PLAINS
ALL AMERICAN

March 23, 2015

Dr. Tomas Oberding
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Plains All American – 2014 Annual Monitoring Reports
4 Sites in Lea County, New Mexico

Dear Dr. Oberding:

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: NMOCD, Hobbs, NM

Enclosures

Original

CONESTOGA-ROVERS & ASSOCIATES

www.CRAworld.com

Final Report

2014 Annual Groundwater Monitoring Report

Darr Angell No. 4
NW 1/4, NE 1/4, Section 11, Township 15 South, Range 37 East
& SW 1/4, SE 1/4, Section 2, Township 15 South, Range 37 East,
Lea County, New Mexico
Plains SRS Number: 2001-10876
NMOCD Reference Number: AP 007

Prepared for: Plains All American Pipeline, L.P.

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

April 2015 • 074684 • Report No. 5

Partners in Sustainability

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Section 1.0 Introduction

This 2014 Annual Groundwater Monitoring Report presents data collected at the Darr Angell No. 4 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 Site falls under NMOCD Abatement Plan number AP-007. This report presents groundwater assessment and remediation activities associated with quarterly monitoring/recovery well gauging and groundwater sampling events (February, May, September and November). Groundwater remediation of hydrocarbons via total fluid pumps in conjunction with vapor extraction and bi-weekly (twice a month) light non-aqueous phase liquid (LNAPL) abatement via hand bailing were also performed during the 2014 calendar year.

1.1 Site Location and History

The legal description of the Site is NW1/4, NE1/4, Section 11, Township 15 South, Range 37 East and SW1/4, SE1/4, Section 2, Township 15 South, Range 37 East, Lea County, New Mexico and is shown in (Figure 1). The Darr Angell No. 4 Pipeline Release Site was formerly the responsibility of Enron Oil Trading and Transportation (EOTT); however, the Site is currently the responsibility of Plains. There were two separate releases at the Site. The first release occurred on November 9, 1999, and the second on February 2, 2001. The second release was discovered by EOTT employees and notification was made to the NMOCD immediately. A Release Notification and Corrective Action Form (C-141) was submitted to the NMOCD dated May 21, 2005. According to the release report, an estimated 150 barrels of crude oil was released and 95 barrels were recovered during initial response actions. The release was reported to have occurred from an 8-inch EOTT pipeline and was attributed to internal pipeline corrosion.

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 16 groundwater monitoring wells (MW-1A, MW-2, MW-3R, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12R, MW-13, MW-14, MW-15 and MW-16) and 15 product recovery wells (RW-1, RW-2, RW-3R, RW-4R, RW-5, RW-6, RW-7, RW-8, RW-9, RW-10, RW-11, RW-12, RW-13, RW-14 and RW-15) at the Site. Recovery well RW-4 was plugged and abandoned with NMOCD approval on October 9, 2014. Replacement recovery well RW-4R was drilled and constructed on October 9, 2014. Replacement recovery well RW-3R and recovery wells RW-14 and RW-15 were drilled and constructed on October 14, 2014. Monitoring wells MW-3 and MW-12 and recovery well RW-3 were plugged and abandoned with

NMOCD approval on October 15, 2014. Replacement monitoring wells MW-3R and MW-12R were drilled and constructed on October 15, 2014. Professional surveying of the new and replacement wells was performed on November 11, 2014. Stratigraphic logs and well construction diagrams are included as Appendix A.

For 2014, an automated groundwater remediation trailer/system was operated at the Site for a total of 84 days. Total fluids pumps driven by compressed air in conjunction with vapor extraction were utilized for LNAPL recovery and groundwater remediation. The system was scheduled to operate when at the Site for 4 weeks with two cycles of rotating pumps into alternate recovery wells during each cycle. The first cycle duration was schedule to last for 2 weeks with followed by another 2-week cycle. RW-1, RW-2, RW-8, RW-9, RW-10 and RW-11 were the wells targeted for LNAPL recovery and groundwater remediation. Monitoring and recovery wells which were gauged with LNAPL, but were not part of the automated recovery system had the LNAPL removed using manual methods bi-weekly (twice a month). All recovered LNAPL is stored onsite in an above-ground storage tank located within a lined berm area. Recovered product is periodically transported to Wasson Station facility for reinjection into the Plains Pipeline system and recovered groundwater is transported to a licensed disposal facility as directed by Plains.

The 2014 abatement program recovered approximately 780 gallons (18.6 barrels) of product. Approximately 17,017 gallons (405 barrels) of product have been recovered from the start of the product abatement program.

For 2014, the following wells exhibited an average increase in LNAPL thickness when compared to their 2013 average LNAPL thickness: RW-2 (0.42 foot); and RW-8 (0.53 foot). For 2014, the following wells exhibited an average decrease in LNAPL thickness when compared to their 2013 average LNAPL thickness: RW-1 (0.73 foot); RW-7 (0.78 foot); RW-9 (0.85 foot); RW-10 (0.87 foot) RW-11 (0.38 foot) RW-12 (0.61 foot) and RW-13 (0.43 foot). LNAPL gauging data collected during quarterly monitoring events for each well was used to calculate the yearly average thickness.

For 2014, the groundwater flow direction is towards the east-southeast and appears to be consistent with historical data. The average groundwater gradient determined for the Site from the groundwater monitoring events was approximately 0.001 foot/foot. Pertinent well gauging data indicated a decline in the elevation of the potentiometric surface for 2014. The average decline was 0.19 foot per quarter. The total of the average decline for the four quarters of 2014 was 0.75 foot.

Section 2.0 Regulatory Framework

The Site has been assigned Abatement Plan number AP-007 by the New Mexico Oil Conservation Division (NMOCD) Environmental Bureau. The 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, which provides the Human Health Standards for Groundwater. The constituents of concern (COCs) in affected groundwater at the Site are LNAPL, benzene, toluene, ethylbenzene and total 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 was amended in NMOCD correspondence dated June 21, 2005.

NMOCD APPROVED SAMPLING SCHEDULE					
Location	***Schedule***	***Location***	***Schedule***	***Location***	***Schedule***
MW-1A	Annually	MW-11	Annually	RW-4	Plugged / Abandoned
MW-2	Annually	MW-12	Plugged / Abandoned	RW-5	Quarterly
MW-3	Plugged / Abandoned	MW-13	Annually	RW-6	Quarterly
MW-4	Annually	MW-14	Quarterly	RW-7	Quarterly
MW-5	Annually	MW-15	Quarterly	RW-8	Quarterly
MW-6	Quarterly	MW-16	Quarterly	RW-9	Quarterly
MW-7	Annually			RW10	Quarterly
MW-8	Quarterly	RW-1	Quarterly	RW-11	Quarterly
MW-9	Semi-Annually	RW-2	Quarterly	RW-12	Quarterly
MW-10	Quarterly	RW-3	Plugged / Abandoned	RW-13	Quarterly

Recently drilled monitoring /recovery wells (MW-3R, MW-12R, RW-3R, RW-4R, RW-14 and RW-15) are currently being monitored on a quarterly basis to establish consistent historical data

regarding dissolved phase COCs and LNAPL thicknesses. These wells will be added to the NMOCD approved site sampling schedule following correspondence with the regulatory agency.

Section 3.0 Groundwater Monitoring Activities

Quarterly groundwater monitoring event activities were conducted by CRA on February 24-27, May 27-30, September 2-5 and November 17-20, 2014. The Site is monitored with a network of 21 monitoring wells and 15 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, each well cap was removed to allow groundwater levels to stabilize and equilibrate. 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, including duplicate 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 benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method 8021B. In addition, in November 2014, four wells (MW-1A, MW-12R, RW-14 and RW-15) were analyzed for Polycyclic Aromatic Hydrocarbons (PAH) by EPA Method 8270D. The groundwater fluids recovered during the Site activities were transferred to a storage tank and later 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 February, May, September and November groundwater monitoring events is presented in Table 1. Groundwater gradient maps for February, May, September and November 2014 are provided as Figures 3, 5, 7 and 9, respectively.

Corrected groundwater elevations ranged from 3,727.62 feet (MW-15) to 3,728.44 feet (MW-7) in February, from 3,727.44 feet (MW-15) to 3,728.26 feet (MW-7) in May, from 3,727.23 feet (MW-15) to 3,728.02 feet (MW-7) in September and from 3,727.01 feet (MW-15) to 3,727.85 feet (MW-7) in November. LNAPL was encountered in nine wells (RW-1, RW-2, RW-7, RW-8, RW-9, RW-10, RW-11, RW-12 and RW-13) during the February, May and September groundwater monitoring events and were not purged and sampled for BTEX. LNAPL was encountered in seven wells (RW-1, RW-3R, RW-4R, RW-7, RW-9, RW-12 and RW-13) during the November monitoring event and were not purged and sampled. Recovery wells RW-2, RW-8, RW-10 and RW-11 were not gauged during the November 2014 event due to total fluids recovery pumps not being removed from the wells. LNAPL thickness ranged from 0.11 foot (RW-12) to 2.61 feet (RW-10) in February, from 0.05 foot (RW-7) to 5.08 feet (RW-11) in May, from 0.04 foot (RW-7) to 4.52 feet (RW-11) in September and from 0.02 foot (RW-4R) to 4.45 feet (RW-3R) in November. For 2014, the following wells exhibited an average increase in LNAPL thickness when compared to their 2013 average LNAPL thickness: RW-2 (0.42 foot); and RW-8 (0.53 foot). For 2014 the following wells exhibited an average decrease in LNAPL thickness when compared to their 2013 average LNAPL thickness: RW-1 (0.73 foot); RW-7 (0.78 foot); RW-9 (0.85 foot); RW-10 (0.87 foot) RW-11 (0.38 foot) RW-12 (0.61 foot) and RW-13 (0.43 foot). LNAPL gauging data collected during quarterly monitoring events, for each well, was used to calculate the yearly average thickness.

Monitoring wells MW-3, MW-8, MW-12, MW-13 and recovery wells RW-3 and RW-4 were either gauged dry or considered dry (not enough fluid column to purge and sample) throughout 2014. Monitoring wells MW-3 and MW-12 and recovery wells RW-3 and RW-4 were plugged, abandoned and replaced with MW-3R, MW-12, RW-3R and RW-4R in October 2014. The groundwater flow direction is toward the east-southeast and appears to be consistent with historical data. The average groundwater gradient determined for the Site from the four groundwater monitoring events was approximately 0.001 foot/foot. Pertinent well gauging data indicated a decline in the elevation of the potentiometric surface for 2014. The average decline was 0.19 foot per quarter. The total of the average decline for the four quarters of 2014 was 0.75 foot.

During the February groundwater monitoring event, five wells (MW-6, MW-14, MW-15, MW-16 and RW-5) were sampled and did not detect benzene concentrations above the NMWQCC Standard (0.01 mg/L) for benzene. During the May groundwater monitoring event, seven wells (MW-6, MW-9, MW-10, MW-14, MW-15, MW-16 and RW-5) were sampled and did not detect benzene concentrations above the NMWQCC Standard for benzene. During the September groundwater monitoring event, seven wells (MW-6, MW-10, MW-11, MW-14, MW-15, MW-16 and RW-5) were sampled and did not detect benzene concentrations above the NMWQCC

Standard for benzene. During the November groundwater monitoring event, 12 wells (MW-1A, MW-5, MW-6, MW-9, MW-10, MW-11, MW-12R, MW-14, MW-15, MW-16, RW-14 and RW-15) were sampled, of which RW-14 and RW-15 exhibited a benzene concentration above the NMWQCC Standard for benzene. For the February, May and September events, RW-5 contained ethylbenzene concentrations above the laboratory reporting limits. For the September event, RW-5 also contained total xylenes concentrations above the laboratory reporting limits. For the November event, RW-14 also contained ethylbenzene and total xylenes concentrations above laboratory reporting limits and RW-15 also contained toluene, ethylbenzene and total xylenes concentrations above laboratory reporting limits. No other BTEX constituents were detected above the NMWQCC standards. Groundwater BTEX analytical results are summarized in Table 2. LNAPL Thickness and Groundwater BTEX Concentration maps for the groundwater monitoring events in February, May, September and November 2014 are presented as Figures 4, 6, 8 and 10, respectively. Polycyclic Aromatic Hydrocarbons (PAH) samples were collected from MW-1A, MW-12R, RW-14 and RW-15 in November 2014. Analytical laboratory results for these wells indicated the wells did not contain any constituents that exceeded the NMWQCC Standards. The historic data on the PAH results are summarized in Table 3. A color-coded table highlighting PSH, Benzene and Clean Wells is presented as Table 4. Copies of the certified laboratory reports and chain-of-custody documentation are attached in Appendix B.

Section 4.0 Corrective Action

For 2014, an automated groundwater remediation trailer/system was onsite and operational for a total of 84 days. The trailer operated at the Site for 21 days during the first quarter, the remediation trailer/system did not operate at the Site during the second quarter, for 21 days during the third quarter and for 42 days during the fourth quarter. Total fluid pumps driven by compressed air in conjunction with vapor extraction were utilized for LNAPL recovery and groundwater remediation. Throughout 2014 the trailer/system was moved to and operated at the Site for a cycle of 4 weeks with four pumps installed into four of the six targeted recovery wells. After 2 weeks, and in an effort to maximize LNAPL abatement, two pumps were rotated into the two remaining wells. RW-1, RW-2, RW-8, RW-9, RW-10 and RW-11 were the wells targeted for LNAPL recovery and groundwater remediation. Monitoring and recovery wells which exhibited LNAPL, but were not part of the automated remediation system had the LNAPL removed using manual methods bi-weekly (twice a month). CRA mobilized to the Site twice a week to perform operation and maintenance (O&M) of the automated remediation trailer/system. O&M of the remediation trailer/system included wellhead and flowline inspections, maintenance of the compressor (i.e. oil changes, drain water) and total fluid pumps (i.e. cleaning, repairs), gauging of fluid recovered in the Site's storage tank 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 fluid pumps' depth intervals in the wells as an effort to increase LNAPL recovery.

The 2014 abatement program recovered approximately 780 gallons (18.6 barrels) of product. Approximately 17,017 gallons (405 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 2014, the following summary of findings is presented:

- There were two separate releases at the Site. The first release occurred on November 9, 1999 and the second on February 2, 2001. The second release was discovered by EOTT employees and notification was made to the NMOCD immediately. A Release Notification and Corrective Action Form (C-141) was submitted to the NMOCD dated May 21, 2005. According to the release report, an estimated 150 barrels of crude oil was released and 95 barrels were recovered during initial response actions. The release was reported to have occurred from an 8-inch EOTT pipeline and was attributed to internal pipeline corrosion;
- CRA assumed remediation responsibility of the Site on May 2, 2011;
- RW-4 was plugged and abandoned with NMOCD approval on October 9, 2014. MW-3, MW-12 and RW-3 were plugged and abandoned with NMOCD approval on October 15, 2014;
- RW-4R was drilled and constructed with NMOCD approval on October 9, 2014. MW-3R, MW-12R, RW-3R, RW-14 and RW-15 were drilled and constructed with NMOCD approval on October 14-15, 2014;
- Currently, the Site is monitored with a network of 16 groundwater monitoring wells (MW-1A, MW-2, MW-3R, MW-4 through MW-11, MW-12R, and MW-13 through MW-16) and 15 product recovery wells (RW-1, RW-2, RW-3R, RW-4R and RW-5 through RW-15);
- The automated groundwater remediation trailer/system was operational at the Site for a total of 84 days in 2014. The trailer operated at the Site for 21 days during the first quarter, the trailer did not operate at the Site during the second quarter, for 21 days during the third quarter, and for 42 days during the fourth quarter. RW-1, RW-2, RW-8,

RW-9, RW-10 and RW-11 were the wells targeted for LNAPL recovery and groundwater remediation;

- Weekly O&M on the groundwater remediation trailer/system, ancillary equipment, flowlines and wellheads was performed while operating at Site;
- Corrected groundwater elevations ranged from 3,727.62 to 3,728.44 feet in February, from 3,727.44 to 3,728.26 feet in May, from 3,727.23 to 3,728.02 feet in September and from 3,727.01 to 3,727.85 feet in November;
- LNAPL was encountered in nine wells during the February, May and September events and seven wells during the November event and were not purged and sampled. The LNAPL thicknesses ranged from 0.11 foot to 2.61 feet in February, from 0.05 foot to 5.08 feet in May, from 0.04 foot to 4.52 feet in September and from 0.02 foot to 4.45 feet in November, New recovery wells RW-4R and RW-3R were gauged with LNAPL thicknesses of 0.02 foot and 4.45 feet, respectively for November;
- For 2014, RW-2 and RW-8 exhibited an average increase in LNAPL thickness when compared to their 2013 average LNAPL thickness;
- For 2014, RW-1, RW-7, RW-9, RW-10, RW-11, RW-12 and RW-13 exhibited an average decrease in LNAPL thickness when compared to their 2013 average LNAPL thickness;
- During the February groundwater monitoring event, five wells (MW-6, MW-14, MW-15, MW-16 and RW-5) were sampled and benzene concentrations were not detected above the NMWQCC Standard (0.01 mg/L) for benzene;
- During the May groundwater monitoring event, seven wells (MW-6, MW-9, MW-10, MW-14, MW-15, MW-16 and RW-5) were sampled and benzene concentrations were not detected above the NMWQCC Standard for benzene;
- During the September groundwater monitoring event, seven wells (MW-6, MW-10, MW-11, MW-14, MW-15, MW-16 and RW-5) were sampled and benzene concentrations were not detected above the NMWQCC Standard for benzene;
- During the November groundwater monitoring event, 12 wells (MW-1A, MW-5, MW-6, MW-9, MW-10, MW-11, MW-12R, MW-14, MW-15, MW-16, RW-14 and RW-15) were sampled, of which RW-14 and RW-15 exhibited a benzene concentration above the NMWQCC Standard for benzene;
- RW-5 contained ethylbenzene concentrations above the laboratory reporting limits for the February, May and September events. RW-5 also contained total xylenes concentrations above the laboratory reporting limits for the September event;
- RW-14 also contained ethylbenzene and total xylenes concentrations above laboratory reporting limits for the November event;
- RW-15 also contained toluene, ethylbenzene and total xylenes concentrations above laboratory reporting limits for the November event;

- Polycyclic Aromatic Hydrocarbons (PAH) samples were collected from MW-1A, MW-12R, RW-14 and RW-15 in November 2014. Analytical laboratory results for all four wells indicated the wells did not contain any constituents that exceeded the NMWQCC Standards;
- During 2014, monitoring wells MW-3, MW-8, MW-12, MW-13 and recovery wells RW-3 and RW-4 were dry or considered dry and were not sampled during quarterly activities;
- The Site's groundwater flow direction is to the east-southeast and appears to be consistent with historical data. The average groundwater gradient determined at the Site from the 2014 groundwater monitoring events was approximately 0.001 foot/foot;
- Pertinent well gauging data indicated a decline in the elevation of the potentiometric surface for 2014. The average decline was 0.19 foot per quarter. The total average decline for the four quarters of 2014 was 0.75 foot;
- Wells which contained measurable LNAPL, but were not a part of the automated LNAPL recovery program, were hand bailed for LNAPL bi-weekly (twice a month); and
- The 2014 abatement program has recovered approximately 780 gallons (18.6 barrels) of product. Approximately 17,017 gallons (405 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 for 2015:

- Initiate correspondence and obtain approval from the NMOCD for addition of the new wells (MW-3R, MW-12R, RW-3R and RW-4R, RW-14 and RW-15) to the approved sampling schedule presented in Section 2.0;
- Continue ongoing quarterly groundwater monitoring events with annual reporting to the NMOCD. Each quarterly event to include monitoring and recovery well gauging, sampling groundwater for BTEX and annual sampling for the fourth quarterly event;
- Continue annual sampling for Polycyclic Aromatic Hydrocarbons (PAH). Wells sampled during the 2014 annual event and wells that previously contained LNAPL, but the thickness has decreased to <0.01 foot, will be scheduled for sampling during the fourth quarterly monitoring event;
- Initiate bi-monthly (twice a month) hand bailing of MW-3R, RW-14 and RW-15 in order to decrease benzene concentrations, if these well show an increasing trend in benzene concentrations;

- Continue bi-weekly (twice a month) LNAPL abatement on select monitoring and recovery wells which were gauged with LNAPL but are not wells targeted for the automated remediation system; and
- Continue groundwater remediation of hydrocarbons by operating the remediation trailer/system on four of the six targeted wells for 2 weeks with pump rotation into the two remaining wells every 2 weeks; and
- Install product only skimmer pumps into select recovery wells to enhance LNAPL recovery when the remediation trailer/system is operating at another site.

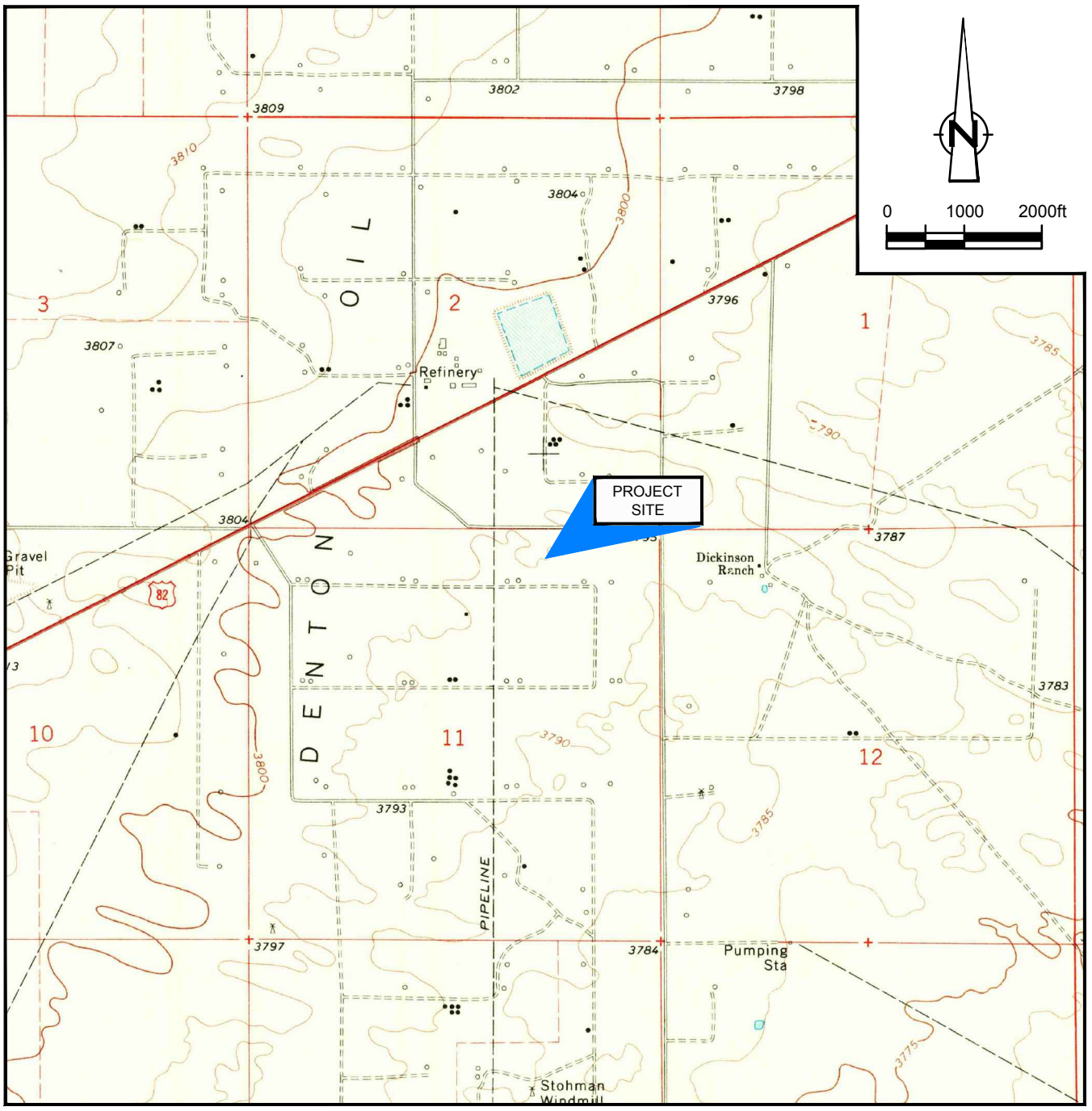
All of which is Respectfully Submitted,

CONESTOGA-ROVERS & ASSOCIATES

John Fergerson, PG
Project Manager

Thomas C. Larson, PG
Principal, Midland Operations Manager

Figures



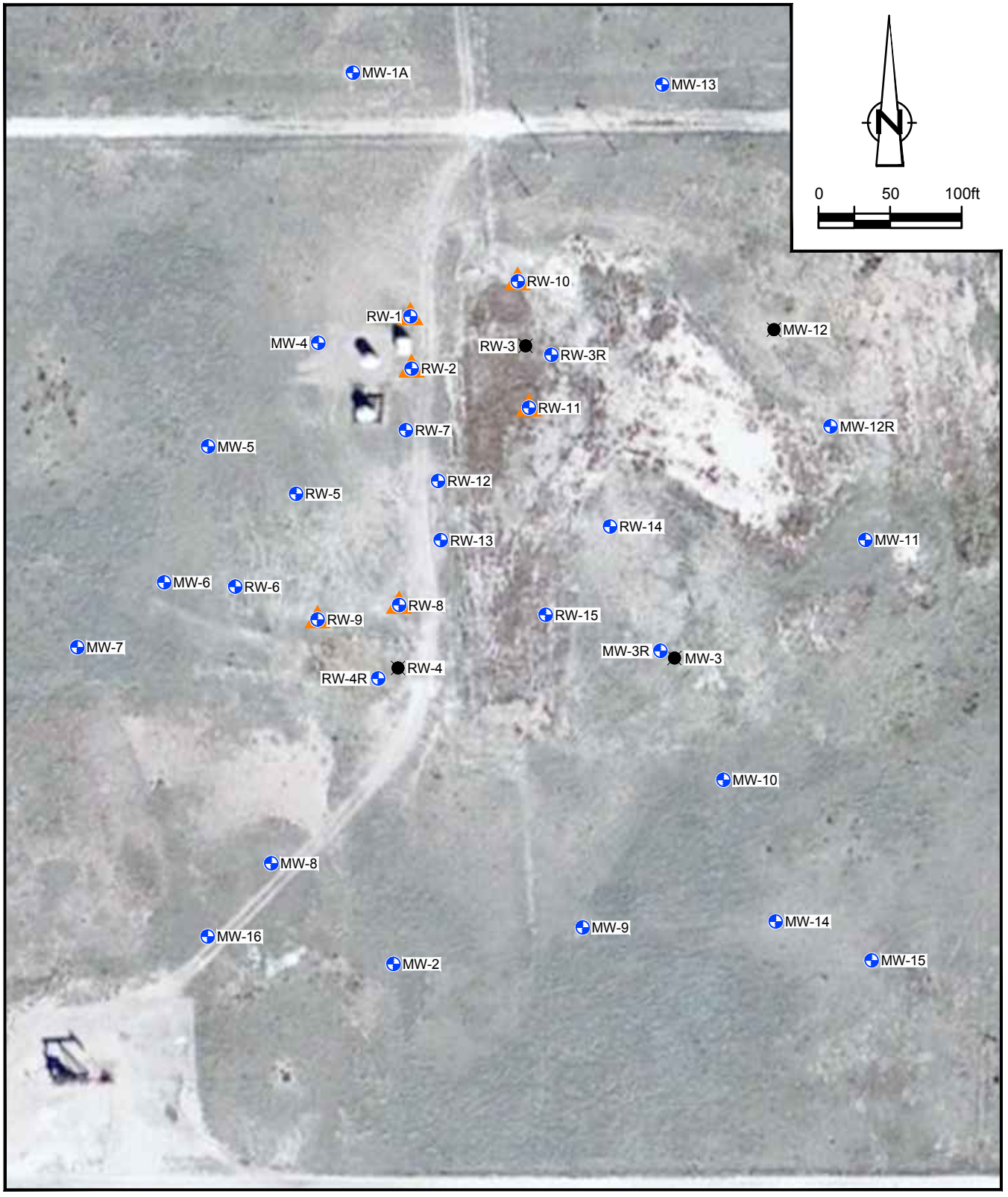
SOURCE: USGS 7.5 MINUTE QUAD
"PRAIRIEVIEW, NEW MEXICO"

LAT/LONG: 33.0264° NORTH, 103.1667° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

Figure 1

SITE LOCATION MAP
DARR ANGELL No.4
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

CRA



LEGEND

- Well Location
- Plugged and Abandoned Well Location
- Well Equipped with Total Fluids Pump

Figure 2

SITE DETAILS MAP
DARR ANGELL No.4
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074684-02(005)GN-DL002 MAR 25/2015

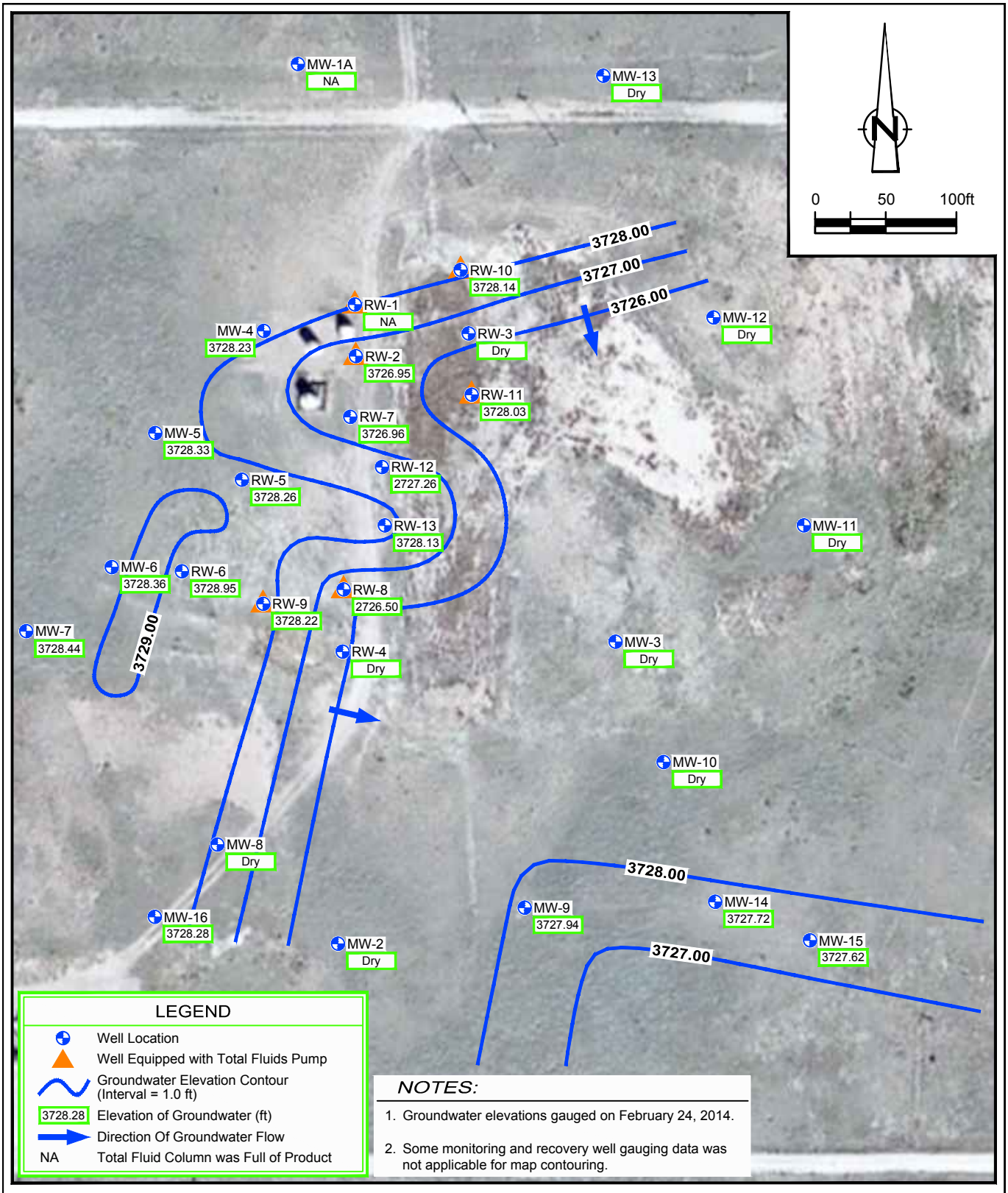


Figure 3

GROUNDWATER GRADIENT MAP - FEBRUARY 2014
DARR ANGELL No.4
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074684-02(005)GN-DL001 MAR 25/2015

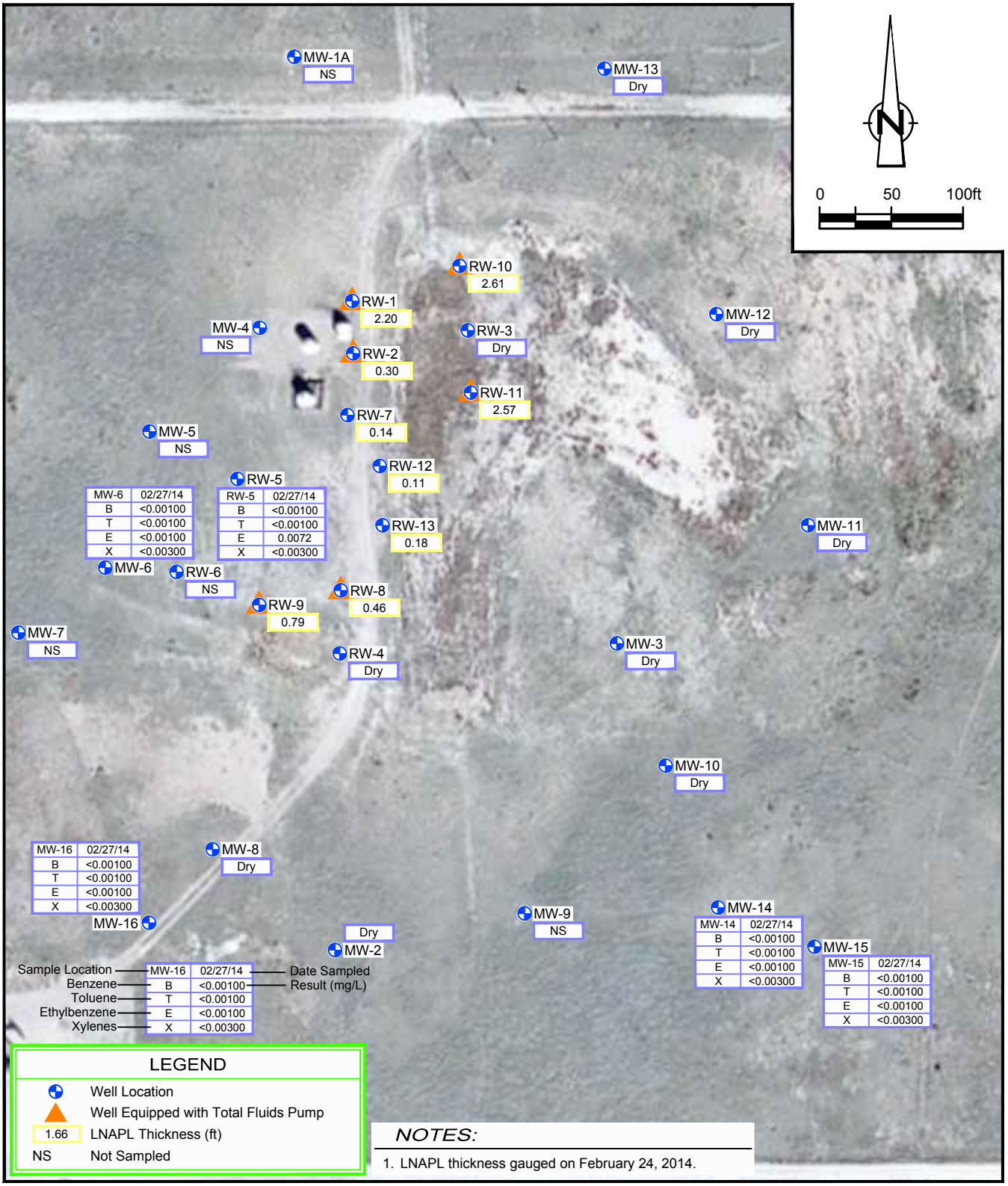


Figure 4

LNAPL THICKNESS AND GROUNDWATER
BTEX CONCENTRATION MAP - FEBRUARY 2014
DARR ANGELL No.4
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074684-02(005)GN-DL001 MAR 25/2015

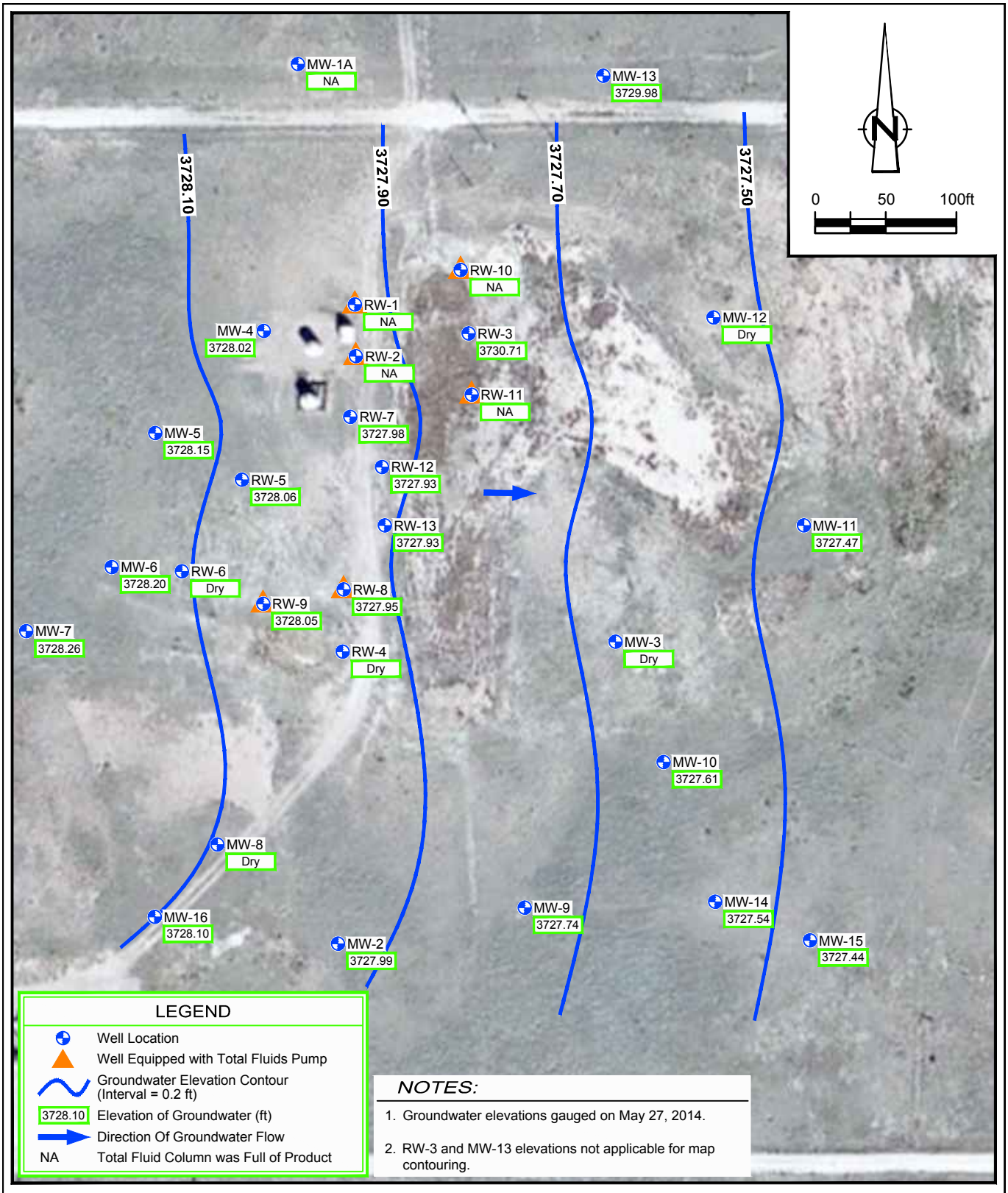


Figure 5

GROUNDWATER GRADIENT MAP - MAY 2014
DARR ANGELL No.4
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074684-02(005)GN-DL001 MAR 25/2015

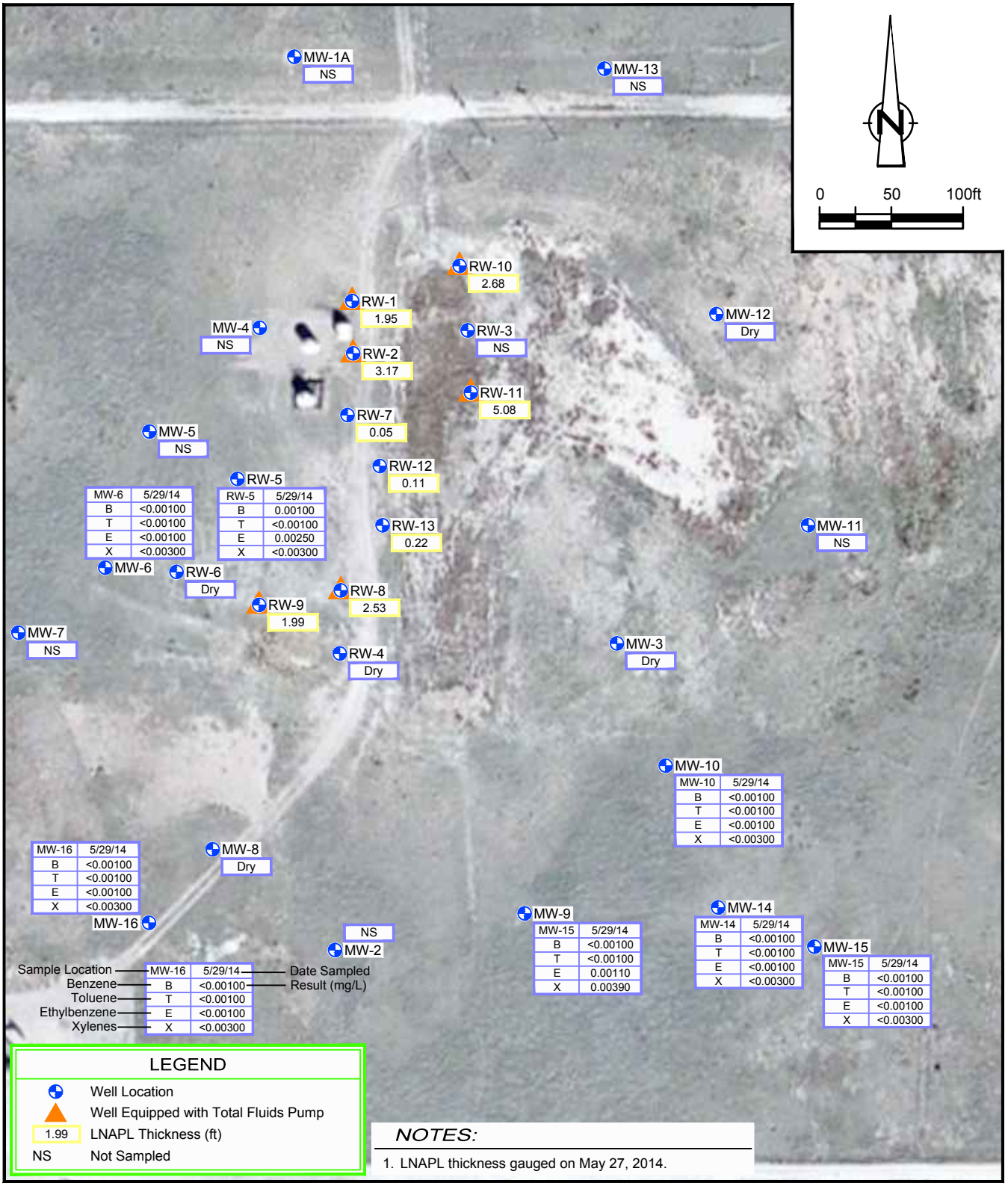


Figure 6

LNAPL THICKNESS AND GROUNDWATER
BTEX CONCENTRATION MAP - MAY 2014
DARR ANGELL No.4
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074684-02(005)GN-DL001 MAR 25/2015

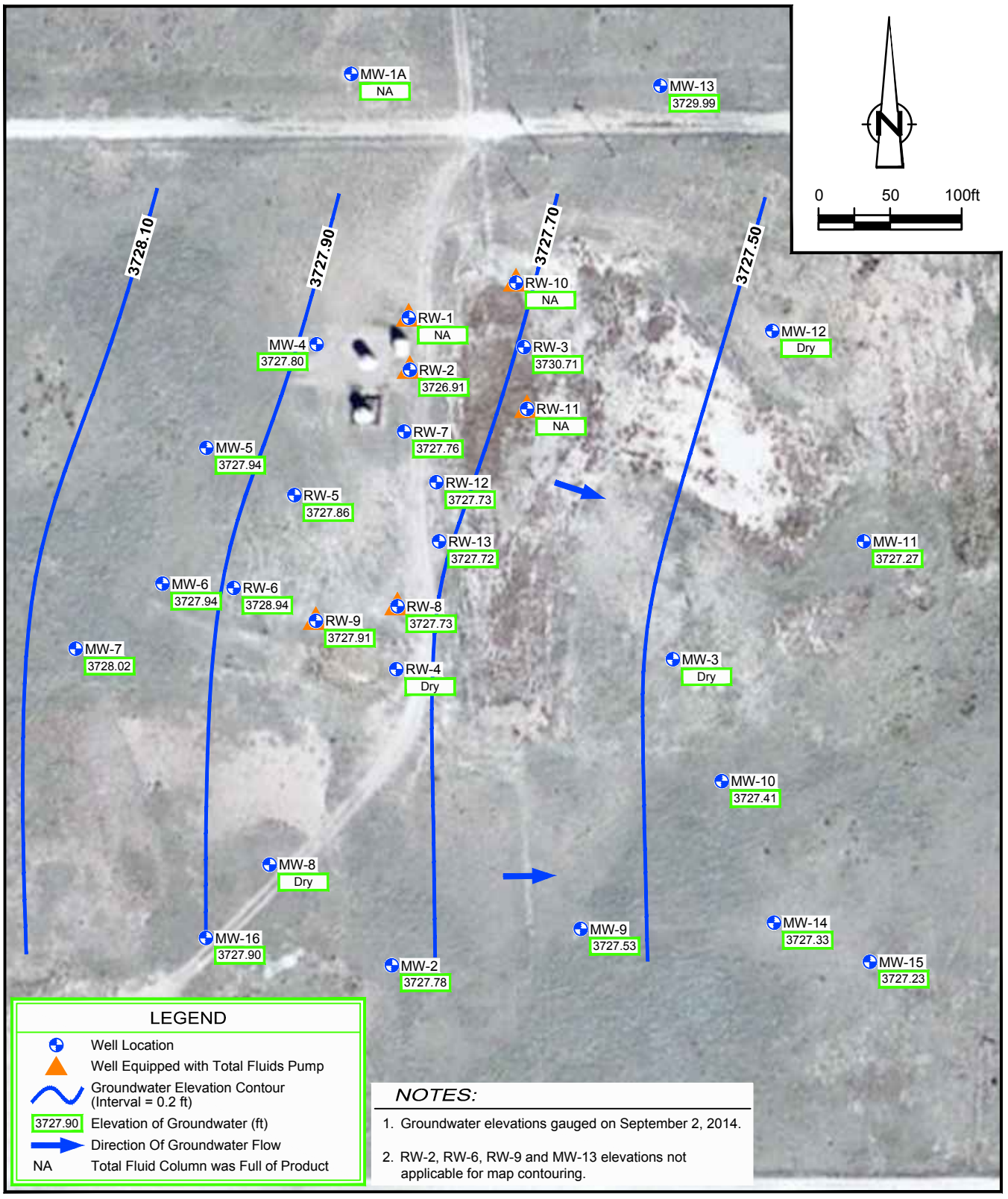


Figure 7

GROUNDWATER GRADIENT MAP - SEPTEMBER 2014
DARR ANGELL No.4
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074684-02(005)GN-DL001 MAR 25/2015

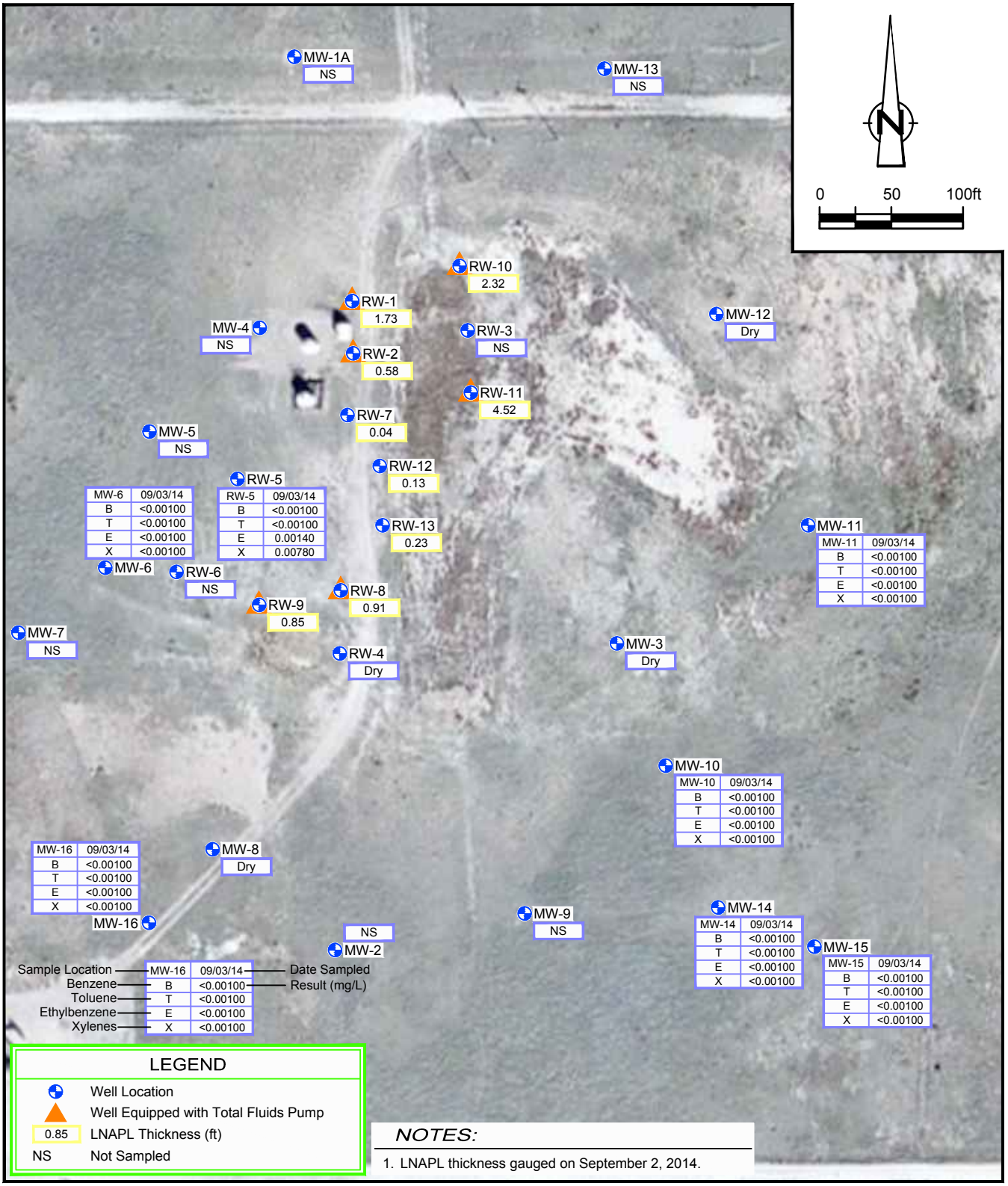


Figure 8

LNAPL THICKNESS AND GROUNDWATER
BTEX CONCENTRATION MAP - SEPTEMBER 2014
DARR ANGELL No.4
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074684-02(005)GN-DL001 MAR 25/2015

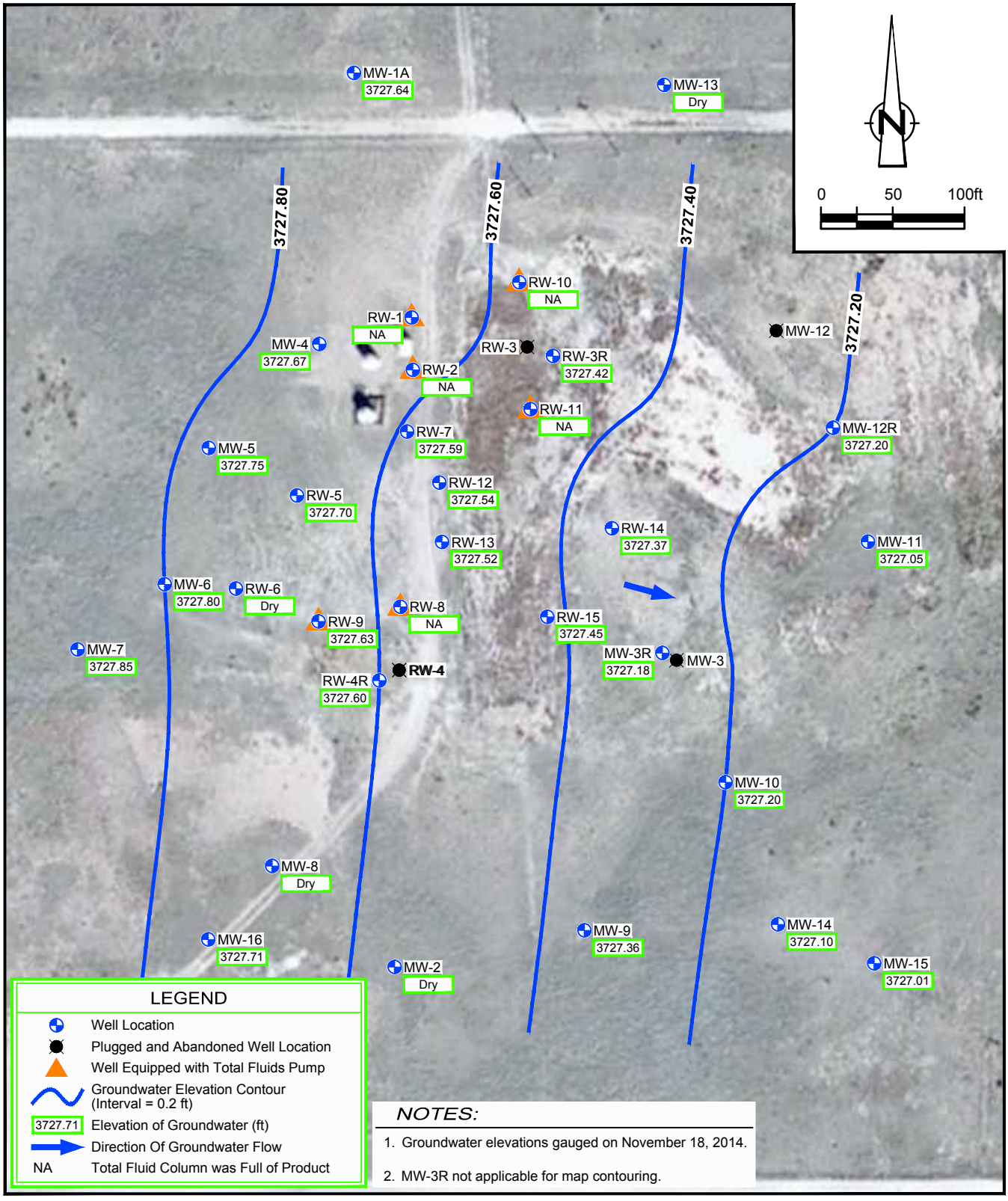


Figure 9

GROUNDWATER GRADIENT MAP - NOVEMBER 2014
DARR ANGELL No.4
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

074684-02(005)GN-DL002 MAR 25/2015

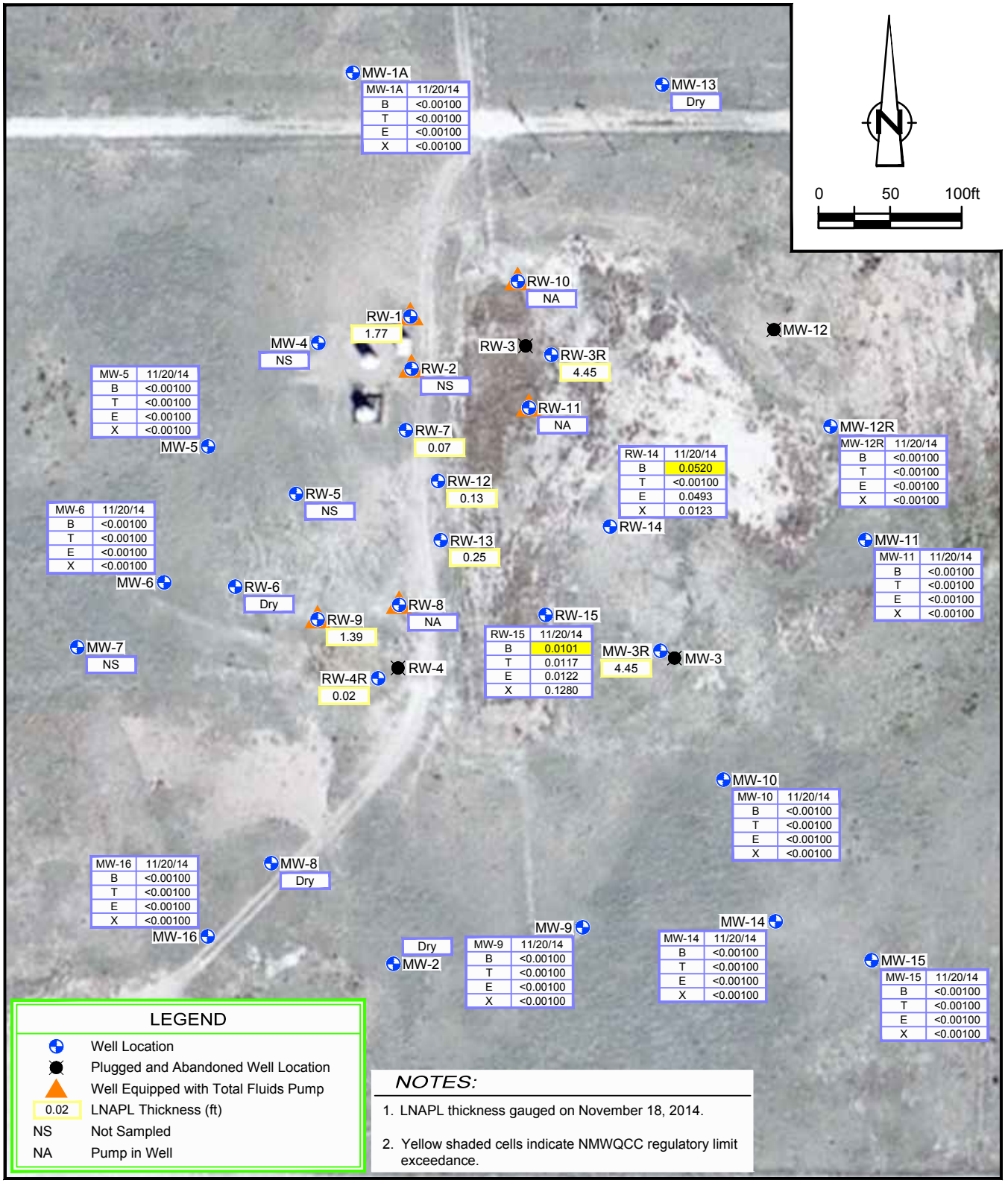


Figure 10

LNAPL THICKNESS AND GROUNDWATER
BTEX CONCENTRATION MAP - NOVEMBER 2014
DARR ANGELL No.4
LEA COUNTY, NEW MEXICO
Plains Pipeline L.P.

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074684-02(005)GN-DL002 MAR 25/2015

Tables

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
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-1A	6/15/11	70.49	---	---	---	74.12	40-65
	9/6/11	70.65	---	---	---	74.14	*2*
	11/29/11	70.83	---	---	---	74.15	
	3/5/12	70.97	---	---	---	74.12	
	6/5/12	71.15	---	---	---	74.15	
	9/10/12	71.33	---	---	---	74.15	
	12/3/12	71.50	---	---	---	74.20	
	3/4/13	71.66	---	---	---	74.10	
	5/28/13	71.85	---	---	---	---	
	8/27/13	72.05	---	---	---	74.18	
	11/12/13	72.17	---	---	---	74.17	
	2/24/14	73.26	---	---	---	74.15	
	5/27/14	72.58	---	---	---	74.15	
	9/2/14	72.75	---	---	---	74.15	
3800.59	11/18/14	72.95	---	---	3727.64	74.15	Surveyed on 11/11/14
MW-2	6/15/11	66.33	---	---	3730.00	68.80	41-66
3796.33	9/6/11	66.53	---	---	3729.80	68.85	*2*
	11/29/11	66.70	---	---	3729.63	68.90	
	3/5/12	66.81	---	---	3729.52	68.93	
	6/5/12	66.97	---	---	3729.36	68.85	
	9/10/12	67.15	---	---	3729.18	68.85	
	12/3/12	67.30	---	---	3729.03	68.81	
	3/4/13	67.46	---	---	3728.87	68.76	
	5/28/13	67.65	---	---	3728.68	---	
	8/27/13	67.84	---	---	3728.49	68.79	
	11/12/13		DRY			68.80	
	2/25/14		DRY			68.80	
	5/27/14	68.34	---	---	3727.99	68.80	
	9/2/14	68.55	---	---	3727.78	68.80	
	11/18/14		DRY			68.80	
MW-3	6/15/11	68.39	---	---	3729.71	68.92	40-65
3798.10	9/6/11	68.55	---	---	3729.55	69.01	*2*
	11/29/11	68.72	---	---	3729.38	69.05	
	3/5/12	68.88	---	---	3729.22	69.08	
	6/5/12	68.95	---	---	3729.15	69.02	
	9/10/12		DRY			68.93	
	12/3/12		DRY			68.95	
	3/4/13		DRY			69.04	
	5/28/13		DRY			69.04	
	8/27/13		DRY			69.04	
	11/12/13		DRY			69.05	
	2/24/14		DRY			69.05	
	5/27/14		DRY			69.05	
	9/2/14		DRY			69.05	
	10/15/14			Plugged and Abandoned			
MW-3R	11/18/14	74.25	69.77	4.48	3727.18	85.12	
3797.80							Surveyed on 11/11/14
MW-4	6/15/11	67.65	---	---	3730.08	69.95	47-67
3797.73	9/6/11	67.82	---	---	3729.91	70.00	*2*

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
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	11/29/11	68.00	---	---	3729.73	70.00	
	3/5/12	68.15	---	---	3729.58	70.00	
	6/5/12	68.32	---	---	3729.41	70.15	
	9/10/12	68.52	---	---	3729.21	70.11	
	12/3/12	68.61	---	---	3729.12	---	
	3/4/13	68.82	---	---	3728.91	70.14	
	5/28/13	69.00	---	---	3728.73	---	
	8/27/13	69.19	---	---	3728.54	70.04	
	11/12/13	69.33	---	---	3728.40	70.16	
	2/24/14	69.50	---	---	3728.23	70.15	
	5/27/14	69.71	---	---	3728.02	70.15	
	9/2/14	69.93	---	---	3727.80	70.15	
	11/18/14	70.06	---	---	3727.67	70.15	
MW-5	6/15/11	67.03	---	---	3730.20	70.00	47-67
3797.23	9/6/11	67.22	---	---	3730.01	70.07	*2*
	11/29/11	67.39	---	---	3729.84	70.10	
	3/5/12	67.55	---	---	3729.68	70.13	
	6/5/12	67.70	---	---	3729.53	70.06	
	9/10/12	67.87	---	---	3729.36	70.08	
	12/3/12	68.01	---	---	3729.22	70.15	
	3/4/13	68.22	---	---	3729.01	70.13	
	5/28/13	68.37	---	---	3728.86	---	
	8/27/13	68.56	---	---	3728.67	70.14	
	11/12/13	68.71	---	---	3728.52	70.14	
	2/24/14	68.90	---	---	3728.33	70.14	
	5/27/14	69.08	---	---	3728.15	70.14	
	9/2/14	69.29	---	---	3727.94	70.14	
	11/18/14	69.48	---	---	3727.75	70.14	
MW-6	6/15/11	66.28	---	---	3730.23	69.20	47-67
3796.51	9/6/11	66.50	---	---	3730.01	69.23	*2*
	11/29/11	66.65	---	---	3729.86	70.32	
	3/5/12	66.79	---	---	3729.72	70.30	
	6/5/12	66.95	---	---	3729.56	69.75	
	9/10/12	67.17	---	---	3729.34	69.21	
	12/3/12	67.28	---	---	3729.23	69.22	
	3/4/13	67.44	---	---	3729.07	69.20	
	5/28/13	67.61	---	---	3728.90	69.22	
	8/27/13	67.78	---	---	3728.73	69.22	
	11/12/13	67.96	---	---	3728.55	69.29	
	2/24/14	68.15	---	---	3728.36	69.25	
	5/27/14	68.31	---	---	3728.20	69.25	
	9/2/14	68.57	---	---	3727.94	69.25	
	11/18/14	68.71	---	---	3727.80	69.25	
MW-7	6/15/11	65.86	---	---	3730.30	68.73	47-67
3796.16	9/6/11	66.05	---	---	3730.11	67.75	*2*
	11/29/11	66.22	---	---	3729.94	68.80	
	3/5/12	66.34	---	---	3729.82	68.80	
	6/5/12	66.52	---	---	3729.64	68.85	
	9/10/12	66.72	---	---	3729.44	68.76	
	12/3/12	66.89	---	---	3729.27	68.81	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
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-7	3/4/13	67.05	---	---	3729.11	68.77	
	5/28/13		DRY			68.80	
	8/27/13	67.39	---	---	3728.77	68.79	
	11/12/13	67.54	---	---	3728.62	68.81	
	2/24/14	67.72	---	---	3728.44	68.75	
	5/27/14	67.90	---	---	3728.26	68.75	
	9/3/14	68.14	---	---	3728.02	68.75	
	11/18/14	68.31	---	---	3727.85	68.75	
MW-8	6/15/11	65.82	---	---	3730.07	66.31	47-67
3795.89	9/6/11	66.02	---	---	3729.87	66.35	*2*
	11/29/11	66.20	---	---	3729.69	66.51	
	3/5/12	66.32	66.29	0.03	3729.59	66.55	
	6/5/12	66.50	66.46	0.04	3729.42	66.51	
	9/10/12		DRY			66.50	
	12/3/12		DRY			66.52	
	3/4/13		DRY			66.53	
	5/28/13		DRY			66.62	
	8/27/13		DRY			66.64	
	11/12/13		DRY			66.85	
	2/24/14		DRY			66.65	
	5/27/14		DRY			66.65	
	9/2/14		DRY			66.65	
	11/18/14		DRY				
MW-9	6/15/11	65.93	---	---	3729.73	69.18	47-67
3795.66	9/6/11	66.11	---	---	3729.55	69.22	*2*
	11/29/11	66.28	---	---	3729.38	69.24	
	3/5/12	66.41	---	---	3729.25	69.27	
	6/5/12	66.58	---	---	3729.08	69.70	
	9/10/12	66.82	---	---	3728.84	69.31	
	12/3/12	66.93	---	---	3728.73	69.45	
	3/4/13	67.06	---	---	3728.60	69.30	
	5/28/13	67.24	---	---	3728.42	69.32	
	8/27/13	67.40	---	---	3728.26	68.40	
	11/12/13	67.55	---	---	3728.11	69.41	
	2/24/14	67.72	---	---	3727.94	69.40	
	5/27/14	67.92	---	---	3727.74	69.40	
	9/2/14	68.13	---	---	3727.53	69.40	
	11/18/14	68.30	---	---	3727.36	69.40	
MW-10	6/15/11	66.63	---	---	3729.60	69.20	47-67
3796.23	9/6/11	66.80	---	---	3729.43	69.28	*2*
	11/29/11	66.97	---	---	3729.26	70.40	
	3/5/12	67.11	---	---	3729.12	70.40	
	6/5/12	67.26	---	---	3728.97	69.40	
	9/10/12	66.51	---	---	3729.72	69.46	
	12/3/12	67.60	---	---	3728.63	69.55	
	3/4/13	67.78	---	---	3728.45	69.48	
	5/28/13	67.93	---	---	3728.30	69.45	
	8/27/13	68.11	---	---	3728.12	69.52	
	11/12/13	68.27	---	---	3727.96	69.56	
	2/24/14		DRY			69.55	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
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-10	5/27/14	68.62	---	---	3727.61	69.55	
	9/3/14	68.82	---	---	3727.41	69.55	
	11/18/14	69.03	---	---	3727.20	69.55	
MW-11	6/15/11	67.11	---	---	3729.47	70.03	47-67
3796.58	9/6/11	67.28	---	---	3729.30	70.03	*2*
	11/29/11	67.45	---	---	3729.13	70.05	
	3/5/12	67.62	---	---	3728.96	70.08	
	6/5/12	67.76	---	---	3728.82	70.10	
	9/10/12	67.96	---	---	3728.62	70.11	
	12/3/12	68.10	---	---	3728.48	70.10	
	3/4/13	68.25	---	---	3728.33	70.06	
	5/28/13	68.42	---	---	3728.16	---	
	8/27/13	68.59	---	---	3727.99	70.09	
	11/12/13	68.75	---	---	3727.83	70.14	
	2/24/14		DRY			70.12	
	5/27/14	69.11	---	---	3727.47	70.12	
	9/2/14	69.31	---	---	3727.27	70.12	
	11/18/14	69.53	---	---	3727.05	70.12	
MW-12	6/15/11	68.39	---	---	3729.64	69.74	47-67
3798.03	9/6/11	68.55	---	---	3729.48	69.74	*2*
	11/29/11	68.73	---	---	3729.30	69.75	
	3/5/12	68.88	---	---	3729.15	69.78	
	6/5/12	69.04	---	---	3728.99	69.70	
	9/10/12	69.20	---	---	3728.83	69.71	
	12/3/12		DRY			69.77	
	3/4/13	69.54	---	---	3728.49	69.63	
	5/28/13		DRY			69.60	
	8/27/13		DRY			69.65	
	11/12/13		DRY			69.66	
	2/24/14		DRY			69.63	
	5/27/14		DRY			69.63	
	9/2/14		DRY			69.63	
	10/15/14			Plugged and Abandoned			
MW-12R	11/18/2014	70.80	---	---	3727.20	83.85	
3798.00							Surveyed on 11/11/14
MW-13	6/15/11	69.63	---	---	3730.02	69.72	47-67
3799.65	9/6/11	69.65	---	---	3730.00	69.74	*2*
	11/29/11	69.65	---	---	3730.00	69.75	
	3/5/12	69.67	---	---	3729.98	69.77	
	6/5/12	69.65	---	---	3730.00	69.72	
	9/10/12		DRY			69.72	
	12/3/12		DRY			69.75	
	3/4/13		DRY			69.74	
	5/28/13		DRY			69.73	
	8/27/13		DRY			69.75	
	11/12/13		DRY			69.76	
	2/24/14		DRY			69.75	
	5/27/14	69.67	---	---	3729.98	69.75	
	9/2/14	69.66	---	---	3729.99	69.75	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
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-13	11/18/14		Dry			69.75	
MW-14	6/15/11	66.68	---	---	3729.42	72.72	---
3796.10	9/6/11	66.76	---	---	3729.34	72.70	*2*
	11/29/11	66.95	---	---	3729.15	72.82	
	3/5/12	67.06	---	---	3729.04	72.86	
	6/5/12	67.26	---	---	3728.84	72.72	
	9/10/12	67.42	---	---	3728.68	72.66	
	12/3/12	67.66	---	---	3728.44	72.90	
	3/4/13	67.72	---	---	3728.38	72.65	
	5/28/13	67.88	---	---	3728.22	72.62	
	8/27/13	68.06	---	---	3728.04	72.61	
	11/12/13	68.21	---	---	3727.89	71.68	
	2/24/14	68.38	---	---	3727.72	72.71	
	5/27/14	68.56	---	---	3727.54	72.71	
	9/2/14	68.77	---	---	3727.33	72.71	
	11/18/14	69.00	---	---	3727.10	72.71	
MW-15	6/15/11	65.50	---	---	3730.46	72.75	---
3795.96	9/6/11	66.72	---	---	3729.24	72.92	*2*
	11/29/11	66.92	---	---	3729.04	73.15	
	3/5/12	67.03	---	---	3728.93	73.15	
	6/5/12	67.21	---	---	3728.75	73.00	
	9/10/12	67.36	---	---	3728.60	73.21	
	12/3/12	67.55	---	---	3728.41	73.20	
	3/4/13	67.68	---	---	3728.28	73.02	
	5/28/13	67.85	---	---	3728.11	73.05	
	8/27/13	68.02	---	---	3727.94	73.08	
	11/12/13	68.18	---	---	3727.78	73.04	
	2/24/14	68.34	---	---	3727.62	73.00	
	5/27/14	68.52	---	---	3727.44	73.00	
	9/2/14	68.73	---	---	3727.23	73.00	
	11/18/14	68.95	---	---	3727.01	73.00	
MW-16	6/15/11	65.81	---	---	3730.12	72.50	---
3795.93	9/6/11	66.03	---	---	3729.90	72.65	*2*
	11/29/11	66.19	---	---	3729.74	73.18	
	3/5/12	66.30	---	---	3729.63	73.20	
	6/5/12	66.46	---	---	3729.47	73.94	
	9/10/12	66.64	---	---	3729.29	74.02	
	12/3/12	66.80	---	---	3729.13	73.50	
	3/4/13	66.95	---	---	3728.98	73.89	
	5/28/13	67.11	---	---	3728.82	73.86	
	8/27/13	67.31	---	---	3728.62	73.89	
	11/12/13	67.46	---	---	3728.47	73.91	
	2/24/14	67.65	---	---	3728.28	70.90	
	5/27/14	67.83	---	---	3728.10	70.90	
	9/2/14	68.03	---	---	3727.90	70.90	
	11/18/14	68.22	---	---	3727.71	70.90	
RW-1	6/15/11	---	66.84	3.97	NA*	70.81	45-70
3797.66	9/6/11	70.08	67.30	2.78	3729.83	70.85	*4*
	11/29/11	69.91	67.55	2.36	3729.66	70.80	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
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	3/5/12	69.85	67.77	2.08	3729.49	70.85	
	6/5/12	---	67.55	3.25	NA*	70.80	
	9/10/12	---	67.59	3.22	NA*	70.81	
	12/4/12	---	68.12	2.73	NA*	70.85	
	3/4/13	---	68.00	2.85	NA*	70.85	
	5/28/13	---	68.12	2.73	NA*	70.85	
	8/27/13	---	68.30	2.58	NA*	70.88	
	11/12/13	---	68.49	2.41	NA*	70.90	
	2/24/14	---	68.70	2.20	NA*	70.90	
	5/27/14	---	69.09	1.95	NA*	71.04	
	9/2/14	---	69.34	1.73	NA*	71.07	
	11/18/14		69.53	1.77	NA*	71.30	
RW-2	6/15/11	67.95	67.51	0.44	3730.01	71.95	44-69
3797.60	9/6/11	68.62	67.57	1.05	3729.83	72.05	*4*
	11/29/11	70.68	67.35	3.33	3729.62	71.98	
	3/5/12	70.72	67.53	3.19	3729.46	71.99	
	6/5/12	70.28	67.92	2.36	3729.23	---	
	9/10/12	70.41	68.21	2.20	3728.97	72.10	
	12/4/12	70.01	68.25	1.76	3729.02	---	
	3/4/13	70.69	69.69	1.00	3727.72	---	
	6/4/13	70.71	69.85	0.86	3727.59	---	
	8/27/13	71.02	70.04	0.98	3727.37	---	
	11/12/13	70.66	69.78	0.88	3727.65	---	
	2/24/14	70.89	70.59	0.30	3726.95	---	
	5/27/14	---	68.92	3.17	NA*	72.09	
	7/8/14	---	69.00	3.20	NA*	72.20	
	7/24/14	69.92	69.65	0.27	3727.90	72.20	
	9/2/14	71.16	69.58	0.58	3726.91	72.10	
	11/18/14		NS				
RW-3	6/15/11	68.07	67.76	0.31	3730.99	68.25	44-69
3798.81	9/6/11	68.20	68.12	0.08	3730.67	68.29	*4*
	11/29/11		DRY				
	3/5/12	68.24	---	---	3730.57	68.29	
	6/5/12		DRY			68.08	
	7/10/12		DRY			68.00	
	12/4/12		DRY			---	
	3/4/13		DRY			68.27	
	5/28/13		DRY			68.25	
	8/27/13		DRY			68.30	
	11/12/13		DRY			68.31	
	2/24/14		DRY			68.32	
	5/27/14	68.10	---	---	3730.71	68.29	
	9/2/14	68.10	---	---	3730.71	68.29	
	10/15/14	Plugged and Abandoned					
RW-3R	11/18/14	74.20	69.75	4.45	3727.42	85.43	
3798.02							Surveyed on 11/11/14
RW-4	6/15/11	---	67.31	0.08	NA*	67.39	44-69
3798.34	9/6/11		DRY			67.43	*4*
	11/29/11		DRY			---	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
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-4	3/5/12		DRY			67.43	
	6/5/12		DRY			---	
	9/10/12		DRY			---	
	12/4/12		DRY			---	
	3/4/13		DRY			67.43	
	5/28/13		DRY			67.40	
	8/27/13		DRY			67.43	
	11/12/13		DRY			67.45	
	2/24/14		DRY			67.44	
	5/27/14		DRY			67.44	
	9/2/14		DRY			67.44	
	10/9/15		Plugged and Abandoned				
RW-4R	11/18/14	70.03	70.01	0.02	3727.60	85.42	
3797.61							Surveyed on 11/11/14
RW-5	6/15/11	67.48	---	---	3730.12	70.35	47-67
3797.60	9/6/11	67.66	---	---	3729.94	70.39	*4*
	11/29/11	67.84	---	---	3729.76	70.38	
	3/5/12	67.97	---	---	3729.63	70.39	
	6/5/12	68.27	---	---	3729.33	70.15	
	9/10/12	68.32	---	---	3729.28	70.32	
	12/4/12	68.50	---	---	3729.10	70.48	
	3/4/13	68.68	---	---	3728.92	70.36	
	5/28/13	68.83	68.80	0.03	3728.77	---	
	8/27/13	69.00	---	---	3728.60	70.40	
	11/12/13	69.16	---	---	3728.44	70.45	
	2/24/14	69.34	---	---	3728.26	70.44	
	5/27/14	69.54	---	---	3728.06	70.44	
	9/2/14	69.74	---	---	3727.86	70.44	
	11/18/14	69.90	---	---	3727.70	70.44	
RW-6	6/15/11	67.84	66.94	0.90	3730.17	68.35	47-67
3797.28	9/6/11	67.84	67.45	0.39	3729.76	68.35	*4*
	11/29/11	67.65	---	---	3729.63	68.40	
	3/5/12	67.71	67.64	0.07	3729.63	68.41	
	6/5/12	68.12	---	---	3729.16	68.30	
	9/10/12	68.31	---	---	3728.97	68.34	
	12/4/12		DRY			68.31	
	3/4/13	68.31	---	---	3728.97	68.31	
	5/28/13		DRY			68.35	
	8/27/13		DRY			68.35	
	11/12/13		DRY			68.37	
	2/24/14	68.33	---	---	3728.95	68.38	
	5/27/14		DRY			68.38	
	9/2/14	68.34	---	---	3728.94	68.38	
	11/18/14		DRY			68.38	
RW-7	6/15/11	68.92	67.13	1.79	3729.96	73.28	---
3797.43	9/6/11	68.30	67.49	0.81	3729.79	73.30	*4*
	11/29/11	67.87	67.86	0.01	3729.57	73.32	
	3/5/12	68.04	67.87	0.17	3729.53	73.44	
	6/5/12	68.17	68.12	0.05	3729.30	---	
	9/10/12	68.72	68.19	0.53	3729.14	73.31	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
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-7	12/4/12	68.75	68.40	0.35	3728.96	---	
	3/4/13	69.29	68.50	0.79	3728.78	---	
	5/28/13	69.42	68.67	0.75	3728.62	---	
	8/27/13	69.71	68.83	0.88	3728.43	---	
	11/12/13	69.95	68.95	1.00	3728.29	---	
	2/24/14	70.58	70.44	0.14	3726.96	---	
	5/27/14	69.49	69.44	0.05	3727.98	73.31	
	9/2/14	69.70	69.66	0.04	3727.76	73.31	
	11/18/14	69.90	69.83	0.07	3727.59	73.31	
RW-8	6/15/11	71.39	67.71	3.68	3729.92	72.80	---
3798.33	9/6/11	70.54	68.10	2.44	3729.77	72.94	*4*
	11/29/11	68.72	---	---	3729.61	73.00	
	3/5/12	68.85	68.83	0.02	3729.50	---	
	6/5/12	69.09	---	---	3729.24	72.95	
	9/10/12	69.20	---	---	3729.13	73.00	
	12/4/12	69.53	69.50	0.03	3728.82	73.30	
	3/4/13	69.73	69.48	0.25	3728.80	---	
	5/28/13	70.15	69.57	0.58	3728.65	---	
	8/27/13	71.13	69.60	1.53	3728.44	---	
	11/12/13	70.61	69.89	0.72	3728.30	---	
	2/24/14	72.20	71.74	0.46	3726.50	---	
	5/27/14	72.43	69.90	2.53	3727.95	73.30	
	7/8/14	72.52	69.75	2.77	3728.05	73.30	
	8/5/14	70.67	70.46	0.21	3727.83	73.30	
	9/2/14	71.34	70.43	0.91	3727.73	73.30	
	11/18/14			NS			
RW-9	6/15/11	71.69	67.11	4.58	3730.01	74.10	---
3797.99	9/6/11	71.04	67.45	3.59	3729.86	74.14	*4*
	11/29/11	68.86	68.43	0.43	3729.48	74.35	
	3/5/12	69.08	68.23	0.85	3729.60	74.38	
	6/5/12	69.15	68.90	0.25	3729.04	---	
	9/10/12	69.15	68.63	0.52	3729.26	74.23	
	12/4/12	69.77	68.72	1.05	3729.07	---	
	3/4/13	71.15	68.65	2.50	3728.87	---	
	5/28/13	71.00	68.88	2.12	3728.71	---	
	8/27/13	71.22	69.05	2.17	3728.53	---	
	11/12/13	70.93	69.27	1.66	3728.40	---	
	2/24/14	70.41	69.62	0.79	3728.22	---	
	5/27/14	71.55	69.56	1.99	3728.05	74.23	
	7/24/14	72.11	69.65	2.46	3727.87	74.23	
	8/5/14	70.45	69.98	0.47	3727.92	74.23	
	9/2/14	70.77	69.92	0.85	3727.91	74.23	
	11/18/14	71.49	70.10	1.39	3727.63	74.23	
RW-10	6/15/11	72.62	68.40	4.22	3729.90	73.49	---
3799.10	9/6/11	71.46	68.90	2.56	3729.71	72.60	*4*
	11/29/11	71.59	69.03	2.56	3729.58	73.50	
	3/5/12	70.72	69.48	1.24	3729.38	73.51	
	6/5/12	70.82	69.80	1.02	3729.11	---	
	9/10/12	71.95	69.66	2.29	3729.00	73.56	
	12/4/12	71.94	69.76	2.18	3728.93	---	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
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-10	3/4/13	73.17	69.44	3.73	3728.95	---	
	5/28/13	73.19	69.59	3.60	3728.83	---	
	8/27/13	73.10	69.78	3.32	3728.69	---	
	11/12/13	73.04	70.08	2.96	3728.46	---	
	2/24/14	73.07	70.46	2.61	3728.14	---	
	5/27/14	---	70.60	2.68	NA*	73.28	
	7/8/14	---	70.65	2.65	NA*	73.30	
	8/5/14	72.01	71.69	0.32	3727.35	73.28	
	9/2/14	---	70.72	2.32	NA*	73.04	
	11/18/14		NS				
RW-11	6/15/11	71.10	65.75	5.35	3729.88	71.10	---
3796.65	9/6/11		Pump Stuck			68.90	*4*
	11/29/11	71.35	66.16	5.19	3729.50	73.70	
	3/5/12	70.93	66.43	4.50	3729.37	73.70	
	6/5/12	69.62	66.94	2.68	3729.20	---	
	9/10/12	70.79	66.89	3.90	3729.02	73.21	
	12/4/12	70.10	67.25	2.85	3728.86	---	
	3/4/13	72.39	66.95	5.44	3728.67	---	
	5/28/13	72.72	67.08	5.64	3728.50	---	
	8/27/13	---	69.30	3.91	NA	73.21	
	11/12/13	70.72	67.94	2.78	3728.18	---	
	2/24/14	70.70	68.13	2.57	3728.03	---	
	5/27/14	---	67.82	5.08	NA*	72.90	
	7/8/14	---	67.88	4.92	n	72.80	
	8/5/14	69.35	68.86	0.49	3727.70	72.90	
	9/2/14	---	68.19	4.52	NA*	72.71	
	11/18/14			NS			
RW-12	6/15/11	69.98	67.80	2.18	3729.92	72.83	---
3798.13	9/6/11	69.22	68.16	1.06	3729.77	72.84	*4*
	11/29/11	68.90	68.62	0.28	3729.46	72.85	
	3/5/12	68.80	68.63	0.17	3729.47	72.85	
	6/5/12	69.15	---	---	3728.98	77.70	
	9/11/12	69.23	69.00	0.23	3729.09	74.10	
	12/4/12	69.37	69.11	0.26	3728.97	---	
	3/4/13	69.93	69.22	0.71	3728.78	---	
	5/28/13	70.29	69.33	0.96	3728.62	---	
	8/27/13	70.14	69.62	0.52	3728.41	---	
	11/12/13	70.42	69.71	0.71	3728.29	---	
	2/24/14	70.96	70.85	0.11	3727.26	---	
	5/27/14	70.29	70.18	0.11	3727.93	74.10	
	9/2/14	70.51	70.38	0.13	3727.73	74.10	
	11/18/14	70.70	70.57	0.13	3727.54		
RW-13	6/15/11	69.52	68.38	1.14	3729.92	73.85	---
3798.52	9/6/11	69.04	68.85	0.19	3729.63	73.92	*4*
	11/29/11	68.95	---	---	3729.57	73.90	
	3/5/12	69.25	69.01	0.24	3729.46	---	
	6/5/12	69.55	69.45	0.10	3729.05	---	
	7/10/12	69.78	69.31	0.47	3729.12	74.00	
	12/4/12	69.86	69.50	0.36	3728.95	---	
	3/4/13	70.05	69.64	0.41	3728.80	---	

TABLE 1
GROUNDWATER GAUGING SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
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-13	5/28/13	70.47	69.76	0.71	3728.63	---	
	8/27/13	70.72	69.98	0.74	3728.40	---	
	11/12/13	70.84	70.12	0.72	3728.26	---	
	2/24/14	70.54	70.36	0.18	3728.13	---	
	5/27/14	70.77	70.55	0.22	3727.93	74.00	
	9/2/14	70.99	70.76	0.23	3727.72	74.00	
	11/18/14	71.20	70.95	0.25	3727.52	74.00	
RW-14 *3798.07*	11/18/14	70.70	---	---	3727.37	85.39	--- Surveyed on 11/11/14
RW-15 *3798.16*	11/18/14	70.71	---	---	3727.45	85.57	--- Surveyed on 11/11/14

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 if LNAPL present in well.
5. NA - Total fluids column was product.
6. NS - No sample collected due to lack of water column or pump in well.

TABLE 2
GROUNDWATER BTEX ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
LEA COUNTY, NEW MEXICO

Sample ID	*Sample Date*	*Benzene*	*Toluene*	*Ethyl-Benzene*	*Total Xylenes*
New Mexico Oil Conservation Division Regulatory Limits					
		0.01	*0.75*	*0.75*	*0.62*
MW-1A	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100
	12/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00100
	11/20/14	<0.00100	<0.00100	<0.00100	<0.00100
MW-2	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100
	12/7/12	<0.00100	<0.00100	<0.00100	<0.00100
MW-3	3/2/11	<0.00100	<0.00100	<0.00100	<0.00100
	6/15/11	<0.00100	<0.00100	<0.00100	<0.00100
	9/13/11	<0.00100	<0.00100	<0.00100	<0.00100
MW-4	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100
	12/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00100
MW-5	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100
	12/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00100
	11/20/14	<0.00100	<0.00100	<0.00100	<0.00100
MW-6	3/2/11	<0.00100	<0.00100	<0.00100	<0.00100
	6/15/11	<0.00100	<0.00100	<0.00100	<0.00100
	9/13/11	<0.00100	<0.00100	<0.00100	<0.00100
	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	6/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	9/12/12	<0.00100	<0.00100	<0.00100	<0.00100
	12/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/13	<0.00100	<0.00100	<0.00100	<0.00100
	5/30/13	<0.00100	<0.00100	<0.00100	<0.00100
	8/29/13	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00100
	2/27/14	<0.00100	<0.00100	<0.00100	<0.00300
	5/29/14	<0.00100	<0.00100	<0.00100	<0.00300
	9/3/14	<0.00100	<0.00100	<0.00100	<0.00100
	11/20/14	<0.00100	<0.00100	<0.00100	<0.00100
MW-7	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100
	12/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00100
MW-8	3/2/11	<0.00100	<0.00100	**0.00760**	**0.0210**
	6/15/11	<0.00100	<0.00100	<0.00100	<0.00100
	9/13/11	<0.00100	<0.00100	<0.00100	**0.00700**
MW-9	6/15/11	<0.00100	<0.00100	<0.00100	<0.00100
	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100
	6/7/12	<0.00100	<0.00100	<0.00100	<0.00100

TABLE 2
GROUNDWATER BTEX ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
LEA COUNTY, NEW MEXICO

Sample ID	*Sample Date*	*Benzene*	*Toluene*	*Ethyl-Benzene*	*Total Xylenes*
New Mexico Oil Conservation Division Regulatory Limits					
		0.01	***0.75***	***0.75***	***0.62***
MW-9 cont.	12/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	5/30/13	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00100
	5/29/14	<0.00100	<0.00100	**0.00110**	**0.00390**
	11/20/14	<0.00100	<0.00100	<0.00100	<0.00100
MW-10	3/2/11	<0.00100	<0.00100	<0.00100	<0.00100
	6/15/11	<0.00100	<0.00100	<0.00100	<0.00100
	9/13/11	<0.00100	<0.00100	<0.00100	<0.00100
	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	6/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	9/12/12	<0.00100	<0.00100	<0.00100	<0.00100
	12/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/13	<0.00100	<0.00100	<0.00100	<0.00100
	5/30/13	<0.00100	<0.00100	<0.00100	<0.00100
	8/29/13	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00100
	5/29/14	<0.00100	<0.00100	<0.00100	<0.00300
	9/3/14	<0.00100	<0.00100	<0.00100	<0.00100
	11/20/14	<0.00100	<0.00100	<0.00100	<0.00100
MW-11	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100
	12/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	8/29/13	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00100
	9/3/14	<0.00100	<0.00100	<0.00100	<0.00100
	11/20/14	<0.00100	<0.00100	<0.00100	<0.00100
MW-12	12/1/11	**0.210**	<0.00500	**0.0147**	<0.00500
	6/7/12	**0.303**	0.134	**0.397**	**1.2**
	11/20/14	<0.00100	<0.00100	<0.00100	<0.00100
MW-14	3/2/11	<0.00100	<0.00100	<0.00100	<0.00100
	6/15/11	<0.00100	<0.00100	<0.00100	<0.00100
	9/13/11	<0.00100	<0.00100	<0.00100	<0.00100
	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	6/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	9/12/12	<0.00100	<0.00100	<0.00100	<0.00100
	12/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/13	<0.00100	<0.00100	<0.00100	<0.00100
	5/30/13	<0.00100	<0.00100	<0.00100	<0.00100
	8/29/13	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00100
	2/27/14	<0.00100	<0.00100	<0.00100	<0.00300
	5/29/14	<0.00100	<0.00100	<0.00100	<0.00300
	9/3/14	<0.00100	<0.00100	<0.00100	<0.00100

TABLE 2
GROUNDWATER BTEX ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
LEA COUNTY, NEW MEXICO

Sample ID	*Sample Date*	*Benzene*	*Toluene*	*Ethyl-Benzene*	*Total Xylenes*
New Mexico Oil Conservation Division Regulatory Limits					
		0.01	*0.75*	*0.75*	*0.62*
MW-14 cont.	11/20/14	<0.00100	<0.00100	<0.00100	<0.00100
MW-15	3/2/11	<0.00100	<0.00100	<0.00100	<0.00100
	6/15/11	<0.00100	<0.00100	<0.00100	<0.00100
	9/13/11	<0.00100	<0.00100	<0.00100	<0.00100
	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	6/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	9/12/12	<0.00100	<0.00100	<0.00100	<0.00100
	12/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/13	<0.00100	<0.00100	<0.00100	<0.00100
	5/30/13	<0.00100	<0.00100	<0.00100	<0.00100
	8/29/13	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00100
	2/27/14	<0.00100	<0.00100	<0.00100	<0.00300
	5/29/14	<0.00100	<0.00100	<0.00100	<0.00300
	9/3/14	<0.00100	<0.00100	<0.00100	<0.00100
	11/20/14	<0.00100	<0.00100	<0.00100	<0.00100
MW-16	3/2/11	<0.00100	<0.00100	<0.00100	<0.00100
	6/15/11	<0.00100	<0.00100	<0.00100	<0.00100
	9/13/11	<0.00100	<0.00100	<0.00100	<0.00100
	12/1/11	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	6/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	9/12/12	<0.00100	<0.00100	<0.00100	<0.00100
	12/7/12	<0.00100	<0.00100	<0.00100	<0.00100
	3/7/13	<0.00100	<0.00100	<0.00100	<0.00100
	5/30/13	<0.00100	<0.00100	<0.00100	<0.00100
	8/29/13	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00100
	2/27/14	<0.00100	<0.00100	<0.00100	<0.00300
	5/29/14	<0.00100	<0.00100	<0.00100	<0.00300
	9/3/14	<0.00100	<0.00100	<0.00100	<0.00100
	11/20/14	<0.00100	<0.00100	<0.00100	<0.00100
RW-5	3/2/11	**0.00830**	<0.00100	**0.0206**	**0.0360**
	6/15/11	**0.0109**	<0.00100	<0.00100	<0.00100
	9/13/11	**0.0151**	**0.00850**	**0.247**	**0.382**
	12/1/11	<0.00100	**0.0478**	**0.354**	**0.758**
	3/7/12	**0.0548**	**0.0550**	**0.268**	**0.675**
	6/7/12	<0.00100	**0.0092**	**0.220**	**0.592**
	9/12/12	**0.0337**	<0.00100	**0.111**	**0.289**
	12/7/12	<0.00100	<0.00100	**0.0498**	**0.0488**
	3/7/13	<0.00100	<0.00100	**0.0294**	**0.0132**
	8/29/13	<0.00100	<0.00100	<0.00100	<0.00100
	11/14/13	<0.00100	<0.00100	<0.00100	<0.00100

TABLE 2
GROUNDWATER BTEX ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
LEA COUNTY, NEW MEXICO

Sample ID	*Sample Date*	*Benzene*	*Toluene*	*Ethyl-Benzene*	*Total Xylenes*
New Mexico Oil Conservation Division Regulatory Limits					
		0.01	*0.75*	*0.75*	*0.62*
RW-5 cont.	2/27/14	<0.00100	<0.00100	**0.0072**	<0.00300
	5/29/14	**0.00100**	<0.00100	**0.00250**	<0.00300
	9/3/14	<0.00100	<0.00100	**0.00140**	**0.00780**
RW-6	12/1/11	**0.0794**	**0.129**	**0.639**	**1.75**
RW-8	12/1/11	**1.21**	**1.57**	**0.685**	**2.55**
	6/7/12	**1.55**	**0.184**	**0.520**	**1.90**
RW-12	6/7/12	**0.303**	**0.134**	**0.397**	**1.20**
RW-13	3/2/11	**1.21**	**0.910**	**0.914**	**2.15**
	12/1/11	**1.08**	**0.219**	**0.311**	**0.776**
RW-14	11/20/14	**0.052**	<0.00100	**0.0493**	**0.0123**
RW-15	11/20/14	**0.0101**	**0.0117**	**0.0122**	**0.128**

Notes:

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

TABLE 3
GROUNDWATER PAH ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	Napthalene	1-Methylnapthalene	2-Methylnapthalene	Dibenzofuran
NMWQCC Drinking Water Standards Section 1-101.UU and 3-103.A																				
					0.001	0.007	0.002		0.002	0.002	0.003			0.004			0.03			
MW-1A	12/3/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	12/1/09	<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	**0.000974**	<0.000183	<0.000183	<0.000183
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
	11/20/14	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.000195	<0.00195	<0.000195	<0.000195
MW-2	12/3/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	12/1/09	<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
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
MW-3	12/3/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	12/1/09	<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
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
MW-3R	11/20/14	Not sampled due to LNAPL present in well																		
MW-4	12/3/08	<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	0.000209	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	12/1/09	<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
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
MW-5	12/3/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	12/1/09	<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
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
MW-6	12/3/08	<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	**0.000391**	<0.000183	<0.000183	<0.000183	<0.000183	**0.000285**
	12/1/09	<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
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
	12/1/11	<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
MW-7	12/3/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	12/1/09	<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
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		

TABLE 3
GROUNDWATER PAH ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	Napthalene	1-Methylnapthalene	2-Methylnapthalene	Dibenzofuran
NMWQCC Drinking Water Standards Section 1-101.UU and 3-103.A																				
					0.001	**0.007**	**0.002**		**0.002**	**0.002**	**0.003**			**0.004**				**0.03**		
MW-8	12/3/08	<0.000192	<0.000192	<0.000192	<0.000192	<0.000192	<0.000192	<0.000192	<0.000192	<0.000192	<0.000192	<0.000192	**0.00604**	<0.000192	**0.00597**	<0.000192	**0.00205**	**0.0108**	**0.00967**	**0.00451**
	12/1/09	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0617**	<0.000917	**0.00241**	<0.000917	<0.000917	<0.000917	<0.000917	**0.00402**
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
MW-9	12/3/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	12/1/09	<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
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
MW-10	12/3/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	12/1/09	<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
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
MW-11	12/3/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	12/1/09	<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
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
MW-12	12/3/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	12/1/09	<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
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
MW-12R	11/20/14	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199	<0.000199
MW-13	12/3/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	12/1/09	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
MW-14	12/3/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	12/1/09	<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
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
MW-15	12/3/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	12/2/09	<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
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
MW-16	12/3/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	12/1/09	<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

TABLE 3
GROUNDWATER PAH ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	Napthalene	1-Methylnapthalene	2-Methylnapthalene	Dibenzofuran
NMWQCC Drinking Water Standards Section 1-101.UU and 3-103.A																				
					0.001	**0.007**	**0.002**		**0.002**	**0.002**	**0.003**			**0.004**			**0.03**			
MW-16	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
RW-1	12/3/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00669**	<0.000184	**0.0084**	<0.000184	**0.0278**	**0.0518**	**0.0478**	**0.00414**
	12/2/09	Not sampled due to insufficient water volume																		
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
RW-2	12/3/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.019**	<0.000184	**0.0227**	<0.000184	**0.0656**	**0.166**	**0.153**	**0.0115**
	12/2/09	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	<0.00461	**0.248**	<0.00461	**0.336**	<0.00461	**0.808**	**2.17**	**3.02**	**0.145**
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
RW-3	12/3/08	Not sampled due to insufficient water volume																		
	12/2/09	Not sampled due to insufficient water volume																		
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
RW-3R	11/20/14	Not sampled due to LNAPL present in well																		
RW-4	12/3/08	Not sampled due to insufficient water volume																		
	12/2/09	Not sampled due to insufficient water volume																		
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
RW-4R	11/20/14	Not sampled due to LNAPL present in well																		
RW-5	12/3/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.00148**	<0.000183	0.000841	<0.000183	**0.0254**	**0.0160**	**0.0144**	**0.00133**
	12/2/09	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	<0.000187	**0.00763**	**0.00624**	**0.00263**	**0.000674**
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
	12/7/12	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	0.00213	<0.000190	0.013	**0.0137**	**0.00994**	**0.00171**
RW-6	12/3/08	Not sampled due to insufficient water volume																		
	12/2/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.00340**	<0.000183	**0.00476**	<0.000183	**0.0382**	**0.0445**	**0.0553**	**0.00257**
	11/23/10	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.00513**	<0.000183	<0.000183	<0.000183	**0.0486**	**0.0529**	**0.0633**	**0.00378**
	12/1/11	<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
RW-7	12/3/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.0179**	<0.000184	**0.0232**	<0.000184	**0.0942**	**0.172**	**0.158**	**0.0118**
	12/2/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.0400**	<0.000183	**0.0570**	<0.000183	**0.172**	**0.408**	**0.506**	**0.0240**
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		

TABLE 3
GROUNDWATER PAH ANALYTICAL SUMMARY
PLAINS PIPELINE, L.P.
DARR ANGELL NO. 4
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	Napthalene	1-Methylnapthalene	2-Methylnapthalene	Dibenzofuran
NMWQCC Drinking Water Standards Section 1-101.UU and 3-103.A																				
					0.001	**0.007**	**0.002**		**0.002**	**0.002**	**0.003**			**0.004**			**0.03**			
RW-8	12/3/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.0128**	<0.000183	**0.0164**	<0.000183	**0.0496**	**0.115**	**0.106**	**0.00891**
	12/2/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.0106**	<0.000183	**0.0145**	<0.000183	**0.0534**	**0.102**	**0.128**	**0.00772**
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
RW-9	12/3/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00907**	<0.000184	**0.0112**	<0.000184	**0.0574**	**0.0859**	**0.0791**	**0.00642**
	12/2/09	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0488**	<0.000917	**0.0679**	<0.000917	**0.215**	**0.473**	**0.625**	**0.0320**
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
RW-10	12/3/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.0265**	<0.000183	**0.0346**	<0.000183	**0.121**	**0.279**	**0.257**	**0.0193**
	12/2/09	Not sampled due to insufficient water volume																		
RW-10	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
RW-11	12/3/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.0076**	<0.000184	**0.0093**	<0.000184	**0.053**	**0.066**	**0.0609**	**0.00494**
	12/2/09	Not sampled due to insufficient water volume																		
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
RW-12	12/3/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.0193**	<0.000183	**0.0242**	<0.000183	**0.11**	**0.198**	**0.182**	**0.0143**
	12/2/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.0127**	<0.000184	**0.0182**	<0.000184	**0.049**	**0.112**	**0.141**	**0.0081**
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
RW-13	12/3/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	**0.00409**	<0.000184	<0.000184	**0.0187**	<0.000184	**0.0234**	<0.000184	**0.0608**	**0.139**	**0.128**	**0.0131**
	12/2/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	**0.0013**	<0.000183	**0.00156**	<0.000183	**0.00094**	**0.00489**	**0.00337**	**0.000891**
	11/23/10	Not sampled as part of Quarterly Monitoring Event																		
RW-14	11/20/14	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198	<0.000198
RW-15	11/20/14	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190

Notes:

1. Shaded cells indicate New Mexico Water Control Commission Limit exceedance.
2. **Bold** indicates detection.
3. PAH analyses by EPA Method 8270.
4. Results shown in mg/L.
5. 2008 through 2010 analytical results collected by NOVA.

TABLE 4

COLOR CODED TABLE (PSH, BENZENE AND CLEAN WELLS)

PLAINS PIPELINE, L.P.

DARR ANGELL NO. 4

LEA COUNTY, NEW MEXICO

	PSH (feet)			Benzene (mg/L)		Clean			
	MW-1A	MW-2	MW-3	MW-3R	MW-4	MW-5	MW-6	MW-7	MW-8
1st Quarter 2010	NSC	NSC			NSC	NSC		NSC	
2nd Quarter 2010	NSC	NSC			NSC	NSC		NSC	
3rd Quarter 2010	NSC	NSC			NSC	NSC		NSC	
4th Quarter 2010									
1st Quarter 2011	NSC	NSC			NSC	NSC		NSC	
2nd Quarter 2011 *	NSC	NSC			NSC	NSC		NSC	
3rd Quarter 2011	NSC	NSC			NSC	NSC		NSC	
4th Quarter 2011			---						---
1st Quarter 2012	NSC	NSC	---		NSC	NSC		NSC	0.03
2nd Quarter 2012	NSC	NSC	NS		NSC	NSC		NSC	
3rd Quarter 2012	NSC	NSC	DRY		NSC	NSC		NSC	DRY
4th Quarter 2012			DRY						DRY
1st Quarter 2013	NSC	NSC	DRY		NSC	NSC		NSC	DRY
2nd Quarter 2013	NSC	NSC	DRY		NSC	NSC		NSC	DRY
3rd Quarter 2013	NSC	NSC	DRY		NSC	NSC		NSC	DRY
4th Quarter 2013		DRY	DRY						DRY
1st Quarter 2014	NSC	DRY	DRY		NSC	NSC		NSC	DRY
2nd Quarter 2014	NSC	NSC	DRY		NSC	NSC		NSC	DRY
3rd Quarter 2014	NSC	NSC	DRY		NSC	NSC		NSC	DRY
4th Quarter 2014		DRY	DRY	4.48	NSC			NSC	DRY

	MW-9	MW-10	MW-11	MW-12	MW-12R	MW-13	MW-14	MW-15	MW-16
1st Quarter 2010	NSC		NSC	NSC		NSC		0.0042	
2nd Quarter 2010			NSC	NSC		NSC			
3rd Quarter 2010	NSC		NSC	NSC		NSC			
4th Quarter 2010				0.658					
1st Quarter 2011	NSC		NSC	NSC		NSC			
2nd Quarter 2011 *			NSC	NSC		NSC			
3rd Quarter 2011	NSC		NSC	NSC		NSC			
4th Quarter 2011				0.210		NSC			
1st Quarter 2012	NSC		NSC	NSC		NSC			
2nd Quarter 2012			NSC	NSC		NSC			
3rd Quarter 2012	NSC		NSC	NSC		NSC			
4th Quarter 2012				DRY		DRY			
1st Quarter 2013	NSC		NSC	DRY		DRY			
2nd Quarter 2013			NSC	DRY		DRY			
3rd Quarter 2013	NSC			DRY		DRY			
4th Quarter 2013				DRY		DRY			
1st Quarter 2014	NSC	NSC	NSC	NSC		DRY			

TABLE 4

COLOR CODED TABLE (PSH, BENZENE AND CLEAN WELLS)

PLAINS PIPELINE, L.P.

DARR ANGELL NO. 4

LEA COUNTY, NEW MEXICO

2nd Quarter 2014			NSC	DRY		DRY			
3rd Quarter 2014	NSC			DRY		NSC			
4th Quarter 2014				DRY		DRY			

	RW-1	RW-2	RW-3	RW-3R	RW-4	RW-4R	RW-5	RW-6	RW-7
1st Quarter 2010	--	1.02	1.20		--		0.0172	0.285	.73
2nd Quarter 2010	--	1.15	--		--		0.0120	0.278	1.79
3rd Quarter 2010	1.13	1.23	0.87		0.54			0.147	0.24
4th Quarter 2010	1.14	1.27	0.88		--			0.248	0.27
1st Quarter 2011	1.23	1.20	0.82		--			0.04	0.27
2nd Quarter 2011 *	3.97	0.44	0.31		0.08		0.0109	0.90	1.79
3rd Quarter 2011	2.78	1.05	0.08		DRY		0.0151	0.39	0.81
4th Quarter 2011	2.36	3.33	DRY		DRY			0.0794	---
1st Quarter 2012	2.08	3.19	DRY		DRY		0.0548	0.07	0.17
2nd Quarter 2012	3.25	2.36	DRY		DRY			NSC	0.05
3rd Quarter 2012	3.22	2.20	DRY		DRY		0.0337	NSC	0.53
4th Quarter 2012	2.73	1.76	DRY		DRY			DRY	0.35
1st Quarter 2013	2.85	1.00	DRY		DRY				0.79
2nd Quarter 2013	2.73	0.86	DRY		DRY		0.03	DRY	0.75
3rd Quarter 2013	2.58	0.98	DRY		DRY			DRY	0.88
4th Quarter 2013	2.41	0.88	DRY		DRY			DRY	1.00
1st Quarter 2014	2.20	0.30	DRY		DRY			NSC	0.14
2nd Quarter 2014	1.95	3.17	DRY		DRY		0.001	DRY	0.05
3rd Quarter 2014	1.73	0.58	NSC		DRY			DRY	0.04
4th Quarter 2014	1.77	NS	DRY	4.45	DRY	0.02	NSC	DRY	0.07

	RW-8	RW-9	RW-10	RW-11	RW-12	RW-13	RW-14	RW-15
1st Quarter 2010	1.41	1.64	4.34	5.74	0.95	0.930		
2nd Quarter 2010	0.76	0.83	3.17	6.13	0.55	1.150		
3rd Quarter 2010	0.66	0.76	3.25	6.13	0.33	0.537		
4th Quarter 2010	0.68	0.72	--	6.06	0.26	2.060		
1st Quarter 2011	0.64	0.25	2.56	5.78	0.25	1.210		
2nd Quarter 2011 *	3.68	4.58	4.22	5.35	2.18	1.14		
3rd Quarter 2011	2.44	3.59	2.56	Pump Stuck	1.06	0.19		
4th Quarter 2011	1.21	0.43	2.56	5.19	0.28	1.08		
1st Quarter 2012	0.02	0.85	1.24	4.50	0.17	0.24		
2nd Quarter 2012	1.55	0.25	1.02	2.68	0.303	0.10		
3rd Quarter 2012	NS	0.52	2.29	3.90	0.23	0.47		
4th Quarter 2012	0.03	1.05	2.18	2.85	0.26	0.36		
1st Quarter 2013	0.25	2.50	3.73	5.44	0.71	0.41		
2nd Quarter 2013	0.58	2.12	3.60	5.64	0.96	0.71		
3rd Quarter 2013	1.53	2.17	3.32	3.91	0.52	0.74		

TABLE 4

COLOR CODED TABLE (PSH, BENZENE AND CLEAN WELLS)

PLAINS PIPELINE, L.P.

DARR ANGELL NO. 4

LEA COUNTY, NEW MEXICO

4th Quarter 2013	0.72	1.66	2.96	2.78	0.71	0.72			
1st Quarter 2014	0.46	0.79	2.61	2.57	0.11	0.18			
2nd Quarter 2014	2.53	1.99	2.68	5.08	0.11	0.22			
3rd Quarter 2014	1.09	0.85	2.32	4.52	0.13	0.23			
4th Quarter 2014	NS	1.39	NS	NS	0.01	0.25	0.0520	0.0101	

* CRA took over for NOVA

NSC - Not Scheduled

NS - Not Sampled

Appendices

Appendix A

Stratigraphic Logs and Well Construction Details (MW-3R, MW-12R, RW-3R, RW-4R, RW-14 and RW-15)

STRATIGRAPHIC LOG

PROJECT NAME: Darr Angell #4
PROJECT NUMBER: 074684
CLIENT: Plain Pipeline, L.P.
LOCATION: Lea County, New Mexico

HOLE DESIGNATION: MW-3R
DATE COMPLETED: October 15, 2014
DRILLING METHOD: Air Rotary (2" O.D.): 0'-82'
FIELD PERSONNEL: J. Fergerson
DRILLING COMPANY: Talon LPE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	Grayish brown silty sandy CLAY (CL), broken caliche in matrix, moist, no hydrocarbon odor	1.00					
	Pale yellow CALICHE, dense to weathered, slightly moist, no hydrocarbon odor						
	Pale yellow CALICHE, weathered to dense, interbedded with poor to moderate cemented very fine sandstone, dry, no hydrocarbon odor	11.00	1				0.1
	Light yellow orange CALICHE, weathered to dense, interbedded with poor to well cemented very fine grain sandstone, dry, no hydrocarbon odor	16.00					
	Light yellow orange SAND (SP) very fine grain, unconsolidated, interbedded with poor to well cemented very fine grain sandstone, dry, no hydrocarbon odor	20.00					
	Dull orange SAND (SP), very fine grain, unconsolidated interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	26.00	2				0.3

NOTES:

WATER FOUND ▽

OVERBURDEN LOG 074684 (MW3R-RW15).GPJ CRA_CORP.GDT 4/2/15

STRATIGRAPHIC LOG

PROJECT NAME: Darr Angell #4
PROJECT NUMBER: 074684
CLIENT: Plain Pipeline, L.P.
LOCATION: Lea County, New Mexico

HOLE DESIGNATION: MW-3R
DATE COMPLETED: October 15, 2014
DRILLING METHOD: Air Rotary (2" O.D.): 0'-82'
FIELD PERSONNEL: J. Fergerson
DRILLING COMPANY: Talon LPE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
50	Dull orange SAND (SP), very fine grain, unconsolidated interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	50.00					
52							
54							
56							
58		58.00					
60	Dull orange SAND (SP) very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, moist, no hydrocarbon odor						
62			3				0.3
64							
66							
68		67.00 ▽					
70	Dull orange SAND (SP) very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, wet, no hydrocarbon odor						
72							
74							
76							
78							--
80							
82	END OF BOREHOLE @ 82.0ft BGS	82.00					
84							
86							
88							
90							
92							
94							
96							
98							

NOTES:

WATER FOUND ▽

OVERBURDEN LOG 074684 (MW3R-RW15).GPJ CRA_CORP.GDT 4/2/15

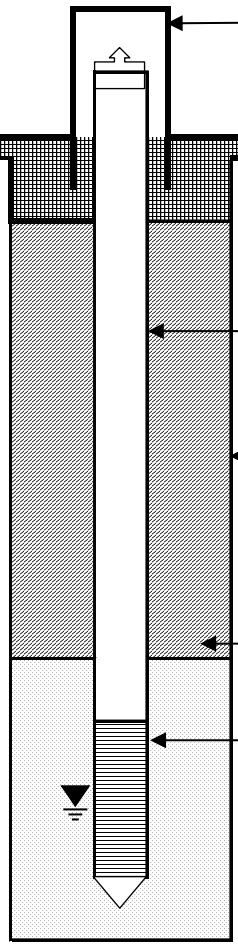
MONITORING WELL CONSTRUCTION DETAIL

Project: Plains - Darr Angell #4

Client: Plains Pipeline L.P.

Monitoring Well No.: MW-3R

File No.:	074684
Date:	10/15/2014
Drilling Co.:	Talon LPE
Supervisor:	
Type Rig:	Air Rotary
Logged by:	J. Fergerson



Top of Casing Elevation: _____
Casing Stick-up: 3.1

Ground Surface

Top of Seal at 2.0

Bottom of Seal at 58.0

Top of Screen at 61.5

Depth to Groundwater (bgs) ~ 67.0

Bottom of screen at 81.5
Bottom of end cap at
Total Well Depth (bgs) 82.0

Surface Casing Protective Cover

Surface Seal: Cement

Well Casing 2"

Diameter Borehole 6 1/4"

Seal Type: Bentonite

Diameter 2"
40 PVC Well Screen

Note: All dimensions are below ground surface (bgs) except where noted.

Screen Type:	slotted	perforated	other:
Screen Material:	stainless steel	PVC	other:
Screen Length: 20	Screen Diameter:		Screen Slot Size: 0.010
Well Casing Material:			Well Casing Diameter:
Development - Method: Bailer			Hole Diameter:
Duration/Volume: 55 gallons			

STRATIGRAPHIC LOG

PROJECT NAME: Darr Angell #4
PROJECT NUMBER: 074684
CLIENT: Plain Pipeline, L.P.
LOCATION: Lea County, New Mexico

HOLE DESIGNATION: MW-12R
DATE COMPLETED: October 15, 2014
DRILLING METHOD: Air Rotary (2" O.D.): 0'-82'
FIELD PERSONNEL: J. Fergerson
DRILLING COMPANY: Talon LPE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	Grayish brown silty sandy CLAY (CL), broken caliche in matrix, moist, no hydrocarbon odor	1.00					
	Pale yellow CALICHE, dense to weathered, slightly moist, no hydrocarbon odor						
	Pale yellow CALICHE, weathered to dense, interbedded with poor to moderate cemented very fine grain sandstone, dry, no hydrocarbon odor	9.00	1				0.5
	Light yellow orange SAND (SP), very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	18.00					
	Dull reddish brown SANDSTONE, dense, dry, no hydrocarbon odor	25.00					
	Dull orange SAND (SP), very fine grain, unconsolidated interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	32.00	2				0.03

NOTES:

WATER FOUND ▽

OVERBURDEN LOG 074684 (MW3R-RW15).GPJ CRA_CORP.GDT 4/2/15

STRATIGRAPHIC LOG

PROJECT NAME: Darr Angell #4
PROJECT NUMBER: 074684
CLIENT: Plain Pipeline, L.P.
LOCATION: Lea County, New Mexico

HOLE DESIGNATION: MW-12R
DATE COMPLETED: October 15, 2014
DRILLING METHOD: Air Rotary (2" O.D.): 0'-82'
FIELD PERSONNEL: J. Fergerson
DRILLING COMPANY: Talon LPE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
50	Dull orange SAND (SP), very fine grain, unconsolidated interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	50.00	3				0.01
68	Dull orange SAND (SP), very fine grain, unconsolidated interbedded with moderate to well cemented very fine grain sandstone, wet, no hydrocarbon odor	68.00 ▽					--
82	END OF BOREHOLE @ 82.0ft BGS	82.00					

NOTES:

WATER FOUND ▽

OVERBURDEN LOG 074684 (MW3R-RW15).GPJ CRA_CORP.GDT 4/2/15

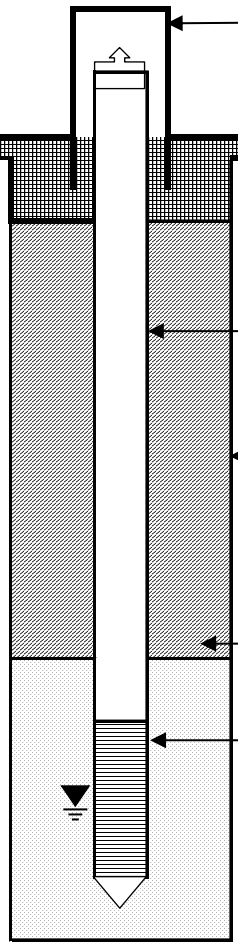
MONITORING WELL CONSTRUCTION DETAIL

Project: Plains - Darr Angell #4

Client: Plains Pipeline L.P.

Monitoring Well No.: MW-12R

File No.:	074684
Date:	10/15/2014
Drilling Co.:	Talon LPE
Supervisor:	
Type Rig:	Air Rotary
Logged by:	J. Fergerson



Top of Casing Elevation: _____
Casing Stick-up: 3.1

Ground Surface

Top of Seal at 2.0

Bottom of Seal at 58.0

Top of Screen at 59.5

Depth to Groundwater (bgs) ~ 68.0

Bottom of screen at 79.5
Bottom of end cap at
Total Well Depth (bgs) 82.0

Surface Casing Protective Cover

Surface Seal: Cement

Well Casing 2"

Diameter Borehole 6 1/4"

Seal Type: Bentonite

Diameter 2"
40 PVC Well Screen

Note: All dimensions are below ground surface (bgs) except where noted.

Screen Type: slotted perforated other: _____

Screen Material: stainless steel PVC other: _____

Screen Length: 20 Screen Diameter: _____ Screen Slot Size: 0.010

Well Casing Material: _____ Well Casing Diameter: _____

Development - Method: Bailer Hole Diameter: _____

Duration/Volume: 55 gallons

STRATIGRAPHIC LOG

PROJECT NAME: Darr Angell #4
PROJECT NUMBER: 074684
CLIENT: Plain Pipeline, L.P.
LOCATION: Lea County, New Mexico

HOLE DESIGNATION: RW-3R
DATE COMPLETED: October 14, 2014
DRILLING METHOD: Air Rotary (4" O.D.): 0'-82'
FIELD PERSONNEL: J. Fergerson
DRILLING COMPANY: Talon LPE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	Grayish brown silty sandy CLAY (CL), broken caliche in matrix, moist, no hydrocarbon odor	1.00					
	Pale yellow CALICHE, dense to weathered, slightly moist, no hydrocarbon odor						
	Pale yellow CALICHE, weathered to dense, interbedded with poor to moderate cemented very fine grain sandstone, dry, no hydrocarbon odor	9.00	1				0.3
	Light yellow orange SAND (SP), very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	18.00					
	Dull orange SAND (SP) very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	27.00					
	-- hydrocarbon odor in cuttings	48.00	2				168

NOTES:

WATER FOUND ▽

OVERBURDEN LOG 074684 (MW3R-RW15).GPJ CRA_CORP.GDT 4/2/15

STRATIGRAPHIC LOG

PROJECT NAME: Darr Angell #4
PROJECT NUMBER: 074684
CLIENT: Plain Pipeline, L.P.
LOCATION: Lea County, New Mexico

HOLE DESIGNATION: RW-3R
DATE COMPLETED: October 14, 2014
DRILLING METHOD: Air Rotary (4" O.D.): 0'-82'
FIELD PERSONNEL: J. Fergerson
DRILLING COMPANY: Talon LPE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
52	Dull orange SAND (SP) very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, dry, moderate hydrocarbon odor	50.00	3				169.2
68	Dull orange SAND (SP), very fine grain, unconsolidated interbedded with moderate to well cemented very fine grain sandstone, wet, moderate hydrocarbon odor	68.00 ▽					--
82	END OF BOREHOLE @ 82.0ft BGS	82.00					

NOTES:

WATER FOUND ▽

OVERBURDEN LOG 074684 (MW3R-RW15).GPJ CRA_CORP.GDT 4/2/15

MONITORING WELL CONSTRUCTION DETAIL

Project: Plains - Darr Angell #4

Client: Plains Pipeline L.P.

Monitoring Well No.: RW-3R

File No.:	074684
Date:	10/14/2014
Drilling Co.:	Talon LPE
Supervisor:	
Type Rig:	Air Rotary
Logged by:	J. Fergerson

Top of Casing Elevation: _____
Casing Stick-up: 2.7

Ground Surface

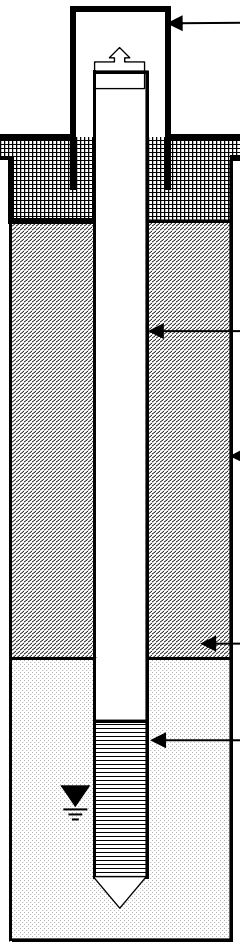
Top of Seal at 2.0

Bottom of Seal at 60.0

Top of Screen at 61.5

Depth to Groundwater (bgs) ~ 68.0

Bottom of screen at 81.5
Bottom of end cap at
Total Well Depth (bgs) 82.0



Surface Casing Protective Cover

Surface Seal: Cement

Well Casing 4"

Diameter Borehole 7 7/8"

Seal Type: Bentonite

Diameter 4"
40 PVC Well Screen

Note: All dimensions are below ground surface (bgs) except where noted.

Screen Type: slotted perforated other: _____

Screen Material: stainless steel PVC other: _____

Screen Length: 20 Screen Diameter: _____ Screen Slot Size: 0.010

Well Casing Material: _____ Well Casing Diameter: _____

Development - Method: Bailer Hole Diameter: _____

Duration/Volume: 55 gallons

STRATIGRAPHIC LOG

PROJECT NAME: Darr Angell #4
PROJECT NUMBER: 074684
CLIENT: Plain Pipeline, L.P.
LOCATION: Lea County, New Mexico

HOLE DESIGNATION: RW-4R
DATE COMPLETED: October 9, 2014
DRILLING METHOD: Air Rotary (4" O.D.): 0'-82'
FIELD PERSONNEL: J. Fergerson
DRILLING COMPANY: Talon LPE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	Grayish brown silty sandy CLAY (CL), broken caliche in matrix, moist, no hydrocarbon odor	1.00					
	Pale yellow CALICHE, dense to weathered, slightly moist, no hydrocarbon odor						
	Pale yellow CALICHE, weathered to dense, interbedded with poor to moderate cemented very fine sandstone, dry, no hydrocarbon odor	11.00	1				3.2
	Light yellow orange CALICHE, weathered to dense, interbedded with poor to well cemented very fine grain sandstone, dry, no hydrocarbon odor	16.00					
	Light yellow orange SAND (SP) very fine grain, unconsolidated, interbedded with poor to well cemented very fine grain sandstone, dry, no hydrocarbon odor	20.00					
	Dull orange SAND (SP), very fine grain, unconsolidated interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	26.00	2				87.9
	-- hydrocarbon odor in cuttings	47.00					

NOTES:

WATER FOUND ▽

OVERBURDEN LOG 074684 (MW3R-RW15).GPJ CRA_CORP.GDT 4/2/15

STRATIGRAPHIC LOG

PROJECT NAME: Darr Angell #4
PROJECT NUMBER: 074684
CLIENT: Plain Pipeline, L.P.
LOCATION: Lea County, New Mexico

HOLE DESIGNATION: RW-4R
DATE COMPLETED: October 9, 2014
DRILLING METHOD: Air Rotary (4" O.D.): 0'-82'
FIELD PERSONNEL: J. Fergerson
DRILLING COMPANY: Talon LPE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
52	Dull orange SAND (SP), very fine grain, unconsolidated interbedded with moderate to well cemented very fine grain sandstone, dry, slight to moderate hydrocarbon odor	50.00					
58	Dull orange SAND (SP) very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, moist, moderate hydrocarbon odor	58.00	3				150
68	Dull orange SAND (SP) very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, wet, moderate hydrocarbon odor	67.00 ▽					--
82	END OF BOREHOLE @ 82.0ft BGS	82.00					

NOTES:

WATER FOUND ▽

OVERBURDEN LOG 074684 (MW3R-RW15).GPJ CRA_CORP.GDT 4/2/15

MONITORING WELL CONSTRUCTION DETAIL

Project: Plains - Darr Angell #4

Client: Plains Pipeline L.P.

Monitoring Well No.: RW-4R

File No.:	074684
Date:	10/9/2014
Drilling Co.:	Talon LPE
Supervisor:	
Type Rig:	Air Rotary
Logged by:	J. Fergerson

Top of Casing Elevation: _____
Casing Stick-up: 2.6

Ground Surface

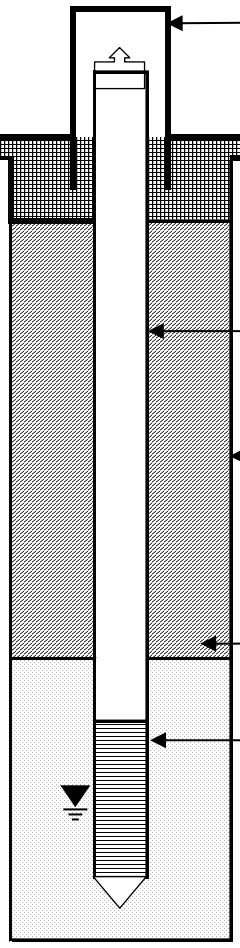
Top of Seal at 2.0

Bottom of Seal at 60.0

Top of Screen at 61.5

Depth to Groundwater (bgs) ~ 67.0

Bottom of screen at 81.5
Bottom of end cap at
Total Well Depth (bgs) 82.0



Surface Casing Protective Cover

Surface Seal: Cement

Well Casing 4"

Diameter Borehole 7 7/8"

Seal Type: Bentonite

Diameter 4"
40 PVC Well Screen

Note: All dimensions are below ground surface (bgs) except where noted.

Screen Type: slotted perforated other: _____

Screen Material: stainless steel PVC other: _____

Screen Length: 20 Screen Diameter: _____ Screen Slot Size: 0.010

Well Casing Material: _____ Well Casing Diameter: _____

Development - Method: Bailer Hole Diameter: _____

Duration/Volume: 55 gallons

STRATIGRAPHIC LOG

PROJECT NAME: Darr Angell #4
PROJECT NUMBER: 074684
CLIENT: Plain Pipeline, L.P.
LOCATION: Lea County, New Mexico

HOLE DESIGNATION: RW-14
DATE COMPLETED: October 14, 2014
DRILLING METHOD: Air Rotary (4" O.D.): 0'-82'
FIELD PERSONNEL: J. Fergerson
DRILLING COMPANY: Talon LPE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	Grayish brown silty sandy CLAY (CL), broken caliche in matrix, moist, no hydrocarbon odor	1.00					
	Pale yellow CALICHE, dense to weathered, slightly moist, no hydrocarbon odor						
	Pale yellow CALICHE, weathered to dense, interbedded with poor to moderate cemented very fine grain sandstone, dry, no hydrocarbon odor	9.00	1				0.0
	Light yellow orange SAND (SP), very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	18.00					
	Dull orange SAND (SP) very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	27.00	2				0.2

NOTES:

WATER FOUND ▽

OVERBURDEN LOG 074684 (MW3R-RW15).GPJ CRA_CORP.GDT 4/2/15

STRATIGRAPHIC LOG

PROJECT NAME: Darr Angell #4
PROJECT NUMBER: 074684
CLIENT: Plain Pipeline, L.P.
LOCATION: Lea County, New Mexico

HOLE DESIGNATION: RW-14
DATE COMPLETED: October 14, 2014
DRILLING METHOD: Air Rotary (4" O.D.): 0'-82'
FIELD PERSONNEL: J. Fergerson
DRILLING COMPANY: Talon LPE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
50	Dull orange SAND (SP) very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	50.00	3				2.5
68	Dull orange SAND (SP), very fine grain, unconsolidated interbedded with moderate to well cemented very fine grain sandstone, wet, no hydrocarbon odor	68.00 ▽					--
82	END OF BOREHOLE @ 82.0ft BGS	82.00					

NOTES:

WATER FOUND ▽

OVERBURDEN LOG 074684 (MW3R-RW15).GPJ CRA_CORP.GDT 4/2/15

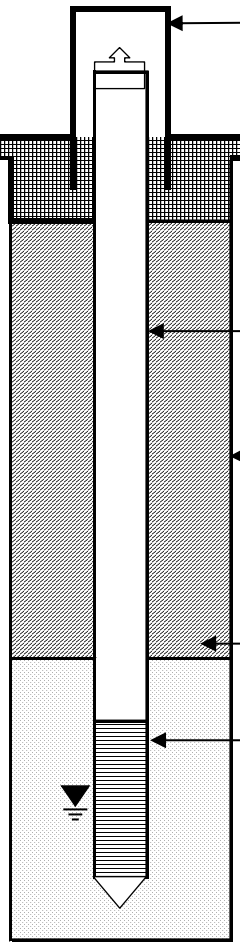
MONITORING WELL CONSTRUCTION DETAIL

Project: Plains - Darr Angell #4

Client: Plains Pipeline L.P.

Monitoring Well No.: RW-14

File No.:	074684
Date:	10/14/2014
Drilling Co.:	Talon LPE
Supervisor:	
Type Rig:	Air Rotary
Logged by:	J. Fergerson



Top of Casing Elevation: _____
Casing Stick-up: 2.8

Ground Surface

Top of Seal at 2.0

Bottom of Seal at 60.0

Top of Screen at 61.5

Depth to Groundwater (bgs) ~ 68.0

Bottom of screen at 81.5
Bottom of end cap at
Total Well Depth (bgs) 82.0

Surface Casing Protective Cover

Surface Seal: Cement

Well Casing 4"

Diameter Borehole 7 7/8"

Seal Type: Bentonite

Diameter 4"
40 PVC Well Screen

Note: All dimensions are below ground surface (bgs) except where noted.

Screen Type: slotted perforated other: _____

Screen Material: stainless steel PVC other: _____

Screen Length: 20 Screen Diameter: _____ Screen Slot Size: 0.010

Well Casing Material: _____ Well Casing Diameter: _____

Development - Method: Bailer Hole Diameter: _____

Duration/Volume: 55 gallons

STRATIGRAPHIC LOG

PROJECT NAME: Darr Angell #4
PROJECT NUMBER: 074684
CLIENT: Plain Pipeline, L.P.
LOCATION: Lea County, New Mexico

HOLE DESIGNATION: RW-15
DATE COMPLETED: October 14, 2014
DRILLING METHOD: Air Rotary (4" O.D.): 0'-82'
FIELD PERSONNEL: J. Fergerson
DRILLING COMPANY: Talon LPE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
0	Grayish brown silty sandy CLAY (CL), broken caliche in matrix, moist, no hydrocarbon odor	1.00					
	Pale yellow CALICHE, dense to weathered, slightly moist, no hydrocarbon odor						
	Pale yellow CALICHE, weathered to dense, interbedded with poor to moderate cemented very fine grain sandstone, dry, no hydrocarbon odor	9.00	1				1.7
	Light yellow orange SAND (SP), very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	18.00					
	Dull orange SAND (SP) very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	27.00	2				1.3

NOTES:

WATER FOUND ▽

OVERBURDEN LOG 074684 (MW3R-RW15).GPJ CRA_CORP.GDT 4/2/15

STRATIGRAPHIC LOG

PROJECT NAME: Darr Angell #4
PROJECT NUMBER: 074684
CLIENT: Plain Pipeline, L.P.
LOCATION: Lea County, New Mexico

HOLE DESIGNATION: RW-15
DATE COMPLETED: October 14, 2014
DRILLING METHOD: Air Rotary (4" O.D.): 0'-82'
FIELD PERSONNEL: J. Fergerson
DRILLING COMPANY: Talon LPE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
50	Dull orange SAND (SP) very fine grain, unconsolidated, interbedded with moderate to well cemented very fine grain sandstone, dry, no hydrocarbon odor	50.00	3				147
52							
54							
56							
58							
60							
62							
64							
66							
68	Dull orange SAND (SP), very fine grain, unconsolidated interbedded with moderate to well cemented very fine grain sandstone, wet, no hydrocarbon odor	68.00 ▽					--
70							
72							
74							
76							
78							
80							
82	END OF BOREHOLE @ 82.0ft BGS	82.00					
84							
86							
88							
90							
92							
94							
96							
98							

NOTES:

WATER FOUND ▽

OVERBURDEN LOG 074684 (MW3R-RW15).GPJ CRA_CORP.GDT 4/2/15

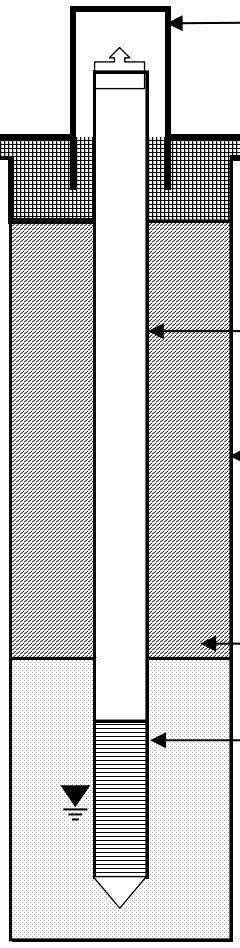
MONITORING WELL CONSTRUCTION DETAIL

Project: Plains - Darr Angell #4

Client: Plains Pipeline L.P.

Monitoring Well No.: RW-15

File No.:	074684
Date:	10/14/2014
Drilling Co.:	Talon LPE
Supervisor:	
Type Rig:	Air Rotary
Logged by:	J. Fergerson



Top of Casing Elevation: _____
Casing Stick-up: 2.9

Ground Surface

Top of Seal at 2.0

Bottom of Seal at 60.0

Top of Screen at 61.5

Depth to Groundwater (bgs) ~ 68.0

Bottom of screen at 81.5
Bottom of end cap at
Total Well Depth (bgs) 82.0

Surface Casing Protective Cover

Surface Seal: Cement

Well Casing 4"

Diameter Borehole 7 7/8"

Seal Type: Bentonite

Diameter 4"
40 PVC Well Screen

Note: All dimensions are below ground surface (bgs) except where noted.

Screen Type: slotted perforated other: _____

Screen Material: stainless steel PVC other: _____

Screen Length: 20 Screen Diameter: _____ Screen Slot Size: 0.010

Well Casing Material: _____ Well Casing Diameter: _____

Development - Method: Bailer Hole Diameter: _____

Duration/Volume: 55 gallons

Appendix B

Certified Laboratory Reports

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: March 3, 2014

Work Order: 14022811

Project Location: Lea Co., NM
Project Name: Darr Angel #4 Site
Project Number: 074684
SRS #: 2001-10876

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
356290	MW-6-022714	water	2014-02-27	08:00	2014-02-28
356291	MW-14-022714	water	2014-02-27	08:45	2014-02-28
356292	MW-15-022714	water	2014-02-27	09:00	2014-02-28
356293	MW-16-022714	water	2014-02-27	08:30	2014-02-28
356294	RW-5-022714	water	2014-02-27	08:15	2014-02-28
356295	Dup-1-022714	water	2014-02-27	00:00	2014-02-28

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 #4 Site were received by TraceAnalysis, Inc. on 2014-02-28 and assigned to work order 14022811. Samples for work order 14022811 were received intact without headspace and at a temperature of 0.6 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	92820	2014-03-01 at 11:30	109776	2014-03-03 at 09:03

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 14022811 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: 356290 - MW-6-022714

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	109776	Date Analyzed:	2014-03-03	Analyzed By:	AK
Prep Batch:	92820	Sample Preparation:	2014-03-01	Prepared By:	AK

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	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0973	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0738	mg/L	1	0.100	74	70 - 130

Sample: 356291 - MW-14-022714

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	109776	Date Analyzed:	2014-03-03	Analyzed By:	AK
Prep Batch:	92820	Sample Preparation:	2014-03-01	Prepared By:	AK

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	<0.00300	mg/L	1	0.00300

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)			0.0735	mg/L	1	0.100	74	70 - 130

Sample: 356292 - MW-15-022714

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	109776	Date Analyzed:	2014-03-03	Analyzed By:	AK
Prep Batch:	92820	Sample Preparation:	2014-03-01	Prepared By:	AK

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	<0.00300	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)			0.0726	mg/L	1	0.100	73	70 - 130

Sample: 356293 - MW-16-022714

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	109776	Date Analyzed:	2014-03-03	Analyzed By:	AK
Prep Batch:	92820	Sample Preparation:	2014-03-01	Prepared By:	AK

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	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0939	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0725	mg/L	1	0.100	72	70 - 130

Sample: 356294 - RW-5-022714

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	109776	Date Analyzed:	2014-03-03	Analyzed By:	AK
Prep Batch:	92820	Sample Preparation:	2014-03-01	Prepared By:	AK

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		1	**0.00720**	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0977	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0779	mg/L	1	0.100	78	70 - 130

Sample: 356295 - Dup-1-022714

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	109776	Date Analyzed:	2014-03-03	Analyzed By:	AK
Prep Batch:	92820	Sample Preparation:	2014-03-01	Prepared By:	AK

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		1	**0.00830**	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0973	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0772	mg/L	1	0.100	77	70 - 130

Method Blanks

Method Blank (1) QC Batch: 109776

QC Batch:	109776	Date Analyzed:	2014-03-03	Analyzed By:	AK
Prep Batch:	92820	QC Preparation:	2014-03-01	Prepared By:	AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000238	mg/L	0.001
Toluene		1	<0.000181	mg/L	0.001
Ethylbenzene		1	<0.000247	mg/L	0.001
Xylene		1	<0.000189	mg/L	0.003

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0956	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0732	mg/L	1	0.100	73	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 109776 | Date Analyzed: 2014-03-03 | Analyzed By: AK
Prep Batch: 92820 | QC Preparation: 2014-03-01 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.108	mg/L	1	0.100	<0.000238	108	70 - 130
Toluene		1	0.109	mg/L	1	0.100	<0.000181	109	70 - 130
Ethylbenzene		1	0.109	mg/L	1	0.100	<0.000247	109	70 - 130
Xylene		1	0.332	mg/L	1	0.300	<0.000189	111	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	0.110	mg/L	1	0.100	<0.000238	110	70 - 130	2	20
Toluene		1	0.111	mg/L	1	0.100	<0.000181	111	70 - 130	2	20
Ethylbenzene		1	0.111	mg/L	1	0.100	<0.000247	111	70 - 130	2	20
Xylene		1	0.337	mg/L	1	0.300	<0.000189	112	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)	0.102	0.101	mg/L	1	0.100	102	101	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0916	0.0910	mg/L	1	0.100	92	91	70 - 130

Matrix Spike (MS-1) Spiked Sample: 356287

QC Batch: 109776 | Date Analyzed: 2014-03-03 | Analyzed By: AK
Prep Batch: 92820 | QC Preparation: 2014-03-01 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.112	mg/L	1	0.100	<0.000238	112	70 - 130
Toluene		1	0.114	mg/L	1	0.100	<0.000181	114	70 - 130
Ethylbenzene		1	0.113	mg/L	1	0.100	<0.000247	113	70 - 130
Xylene		1	0.341	mg/L	1	0.300	<0.000189	114	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	0.112	mg/L	1	0.100	<0.000238	112	70 - 130	0	20
Toluene		1	0.113	mg/L	1	0.100	<0.000181	113	70 - 130	1	20
Ethylbenzene		1	0.111	mg/L	1	0.100	<0.000247	111	70 - 130	2	20
Xylene		1	0.337	mg/L	1	0.300	<0.000189	112	70 - 130	1	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	0.0996	mg/L	1	0.1	101	100	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0919	0.0872	mg/L	1	0.1	92	87	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 109776 | Date Analyzed: 2014-03-03 | 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	0.109	109	80 - 120	2014-03-03
Toluene		1	mg/L	0.100	0.111	111	80 - 120	2014-03-03
Ethylbenzene		1	mg/L	0.100	0.110	110	80 - 120	2014-03-03
Xylene		1	mg/L	0.300	0.335	112	80 - 120	2014-03-03

Standard (CCV-2)

QC Batch: 109776 | Date Analyzed: 2014-03-03 | 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	0.110	110	80 - 120	2014-03-03
Toluene		1	mg/L	0.100	0.111	111	80 - 120	2014-03-03
Ethylbenzene		1	mg/L	0.100	0.110	110	80 - 120	2014-03-03
Xylene		1	mg/L	0.300	0.333	111	80 - 120	2014-03-03

Standard (CCV-3)

QC Batch: 109776 | Date Analyzed: 2014-03-03 | 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	0.103	103	80 - 120	2014-03-03
Toluene		1	mg/L	0.100	0.108	108	80 - 120	2014-03-03
Ethylbenzene		1	mg/L	0.100	0.108	108	80 - 120	2014-03-03
Xylene		1	mg/L	0.300	0.329	110	80 - 120	2014-03-03

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 # 14022811

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

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

Company Name: CRA, Inc
Phone #: 432-686-0086
Address: (Street, City, Zip) 2135 S. Loop 250 W. Midland, TX 79703
Fax #:
Contact Person: Kim Lambert
E-mail: Klambert@craworld.com
Invoice to: (If different from above) Plains-Lamelle Bryant
cjbryant@paalp.com
Project #: 074684
Project Name: Darr Angell #4
Project Location (including state): New Mexico
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
356290	MW-6-022714	3	40mL	X				X						02/27/14	800
291	MW-14-022714	↓	↓	X				↓						↓	845
292	MW-15-022714			X											900
293	MW-16-022714			X											830
294	RW-5-022714			X											815
295	DUP-1-022714	↓	↓	X				↓						↓	

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
	↓																									

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	CRA	22714	1000		A	2/28/14	10:00	INST 1K↓ OBS 1.6 °C COR 0.6 °C
								INST ____ OBS ____ °C COR ____ °C
								INST ____ OBS ____ °C COR ____ °C

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

REMARKS: Midland cell

- ☐ 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.

ORIGINAL COPY

Carrier #

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

John Fergerson
CRA-Midland
2135 South Loop 250 West
Midland, TX, 79703

Report Date: June 10, 2014

Work Order: 14060201

Project Location: Lovington, NM
Project Name: Darr Angel #4
Project Number: 074684
SRS #: 2001-10876

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
364427	MW-6-052914	water	2014-05-29	13:00	2014-05-30
364428	MW-9-052914	water	2014-05-29	13:10	2014-05-30
364429	MW-10-052914	water	2014-05-29	13:30	2014-05-30
364430	MW-14-052914	water	2014-05-29	13:45	2014-05-30
364431	MW-15-052914	water	2014-05-29	14:00	2014-05-30
364432	MW-16-052914	water	2014-05-29	14:20	2014-05-30
364433	RW-5-052914	water	2014-05-29	14:45	2014-05-30
364434	Dup-1-052914	water	2014-05-29	00:00	2014-05-30

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 #4 were received by TraceAnalysis, Inc. on 2014-05-30 and assigned to work order 14060201. Samples for work order 14060201 were received intact without headspace and at a temperature of 2.6 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	95116	2014-06-03 at 15:15	112508	2014-06-04 at 11:13
BTEX	S 8021B	95149	2014-06-05 at 08:42	112620	2014-06-07 at 09:03

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 14060201 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: 364427 - MW-6-052914

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112620	Date Analyzed:	2014-06-07	Analyzed By:	AK
Prep Batch:	95149	Sample Preparation:	2014-06-05	Prepared By:	AK

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	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.100	mg/L	1	0.100	100	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0850	mg/L	1	0.100	85	70 - 130

Sample: 364428 - MW-9-052914

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112620	Date Analyzed:	2014-06-07	Analyzed By:	AK
Prep Batch:	95149	Sample Preparation:	2014-06-05	Prepared By:	AK

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		1	**0.00110**	mg/L	1	0.00100
Xylene		1	**0.00390**	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0992	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0945	mg/L	1	0.100	94	70 - 130

Sample: 364429 - MW-10-052914

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112620	Date Analyzed:	2014-06-07	Analyzed By:	AK
Prep Batch:	95149	Sample Preparation:	2014-06-05	Prepared By:	AK

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	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0943	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0844	mg/L	1	0.100	84	70 - 130

Sample: 364430 - MW-14-052914

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112620	Date Analyzed:	2014-06-07	Analyzed By:	AK
Prep Batch:	95149	Sample Preparation:	2014-06-05	Prepared By:	AK

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	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0934	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0806	mg/L	1	0.100	81	70 - 130

Sample: 364431 - MW-15-052914

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112620	Date Analyzed:	2014-06-07	Analyzed By:	AK
Prep Batch:	95149	Sample Preparation:	2014-06-05	Prepared By:	AK

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	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0921	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0782	mg/L	1	0.100	78	70 - 130

Sample: 364432 - MW-16-052914

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112508	Date Analyzed:	2014-06-04	Analyzed By:	AK
Prep Batch:	95116	Sample Preparation:	2014-06-03	Prepared By:	AK

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		1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0924	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0725	mg/L	1	0.100	72	70 - 130

Sample: 364433 - RW-5-052914

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112508	Date Analyzed:	2014-06-04	Analyzed By:	AK
Prep Batch:	95116	Sample Preparation:	2014-06-03	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		1	**0.00100**	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene		1	**0.00250**	mg/L	1	0.00100
Xylene		1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0921	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0747	mg/L	1	0.100	75	70 - 130

Sample: 364434 - Dup-1-052914

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112508	Date Analyzed:	2014-06-04	Analyzed By:	AK
Prep Batch:	95116	Sample Preparation:	2014-06-03	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		1	**0.104**	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		1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0882	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.104	mg/L	1	0.100	104	70 - 130

Method Blanks

Method Blank (1) QC Batch: 112508

QC Batch: 112508 | Date Analyzed: 2014-06-04 | Analyzed By: AK
Prep Batch: 95116 | QC Preparation: 2014-06-03 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000238	mg/L	0.001
Toluene		1	<0.000181	mg/L	0.001
Ethylbenzene		1	<0.000247	mg/L	0.001
Xylene		1	<0.000189	mg/L	0.003

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0925	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0808	mg/L	1	0.100	81	70 - 130

Method Blank (1) QC Batch: 112620

QC Batch: 112620 | Date Analyzed: 2014-06-07 | Analyzed By: AK
Prep Batch: 95149 | QC Preparation: 2014-06-05 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000238	mg/L	0.001
Toluene		1	<0.000181	mg/L	0.001
Ethylbenzene		1	<0.000247	mg/L	0.001
Xylene		1	<0.000189	mg/L	0.003

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0925	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0864	mg/L	1	0.100	86	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 112508 | Date Analyzed: 2014-06-04 | Analyzed By: AK
Prep Batch: 95116 | QC Preparation: 2014-06-03 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.102	mg/L	1	0.100	<0.000238	102	70 - 130
Toluene		1	0.104	mg/L	1	0.100	<0.000181	104	70 - 130
Ethylbenzene		1	0.100	mg/L	1	0.100	<0.000247	100	70 - 130
Xylene		1	0.305	mg/L	1	0.300	<0.000189	102	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	0.103	mg/L	1	0.100	<0.000238	103	70 - 130	1	20
Toluene		1	0.105	mg/L	1	0.100	<0.000181	105	70 - 130	1	20
Ethylbenzene		1	0.102	mg/L	1	0.100	<0.000247	102	70 - 130	2	20
Xylene		1	0.310	mg/L	1	0.300	<0.000189	103	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)	0.0993	0.0980	mg/L	1	0.100	99	98	70 - 130
4-Bromofluorobenzene (4-BFB)	0.108	0.105	mg/L	1	0.100	108	105	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 112620 | Date Analyzed: 2014-06-07 | Analyzed By: AK
Prep Batch: 95149 | QC Preparation: 2014-06-05 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0982	mg/L	1	0.100	<0.000238	98	70 - 130
Toluene		1	0.101	mg/L	1	0.100	<0.000181	101	70 - 130
Ethylbenzene		1	0.0958	mg/L	1	0.100	<0.000247	96	70 - 130
Xylene		1	0.293	mg/L	1	0.300	<0.000189	98	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	<0.000238	104	70 - 130	6	20
Toluene		1	0.107	mg/L	1	0.100	<0.000181	107	70 - 130	6	20
Ethylbenzene		1	0.102	mg/L	1	0.100	<0.000247	102	70 - 130	6	20
Xylene		1	0.309	mg/L	1	0.300	<0.000189	103	70 - 130	5	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)	0.0984	0.0953	mg/L	1	0.100	98	95	70 - 130
4-Bromofluorobenzene (4-BFB)	0.105	0.104	mg/L	1	0.100	105	104	70 - 130

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 364362

QC Batch: 112508 | Date Analyzed: 2014-06-04 | Analyzed By: AK
Prep Batch: 95116 | QC Preparation: 2014-06-03 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.109	mg/L	1	0.100	<0.000238	109	70 - 130
Toluene		1	0.110	mg/L	1	0.100	<0.000181	110	70 - 130
Ethylbenzene		1	0.103	mg/L	1	0.100	<0.000247	103	70 - 130
Xylene		1	0.314	mg/L	1	0.300	<0.000189	105	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	0.107	mg/L	1	0.100	<0.000238	107	70 - 130	2	20
Toluene		1	0.107	mg/L	1	0.100	<0.000181	107	70 - 130	3	20
Ethylbenzene		1	0.100	mg/L	1	0.100	<0.000247	100	70 - 130	3	20
Xylene		1	0.305	mg/L	1	0.300	<0.000189	102	70 - 130	3	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)	0.0970	0.0982	mg/L	1	0.1	97	98	70 - 130
4-Bromofluorobenzene (4-BFB)	0.101	0.0985	mg/L	1	0.1	101	98	70 - 130

Matrix Spike (MS-1) Spiked Sample: 362886

QC Batch: 112620 | Date Analyzed: 2014-06-07 | Analyzed By: AK
Prep Batch: 95149 | QC Preparation: 2014-06-05 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	10.4	mg/L	100	10.0	<0.0238	104	70 - 130
Toluene		1	18.2	mg/L	100	10.0	6.33	119	70 - 130
Ethylbenzene		1	9.97	mg/L	100	10.0	<0.0247	100	70 - 130
Xylene		1	30.6	mg/L	100	30.0	<0.0189	102	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	10.3	mg/L	100	10.0	<0.0238	103	70 - 130	1	20
Toluene		1	17.7	mg/L	100	10.0	6.33	114	70 - 130	3	20
Ethylbenzene		1	9.74	mg/L	100	10.0	<0.0247	97	70 - 130	2	20
Xylene		1	29.9	mg/L	100	30.0	<0.0189	100	70 - 130	2	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)	9.96	9.67	mg/L	100	10	100	97	70 - 130
4-Bromofluorobenzene (4-BFB)	10.5	10.4	mg/L	100	10	105	104	70 - 130

Calibration Standards

Standard (CCV-2)

QC Batch: 112508 | Date Analyzed: 2014-06-04 | 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	0.105	105	80 - 120	2014-06-04
Toluene		1	mg/L	0.100	0.106	106	80 - 120	2014-06-04
Ethylbenzene		1	mg/L	0.100	0.100	100	80 - 120	2014-06-04
Xylene		1	mg/L	0.300	0.305	102	80 - 120	2014-06-04

Standard (CCV-3)

QC Batch: 112508 | Date Analyzed: 2014-06-04 | 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	2014-06-04
Toluene		1	mg/L	0.100	0.101	101	80 - 120	2014-06-04
Ethylbenzene		1	mg/L	0.100	0.0956	96	80 - 120	2014-06-04
Xylene		1	mg/L	0.300	0.289	96	80 - 120	2014-06-04

Standard (CCV-1)

QC Batch: 112620 | Date Analyzed: 2014-06-07 | 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	0.0994	99	80 - 120	2014-06-07
Toluene		1	mg/L	0.100	0.102	102	80 - 120	2014-06-07
Ethylbenzene		1	mg/L	0.100	0.0943	94	80 - 120	2014-06-07
Xylene		1	mg/L	0.300	0.292	97	80 - 120	2014-06-07

Standard (CCV-2)

QC Batch: 112620 | Date Analyzed: 2014-06-07 | 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	0.103	103	80 - 120	2014-06-07
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2014-06-07
Ethylbenzene		1	mg/L	0.100	0.0979	98	80 - 120	2014-06-07
Xylene		1	mg/L	0.300	0.298	99	80 - 120	2014-06-07

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 # 140CC201

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, Inc. **Phone #:** 432-686-0086

Address: (Street, City, Zip) 2135 S. Loop 250 W. Midland, TX 79703 **Fax #:** 432-686-0186

Contact Person: John Fergerson **E-mail:** jfergerson@craworld.com

Invoice to: (If different from above)

Project #: 074684 **Project Name:** Darr Angell # 4

Project Location (including state): Lovington, NM **Sampler Signature:** Stuart Meurer

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
364427	MW-6-052914	2	40 mL	X				X						5.29.14	1300		X																								
428	MW-9-052914														1310																										
429	MW-10-052914														1330																										
430	MW-14-052914														1345																										
431	MW-15-052914														1400																										
432	MW-16-052914														1420																										
433	RW-5-052914														1445																										
434	DUP-1-052914																																								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Stuart Meurer	CRA	5.30.14	1620		TA	5/30/14	16:20	INST 2.6 °C OBS 2.6 °C COR 2.6 °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 alp

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

Carrier # Carry

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

ORIGINAL COPY

TRACEANALYSIS, INC.

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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

John Fergerson
CRA-Midland
2135 South Loop 250 West
Midland, TX, 79703

Report Date: September 17, 2014

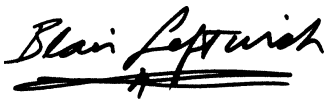
Work Order: 14090809

Project Location: Lovington, NM
Project Name: Darr Angel #4
Project Number: 074684
SRS #: 2001-10876

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
373862	MW-6-090314	water	2014-09-03	14:15	2014-09-05
373863	MW-16-090314	water	2014-09-03	14:40	2014-09-05
373864	MW-11-090314	water	2014-09-03	15:20	2014-09-05
373865	MW-15-090314	water	2014-09-03	15:50	2014-09-05
373866	MW-14-090314	water	2014-09-03	16:15	2014-09-05
373867	MW-10-090314	water	2014-09-03	16:40	2014-09-05
373868	RW-5-090314	water	2014-09-03	17:00	2014-09-05
373869	Dup-1-090314	water	2014-09-03	00:00	2014-09-05

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
James Taylor, Assistant Director
Brian Pellam, Operations Manager

Report Contents

Case Narrative

Samples for project Darr Angel #4 were received by TraceAnalysis, Inc. on 2014-09-05 and assigned to work order 14090809. Samples for work order 14090809 were received intact without headspace and at a temperature of 3.8 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	97462	2014-09-08 at 11:31	115348	2014-09-10 at 07:01
BTEX	S 8021B	97692	2014-09-15 at 15:15	115519	2014-09-17 at 06:51

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 14090809 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: 373862 - MW-6-090314

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115519	Date Analyzed:	2014-09-17	Analyzed By:	AK
Prep Batch:	97692	Sample Preparation:	2014-09-15	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0872	mg/L	1	0.100	87	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0863	mg/L	1	0.100	86	70 - 130

Sample: 373863 - MW-16-090314

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115348	Date Analyzed:	2014-09-10	Analyzed By:	AK
Prep Batch:	97462	Sample Preparation:	2014-09-08	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0873	mg/L	1	0.100	87	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0839	mg/L	1	0.100	84	70 - 130

Sample: 373864 - MW-11-090314

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115348	Date Analyzed:	2014-09-10	Analyzed By:	AK
Prep Batch:	97462	Sample Preparation:	2014-09-08	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0962	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0838	mg/L	1	0.100	84	70 - 130

Sample: 373865 - MW-15-090314

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115348	Date Analyzed:	2014-09-10	Analyzed By:	AK
Prep Batch:	97462	Sample Preparation:	2014-09-08	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0894	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0838	mg/L	1	0.100	84	70 - 130

Sample: 373866 - MW-14-090314

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115348	Date Analyzed:	2014-09-10	Analyzed By:	AK
Prep Batch:	97462	Sample Preparation:	2014-09-08	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0915	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0838	mg/L	1	0.100	84	70 - 130

Sample: 373867 - MW-10-090314

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115348	Date Analyzed:	2014-09-10	Analyzed By:	AK
Prep Batch:	97462	Sample Preparation:	2014-09-08	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0911	mg/L	1	0.100	91	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0836	mg/L	1	0.100	84	70 - 130

Sample: 373868 - RW-5-090314

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115348	Date Analyzed:	2014-09-10	Analyzed By:	AK
Prep Batch:	97462	Sample Preparation:	2014-09-08	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene		5	**0.00140**	mg/L	1	0.00100
Xylene		5	**0.00780**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0939	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0892	mg/L	1	0.100	89	70 - 130

Sample: 373869 - Dup-1-090314

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115348	Date Analyzed:	2014-09-10	Analyzed By:	AK
Prep Batch:	97462	Sample Preparation:	2014-09-08	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene		5	**0.00240**	mg/L	1	0.00100
Xylene		5	**0.0107**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0932	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0878	mg/L	1	0.100	88	70 - 130

Method Blanks

Method Blank (1) QC Batch: 115348

QC Batch: 115348 | Date Analyzed: 2014-09-10 | Analyzed By: AK
Prep Batch: 97462 | QC Preparation: 2014-09-08 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		5	<0.000299	mg/L	0.001
Toluene		5	<0.000247	mg/L	0.001
Ethylbenzene		5	<0.000423	mg/L	0.001
Xylene		5	<0.000552	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0884	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0843	mg/L	1	0.100	84	70 - 130

Method Blank (1) QC Batch: 115519

QC Batch: 115519 | Date Analyzed: 2014-09-17 | Analyzed By: AK
Prep Batch: 97692 | QC Preparation: 2014-09-15 | Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		5	<0.000299	mg/L	0.001
Toluene		5	<0.000247	mg/L	0.001
Ethylbenzene		5	<0.000423	mg/L	0.001
Xylene		5	<0.000552	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0883	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0863	mg/L	1	0.100	86	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 115348 | Date Analyzed: 2014-09-10 | Analyzed By: AK
Prep Batch: 97462 | QC Preparation: 2014-09-08 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0760	mg/L	1	0.100	<0.000299	76	70 - 130
Toluene		5	0.0956	mg/L	1	0.100	<0.000247	96	70 - 130
Ethylbenzene		5	0.104	mg/L	1	0.100	<0.000423	104	70 - 130
Xylene		5	0.323	mg/L	1	0.300	<0.000552	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		5	0.0918	mg/L	1	0.100	<0.000299	92	70 - 130	19	20
Toluene		5	0.0948	mg/L	1	0.100	<0.000247	95	70 - 130	1	20
Ethylbenzene		5	0.0958	mg/L	1	0.100	<0.000423	96	70 - 130	8	20
Xylene		5	0.297	mg/L	1	0.300	<0.000552	99	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)	0.0889	0.0920	mg/L	1	0.100	89	92	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0915	0.0915	mg/L	1	0.100	92	92	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 115519 | Date Analyzed: 2014-09-17 | Analyzed By: AK
Prep Batch: 97692 | QC Preparation: 2014-09-15 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.104	mg/L	1	0.100	<0.000299	104	70 - 130
Toluene		5	0.0995	mg/L	1	0.100	<0.000247	100	70 - 130
Ethylbenzene		5	0.0961	mg/L	1	0.100	<0.000423	96	70 - 130
Xylene		5	0.295	mg/L	1	0.300	<0.000552	98	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		5	0.0946	mg/L	1	0.100	<0.000299	95	70 - 130	10	20
Toluene		5	0.0932	mg/L	1	0.100	<0.000247	93	70 - 130	6	20
Ethylbenzene		5	0.0907	mg/L	1	0.100	<0.000423	91	70 - 130	6	20
Xylene		5	0.280	mg/L	1	0.300	<0.000552	93	70 - 130	5	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)	0.0909	0.0861	mg/L	1	0.100	91	86	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0918	0.0916	mg/L	1	0.100	92	92	70 - 130

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 373698

QC Batch: 115348 | Date Analyzed: 2014-09-10 | Analyzed By: AK
Prep Batch: 97462 | QC Preparation: 2014-09-08 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0948	mg/L	1	0.100	<0.000299	95	70 - 130
Toluene		5	0.0989	mg/L	1	0.100	0.0008	98	70 - 130
Ethylbenzene		5	0.0993	mg/L	1	0.100	<0.000423	99	70 - 130
Xylene		5	0.307	mg/L	1	0.300	0.0013	102	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		5	0.0947	mg/L	1	0.100	<0.000299	95	70 - 130	0	20
Toluene		5	0.0990	mg/L	1	0.100	0.0008	98	70 - 130	0	20
Ethylbenzene		5	0.100	mg/L	1	0.100	<0.000423	100	70 - 130	1	20
Xylene		5	0.310	mg/L	1	0.300	0.0013	103	70 - 130	1	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)	0.0904	0.0894	mg/L	1	0.1	90	89	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0914	0.0918	mg/L	1	0.1	91	92	70 - 130

Matrix Spike (MS-1) Spiked Sample: 373871

QC Batch: 115519 | Date Analyzed: 2014-09-17 | Analyzed By: AK
Prep Batch: 97692 | QC Preparation: 2014-09-15 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0988	mg/L	1	0.100	<0.000299	99	70 - 130
Toluene		5	0.0945	mg/L	1	0.100	<0.000247	94	70 - 130
Ethylbenzene		5	0.0898	mg/L	1	0.100	<0.000423	90	70 - 130
Xylene		5	0.274	mg/L	1	0.300	<0.000552	91	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		5	0.102	mg/L	1	0.100	<0.000299	102	70 - 130	3	20
Toluene		5	0.0979	mg/L	1	0.100	<0.000247	98	70 - 130	4	20
Ethylbenzene		5	0.0942	mg/L	1	0.100	<0.000423	94	70 - 130	5	20
Xylene		5	0.289	mg/L	1	0.300	<0.000552	96	70 - 130	5	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)	0.0903	0.0896	mg/L	1	0.1	90	90	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0914	0.0914	mg/L	1	0.1	91	91	70 - 130

Calibration Standards

Standard (CCV-2)

QC Batch: 115348 | Date Analyzed: 2014-09-10 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0915	92	80 - 120	2014-09-10
Toluene		5	mg/L	0.100	0.0933	93	80 - 120	2014-09-10
Ethylbenzene		5	mg/L	0.100	0.0927	93	80 - 120	2014-09-10
Xylene		5	mg/L	0.300	0.286	95	80 - 120	2014-09-10

Standard (CCV-3)

QC Batch: 115348 | Date Analyzed: 2014-09-10 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.104	104	80 - 120	2014-09-10
Toluene		5	mg/L	0.100	0.100	100	80 - 120	2014-09-10
Ethylbenzene		5	mg/L	0.100	0.102	102	80 - 120	2014-09-10
Xylene		5	mg/L	0.300	0.313	104	80 - 120	2014-09-10

Standard (CCV-1)

QC Batch: 115519 | Date Analyzed: 2014-09-17 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0984	98	80 - 120	2014-09-17
Toluene		5	mg/L	0.100	0.0952	95	80 - 120	2014-09-17
Ethylbenzene		5	mg/L	0.100	0.0911	91	80 - 120	2014-09-17
Xylene		5	mg/L	0.300	0.276	92	80 - 120	2014-09-17

Standard (CCV-2)

QC Batch: 115519 | Date Analyzed: 2014-09-17 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.101	101	80 - 120	2014-09-17
Toluene		5	mg/L	0.100	0.0965	96	80 - 120	2014-09-17
Ethylbenzene		5	mg/L	0.100	0.0931	93	80 - 120	2014-09-17
Xylene		5	mg/L	0.300	0.288	96	80 - 120	2014-09-17

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	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2014-018	Lubbock

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.

F	Description
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 # 14090809

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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200 East Sunset Rd., Suite E
El Paso, Texas 79922
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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
Phone #: (432) 686-0086
Address: (Street, City, Zip) 2135 S Loop 250 W, Midland, 79703
Fax #: (432) 686-0186
Contact Person: John Fergerson
E-mail: jfergerson@crawworld.com
Invoice to: (If different from above)
Project #: 074684
Project Name: Darr-Angell #4
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 B	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
573862	MW-6-090314	3	40 mL	X				X						9/3/14	1415		X																								
863	MW-16-090314	↓	↓	X				X						↓	1440		X																								
864	MW-11-090314			X				X							1520		X																								
865	MW-15-090314			X				X							1550		X																								
866	MW-14-090314			X				X							1615		X																								
867	MW-10-090314			X				X							1640		X																								
868	RW-5-090314			X				X							1700		X																								
865	DUP-1-090314			X				X									X																								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
	CRA	9-5-14	1635			9/5/14	16:35

INST Ky
OBS 39 °C
COR 38 °C

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

REMARKS:

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

Carrier #

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

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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

John Fergerson
CRA-Midland
2135 South Loop 250 West
Midland, TX, 79703

Report Date: December 4, 2014

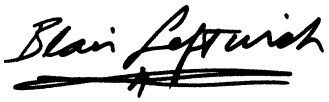
Work Order: 14112401

Project Location: Lovington, NM
Project Name: Darr Angel #4
Project Number: 074684
SRS #: 2001-10876

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
380483	MW-1A-112014	water	2014-11-20	13:10	2014-11-20
380484	MW-12R-112014	water	2014-11-20	13:20	2014-11-20
380485	RW-14-112014	water	2014-11-20	13:40	2014-11-20
380486	RW-15-112014	water	2014-11-20	13:50	2014-11-20
380487	MW-16-112014	water	2014-11-20	14:00	2014-11-20
380488	MW-19-112014	water	2014-11-20	14:10	2014-11-20
380489	MW-14-112014	water	2014-11-20	14:20	2014-11-20
380490	MW-15-112014	water	2014-11-20	14:30	2014-11-20
380491	MW-10-112014	water	2014-11-20	14:40	2014-11-20
380492	MW-11-112014	water	2014-11-20	14:50	2014-11-20
380493	MW-6-112014	water	2014-11-20	15:10	2014-11-20
380494	MW-5-112014	water	2014-11-20	15:20	2014-11-20
380495	DUP-1-112014	water	2014-11-20	00:00	2014-11-20

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
James Taylor, Assistant Director
Brian Pellam, Operations Manager

Report Contents

Case Narrative

Samples for project Darr Angel #4 were received by TraceAnalysis, Inc. on 2014-11-20 and assigned to work order 14112401. Samples for work order 14112401 were received intact without headspace and at a temperature of 2.0 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	99420	2014-12-01 at 08:34	117601	2014-12-01 at 08:34
PAH	S 8270D	99527	2014-11-26 at 15:00	117718	2014-12-04 at 13:07

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 14112401 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: 380483 - MW-1A-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Toluene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Xylene		2,3,5,7,8	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.101	mg/L	1	0.100	101	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.101	mg/L	1	0.100	101	70 - 130

Sample: 380483 - MW-1A-112014

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	117718	Date Analyzed:	2014-12-04	Analyzed By:	MN
Prep Batch:	99527	Sample Preparation:	2014-11-26	Prepared By:	MN

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Naphthalene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
2-Methylnaphthalene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
1-Methylnaphthalene	U	2	<0.000195	mg/L	0.976	0.000200
Acenaphthylene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Acenaphthene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Dibenzofuran	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Fluorene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Anthracene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Phenanthrene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Fluoranthene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Pyrene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Benzo(a)anthracene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Chrysene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200

continued ...

sample 380483 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzo(b)fluoranthene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Benzo(k)fluoranthene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Benzo(a)pyrene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Indeno(1,2,3-cd)pyrene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Dibenzo(a,h)anthracene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200
Benzo(g,h,i)perylene	U	2,3,5,7,8	<0.000195	mg/L	0.976	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0336	mg/L	0.976	0.0800	42	10 - 121
2-Fluorobiphenyl			0.0467	mg/L	0.976	0.0800	58	20.5 - 120
Terphenyl-d14			0.0806	mg/L	0.976	0.0800	101	26.4 - 120

Sample: 380484 - MW-12R-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Toluene		2,3,5,7,8	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Xylene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.101	mg/L	1	0.100	101	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.100	mg/L	1	0.100	100	70 - 130

Sample: 380484 - MW-12R-112014

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	117718	Date Analyzed:	2014-12-04	Analyzed By:	MN
Prep Batch:	99527	Sample Preparation:	2014-11-26	Prepared By:	MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
2-Methylnaphthalene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
1-Methylnaphthalene	U	2	<0.000199	mg/L	0.995	0.000200
Acenaphthylene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Acenaphthene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Dibenzofuran	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Fluorene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Anthracene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Phenanthrene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Fluoranthene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Pyrene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Benzo(a)anthracene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Chrysene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Benzo(b)fluoranthene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Benzo(k)fluoranthene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Benzo(a)pyrene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Indeno(1,2,3-cd)pyrene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Dibenzo(a,h)anthracene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200
Benzo(g,h,i)perylene	U	2,3,5,7,8	<0.000199	mg/L	0.995	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0547	mg/L	0.995	0.0800	68	10 - 121
2-Fluorobiphenyl			0.0745	mg/L	0.995	0.0800	93	20.5 - 120
Terphenyl-d14			0.0899	mg/L	0.995	0.0800	112	26.4 - 120

Sample: 380485 - RW-14-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		2,3,5,7,8	**0.0520**	mg/L	1	0.00100
Toluene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Ethylbenzene		2,3,5,7,8	**0.0493**	mg/L	1	0.00100
Xylene		2,3,5,7,8	**0.0123**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.101	mg/L	1	0.100	101	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.106	mg/L	1	0.100	106	70 - 130

Sample: 380485 - RW-14-112014

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	117718	Date Analyzed:	2014-12-04	Analyzed By:	MN
Prep Batch:	99527	Sample Preparation:	2014-11-26	Prepared By:	MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
2-Methylnaphthalene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
1-Methylnaphthalene	U	2	<0.000198	mg/L	0.99	0.000200
Acenaphthylene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Acenaphthene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Dibenzofuran	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Fluorene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Anthracene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Phenanthrene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Fluoranthene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Pyrene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Benzo(a)anthracene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Chrysene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Benzo(b)fluoranthene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Benzo(k)fluoranthene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Benzo(a)pyrene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Indeno(1,2,3-cd)pyrene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Dibenzo(a,h)anthracene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200
Benzo(g,h,i)perylene	U	2,3,5,7,8	<0.000198	mg/L	0.99	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0151	mg/L	0.99	0.0800	19	10 - 121
2-Fluorobiphenyl			0.0186	mg/L	0.99	0.0800	23	20.5 - 120
Terphenyl-d14	Qsr	Qsr	0.0196	mg/L	0.99	0.0800	24	26.4 - 120

Sample: 380486 - RW-15-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		2,3,5,7,8	**0.0101**	mg/L	1	0.00100
Toluene		2,3,5,7,8	**0.0117**	mg/L	1	0.00100
Ethylbenzene		2,3,5,7,8	**0.0122**	mg/L	1	0.00100
Xylene		2,3,5,7,8	**0.128**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.102	mg/L	1	0.100	102	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.104	mg/L	1	0.100	104	70 - 130

Sample: 380486 - RW-15-112014

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	117718	Date Analyzed:	2014-12-04	Analyzed By:	MN
Prep Batch:	99527	Sample Preparation:	2014-11-26	Prepared By:	MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
2-Methylnaphthalene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
1-Methylnaphthalene		2	<0.000190	mg/L	0.952	0.000200
Acenaphthylene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Acenaphthene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Dibenzofuran	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Fluorene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Anthracene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Phenanthrene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Fluoranthene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Pyrene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Benzo(a)anthracene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Chrysene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Benzo(b)fluoranthene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Benzo(k)fluoranthene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Benzo(a)pyrene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Indeno(1,2,3-cd)pyrene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200
Dibenzo(a,h)anthracene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200

continued ...

sample 380486 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzo(g,h,i)perylene	U	2,3,5,7,8	<0.000190	mg/L	0.952	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0353	mg/L	0.952	0.0800	44	10 - 121
2-Fluorobiphenyl			0.0438	mg/L	0.952	0.0800	55	20.5 - 120
Terphenyl-d14			0.0447	mg/L	0.952	0.0800	56	26.4 - 120

Sample: 380487 - MW-16-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Toluene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Xylene		2,3,5,7,8	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.102	mg/L	1	0.100	102	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.101	mg/L	1	0.100	101	70 - 130

Sample: 380488 - MW-19-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100

continued . . .

sample 380488 continued . . .

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Toluene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Xylene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.102	mg/L	1	0.100	102	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.101	mg/L	1	0.100	101	70 - 130

Sample: 380489 - MW-14-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Toluene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Xylene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.0982	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.102	mg/L	1	0.100	102	70 - 130

Sample: 380490 - MW-15-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

continued . . .

sample 380490 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Toluene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Xylene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.102	mg/L	1	0.100	102	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.102	mg/L	1	0.100	102	70 - 130

Sample: 380491 - MW-10-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Toluene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Xylene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.102	mg/L	1	0.100	102	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.101	mg/L	1	0.100	101	70 - 130

Sample: 380492 - MW-11-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzene	U	2,3,5,7,8	<0.00100		mg/L	1	0.00100
Toluene	U	2,3,5,7,8	<0.00100		mg/L	1	0.00100
Ethylbenzene	U	2,3,5,7,8	<0.00100		mg/L	1	0.00100
Xylene	U	2,3,5,7,8	<0.00100		mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.103	mg/L	1	0.100	103	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.102	mg/L	1	0.100	102	70 - 130

Sample: 380493 - MW-6-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzene	U	2,3,5,7,8	<0.00100		mg/L	1	0.00100
Toluene	U	2,3,5,7,8	<0.00100		mg/L	1	0.00100
Ethylbenzene	U	2,3,5,7,8	<0.00100		mg/L	1	0.00100
Xylene	U	2,3,5,7,8	<0.00100		mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.0988	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.102	mg/L	1	0.100	102	70 - 130

Sample: 380494 - MW-5-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzene	U	2,3,5,7,8	<0.00100		mg/L	1	0.00100

continued ...

sample 380494 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Toluene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	2,3,5,7,8	<0.00100	mg/L	1	0.00100
Xylene		2,3,5,7,8	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.102	mg/L	1	0.100	102	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.102	mg/L	1	0.100	102	70 - 130

Sample: 380495 - DUP-1-112014

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	117601	Date Analyzed:	2014-12-01	Analyzed By:	MT
Prep Batch:	99420	Sample Preparation:	2014-12-01	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene [1]	U	2,3,5,7,8	<0.00500	mg/L	5	0.00100
Toluene	U	2,3,5,7,8	<0.00500	mg/L	5	0.00100
Ethylbenzene	U	2,3,5,7,8	<0.00500	mg/L	5	0.00100
Xylene	U	2,3,5,7,8	<0.00500	mg/L	5	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.503	mg/L	5	0.500	101	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.519	mg/L	5	0.500	104	70 - 130

Method Blanks

Method Blank (1) QC Batch: 117601

QC Batch: 117601 | Date Analyzed: 2014-12-01 | Analyzed By: MT
Prep Batch: 99420 | QC Preparation: 2014-12-01 | Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		2,3,5,7,8	<0.000303	mg/L	0.001
Toluene		2,3,5,7,8	<0.000303	mg/L	0.001
Ethylbenzene		2,3,5,7,8	<0.000266	mg/L	0.001
Xylene		2,3,5,7,8	<0.000265	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8	0.102	mg/L	1	0.100	102	70 - 130
4-Bromofluorobenzene (4-BFB)		8	0.101	mg/L	1	0.100	101	70 - 130

Method Blank (1) QC Batch: 117718

QC Batch: 117718 | Date Analyzed: 2014-12-04 | Analyzed By: MN
Prep Batch: 99527 | QC Preparation: 2014-11-26 | Prepared By: MN

Parameter	Flag	Cert	MDL Result	Units	RL
Naphthalene		2,3,5,7,8	<0.0000708	mg/L	0.0002
2-Methylnaphthalene		2,3,5,7,8	<0.0000834	mg/L	0.0002
1-Methylnaphthalene		2	<0.000107	mg/L	0.0002
Acenaphthylene		2,3,5,7,8	<0.0000823	mg/L	0.0002
Acenaphthene		2,3,5,7,8	<0.0000888	mg/L	0.0002
Dibenzofuran		2,3,5,7,8	<0.0000787	mg/L	0.0002
Fluorene		2,3,5,7,8	<0.0000670	mg/L	0.0002
Anthracene		2,3,5,7,8	<0.0000838	mg/L	0.0002
Phenanthrene		2,3,5,7,8	<0.000106	mg/L	0.0002
Fluoranthene		2,3,5,7,8	<0.0000885	mg/L	0.0002
Pyrene		2,3,5,7,8	<0.000149	mg/L	0.0002
Benzo(a)anthracene		2,3,5,7,8	<0.000146	mg/L	0.0002
Chrysene		2,3,5,7,8	<0.000157	mg/L	0.0002
Benzo(b)fluoranthene		2,3,5,7,8	<0.000146	mg/L	0.0002
Benzo(k)fluoranthene		2,3,5,7,8	<0.000152	mg/L	0.0002
Benzo(a)pyrene		2,3,5,7,8	<0.000141	mg/L	0.0002

continued ...

method blank continued ...

Parameter	Flag	Cert	MDL Result	Units	RL
Indeno(1,2,3-cd)pyrene		2,3,5,7,8	<0.000160	mg/L	0.0002
Dibenzo(a,h)anthracene		2,3,5,7,8	<0.000127	mg/L	0.0002
Benzo(g,h,i)perylene		2,3,5,7,8	<0.000175	mg/L	0.0002

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0403	mg/L	1	0.0800	50	10 - 121
2-Fluorobiphenyl			0.0499	mg/L	1	0.0800	62	20.5 - 120
Terphenyl-d14			0.0498	mg/L	1	0.0800	62	26.4 - 120

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 117601 | Date Analyzed: 2014-12-01 | Analyzed By: MT
Prep Batch: 99420 | QC Preparation: 2014-12-01 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2,3,5,7,8	0.0989	mg/L	1	0.100	<0.000303	99	70 - 130
Toluene		2,3,5,7,8	0.103	mg/L	1	0.100	<0.000303	103	70 - 130
Ethylbenzene		2,3,5,7,8	0.102	mg/L	1	0.100	<0.000266	102	70 - 130
Xylene		2,3,5,7,8	0.308	mg/L	1	0.300	<0.000265	102	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		2,3,5,7,8	0.0986	mg/L	1	0.100	<0.000303	99	70 - 130	0	20
Toluene		2,3,5,7,8	0.103	mg/L	1	0.100	<0.000303	103	70 - 130	0	20
Ethylbenzene		2,3,5,7,8	0.101	mg/L	1	0.100	<0.000266	101	70 - 130	0	20
Xylene		2,3,5,7,8	0.307	mg/L	1	0.300	<0.000265	102	70 - 130	0	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)	8	0.102	0.103	mg/L	1	0.100	102	103	70 - 130
4-Bromofluorobenzene (4-BFB)	8	0.0983	0.100	mg/L	1	0.100	98	100	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 117718 | Date Analyzed: 2014-12-04 | Analyzed By: MN
Prep Batch: 99527 | QC Preparation: 2014-11-26 | Prepared By: MN

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene		2,3,5,7,8	0.0540	mg/L	1	0.0800	<0.0000708	68	33.4 - 120
2-Methylnaphthalene		2,3,5,7,8	0.0547	mg/L	1	0.0800	<0.0000834	68	36.7 - 120
1-Methylnaphthalene		2	0.0547	mg/L	1	0.0800	<0.000107	68	37.7 - 120
Acenaphthylene		2,3,5,7,8	0.0547	mg/L	1	0.0800	<0.0000832	68	39.7 - 120
Acenaphthene		2,3,5,7,8	0.0529	mg/L	1	0.0800	<0.0000888	66	10 - 120

continued ...

control spikes continued . . .

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dibenzofuran		2,3,5,7,8	0.0543	mg/L	1	0.0800	<0.0000787	68	27.5 - 120
Fluorene		2,3,5,7,8	0.0574	mg/L	1	0.0800	<0.0000670	72	32.7 - 120
Anthracene		2,3,5,7,8	0.0557	mg/L	1	0.0800	<0.0000838	70	23.6 - 120
Phenanthrene		2,3,5,7,8	0.0571	mg/L	1	0.0800	<0.000106	71	26.7 - 120
Fluoranthene		2,3,5,7,8	0.0589	mg/L	1	0.0800	<0.0000885	74	19.2 - 120
Pyrene		2,3,5,7,8	0.0524	mg/L	1	0.0800	<0.000149	66	34.1 - 120
Benzo(a)anthracene		2,3,5,7,8	0.0569	mg/L	1	0.0800	<0.000146	71	43.4 - 120
Chrysene		2,3,5,7,8	0.0691	mg/L	1	0.0800	<0.000157	86	10 - 176
Benzo(b)fluoranthene		2,3,5,7,8	0.0466	mg/L	1	0.0800	<0.000146	58	18.4 - 120
Benzo(k)fluoranthene		2,3,5,7,8	0.0515	mg/L	1	0.0800	<0.000152	64	22 - 124
Benzo(a)pyrene		2,3,5,7,8	0.0418	mg/L	1	0.0800	<0.000141	52	25.1 - 120
Indeno(1,2,3-cd)pyrene		2,3,5,7,8	0.0477	mg/L	1	0.0800	<0.000160	60	21.3 - 120
Dibenzo(a,h)anthracene		2,3,5,7,8	0.0619	mg/L	1	0.0800	<0.000127	77	10 - 173
Benzo(g,h,i)perylene		2,3,5,7,8	0.0430	mg/L	1	0.0800	<0.000175	54	10.7 - 128

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
Naphthalene		2,3,5,7,8	0.0572	mg/L	1	0.0800	<0.0000708	72	33.4 - 120	6	20
2-Methylnaphthalene		2,3,5,7,8	0.0582	mg/L	1	0.0800	<0.0000834	73	36.7 - 120	6	20
1-Methylnaphthalene		2	0.0584	mg/L	1	0.0800	<0.000107	73	37.7 - 120	6	20
Acenaphthylene		2,3,5,7,8	0.0581	mg/L	1	0.0800	<0.0000832	73	39.7 - 120	6	20
Acenaphthene		2,3,5,7,8	0.0567	mg/L	1	0.0800	<0.0000888	71	10 - 120	7	20
Dibenzofuran		2,3,5,7,8	0.0576	mg/L	1	0.0800	<0.0000787	72	27.5 - 120	6	20
Fluorene		2,3,5,7,8	0.0607	mg/L	1	0.0800	<0.0000670	76	32.7 - 120	6	20
Anthracene		2,3,5,7,8	0.0584	mg/L	1	0.0800	<0.0000838	73	23.6 - 120	5	20
Phenanthrene		2,3,5,7,8	0.0602	mg/L	1	0.0800	<0.000106	75	26.7 - 120	5	20
Fluoranthene		2,3,5,7,8	0.0630	mg/L	1	0.0800	<0.0000885	79	19.2 - 120	7	20
Pyrene		2,3,5,7,8	0.0558	mg/L	1	0.0800	<0.000149	70	34.1 - 120	6	20
Benzo(a)anthracene		2,3,5,7,8	0.0599	mg/L	1	0.0800	<0.000146	75	43.4 - 120	5	20
Chrysene		2,3,5,7,8	0.0729	mg/L	1	0.0800	<0.000157	91	10 - 176	5	20
Benzo(b)fluoranthene		2,3,5,7,8	0.0507	mg/L	1	0.0800	<0.000146	63	18.4 - 120	8	20
Benzo(k)fluoranthene		2,3,5,7,8	0.0546	mg/L	1	0.0800	<0.000152	68	22 - 124	6	20
Benzo(a)pyrene		2,3,5,7,8	0.0442	mg/L	1	0.0800	<0.000141	55	25.1 - 120	6	20
Indeno(1,2,3-cd)pyrene		2,3,5,7,8	0.0504	mg/L	1	0.0800	<0.000160	63	21.3 - 120	6	20
Dibenzo(a,h)anthracene		2,3,5,7,8	0.0656	mg/L	1	0.0800	<0.000127	82	10 - 173	6	20
Benzo(g,h,i)perylene		2,3,5,7,8	0.0459	mg/L	1	0.0800	<0.000175	57	10.7 - 128	6	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
Nitrobenzene-d5	0.0398	0.0418	mg/L	1	0.0800	50	52	10 - 121
2-Fluorobiphenyl	0.0499	0.0530	mg/L	1	0.0800	62	66	20.5 - 120
Terphenyl-d14	0.0475	0.0498	mg/L	1	0.0800	59	62	26.4 - 120

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 380677

QC Batch: 117601 | Date Analyzed: 2014-12-01 | Analyzed By: MT
Prep Batch: 99420 | QC Preparation: 2014-12-01 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2,3,5,7,8	0.0998	mg/L	1	0.100	<0.000303	100	70 - 130
Toluene		2,3,5,7,8	0.102	mg/L	1	0.100	<0.000303	102	70 - 130
Ethylbenzene		2,3,5,7,8	0.100	mg/L	1	0.100	<0.000266	100	70 - 130
Xylene		2,3,5,7,8	0.303	mg/L	1	0.300	<0.000265	101	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		2,3,5,7,8	0.0962	mg/L	1	0.100	<0.000303	96	70 - 130	4	20
Toluene		2,3,5,7,8	0.100	mg/L	1	0.100	<0.000303	100	70 - 130	2	20
Ethylbenzene		2,3,5,7,8	0.0996	mg/L	1	0.100	<0.000266	100	70 - 130	1	20
Xylene		2,3,5,7,8	0.302	mg/L	1	0.300	<0.000265	101	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)	8	0.101	0.0988	mg/L	1	0.1	101	99	70 - 130
4-Bromofluorobenzene (4-BFB)	8	0.0989	0.101	mg/L	1	0.1	99	101	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 117601 | Date Analyzed: 2014-12-01 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2,3,5,7,8	mg/L	0.100	0.0991	99	80 - 120	2014-12-01
Toluene		2,3,5,7,8	mg/L	0.100	0.100	100	80 - 120	2014-12-01
Ethylbenzene		2,3,5,7,8	mg/L	0.100	0.0992	99	80 - 120	2014-12-01
Xylene		2,3,5,7,8	mg/L	0.300	0.301	100	80 - 120	2014-12-01

Standard (CCV-2)

QC Batch: 117601 | Date Analyzed: 2014-12-01 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2,3,5,7,8	mg/L	0.100	0.0942	94	80 - 120	2014-12-01
Toluene		2,3,5,7,8	mg/L	0.100	0.101	101	80 - 120	2014-12-01
Ethylbenzene		2,3,5,7,8	mg/L	0.100	0.101	101	80 - 120	2014-12-01
Xylene		2,3,5,7,8	mg/L	0.300	0.304	101	80 - 120	2014-12-01

Standard (CCV-3)

QC Batch: 117601 | Date Analyzed: 2014-12-01 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2,3,5,7,8	mg/L	0.100	0.0990	99	80 - 120	2014-12-01
Toluene		2,3,5,7,8	mg/L	0.100	0.102	102	80 - 120	2014-12-01
Ethylbenzene		2,3,5,7,8	mg/L	0.100	0.102	102	80 - 120	2014-12-01
Xylene		2,3,5,7,8	mg/L	0.300	0.309	103	80 - 120	2014-12-01

Standard (CCV-1)

QC Batch: 117718 | Date Analyzed: 2014-12-04 | Analyzed By: MN

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		2,3,5,7,8	mg/L	60.0	61.3	102	80 - 120	2014-12-04
2-Methylnaphthalene		2,3,5,7,8	mg/L	60.0	62.0	103	80 - 120	2014-12-04
1-Methylnaphthalene		2	mg/L	60.0	61.5	102	80 - 120	2014-12-04
Acenaphthylene		2,3,5,7,8	mg/L	60.0	59.1	98	80 - 120	2014-12-04
Acenaphthene		2,3,5,7,8	mg/L	60.0	59.7	100	80 - 120	2014-12-04
Dibenzofuran		2,3,5,7,8	mg/L	60.0	61.4	102	80 - 120	2014-12-04
Fluorene		2,3,5,7,8	mg/L	60.0	65.0	108	80 - 120	2014-12-04
Anthracene		2,3,5,7,8	mg/L	60.0	64.8	108	80 - 120	2014-12-04
Phenanthrene		2,3,5,7,8	mg/L	60.0	64.3	107	80 - 120	2014-12-04
Fluoranthene		2,3,5,7,8	mg/L	60.0	69.0	115	80 - 120	2014-12-04
Pyrene		2,3,5,7,8	mg/L	60.0	62.0	103	80 - 120	2014-12-04
Benzo(a)anthracene		2,3,5,7,8	mg/L	60.0	63.0	105	80 - 120	2014-12-04
Chrysene		2,3,5,7,8	mg/L	60.0	61.2	102	80 - 120	2014-12-04
Benzo(b)fluoranthene		2,3,5,7,8	mg/L	60.0	63.6	106	80 - 120	2014-12-04
Benzo(k)fluoranthene		2,3,5,7,8	mg/L	60.0	61.1	102	80 - 120	2014-12-04
Benzo(a)pyrene		2,3,5,7,8	mg/L	60.0	50.9	85	80 - 120	2014-12-04
Indeno(1,2,3-cd)pyrene		2,3,5,7,8	mg/L	60.0	57.7	96	80 - 120	2014-12-04
Dibenzo(a,h)anthracene		2,3,5,7,8	mg/L	60.0	60.9	102	80 - 120	2014-12-04
Benzo(g,h,i)perylene		2,3,5,7,8	mg/L	60.0	56.3	94	80 - 120	2014-12-04

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			54.0	mg/L	1	60.0	90	-
2-Fluorobiphenyl			64.5	mg/L	1	60.0	108	-
Terphenyl-d14			62.2	mg/L	1	60.0	104	-

Standard (CCV-2)

QC Batch: 117718 | Date Analyzed: 2014-12-04 | Analyzed By: MN

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		2,3,5,7,8	mg/L	60.0	61.8	103	80 - 120	2014-12-04
2-Methylnaphthalene		2,3,5,7,8	mg/L	60.0	64.1	107	80 - 120	2014-12-04
1-Methylnaphthalene		2	mg/L	60.0	63.2	105	80 - 120	2014-12-04
Acenaphthylene		2,3,5,7,8	mg/L	60.0	59.2	99	80 - 120	2014-12-04
Acenaphthene		2,3,5,7,8	mg/L	60.0	59.7	100	80 - 120	2014-12-04

continued . . .

standard continued . . .

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dibenzofuran		2,3,5,7,8	mg/L	60.0	61.5	102	80 - 120	2014-12-04
Fluorene		2,3,5,7,8	mg/L	60.0	65.2	109	80 - 120	2014-12-04
Anthracene		2,3,5,7,8	mg/L	60.0	63.7	106	80 - 120	2014-12-04
Phenanthrene		2,3,5,7,8	mg/L	60.0	63.6	106	80 - 120	2014-12-04
Fluoranthene		2,3,5,7,8	mg/L	60.0	68.8	115	80 - 120	2014-12-04
Pyrene		2,3,5,7,8	mg/L	60.0	61.8	103	80 - 120	2014-12-04
Benzo(a)anthracene		2,3,5,7,8	mg/L	60.0	63.2	105	80 - 120	2014-12-04
Chrysene		2,3,5,7,8	mg/L	60.0	61.5	102	80 - 120	2014-12-04
Benzo(b)fluoranthene		2,3,5,7,8	mg/L	60.0	64.0	107	80 - 120	2014-12-04
Benzo(k)fluoranthene		2,3,5,7,8	mg/L	60.0	62.4	104	80 - 120	2014-12-04
Benzo(a)pyrene		2,3,5,7,8	mg/L	60.0	50.7	84	80 - 120	2014-12-04
Indeno(1,2,3-cd)pyrene		2,3,5,7,8	mg/L	60.0	57.5	96	80 - 120	2014-12-04
Dibenzo(a,h)anthracene		2,3,5,7,8	mg/L	60.0	61.2	102	80 - 120	2014-12-04
Benzo(g,h,i)perylene		2,3,5,7,8	mg/L	60.0	56.5	94	80 - 120	2014-12-04

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			53.9	mg/L	1	60.0	90	-
2-Fluorobiphenyl			63.0	mg/L	1	60.0	105	-
Terphenyl-d14			61.7	mg/L	1	60.0	103	-

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	PJLA	L14-103	El Paso
2	PJLA	L14-93	Lubbock
3	Kansas	Kansas E-10317	Lubbock
4	LELAP	LELAP-02002	El Paso
5	LELAP	LELAP-02003	Lubbock
6	NELAP	T104704221-12-3	El Paso
7	NELAP	T104704219-14-10	Lubbock
8		2014-018	Lubbock

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.

F	Description
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

1 Sample dilution due to excessive soil in the voa.

Attachments

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

LAB Order ID # 14112401

Page 1 of 2

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

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

Company Name: CRA / Midland
Phone #: 432-0086
Address: (Street, City, Zip) 2135 S Loop 250 W Midland, TX 79703
Fax #: 432-686-0186
Contact Person: John Fergeson
E-mail: JFergeson@craworld.com
Invoice to: (If different from above)
Project #: 074684
Project Name: Dark
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
380483	mw-1A-11/2014	4		X										11-2014	1310
484	mw-12R-11/2014	↓													1320
485	Rw-14-11/2014														1340
486	Rw-15-11/2014														1350
487	mw-16-11/2014	3													1400
488	mw-9-11/2014	↓													1410
489	mw-14-11/2014														1420
490	mw-15-11/2014														1430
491	mw-10-11/2014														1440
492	mw-11-11/2014														1450
493	mw-6-11/2014	↓												↓	1510

ANALYSIS REQUEST (Circle or Specify Method No.)	
MTBE 8021 / 602 / 8260 / 624	
BTEX 8021 / 602 / 8260 / 624	X ↓
TPH 418.1 / TX1005 / TX1005 Ext(C35)	
TPH 8015 GRO / DRO / TVHC	
PAH 8270 / 625	X ↓
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:	INST / OBS / COR
	CRA	11-2014		Dylan Barry	Brandon Clark	11/20/14	14:30	INST ___ OBS 2.0 °C COR ___ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ___ OBS ___ °C COR ___ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST IR3 OBS 2.9 °C COR 2.8 °C
					TA-L	11-22-14	9:35	

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

REMARKS:
Some wells had small H2O columns, resulting in sand in samples.

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

Carrier # LSO ZR858163

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

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LAB Order ID # 14112401

Page 2 of 2

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email: lab@traceanalysis.com

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Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

Company Name: CRA / Midland
Phone #: 432-686-0086
Address: (Street, City, Zip) 2135 S. Loop 250 W Midland, TX 79703
Fax #: 432-686-0186
Contact Person: John Ferguson
E-mail: JFerguson@craworld.com
Invoice to:
(If different from above)
Project #: 074684
Project Name: Dark 4
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
380494	MW-5 -1/2014	3		X				X				X		11-2014	1520		X																							
495	Dup-1-1/2014	3		X				X				X		↓	—		X																							

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	CRA	11-2014		Dylan Bay	Brandon & Clark	11/20/14	16:30	INST ____ OBS 2 °C COR ____ °C
								INST ____ OBS ____ °C COR ____ °C
				T.H.	TA-L	11-22-14	9:35	INST IR3 OBS 2.9 °C COR 2.8 °C

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

REMARKS: Wells had small 1/20 column, resulting in sand in samples.

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

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Carrier # LSO 2R858163

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