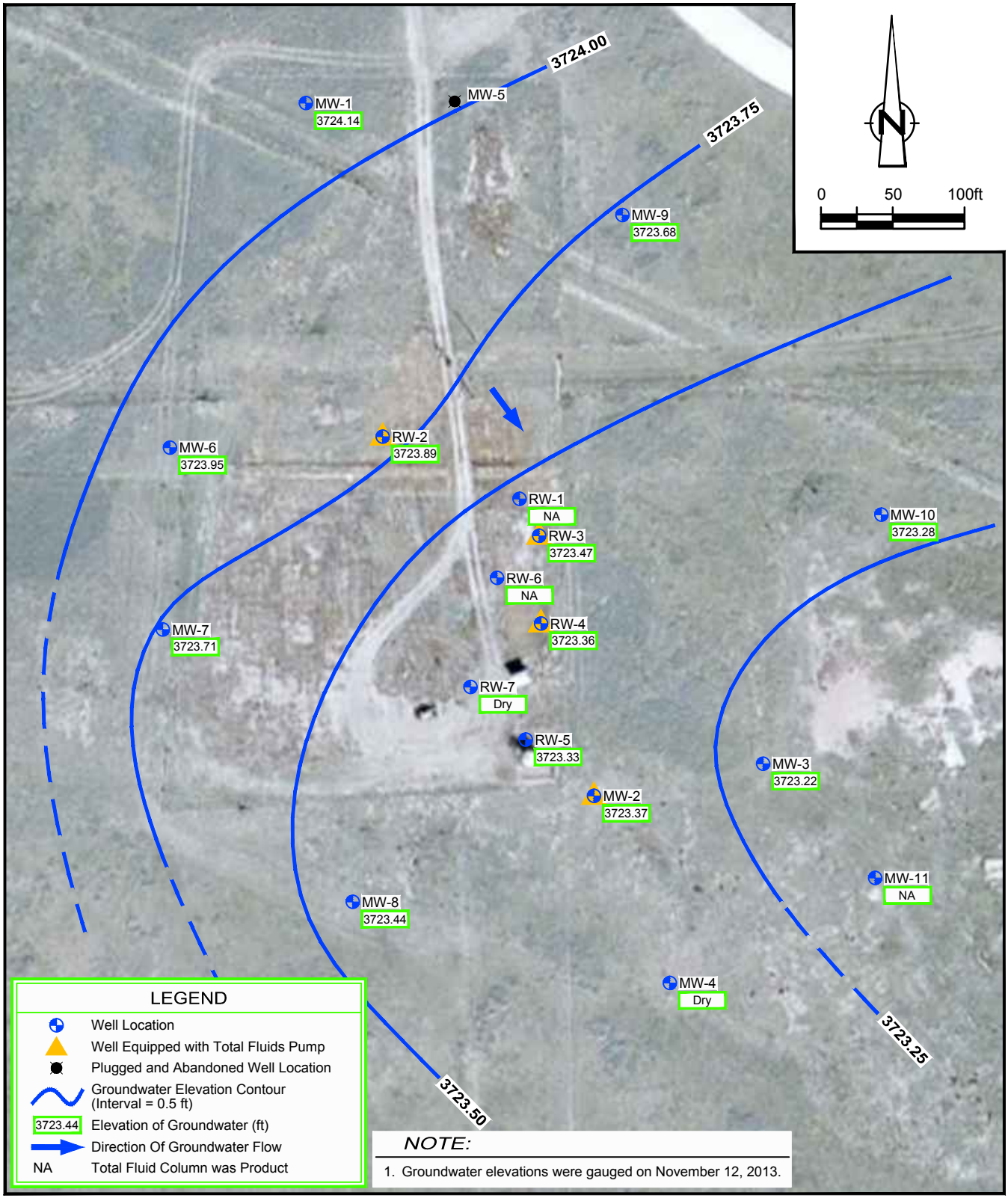


figure 6

GROUNDWATER GRADIENT MAP - NOVEMBER 2013
DARR ANGELL No.2
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074685-02(004)GN-DL001 MAR 14/2014

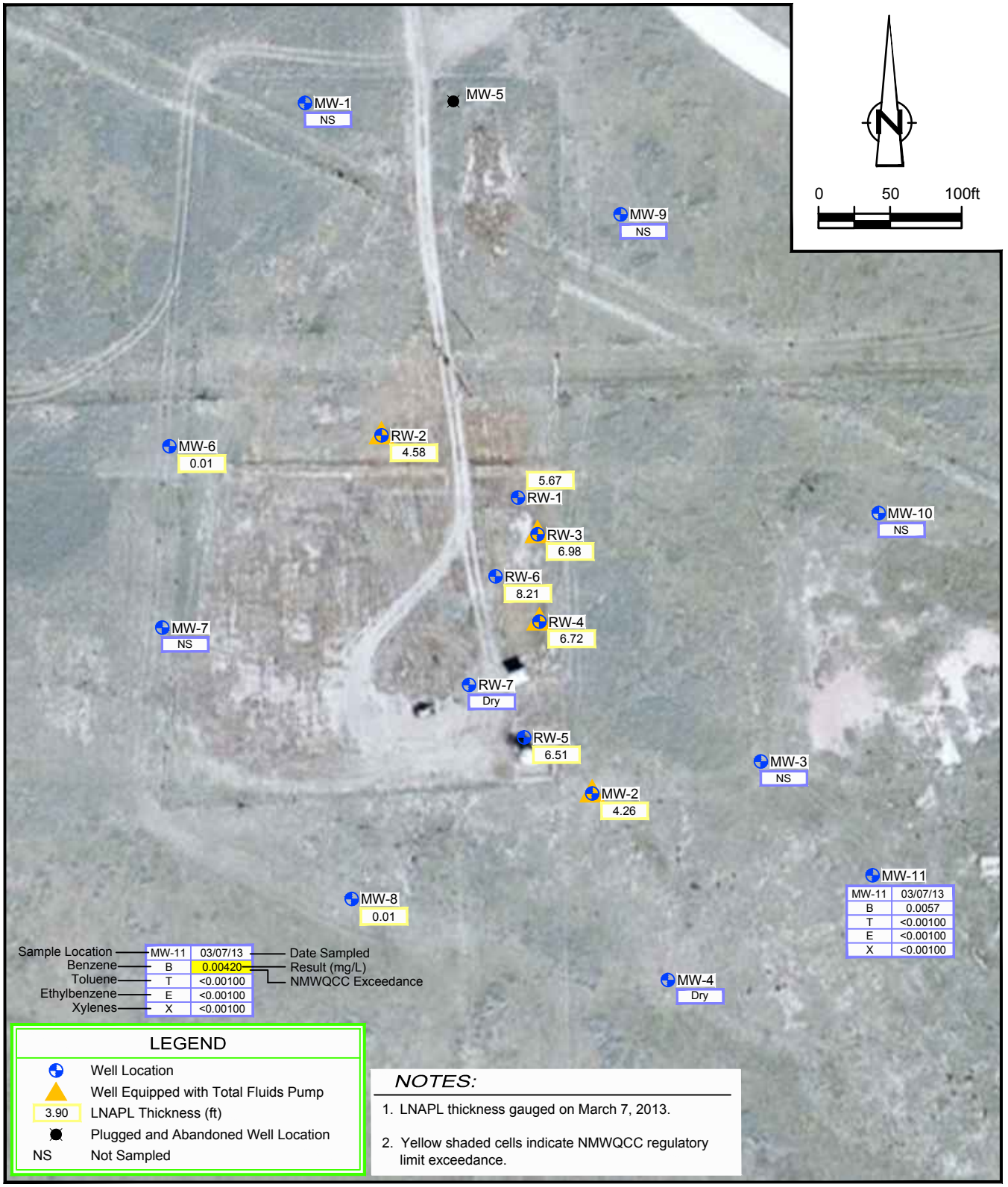


figure 7

LNAPL THICKNESS AND GROUNDWATER BTEX CONCENTRATION MAP - MARCH 2013
DARR ANGELL No.2
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

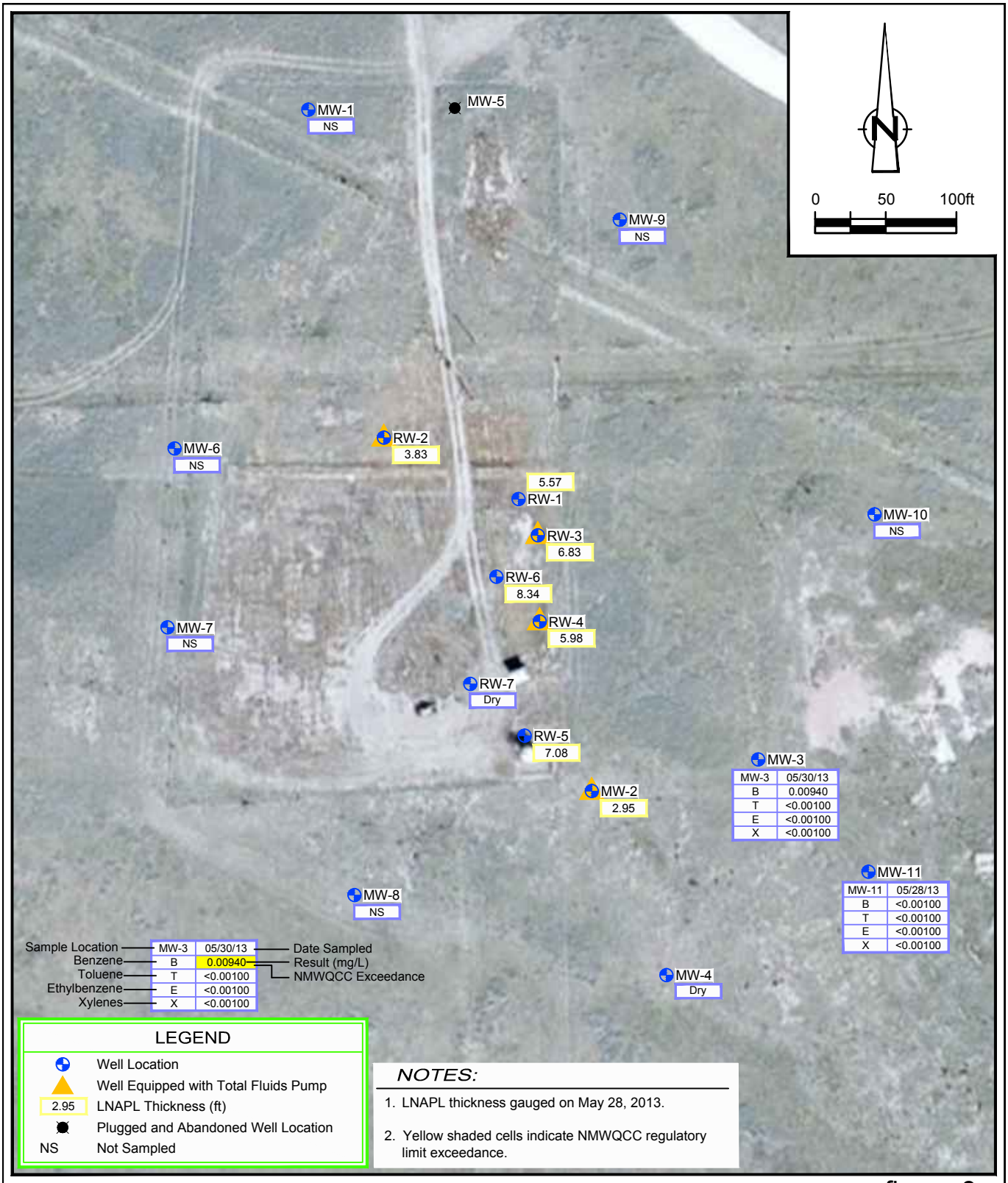


figure 8

LNAPL THICKNESS AND GROUNDWATER BTEX CONCENTRATION MAP - MAY 2013
DARR ANGELL No.2
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074685-02(004)GN-DL001 MAR 14/2014

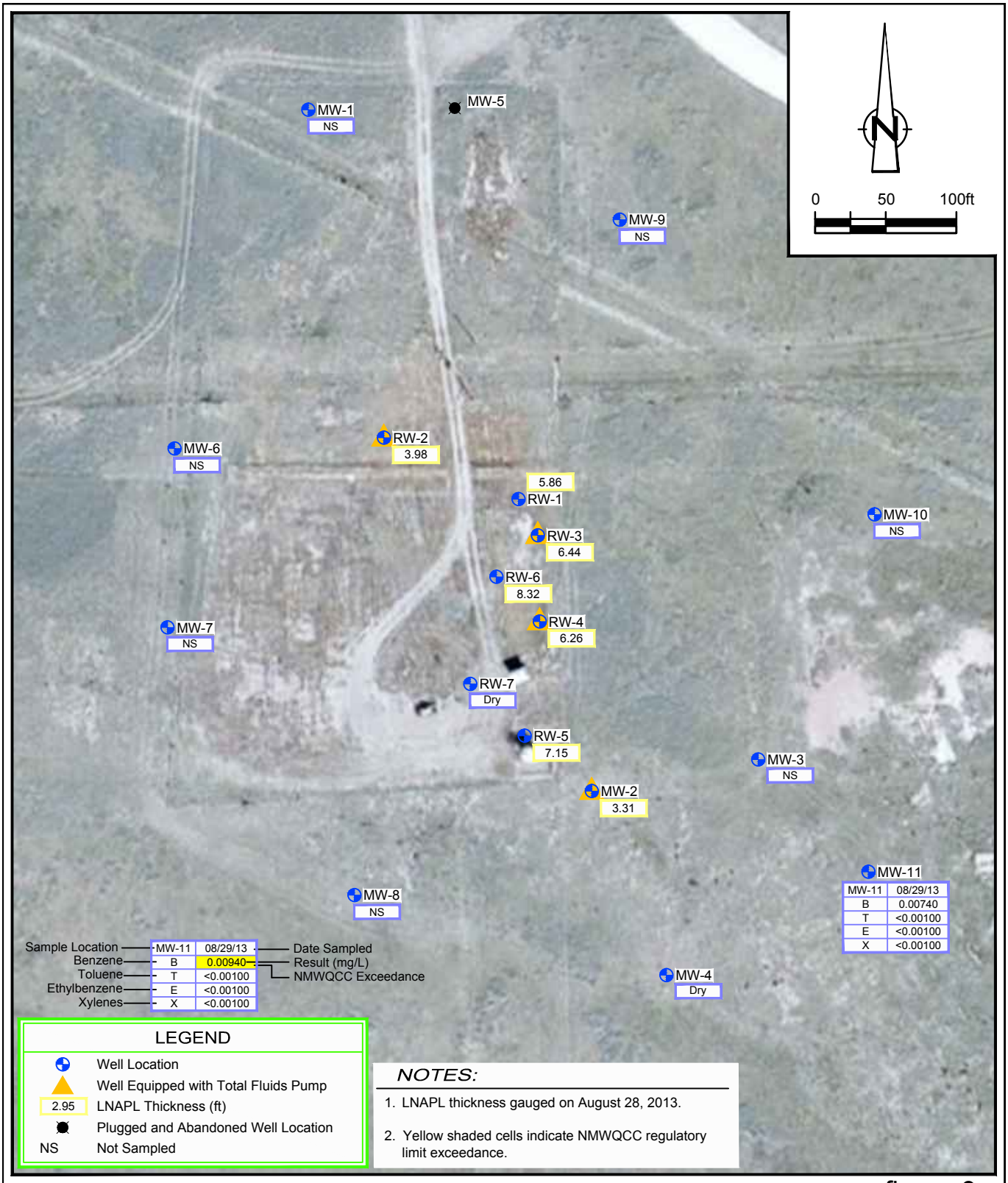


figure 9

LNAPL THICKNESS AND GROUNDWATER BTEX CONCENTRATION MAP - AUGUST 2013
DARR ANGELL No.2
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

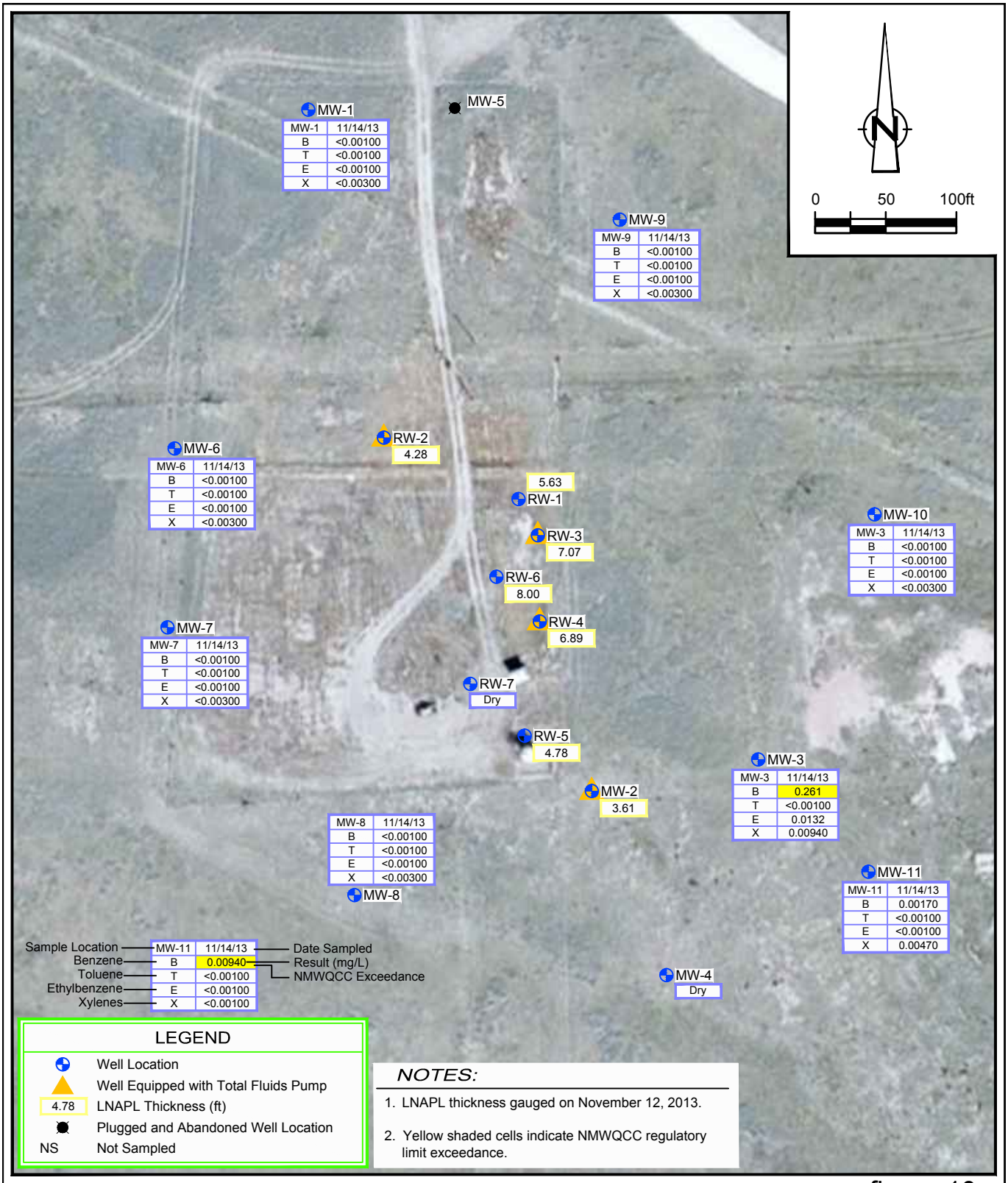


figure 10

LNAPL THICKNESS AND GROUNDWATER BTEX CONCENTRATION MAP - NOVEMBER 2013
DARR ANGELL No.2
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

Tables

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 2
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	6/16/11	62.42	---	---	3725.62	68.01	40-65
3788.04	9/6/11	62.58	---	---	3725.46	69.31	*2*
	11/28/11	62.70	---	---	3725.34	68.09	
	3/5/12	62.83	---	---	3725.21	68.05	
	6/4/12	62.99	---	---	3725.05	68.00	
	9/10/12	63.15	---	---	3724.89	68.00	
	12/3/12	63.34	---	---	3724.70	68.08	
	3/4/13	63.47	---	---	3724.57	68.05	
	5/28/13	63.60	---	---	3724.44	---	
	8/28/13	63.76	---	---	3724.28	68.05	
	11/12/13	63.90	---	---	3724.14	68.08	
MW-2	6/16/11	67.28	63.91	3.37	3723.86	68.20	40-65
3788.41	9/6/11	66.81	63.19	3.62	3724.53	68.98	*2*
	11/28/11	65.91	63.49	2.42	3724.46	68.21	
	3/5/12	67.61	62.98	4.63	3724.55	68.20	
	6/4/12	68.01	63.95	4.06	3723.69	---	
	9/10/12	---	64.31	3.71	NA*	68.02	
	12/3/12	---	64.31	3.90	NA*	68.21	
	3/4/13	67.78	63.52	4.26	3724.08	---	
	5/28/13	---	65.20	2.95	NA*	68.15	
	8/28/13	68.05	64.74	3.31	3723.04	---	
	11/12/13	67.96	64.35	3.61	3723.37	---	
MW-3	6/16/11	63.28	---	---	3724.66	67.70	40-65
3787.94	9/6/11	63.49	---	---	3724.45	68.07	*2*
	11/28/11	63.56	---	---	3724.38	67.71	
	3/5/12	63.71	---	---	3724.23	67.73	
	6/4/12	63.83	---	---	3724.11	67.70	
	9/10/12	63.97	---	---	3723.97	67.70	
	12/3/12	64.21	---	---	3723.73	67.81	
	3/4/13	64.29	---	---	3723.65	67.67	
	5/28/13	64.48	---	---	3723.46	67.66	
	8/28/13	64.57	---	---	3723.37	67.66	
	11/12/13	64.72	---	---	3723.22	67.69	
MW-4	6/16/11	63.18	---	---	3724.58	63.31	40-65
3787.76	9/6/11	63.25	---	---	3724.51	63.55	*2*
	11/28/11	63.30	---	---	3724.46	63.40	
	3/5/12	63.28	---	---	3724.48	63.35	
	6/4/12	63.25	---	---	3724.51	63.30	
	9/10/12	DRY				63.10	
	12/3/12	DRY				63.35	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 2
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-4 (cont.)	3/4/13			DRY		63.35	
	5/28/13			DRY		63.34	
	8/28/13			DRY		63.38	
	11/12/13			DRY		63.36	
MW-5	6/16/11			Plugged and Abandoned			46-66
	6/16/11	62.88	---	---	3725.43	68.77	42-62
3788.31	9/6/11	63.03	---	---	3725.28	69.85	*2*
	11/28/11	63.15	---	---	3725.16	68.84	
	3/5/12	63.30	---	---	3725.01	68.62	
	6/4/12	63.42	---	---	3724.89		
	9/10/12	63.60	---	---	3724.71	68.70	
	12/3/12	63.55	---	---	3724.76	68.60	
	3/4/13	63.91	63.90	0.01	3724.40	68.62	
	5/28/13	64.10	---	---	3724.21	---	
	8/28/13	64.20	---	---	3724.11	68.57	
	11/12/13	64.36	---	---	3723.95	68.06	
MW-7	6/16/11	63.46	---	---	3725.19	69.06	42-62
3788.65	9/6/11	63.60	---	---	3725.05	69.45	*2*
	11/28/11	63.75	---	---	3724.90	69.12	
	3/5/12	63.88	---	---	3724.77	69.09	
	6/4/12	64.05	---	---	3724.60	69.10	
	9/10/12	64.18	---	---	3724.47	69.00	
	12/3/12	64.33	---	---	3724.32	69.11	
	3/4/13	64.49	---	---	3724.16	69.08	
	5/28/13	64.62	---	---	3724.03	---	
	8/28/13	64.79	---	---	3723.86	69.11	
	11/12/13	64.94	---	---	3723.71	69.13	
MW-8	6/16/11	62.71	---	---	3724.89	69.29	42-62
3787.60	9/6/11	62.89	---	---	3724.71	70.01	*2*
	11/28/11	63.00	---	---	3724.60	69.37	
	3/5/12	63.13	---	---	3724.47	69.28	
	6/4/12	63.26	---	---	3724.34	69.70	
	9/10/12	63.40	---	---	3724.20	69.40	
	12/3/12	63.61	---	---	3723.99	69.35	
	3/4/13	63.73	63.72	0.01	3723.87	69.32	
	5/28/13	63.88	---	---	3723.72	---	
	8/28/13	64.02	---	---	3723.58	69.32	
	11/12/13	64.16	---	---	3723.44	69.34	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 2
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	6/16/11	62.11	---	---	3725.16	68.97	47-67
3787.27	9/6/11	62.33	---	---	3724.94	69.61	*2*
	11/28/11	62.40	---	---	3724.87	69.23	
	3/5/12	62.57	---	---	3724.70	69.07	
	6/4/12	62.70	---	---	3724.57	69.00	
	9/10/12	62.85	---	---	3724.42	68.98	
	12/3/12	63.01	---	---	3724.26	69.01	
	3/4/13	63.15	---	---	3724.12	68.96	
	5/28/13	63.31	---	---	3723.96	---	
	8/28/13	63.44	---	---	3723.83	69.00	
	11/12/13	63.59	---	---	3723.68	69.00	
MW-10	6/16/11	62.74	---	---	3724.76	68.11	47-67
3787.50	9/6/11	62.93	---	---	3724.57	68.57	*2*
	11/28/11	63.02	---	---	3724.48	68.12	
	3/5/12	63.16	---	---	3724.34	68.03	
	6/4/12	63.30	---	---	3724.20	67.90	
	9/10/12	63.45	---	---	3724.05	68.00	
	12/3/12	63.60	---	---	3723.90	67.95	
	3/4/13	63.75	---	---	3723.75	67.89	
	5/28/13	63.88	---	---	3723.62	---	
	8/28/13	64.04	---	---	3723.46	68.07	
	11/12/13	64.22	---	---	3723.28	67.92	
MW-11	6/16/11	63.88	---	---	---	69.17	45-65
	9/6/11	64.08	---	---	---	69.65	*2*
	11/28/11	64.13	---	---	---	69.19	
	3/5/12	64.28	---	---	---	69.19	
	6/4/12	64.41	---	---	---	69.70	
	9/10/12	64.55	---	---	---	69.20	
	12/3/12	64.72	---	---	---	69.21	
	3/4/13	64.85	---	---	---	69.26	
	5/28/13	65.01	---	---	---	69.18	
	8/28/13	65.16	---	---	---	69.18	
	11/12/13	65.30	---	---	---	69.14	
RW-1	6/16/11	---	60.95	6.94	NA*	67.89	40-65
3787.45	9/6/11	67.87	61.13	6.74	3725.04	68.03	*4*
	11/28/11	67.82	61.21	6.61	3724.98	67.92	
	3/5/12	67.83	61.39	6.44	3724.84	67.93	
	6/4/12	67.61	61.50	6.11	3724.79	---	
	9/10/12	67.63	61.63	6.00	3724.68	---	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 2
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-1 (cont.)	12/4/12	67.70	61.79	5.91	3724.54	---	
	3/4/13	67.59	61.92	5.67	3724.45	---	
	5/28/13	67.65	62.08	5.57	3724.31	---	
	8/28/13	68.08	62.22	5.86	3724.12	---	
	11/12/13	---	62.37	5.63	NA*	68.00	
RW-2	6/16/11	67.00	63.15	3.85	3723.95	68.25	40-65
3787.83	9/6/11	67.99	61.51	6.48	3725.09	68.87	*4*
	11/28/11	67.96	61.58	6.38	3725.04	68.35	
	3/5/12	67.91	61.70	6.21	3724.95	68.20	
	6/4/12	67.91	62.72	5.19	3724.12	---	
	9/10/12	67.79	62.61	5.18	3724.24	---	
	12/4/12	67.94	63.12	4.82	3723.79	---	
	3/4/13	67.89	63.31	4.58	3723.65	---	
	6/4/13	68.03	64.20	3.83	3722.90	---	
	8/28/13	67.67	63.69	3.98	3723.38	---	
	11/12/13	67.41	63.13	4.28	3723.89	---	
RW-3	6/16/11	69.43	62.59	6.84	3723.92	71.20	48-68
3787.81	9/6/11	69.43	61.65	7.78	3724.68	72.59	*4*
	11/28/11	69.51	61.72	7.78	3724.60	71.30	
	3/5/12	69.78	61.82	7.96	3724.48	71.18	
	6/4/12	69.32	62.55	6.77	3723.97	---	
	9/10/12	69.03	62.40	6.63	3724.15	---	
	12/4/12	70.51	63.40	7.11	3723.06	---	
	3/4/13	70.80	63.82	6.98	3722.66	---	
	6/4/13	70.56	63.73	6.83	3722.78	---	
	8/28/13	69.76	63.32	6.44	3723.27	---	
	11/12/13	70.07	63.00	7.07	3723.47	---	
RW-4	6/16/11	67.62	62.19	5.43	3724.52	72.18	49-69
3787.74	9/6/11	68.98	61.75	7.23	3724.62	72.31	*4*
	11/28/11	67.77	62.11	5.66	3724.55	72.24	
	3/5/12	69.22	62.43	6.79	3724.02	72.15	
	6/4/12	69.53	62.50	7.03	3723.90	---	
	9/10/12	69.13	62.41	6.72	3724.05	---	
	12/4/12	69.28	63.71	5.57	3722.97	---	
	3/4/13	70.10	63.38	6.72	3723.08	---	
	6/4/13	69.45	63.47	5.98	3723.13	---	
	8/28/13	69.45	63.19	6.26	3723.36	---	
	11/12/13	69.96	63.07	6.89	3723.36	---	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 2
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-5	6/16/11	66.03	61.21	4.82	3725.25	71.74	48-68
3787.38	9/6/11	68.73	61.38	7.35	3724.60	72.81	*4*
	11/28/11	68.33	61.59	6.74	3724.51	71.79	
	3/5/12	68.38	61.78	6.60	3724.35	71.83	
	6/4/12	66.62	62.41	4.21	3724.17	---	
	9/10/12	68.55	62.07	6.48	3724.08	68.55	
	12/4/12	68.34	62.35	5.99	3723.89	---	
	3/4/13	68.90	62.39	6.51	3723.75	---	
	5/28/13	69.52	62.44	7.08	3723.59	---	
	8/28/13	69.70	62.55	7.15	3723.47	---	
	11/12/13	67.92	63.14	4.78	3723.33	---	
RW-6	6/16/11	67.86	60.78	7.08	3725.09	71.81	49-69
3787.22	9/6/11	69.02	60.98	8.04	3724.71	72.08	*4*
	11/28/11	69.01	60.96	8.05	3724.73	72.09	
	3/5/12	69.16	60.10	9.06	3725.40	71.87	
	6/4/12	---	61.21	7.74	NA*	69.05	
	9/10/12	69.87	61.34	8.53	3724.26	---	
	12/4/12	69.70	61.55	8.15	3724.12	---	
	3/4/13	69.87	61.66	8.21	3724.00	---	
	5/28/13	70.13	61.79	8.34	3723.85	---	
	8/28/13	70.25	61.93	8.32	3723.71	---	
	11/12/13	---	62.13	8.00	NA*	70.13	
RW-7	6/16/11	DRY				60.20	48-68
3787.40	9/6/11	DRY				60.98	*4*
	11/28/11	DRY				60.98	
	3/5/12	DRY				61.22	
	6/4/12	DRY				---	
	9/10/12	DRY				60.29	
	12/4/12	DRY				60.25	
	3/4/13	DRY				60.30	
	5/28/13	DRY				60.24	
	8/28/13	DRY				60.30	
	11/12/13	DRY				60.33	

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 fluids column was product.

TABLE 2
GROUNDWATER BTEX ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 2
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-1	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-3	3/4/11	**1.00**	<0.0500	**0.349**	**1.11**	**1.30**
	6/16/11	**1.30**	<0.0500	<0.0500	<0.0500	**1.30**
	9/9/11	**0.410**	<0.00100	**0.0839**	**0.0700**	**0.564**
	12/1/11	**0.101**	<0.00100	**0.145**	**0.0258**	**0.272**
	3/7/12	**0.365**	<0.00500	**0.120**	**0.159**	**0.644**
	6/7/12	**0.099**	<0.00100	**0.140**	**0.220**	**0.459**
	9/12/12	**0.376**	<0.00100	**0.103**	**0.016**	**0.495**
	12/6/12	**0.00420**	<0.00100	**0.063**	**0.014**	**0.077**
	5/30/13	**0.00940**	<0.00100	<0.00100	<0.00100	**0.0094**
	11/14/13	**0.261**	<0.00100	**0.0132**	**0.0094**	**0.2836**
MW-6	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-7	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-8	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-9	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-10	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-11	3/4/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	6/16/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	9/9/11	<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

TABLE 2
GROUNDWATER BTEX ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 2
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-11 (cont.)	9/12/12	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	12/6/12	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/13	**0.0057**	<0.00100	<0.00100	<0.00100	**0.0057**
	5/30/13	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
	8/29/13	**0.00740**	<0.00100	<0.00100	<0.00100	**0.00740**
	11/14/13	**0.00170**	<0.00100	<0.00100	**0.00470**	**0.00640**

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 PAH ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 2
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**	**0.0007**	**0.002**		**0.002**	**0.002**	**0.003**			**0.004**			**0.03**			
MW-1	12/1/08	<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
	11/30/09	<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
	11/24/10	Not sampled as part of Quarterly Monitoring Event																		
MW-2	12/1/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.178**	<0.000183	**0.230**	<0.000183	**0.704**	**1.68**	**2.31**	**0.130**
	11/30/09	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	<0.0229	**0.755**	<0.0229	**1.04**	<0.0229	**2.89**	**7.25**	**9.78**	**0.524**
	11/24/10	Not Sampled Due to Presence of PSH																		
MW-3	12/1/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.00126**	<0.000183	**0.00103**	<0.000183	**0.0426**	**0.0260**	<0.000183	**0.0014**
	11/30/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00155**	<0.000184	**0.00134**	<0.000184	**0.0238**	**0.0306**	<0.000184	**0.00145**
	11/24/10	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00132**	<0.000184	**0.00112**	<0.000184	<0.000184	**0.0234**	<0.000184	**0.00133**
	12/1/11	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.00140**	<0.000183	**0.00135**	<0.000183	**0.00893**	**0.0191**	<0.000183	**0.00163**
	12/6/12	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	<0.000191	**0.000657**	<0.000191	**0.000626**	<0.000191	<0.000191	**0.0016**	<0.000191	**0.00080**
MW-4	12/1/08	Not sampled due to insufficient water volume																		
	11/30/09	<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	**0.00118**	<0.000184	<0.000184	<0.000184
	11/24/10	Not sampled as part of Quarterly Monitoring Event																		
MW-6	12/1/08	<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
	11/30/09	<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
	11/24/10	Not sampled as part of Quarterly Monitoring Event																		
MW-7	12/1/08	<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
	11/30/09	<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
	11/24/10	Not sampled as part of Quarterly Monitoring Event																		
MW-8	12/1/08	<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
	11/30/09	<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

TABLE 3

GROUNDWATER PAH ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 2
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**	**0.0007**	**0.002**		**0.002**	**0.002**	**0.003**			**0.004**			**0.03**			
MW-8 (Cont)	11/24/10	Not sampled as part of Quarterly Monitoring Event																		
MW-9	12/1/08	<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
	11/30/09	<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
	11/24/10	Not sampled as part of Quarterly Monitoring Event																		
MW-10	12/1/08	<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
	11/30/09	<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
	11/24/10	Not sampled as part of Quarterly Monitoring Event																		
MW-11	12/1/08	<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
	11/30/09	<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
	11/24/10	Not sampled as part of Quarterly Monitoring Event																		
RW-1	12/1/08	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	<0.00459	**0.274**	<0.00459	**0.346**	<0.00459	**1.01**	**2.42**	**3.20**	**0.208**
	11/30/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0117**	<0.000922	**0.0134**	<0.000922	**0.102**	**0.118**	**0.154**	**0.00842**
	11/24/10	Not sampled due to presence of PSH.																		
RW-2	12/1/08	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	<0.00184	**0.0507**	<0.00184	**0.0569**	<0.00184	**0.224**	**0.410**	**0.526**	**0.0350**
	11/30/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0254**	<0.000922	**0.0322**	<0.000922	**0.157**	**0.266**	**0.347**	**0.0178**
	11/24/10	Not sampled due to presence of PSH.																		
RW-3	12/2/08	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0447**	<0.000922	**0.0523**	<0.000922	**0.203**	**0.362**	**0.480**	**0.0309**
	11/30/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0114**	<0.000922	**0.0132**	<0.000922	**0.113**	**0.128**	**0.164**	**0.0101**
	11/24/10	Not sampled due to presence of PSH.																		
RW-4	12/2/08	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	**0.173**	<0.00183	**0.216**	<0.00183	**0.637**	**1.58**	**2.14**	**0.122**
	11/30/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0263**	<0.000922	**0.0337**	<0.000922	**0.169**	**0.276**	**0.367**	**0.0184**
	11/24/10	Not sampled due to presence of PSH.																		

TABLE 3

GROUNDWATER PAH ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 2
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**	**0.0007**	**0.002**		**0.002**	**0.002**	**0.003**			**0.004**			**0.03**			
RW-5	12/1/08	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0938**	<0.000922	**0.117**	<0.000922	**0.283**	**0.835**	**0.910**	**0.0654**
	11/30/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0201**	<0.000922	**0.0284**	<0.000922	**0.147**	**0.217**	**0.295**	**0.0155**
	11/24/10	Not sampled due to presence of PSH.																		
RW-6	12/2/08	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	**0.188**	<0.00183	**0.244**	<0.00183	**0.693**	**1.77**	**2.44**	**0.138**
	11/30/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	**0.0352**	<0.000922	**0.0492**	<0.000922	**0.20**	**0.36**	**0.481**	**0.0253**
	11/24/10	Not sampled due to presence of PSH.																		
RW-7	12/2/08	Not sampled due to insufficient water volume																		
	11/30/09	Not sampled due to insufficient water volume																		
	11/24/10	Not sampled due to presence of PSH.																		

Notes:

1. Shaded cells indicate New Mexico Oil Conservation Division Regulatory Limit exceedance.
2. BTEX analyses by EPA Method 8021B.
5. Results shown in mg/L.
6. **Bold** indicates detection.
7. 2008 through 2010 samples 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: 13030732

Project Location: Lea Co., NM
Project Name: Darr Angel #2
Project Number: 074685
SRS#: LF 1999-62

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
322755	MW-11 030713	water	2013-03-07	11:45	2013-03-07

	BTEX			
	Benzene	Toluene	Ethylbenzene	Xylene
Sample - Field Code	(mg/L)	(mg/L)	(mg/L)	(mg/L)
322755 - MW-11 030713	**0.00570**	<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: 13030732

Project Location: Lea Co., NM
Project Name: Darr Angel #2
Project Number: 074685
SRS#: LF 1999-62

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
322755	MW-11 030713	water	2013-03-07	11:45	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 #2 were received by TraceAnalysis, Inc. on 2013-03-07 and assigned to work order 13030732. Samples for work order 13030732 were received intact without headspace and at a temperature of 19.7 C. Samples were received straight from the 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 13030732 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: 322755 - MW-11 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	**0.00570**	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)			0.0965	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0897	mg/L	1	0.100	90	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 # 13030732

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 #: 686-0086
Address: (Street, City, Zip) 2135 S. Loop 250 W. Midland TX 79703
Fax #: 686-0186
Contact Person: Todd Wells
E-mail: twells@crawoild.com
Invoice to: (If different from above) Plains Pipeline Jason Henry SRS# LF-1999-62
Project #: 074685
Project Name: Perr #2
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 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
322755	MW-11 030713	3	40ml	X				8				1		3-7-13	1145		X																							

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	CRA	3-07-13	1548		TA	3/7/13	15:48	INST 1k-1
								OBS 19.7 °C
								COR 19.7 °C
								INST ____ °C
								OBS ____ °C
								COR ____ °C
								INST ____ °C
								OBS ____ °C
								COR ____ °C

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

REMARKS: Straight from field Midland

- 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: 13053123

Project Location: Lea Co., NM
Project Name: Darr Angel #2
Project Number: 074685
SRS#: LF 1999-62

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
330660	MW-3 053013	water	2013-05-30	11:40	2013-05-31
330661	MW-11 053013	water	2013-05-30	11:50	2013-05-31

	BTEX			
Sample - Field Code	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
330660 - MW-3 053013	**0.00940**	<0.00100	<0.00100	<0.00100
330661 - MW-11 053013	<0.00100	<0.00100	<0.00100	<0.00100

TRACEANALYSIS, INC.

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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: 13053123

Project Location: Lea Co., NM
Project Name: Darr Angel #2
Project Number: 074685
SRS#: LF 1999-62

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
330660	MW-3 053013	water	2013-05-30	11:40	2013-05-31
330661	MW-11 053013	water	2013-05-30	11:50	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 #2 were received by TraceAnalysis, Inc. on 2013-05-31 and assigned to work order 13053123. Samples for work order 13053123 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 13053123 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: 330660 - MW-3 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		1	**0.00940**	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)			0.0797	mg/L	1	0.100	80	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0821	mg/L	1	0.100	82	70 - 130

Sample: 330661 - MW-11 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)			0.0793	mg/L	1	0.100	79	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0811	mg/L	1	0.100	81	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.

Fax #: 432-686-0006 686-0186

\ lead Tf

E-mail: twells@crawold.com

ry Plains All American SRS# LF1999-62

Project Name: DeRR Ansell #2

Sampler Signature:

(Circle or Specify Method No.)

# CONTAINERS	Volume / Amount	MATRIX: WATER	MATRIX: SOIL	MATRIX: AIR	MATRIX: SLUDGE	MATRIX: —	PRESERVATIVE METHOD: HCl	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: H_2SO_4	PRESERVATIVE METHOD: NaOH	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD: —	SAMPLING: DATE	SAMPLING: TIME	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
3		X					X							5-30-13	1140		X																							
3		X					X							5-30-13	1150		X																							

Time:	Received by:	Company:	Date:	Time:	INST / OBS / COR
9:15	Chase Williams	T/A	5/31/13	9:15	INST ___ °c; OBS 3.1 °c; COR ___ °c

LAB USE ONLY

REMARKS:

Fax #: 686-0186

E-mail: twells@crawoil.com

Plains All American SRS# LF1999-62

Project Name: Dale Angell # 2

Sampler Signature:

(Circle or Specify Method No.)

# 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
3		X					X							5-30-13	1140		X																						
3		X					X							5-30-13	1150		X																						

Time:	Received by:	Company:	Date:	Time:	INST / OBS / COR
9:15	Chase Williams	TIA	5/31/13	9:15	INST ____ OBS 3.1 °C COR ____ °C
Time:	Received by:	Company:	Date:	Time:	INST

LAB USE ONLY

REMARKS:

Summary Report

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

Report Date: September 11, 2013

Work Order: 13083037

Project Location: Lea Co., NM
Project Name: Darr Angel #2
Project Number: 074685
SRS#: LF 1999-62

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
340684	MW-11 082913	water	2013-08-29	11:30	2013-08-30

	BTEX			
	Benzene	Toluene	Ethylbenzene	Xylene
Sample - Field Code	(mg/L)	(mg/L)	(mg/L)	(mg/L)
340684 - MW-11 082913	**0.00740**	<0.00100	<0.00100	<0.00100

TRACEANALYSIS, INC.

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(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 11, 2013

Work Order: 13083037

Project Location: Lea Co., NM
Project Name: Darr Angel #2
Project Number: 074685
SRS#: LF 1999-62

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
340684	MW-11 082913	water	2013-08-29	11:30	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 #2 were received by TraceAnalysis, Inc. on 2013-08-30 and assigned to work order 13083037. Samples for work order 13083037 were received intact without headspace and at a temperature of 7.4 C. Sample was 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

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 13083037 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: 340684 - MW-11 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	RL	Units	Dilution	RL
Benzene		1	**0.00740**		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)			0.102	mg/L	1	0.100	102	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0994	mg/L	1	0.100	99	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

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

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

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

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 # 13083037

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) 8135 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
Project #: 074685
Project Name: DARR Angell #2
Project Location (including state): Lea County NM
Sampler Signature: [signature]

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
340684	MW-11082913	3	40ml	X				X						8-29-13	1130

ANALYSIS REQUEST
(Circle or Specify Method No.)

Analysis	MW-11082913
MTBE 8021 / 602 / 8260 / 624	
BTEX 8021B / 602 / 8260 / 624 (8021B circled)	X
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	

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp
[signature]	CRA	8-30-13	1303	Chase Williams	T/A	8/30/13	1300	INST IR; OBS 8.0 °C; COR 7.4 °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 # Carry 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: 13111541

Project Location: Lea Co., NM
Project Name: Darr Angel #2
Project Number: 074685
SRS#: LF 1999-62

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
346770	MW9 111413	water	2013-11-14	11:00	2013-11-15
346771	MW10 111413	water	2013-11-14	11:15	2013-11-15
346772	MW3 111413	water	2013-11-14	11:30	2013-11-15
346773	MW11 111413	water	2013-11-14	11:45	2013-11-15
346774	MW8 111413	water	2013-11-14	12:00	2013-11-15
346775	MW7 111413	water	2013-11-14	12:15	2013-11-15
346776	MW6 111413	water	2013-11-14	12:30	2013-11-15
346777	MW1 111413	water	2013-11-14	12:45	2013-11-15
346778	Dup2 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)
346770 - MW9 111413	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00300 Qr,Qs
346771 - MW10 111413	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00300 Qr,Qs
346772 - MW3 111413	**0.261** Qr,Qs	<0.00100 Qr,Qs	**0.0132** Qr,Qs	**0.00940** Qr,Qs
346773 - MW11 111413	**0.00170** Qr,Qs	<0.00100 Qr,Qs	<0.00100 Qr,Qs	**0.00470** Qr,Qs
346774 - MW8 111413	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00300 Qr,Qs
346775 - MW7 111413	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00300 Qr,Qs
346776 - MW6 111413	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00300 Qr,Qs
346777 - MW1 111413	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00100 Qr,Qs	<0.00300 Qr,Qs
346778 - Dup2 111413	<0.00100 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: 13111541

Project Location: Lea Co., NM
Project Name: Darr Angel #2
Project Number: 074685
SRS#: LF 1999-62

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
346770	MW9 111413	water	2013-11-14	11:00	2013-11-15
346771	MW10 111413	water	2013-11-14	11:15	2013-11-15
346772	MW3 111413	water	2013-11-14	11:30	2013-11-15
346773	MW11 111413	water	2013-11-14	11:45	2013-11-15
346774	MW8 111413	water	2013-11-14	12:00	2013-11-15
346775	MW7 111413	water	2013-11-14	12:15	2013-11-15
346776	MW6 111413	water	2013-11-14	12:30	2013-11-15
346777	MW1 111413	water	2013-11-14	12:45	2013-11-15
346778	Dup2 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 #2 were received by TraceAnalysis, Inc. on 2013-11-15 and assigned to work order 13111541. Samples for work order 13111541 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 13111541 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: 346770 - MW9 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)			0.0970	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0867	mg/L	1	0.100	87	70 - 130

Sample: 346771 - MW10 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)			0.0981	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0873	mg/L	1	0.100	87	70 - 130

Sample: 346772 - MW3 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	RL Result	Units	Dilution	RL
Benzene	Qr,Qs	1	**0.261**	mg/L	1	0.00100
Toluene	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,Qs	1	**0.0132**	mg/L	1	0.00100
Xylene	Qr,Qs	1	**0.00940**	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0984	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.129	mg/L	1	0.100	129	70 - 130

Sample: 346773 - MW11 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	RL Result	Units	Dilution	RL
Benzene	Qr,Qs	1	**0.00170**	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	1	**0.00470**	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0961	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0883	mg/L	1	0.100	88	70 - 130

Sample: 346774 - MW8 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	RL Result	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: 346775 - 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	RL Result	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)			0.0955	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0854	mg/L	1	0.100	85	70 - 130

Sample: 346776 - MW6 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	RL Result	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)			0.0964	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0861	mg/L	1	0.100	86	70 - 130

Sample: 346777 - MW1 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	RL Result	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)			0.0951	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0850	mg/L	1	0.100	85	70 - 130

Sample: 346778 - Dup2 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)			0.0967	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0853	mg/L	1	0.100	85	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 # 1311541

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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Fax (432) 689-6313

200 East Sunset Rd., Suite E
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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 #:**

Contact Person: Kim Lambert **E-mail:** klambert@craworld.com

Invoice to: (If different from above)

Project #: 074685 **Project Name:** Darr Angell #2

Project Location (including state): Lovington, NM **Sampler Signature:** [signature]

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
346770	MW9111413	3		X				X				X		11/14/13	1100
771	MW10111413														1115
772	MW3 111413														1130
773	MW11 111413														1145
774	MW8 111413														1200
775	MW7111413														1215
776	MW6111413														1230
777	MW1111413														1245
778	DUP2111413														

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB #	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
346770		X																			
771																					
772																					
773																					
774																					
775																					
776																					
777																					
778																					

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
[signature]	CRA	11-15-13	14:42	[signature]	TA	11/15/13	14:40	INST K1 OBS 12.1 °C COR 12.0 °C
								INST ___ OBS ___ °C COR ___ °C
								INST ___ OBS ___ °C COR ___ °C

LAB USE ONLY
Intact (Y) / N
Headspace Y / N / (NA)
Log-in-Review [initials]

REMARKS: Midland All

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

Carrier # [illegible]

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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	13111541
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	074685
	Project Location = Lea Co., NM
	Project Name = Darr Angel #2
	Project Number = 074685
	SRS# = LF 1999-62
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
346770	MW9 111413	Normal	water	2013-11-14	11:00	1
346771	MW10 111413	Normal	water	2013-11-14	11:15	1
346772	MW3 111413	Normal	water	2013-11-14	11:30	1
346773	MW11 111413	Normal	water	2013-11-14	11:45	1
346774	MW8 111413	Normal	water	2013-11-14	12:00	1
346775	MW7 111413	Normal	water	2013-11-14	12:15	1
346776	MW6 111413	Normal	water	2013-11-14	12:30	1
346777	MW1 111413	Normal	water	2013-11-14	12:45	1

Work Order Receipt

Samples

Sample	Field Code	Priority	Matrix	Collect Date	Collect Time	Quantity
346778	Dup2 111413	Normal	water	2013-11-14	00:00	1

Sample	Test	Method	Prep	Priority
346770	BTEX	S 8021B	S 5030B	Normal
346771	BTEX	S 8021B	S 5030B	Normal
346772	BTEX	S 8021B	S 5030B	Normal
346773	BTEX	S 8021B	S 5030B	Normal
346774	BTEX	S 8021B	S 5030B	Normal
346775	BTEX	S 8021B	S 5030B	Normal
346776	BTEX	S 8021B	S 5030B	Normal
346777	BTEX	S 8021B	S 5030B	Normal
346778	BTEX	S 8021B	S 5030B	Normal

LAB Order ID # 13111541

Page 1 of 1

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Fax #:
Contact Person: Kim Lambert
E-mail: klambert@craworld.com
Invoice to: (If different from above)
Project #: 074685
Project Name: Darr Angell #2
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
346770	MW9 11413	3		X				X				X		11/14/13	1100		X																							
771	MW10 11413														1115																										
772	MW3 11413														1130																										
773	MW11 11413														1145																										
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777	MW1 11413														1245																										
778	DUP2 11413																																							

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	CRA	11-15-13	14:42		TAI	11/15/13	14:40	INST 1.1 °C OBS 12.1 °C COR 12.0 °C
								INST ____ °C OBS ____ °C COR ____ °C
								INST ____ °C OBS ____ °C COR ____ °C

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

REMARKS: 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.

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