

GW - 140

AMR REPORTS

YEAR(S):

2011



2011
ANNUAL MONITORING REPORT

TNM SPS-11
NW ¼ SE ¼ of SECTION 18, TOWNSHIP 18 SOUTH, RANGE 36 EAST
LEA COUNTY, NEW MEXICO
PLAINS SRS NUMBER: TNM-SPS-11
NMOCD Reference GW-0140

PREPARED FOR:

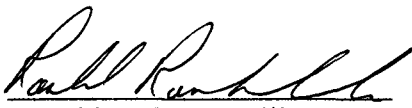
PLAINS MARKETING, L.P.
333 CLAY STREET, SUITE 1600
HOUSTON, TEXAS 77002

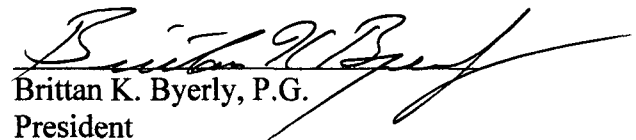


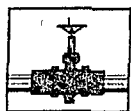
PREPARED BY:

NOVA Safety and Environmental
2057 Commerce
Midland, Texas 79703

March 2012


Ronald K. Rounsaville
Senior Project Manager


Brittan K. Byerly, P.G.
President



PLAINS
ALL AMERICAN

March 22, 2012

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

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Re: Plains All American – 2011 Annual Monitoring Reports
15 Sites in Lea County, New Mexico

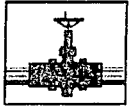
Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Dear Mr. Hansen:

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:

34 Junc. to Lea Sta.	1R-0386 ✓	Section 21, Township 20 South, Range 37 East, Lea County
34 Junction South	1R-0456 ✓	Section 02, Township 17 South, Range 36 East, Lea County
Bob Durham	AP-0016 ✓	Section 32, Township 19 South, Range 37 East, Lea County
HDO-90-23	AP-009 ✓	Section 06, Township 20 South, Range 37 East, Lea County
LF-59	1R-0103 ✓	Section 32, Township 19 South, Range 37 East, Lea County
Monument 2	1R-0110 ✓	Section 06, Township 20 South, Range 37 East, Lea County Section 07, Township 20 South, Range 37 East, Lea County
Monument 10	1R-0119 ✓	Section 30, Township 19 South, Range 37 East, Lea County
Monument 17	1R-123 ✓	Section 29, Township 19 South, Range 37 East, Lea County
Monument 18	1R-0124 ✓	Section 07, Township 20 South, Range 37 East, Lea County
SPS-11	GW-0140 ✓	Section 18, Township 18 South, Range 36 East, Lea County
Texaco Skelly F	1R-0420 ✓	Section 11, Township 21 South, Range 37 East, Lea County
TNM 97-04	GW-0294 ✓	Section 11, Township 16 South, Range 35 East, Lea County
TNM 97-17	AP-017 ✓	Section 21, Township 20 South, Range 37 East, Lea County
TNM 97-18	AP-0013 ✓	Section 28, Township 20 South, Range 37 East, Lea County
TNM 98-05A	AP-12 ✓	Section 26, Township 21 South, Range 37 East, Lea County

Nova Safety and Environmental (Nova) 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 Nova 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.



PLAINS
ALL AMERICAN

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

Sincerely,

Jason Henry
Remediation Coordinator
Plains All American

CC: Geoff Leking, NMOCD, Hobbs, NM

Enclosures

TABLE OF CONTENTS

INTRODUCTION	1
SITE DESCRIPTION AND BACKGROUND INFORMATION	1
FIELD ACTIVITIES	2
LABORATORY RESULTS	3
SUMMARY	11
ANTICIPATED ACTIONS	11
LIMITATIONS	12
DISTRIBUTION	13

FIGURES

Figure 1 – Site Location Map

Figure 2 – Site Map

Figure 3A – Inferred Groundwater Gradient Map – March 8-9, 2011

3B – Inferred Groundwater Gradient Map – May 25-26, 2011

3C – Inferred Groundwater Gradient Map – August 18-19, 2011

3D – Inferred Groundwater Gradient Map – November 15, 2011

Figure 4 – Differentiated Area Site Map

Figure 5 – Area 1 Site Map

Figure 5A – BTEX Concentration and Inferred PSH Extent Map – Area 1 – March 9, 2011

5B – BTEX Concentration and Inferred PSH Extent Map – Area 1 – May 25-26, 2011

5C – BTEX Concentration and Inferred PSH Extent Map – Area 1 – August 18-19, 2011

5D – BTEX Concentrations and Inferred PSH Extent Map – Area 1 – November 15, 2011

Figure 6 – Area 2 Site Map

Figure 6A – BTEX Concentration and Inferred PSH Extent Map – Area 2 – March 9, 2011

6B – BTEX Concentration and Inferred PSH Extent Map – Area 2 – May 25-26, 2011

6C – BTEX Concentration and Inferred PSH Extent Map – Area 2 – August 18-19, 2011

6D – BTEX Concentrations and Inferred PSH Extent Map – Area 2 – November 15, 2011

Figure 7 – Area 3 Site Map

Figure 7A – BTEX Concentration and Inferred PSH Extent Map – Area 3 – March 9, 2011

7B – BTEX Concentration and Inferred PSH Extent Map – Area 3 – May 25-26, 2011

7C – BTEX Concentration and Inferred PSH Extent Map – Area 3 – August 18-19, 2011

7D – BTEX Concentrations and Inferred PSH Extent Map – Area 3 – November 15, 2011

TABLES

Table 1 – 2011 Groundwater Elevation Data

Table 2 – 2011 Concentrations of BTEX and TPH in Groundwater

Table 3 – 2011 Concentrations of PAH in Groundwater

APPENDICES

Appendix A – Release Notification and Corrective Action (Form C-141)

ENCLOSED ON DATA DISK

2011 Annual Monitoring Report

2011 Tables 1, 2 and 3 – Groundwater Elevation, BTEX and PAH Concentration Tables

2011 Figures 1, 2A-2D, and 3A-3D

Electronic Copies of Laboratory Reports

Historic Tables 1, 2 and 3 – Groundwater Elevation, BTEX and PAH Concentration Tables

INTRODUCTION

On behalf of Plains Marketing, L.P. (Plains), NOVA Safety and Environmental (NOVA) is pleased to submit this Annual Monitoring Report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998 requiring submittal of an Annual Monitoring Report by April 1 of each year. Beginning on May 29, 2004, project management responsibilities were assumed by NOVA. The TNM SPS-11 Release Site (the site), which was formerly the responsibility of Texas New Mexico Pipe Line Company (TNM) and EOTT Energy Corporation (EOTT), which became Link Energy, is now the responsibility of Plains. This report is intended to be viewed as a complete document with text, figures, tables and appendices. The report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2011 only. However, historical data tables as well as 2011 laboratory analytical reports are included on the enclosed data disk. Historic information prior to August 19, 1999 does not appear on the enclosed data disk because this data is unavailable. For reference, the Site Location Map is provided as Figure 1.

Groundwater monitoring was conducted during each quarter of 2011 to assess the levels and extent of dissolved phase constituents and Phase Separated Hydrocarbon (PSH). Each groundwater monitoring event consisted of measuring static water levels in monitor wells, checking for the presence of PSH on the water column and purging and sampling of each well exhibiting sufficient recharge. Groundwater samples from monitor wells containing a thickness of PSH greater than 0.01 foot were not sampled during 2011.

SITE DESCRIPTION AND BACKGROUND INFORMATION

The site is located approximately 15 miles west of the town of Hobbs, New Mexico in the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 18, Township 18 South, Range 36 East. Observations in the field indicate the surface topography in the area of the site to be nearly flat. Ground cover consists of low grasses with few mesquite bushes. The predominant land usage in the vicinity of the site is oil and gas production.

According to the Site Investigation and Remedial Action Plan prepared by TNM and dated January 25, 1993, water from a utility well (SPS-11) belonging to Southwestern Public Service Company (SPS) was sampled on April 2, 1991. The analytical results indicated benzene concentrations were above the Environmental Protection Agency (EPA) drinking water standards. The water well was taken out of service in April 1991. A TNM pipeline adjacent to the water well was identified and a hydrocarbon surface stain was observed in the vicinity of utility well SPS-11. The staining was reportedly the result of a pipeline release prior to 1975. No detailed information from the previous pipeline owners or consultants with respect to the release date, volume of crude oil released, or pipeline repair is available, at this time. The Release Notification and Corrective Action (Form C-141) is provided as Appendix B.

Initial site investigation actions were performed for TNM and EOTT by previous consultants. A total of 25 soil borings/groundwater monitoring wells (MW-1 through MW-25) were installed prior to October 1999, and six monitor wells were installed between May 2000 and December 2001. In 2004, two additional monitor wells (MW-32 and MW-33) were installed.

In March 2006, one soil boring (SB-106) was advanced and two monitor wells (MW-34 and MW-35) were installed. In September 2006, one soil boring (SB-206) was advanced and three monitor wells (MW-36, MW-37, and MW-38) were installed.

On November 27, 2007, two additional monitor wells (MW-39 and MW-40) were installed to further delineate the down gradient impact to groundwater.

Of the forty monitor wells installed at the site since project inception, two monitor wells (MW-5 and MW-8) are missing and could not be located. Monitor wells MW-20, MW-22, and MW-27 were plugged and abandoned September 14, 2005, after review of relevance and approval from the NMOCD.

There are currently 35 monitor wells on site.

FIELD ACTIVITIES

Product Recovery Efforts

Based on gauging data collected during the reporting period, a measurable thickness of PSH was detected in monitor wells MW-1, MW-4 and MW-7 during all four sampling events and in monitor well MW-11 during at least two sampling events. The maximum thickness of PSH in the monitor wells was 5.74 feet as recorded in monitor well MW-1 on June 2, 2011. The average thickness of PSH in monitor wells exhibiting PSH is 2.95 feet. PSH data for the 2011 gauging events can be found in Table 1. PSH recovery is performed on a weekly schedule by manual recovery methods. Approximately 369 gallons (8.8 barrels) of PSH were recovered from the site during this reporting period.

During the reporting period, Plains contracted a third party to conduct a Mobile Dual Phase Extraction (MDPE) event at the SPS-11 site to assist in PSH recovery efforts. On September 14, 2011, one, 12-hour MDPE event was conducted on monitor wells MW-1, MW-4, MW-7 and MW-11. During the MDPE event, approximately 12 gallons of liquid PSH and 47.02 equivalent off-gas vapor gallons were recovered.

Groundwater Monitoring

Quarterly monitoring events for the reporting period were performed according to the following sampling schedule, which was approved by the NMOCD in correspondence dated April 28, 2004 and amended by NMOCD correspondences dated June 22, 2005 and May 2, 2006.

NMOCD Approved Sampling Schedule					
MW-1	Quarterly	MW-15	Quarterly	MW-29	Quarterly
MW-2	Annually	MW-16	Quarterly	MW-30	Annually
MW-3	Annually	MW-17	Quarterly	MW-31	Annually
MW-4	Quarterly	MW-18	Semi-Annually	MW-32	Quarterly
MW-5	-	MW-19	Annually	MW-33	Quarterly
MW-6	Quarterly	MW-20	Plugged and Abandoned	MW-34	Quarterly
MW-7	Quarterly	MW-21	Annually	MW-35	Quarterly
MW-8	-	MW-22	Plugged and Abandoned	MW-36	Quarterly
MW-9	Quarterly	MW-23	Quarterly	MW-37	Quarterly
MW-10	Quarterly	MW-24	Quarterly	MW-38	Quarterly
MW-11	Quarterly	MW-25	Annually	MW-39	Quarterly
MW-12	Quarterly	MW-26	Quarterly	MW-40	Quarterly
MW-13	Annually	MW-27	Plugged and Abandoned		
MW-14	Quarterly	MW-28	Quarterly		

The site monitor wells were gauged and sampled on March 8-9, May 25-26, August 18-19, and November 15, 2011. During each sampling event, monitor wells were purged of a minimum of three well volumes of water or until the wells failed to produce water. Purging was performed using a disposable polyethylene bailer for each well or electrical Grundfos pump and dedicated tubing. Groundwater was allowed to recharge and samples were collected using disposable Teflon samplers. Water samples were placed in clean glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a polystyrene tank and disposed of at a licensed disposal facility.

Locations of the monitor wells and the inferred groundwater gradient, which were constructed from measurements collected during quarterly sampling events performed in 2011, are depicted on Figures 3A through 3D, the Inferred Groundwater Gradient Map(s). Groundwater elevation data for 2011 is provided as Table 1. Historic groundwater elevation data is provided on the enclosed data disk.

The most recent Inferred Groundwater Gradient Map, Figure 3D, indicates a general gradient of approximately 0.003 feet/foot to the southeast as measured between monitor wells MW-25 and MW-35. This is consistent with data presented on Figures 2A through 2C from earlier in the year. The corrected groundwater elevations ranged between 3,793.37 and 3,805.02 feet above mean sea level, in monitor well MW-35 on November 15, 2011 and in monitor well MW-25 on March 8, 2011, respectively. PSH data for the 2011 gauging events can be found in Table 1 and on Figures 5, 5A through 5D, Figure 6, 6A through 6D, and Figure 7, 7A through 7D.

LABORATORY RESULTS

Based on the results of the groundwater monitoring and sampling activities over the past several years, it is reasonable to believe that the SPS-11 site appears to be composed of three separate release incidents. Each area is defined by impacted soil and groundwater but the areas are separated by clean wells supported by analytical data. For discussion purposes, we have identified the area to the northwest as "Area 1" and it consists of monitor wells MW-6, MW-9, MW-12, MW-13, MW-14, MW-15, MW-16, MW-23, MW-24 and MW-25. "Area 2" is the central area and it consists of monitor wells MW-1, MW-2, MW-3, MW-4, MW-7, MW-10, MW-11, MW-18, MW-19, MW-21, MW-39 and PW-2. "Area 3" is the area to the southeast and

it consists of monitor wells MW-17, MW-26, MW-28; MW-29, MW-30, MW-31, MW-32, MW-33, MW-34, MW-35, MW-36, MW-38 and MW-40.

Monitor wells MW-1, MW-4 and MW-7 contained measurable PSH throughout the reporting period and were not sampled during the four quarters of 2011. Monitor well MW-11 contained measurable PSH during the 3rd and 4th quarters and were not sampled during those sampling events.

Groundwater samples obtained during the quarterly sampling events of 2011 were delivered to Trace Analysis, Inc. in Midland, Texas for determination of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) constituent concentrations by EPA Method 8021B. Polynuclear Aromatic Hydrocarbons (PAH) analysis was conducted during the 2011 calendar year on MW-14. Based upon historic PAH analytical data, only those wells exhibiting elevated constituent concentrations above WQCC standards will be sampled, with the exclusion of those wells containing measurable PSH thicknesses. A listing of BTEX constituent concentrations for 2011 are summarized in Table 2 and the historic PAH constituent concentrations are summarized in Table 3. Copies of the laboratory reports generated for 2011 are provided on the enclosed data disk. The quarterly groundwater sample results for BTEX constituent concentrations are depicted on Figures 5A through 5D, 6A through 6D and 7A through 7D.

Area 1 Wells

Monitor well MW-6 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during all four quarters of the reporting period. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 21 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-9 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.0375 mg/L during the 1st quarter to 0.9240 mg/L during the 4th quarter of 2011. Benzene concentrations were above NMOCD regulatory standards during all four quarters of the reporting period. Toluene concentrations were below the MDL and NMOCD regulatory standard during all four quarters of the reporting period. Ethyl-benzene concentrations ranged from <0.005 mg/L during the 3rd quarter to 0.068 mg/L during the 2nd quarter of 2011. Ethyl-benzene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. Xylene concentrations ranged from <0.005 mg/L during the 3rd and 4th quarters to 0.0818 mg/L during the 2nd quarter of 2011. Xylene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-12 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during all four quarters of the reporting period. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 11 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-13 is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during the 4th quarter sampling event. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 35 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-14 is sampled on a quarterly schedule. Analytical results indicate benzene concentrations ranged from 4.280 mg/L during the 4th quarter to 6.360 mg/L during the 1st quarter of 2011. Benzene concentrations were above NMOCD regulatory standards during all four quarters of the reporting period. Toluene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. Ethyl-benzene concentrations ranged from <0.050 mg/L during the 3rd and 4th quarters to 0.671 mg/L during the 1st quarter of 2011. Ethyl-benzene concentrations were below the NMOCD regulatory standards during all four quarters of the reporting period. Xylene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above WQCC Drinking Water Standards for naphthalene (0.0355 mg/L), 1-methylnaphthalene (0.0256 mg/L) and 2-methylnaphthalene (0.0224 mg/L) and fluorene (0.00106 mg/L). Additional PAH constituents detected above MDLs include phenanthrene (0.000973 mg/L) and dibenzofuran (0.00178 mg/L), which are below WQCC standards.

Monitor well MW-15 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during all four quarters of the reporting period. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 40 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-16 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 1st and 2nd quarters to 0.0059 mg/L during the 4th quarter of 2011. Benzene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. Toluene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 3rd quarters to 0.0054 mg/L during the 4th quarter of 2011. Toluene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. Ethyl-benzene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. Xylene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 3rd quarters to 0.0026 mg/L during the 4th quarter of 2011. Xylene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-23 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during all four quarters of the reporting period. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 50 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-24 is sampled on a quarterly schedule. Analytical results indicate benzene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. Toluene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 3rd quarters to 0.0018 mg/L during the 4th quarter of 2011. Toluene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. Ethyl-benzene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 3rd quarters to 0.0024 mg/L during the 4th quarter of 2011. Ethyl-benzene concentrations were below the NMOCD regulatory standards during all four quarters of the reporting period. Xylene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 3rd quarters to 0.0033 mg/L during the 4th quarter of 2011. Xylene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-25 is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during the 4th quarter sampling event. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 27 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Area 2 Wells

Monitor well MW-1 is monitored on a quarterly schedule. Monitor well MW-1 was not sampled during the 1st, 2nd, 3rd and 4th quarters of the reporting period, due to the presence of PSH in the monitor well. PSH thicknesses of 1.47 feet, 5.35 feet, 1.60 feet and 2.07 feet were reported during the 1st, 2nd, 3rd and 4th quarters of 2011, respectively. PAH analysis was not conducted during the 4th quarter sampling event due to the presence of PSH.

Monitor well MW-2 is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during the 4th quarter sampling event. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 17 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-3 is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during the 4th quarter sampling event. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 27 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-4 is monitored on a quarterly schedule. Monitor well MW-4 was not sampled during the 1st, 2nd, 3rd and 4th quarters of the reporting period, due to the presence of PSH in the monitor well. PSH thicknesses of 2.53 feet, 3.79 feet, 2.20 feet and 2.25 feet were reported during the 1st, 2nd, 3rd and 4th quarters of 2011, respectively. PAH analysis was not conducted during the 4th quarter sampling event due to the presence of PSH.

Monitor well MW-7 is monitored on a quarterly schedule. Monitor well MW-7 was not sampled during the 1st, 2nd, 3rd and 4th quarters of the reporting period, due to the presence of PSH in the monitor well. PSH thicknesses of 1.45 feet, 5.04 feet, 1.00 feet and 1.11 feet were reported during the 1st, 2nd, 3rd and 4th quarters of 2011, respectively. PAH analysis was not conducted during the 4th quarter sampling event due to the presence of PSH.

Monitor well MW-10 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 4th quarter to 0.0174 mg/L during the 1st quarter of 2011. Benzene concentrations were above NMOCD regulatory standards during the 1st and 2nd quarters of the reporting period. Toluene, ethyl-benzene and xylene concentrations were below the MDL and NMOCD regulatory standard during all four quarters of the reporting period. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-11 is sampled on a quarterly schedule. Monitor well MW-11 was not sampled during the 3rd and 4th quarters of the reporting period, due to the presence of PSH in the monitor well. PSH thicknesses of 1.84 feet and 2.70 feet were reported during the 3rd and 4th quarters of 2011, respectively. Analytical results on samples collected during the 1st and 2nd quarters indicate benzene concentrations ranged from 5.150 mg/L during the 1st quarter to 5.710 mg/L during the 2nd quarter of 2011. Benzene concentrations were above NMOCD regulatory standards during the 1st and 2nd quarters of the reporting period. Toluene concentrations were below the MDL and NMOCD regulatory standards during the 1st and 2nd quarters of the reporting period. Ethyl-benzene concentrations ranged from 1.30 mg/L during the 2nd quarter to 1.43 mg/L during the 1st quarter of 2011. Ethyl-benzene concentrations were above the NMOCD regulatory standards during the 1st and 2nd quarters of the reporting period. Xylene concentrations ranged from 1.190 mg/L during the 2nd quarter to 1.260 mg/L during the 1st quarter of 2011. Xylene concentrations were above NMOCD regulatory standards during the 1st and 2nd quarters of the reporting period. PAH analysis was not conducted during the 4th quarter sampling event due to the presence of PSH.

Monitor well MW-18 is sampled on a semi-annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during the 2nd and 4th quarter sampling events. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 34 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-19 is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during the 4th quarter of the reporting period. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 16 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-21 is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during the 4th quarter sampling event. The analytical results indicate BTEX

constituent concentrations have been below NMOCD regulatory standards for the last 17 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-39 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during all four quarters of the reporting period. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 17 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Area 3 Wells

Monitor well MW-17 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 1st and 2nd quarters to 0.0108 mg/L during the 4th quarter of 2011. Benzene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period. Toluene and ethyl-benzene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. Xylene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 3rd quarters to 0.0029 mg/L during the 4th quarter of 2011. Xylene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-26 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.2190 mg/L during the 1st quarter to 0.6760 mg/L during the 4th quarter of 2011. Benzene concentrations were above NMOCD regulatory standards during all four quarters of the reporting period. Toluene concentrations ranged from 0.008 mg/L during the 1st quarter to 0.240 mg/L during the 4th quarter of 2011. Toluene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. Ethyl-benzene concentrations ranged from 0.0260 mg/L during the 1st quarter to 0.172 mg/L during the 4th quarter of 2011. Ethyl-benzene concentrations were below the NMOCD regulatory standards during all four quarters of the reporting period. Xylene concentrations ranged from 0.025 mg/L during the 1st quarter to 0.0984 mg/L during the 2nd quarter of 2011. Xylene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-28 is sampled on a quarterly schedule. Analytical results indicate benzene concentrations ranged from 0.886 mg/L during the 4th quarter to 1.430 mg/L during the 3rd quarter of 2011. Benzene concentrations were above NMOCD regulatory standards during all four quarters of the reporting period. Toluene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. Ethyl-benzene concentrations ranged from 0.116 mg/L during the 4th quarter to 0.363 mg/L during the 3rd quarter of 2011. Ethyl-benzene concentrations were below the NMOCD regulatory standards during all four quarters of the reporting period. Xylene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-29 is sampled on a quarterly schedule. Analytical results indicate benzene concentrations ranged from 0.767 mg/L during the 3rd quarter to 0.833 mg/L during the 4th quarter of 2011. Benzene concentrations were above NMOCD regulatory standards during all four quarters of the reporting period. Toluene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. Ethyl-benzene concentrations ranged from 0.0435 mg/L during the 4th quarter to 0.140 mg/L during the 1st quarter of 2011. Ethyl-benzene concentrations were below the NMOCD regulatory standards during all four quarters of the reporting period. Xylene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-30 is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during the 4th quarter sampling event. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 17 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-31 is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during the 4th quarter sampling event. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 17 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-32 is sampled on a quarterly schedule. Analytical results indicate benzene concentrations ranged from 1.650 mg/L during the 1st quarter to 1.840 mg/L during the 4th quarter of 2011. Benzene concentrations were above NMOCD regulatory standards during all four quarters of the reporting period. Toluene concentrations ranged from <0.010 mg/L during the 1st, 2nd and 3rd quarters to 0.0424 mg/L during the 4th quarter of 2011. Toluene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. Ethyl-benzene concentrations ranged from 0.0657 mg/L during the 3rd quarter to 0.136 mg/L during the 1st quarter of 2011. Ethyl-benzene concentrations were below the NMOCD regulatory standards during all four quarters of the reporting period. Xylene concentrations ranged from <0.010 mg/L during the 1st, 2nd and 3rd quarters to 0.0368 mg/L during the 4th quarter of 2011. Xylene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-33 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during all four quarters of the reporting period. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 28 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-34 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during all four quarters of the reporting period. The analytical results indicate

BTEX constituent concentrations have been below NMOCD regulatory standards for the last nine consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-35 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 1st and 2nd quarters to 0.169 mg/L during the 4th quarter of 2011. Benzene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period. Toluene concentrations were below the MDL and NMOCD regulatory standards during all four quarters of the reporting period. Ethyl-benzene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 3rd quarters to 0.062 mg/L during the 4th quarter of 2011. Ethyl-benzene concentrations were below the NMOCD regulatory standards during all four quarters of the reporting period. Xylene concentrations ranged from <0.001 mg/L during the 1st and 2nd quarters to 0.0185 mg/L during the 4th quarter of 2011. Xylene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-36 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 3rd quarters to 0.0044 mg/L during the 4th quarter of 2011. Benzene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. Toluene, ethyl-benzene and xylene concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during all four quarters of the reporting period. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-37 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during all four quarters of the reporting period. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 22 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-38 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during all four quarters of the reporting period. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 22 consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Monitor well MW-40 is sampled on a quarterly schedule and analytical results indicate BTEX constituent concentrations were below the MDL and the NMOCD regulatory standard for each BTEX constituent during all four quarters of the reporting period. The analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last five consecutive quarters. PAH analysis was not required during the 4th quarter sampling event.

Laboratory analytical results were compared to NMOCD regulatory limits based on the New Mexico groundwater standards found in section 20.6.2.3103 of the New Mexico Administrative Code.

SUMMARY

This report presents the results of monitoring and sampling activities during the annual reporting period of 2011. Currently, there are 35 groundwater monitor wells (MW-1 through MW-40, excluding MW-5, MW-8, MW-20, MW-22, and MW-27, which have been plugged) in three separate plumes on site. The most recent Groundwater Gradient Map indicates a general gradient of approximately 0.003 feet/foot to the southeast.

Based on gauging data collected during the reporting period, measurable thicknesses of PSH was detected only in Area 2 in monitor wells MW-1, MW-4, MW-7 during all four quarters and in MW-11 during the 3rd and 4th quarters. The maximum thickness of PSH in monitor well was 5.74 feet as recorded in monitor well MW-1 on June 2, 2011. The average thickness of PSH in monitor wells exhibiting PSH is 2.95 feet. Approximately 369 gallons (8.8 barrels) of PSH were recovered from the site during this reporting period. PSH data for the 2011 gauging events can be found in Table 1. PSH recovery is performed on a weekly schedule by manual recovery methods.

During the reporting period, Plains contracted a third party to conduct a Mobile Dual Phase Extraction (MDPE) event at the SPS-11 site to assist in PSH recovery efforts. On September 14, 2011, one, 12-hour MDPE event was conducted on monitor wells MW-1, MW-4, MW-7 and MW-11. During the MDPE event, approximately 12 gallons of liquid PSH and 47.02 equivalent off-gas vapor gallons were recovered.

Review of laboratory analytical results from samples collected from monitor wells within Area 1 indicates BTEX constituent concentrations are below NMOCD regulatory standards in eight of the ten monitor wells within Area 1. Review of PAH analysis indicates an increasing trend in constituent concentrations in monitor well MW-14.

Review of laboratory analytical results from samples collected from monitor wells within Area 2 indicates BTEX constituent concentrations are below NMOCD regulatory standards in six of the eleven monitor wells within Area 2. PSH was observed in four monitor wells (MW-1, MW-4, MW-7 and MW-11) within Area 2. PAH analysis was not conducted on groundwater samples collected from Area 2 monitor wells.

Review of laboratory analytical results from samples collected from monitor wells within Area 3 indicates BTEX constituent concentrations are below NMOCD regulatory standards in eight of the fourteen monitor wells within Area 3. PAH analysis was not conducted on groundwater samples collected from Area 3 monitor wells.

ANTICIPATED ACTIONS

Quarterly monitoring and groundwater sampling will continue in 2012. Plains respectfully requests NMOCD approval to modify the sampling schedule for the following monitor wells:

- Monitor well MW-23 is currently sampled on a quarterly schedule. Plains proposes to modify the schedule to an annual schedule. This down-gradient monitor well was

installed during the 1st quarter 2000 and the analytical results indicate BTEX constituent concentrations have been below NMOCD regulatory standards for the last 50 consecutive quarters.

Groundwater monitoring and weekly PSH recovery will continue in 2012. An Annual Monitoring Report will be submitted to the NMOCD before April 1, 2013.

Based on the results of the PAH analysis over the past several years, further PAH analysis be conducted only on monitor well MW-14, which has historically exhibited elevated constituents near or above the WQCC standards.

LIMITATIONS

NOVA has prepared this Annual Monitoring Report to the best of its ability. No other warranty, expressed or implied, is made or intended.

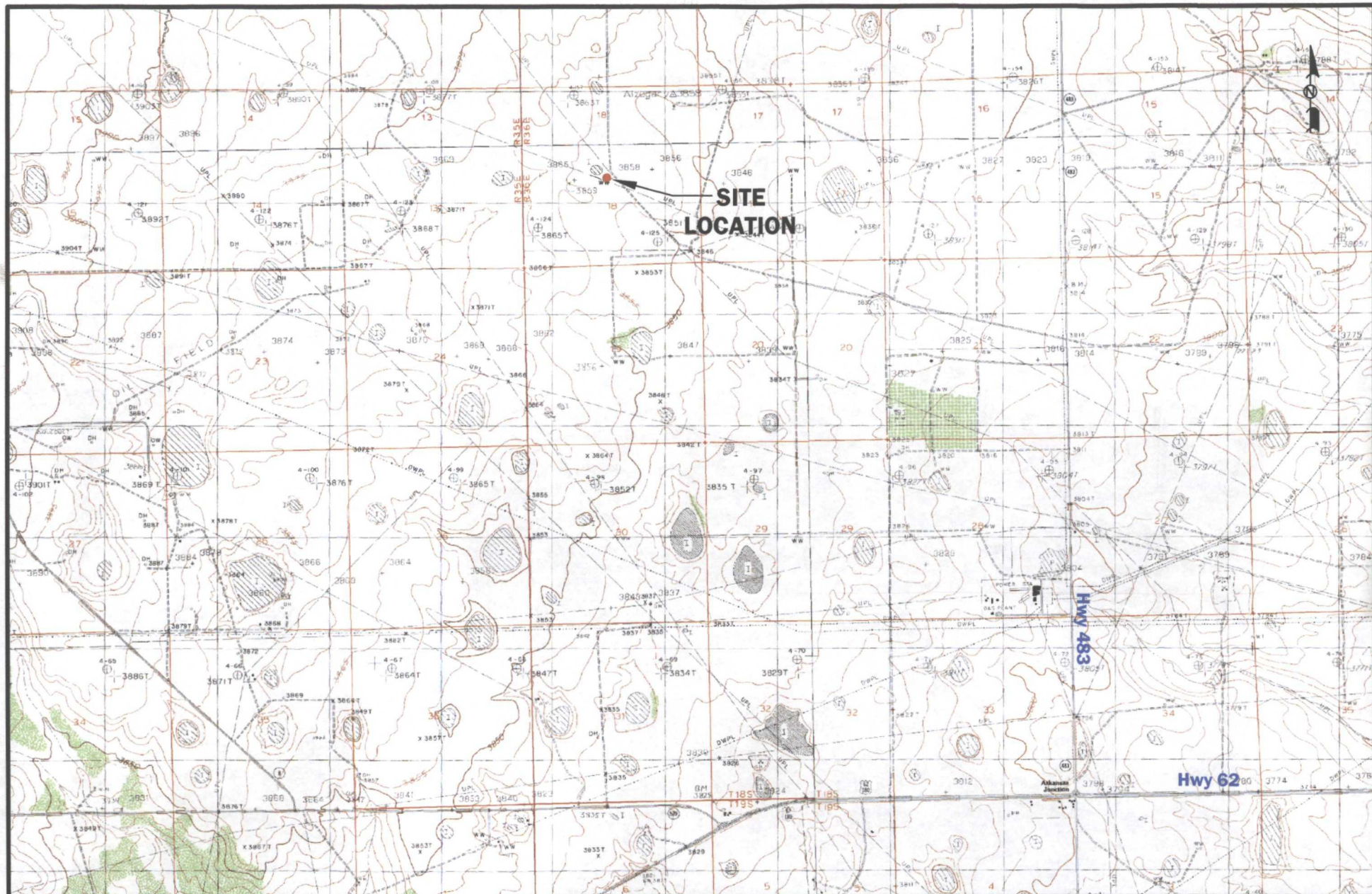
NOVA has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. NOVA has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. NOVA has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. NOVA also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Plains. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of NOVA and/or Plains.

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2057 Commerce Street
Midland, TX 79703
rrounsaville@novatraining.cc

Figures



LEGEND:



NMOCD Reference #GW-0140

Figure 1
Site Location Map
TMN SPS-11
Plains Marketing, L.P.
Lea County, NM

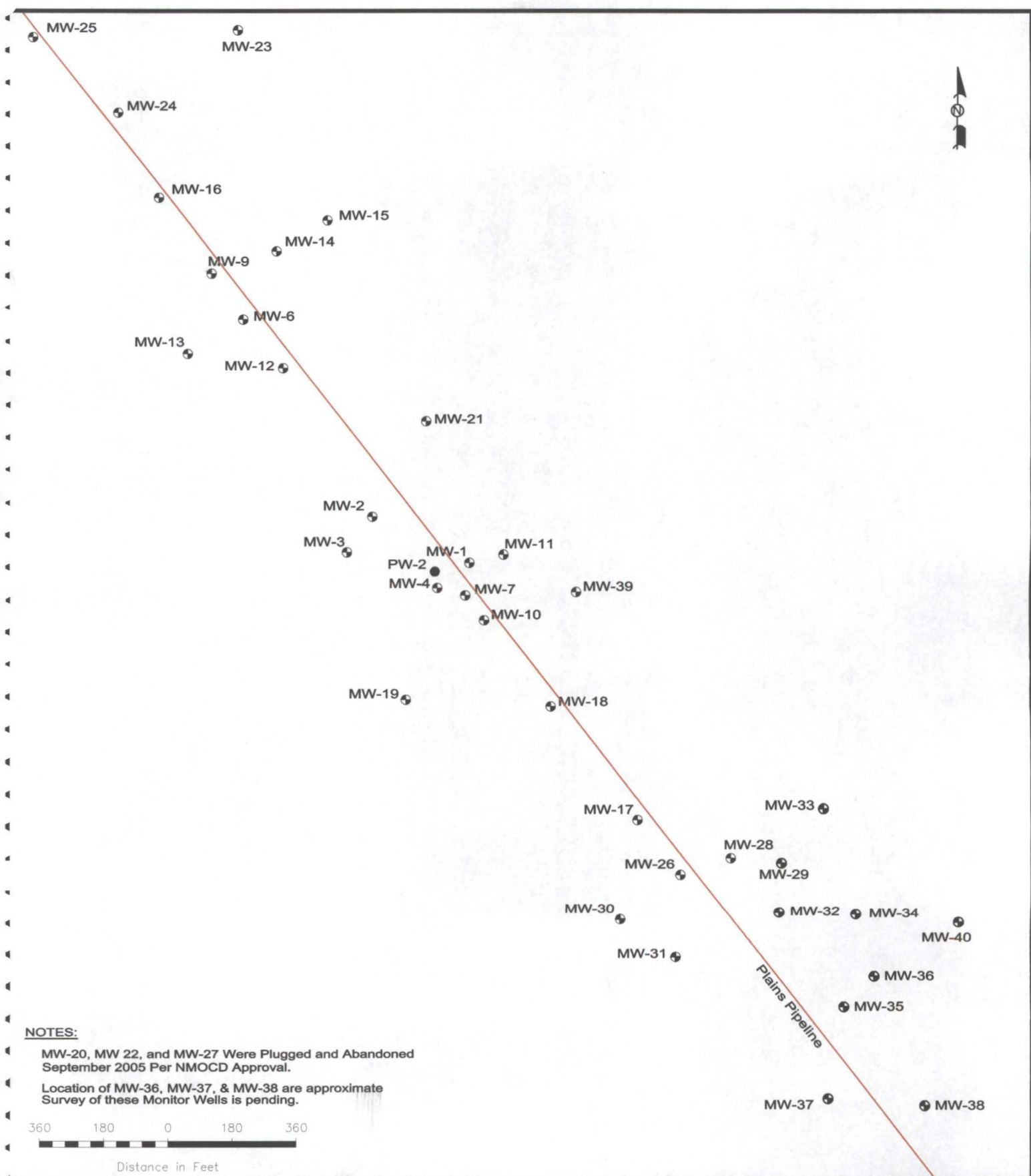


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March 3, 2011 Scale: 1" = 4000' CAD By: TA Checked By: RKR

LATITUDE & LONGITUDE COORDINATES: N 32° 44' 50.3" W 103° 23' 36.5"



NOTES:

MW-20, MW 22, and MW-27 Were Plugged and Abandoned September 2005 Per NMOCD Approval.

Location of MW-36, MW-37, & MW-38 are approximate Survey of these Monitor Wells is pending.



Distance in Feet

LEGEND:

- Monitoring Well Location
- Soil Boring Location
- Producing Well Location
- ⊗ Proposed Monitoring Well Location

Figure 2

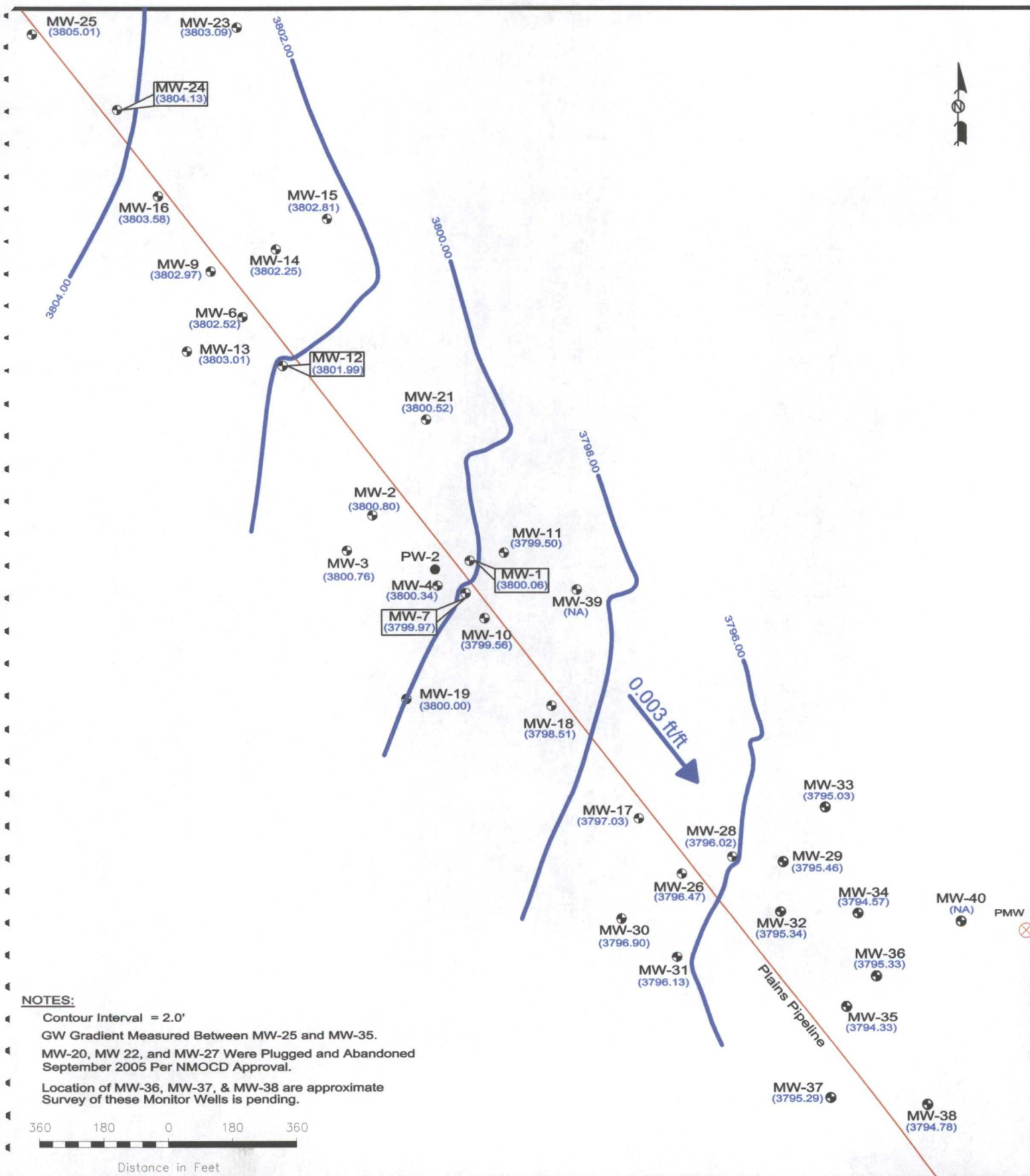
Site Map
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM



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April 5, 2011	Scale: 1" = 360'	CAD By: TA	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	



NOTES:

Contour Interval = 2.0'

GW Gradient Measured Between MW-25 and MW-35.

MW-20, MW 22, and MW-27 Were Plugged and Abandoned September 2005 Per NMOCD Approval.

Location of MW-36, MW-37, & MW-38 are approximate Survey of these Monitor Wells is pending.

LEGEND:

- Groundwater Gradient Contour Line
- 0.001 ft/ft Groundwater Gradient and Magnitude
- Soil Boring Location
- Monitoring Well Location
- Producing Well Location
- Proposed Monitoring Well Location
- (3796.13) Groundwater Elevation (feet)

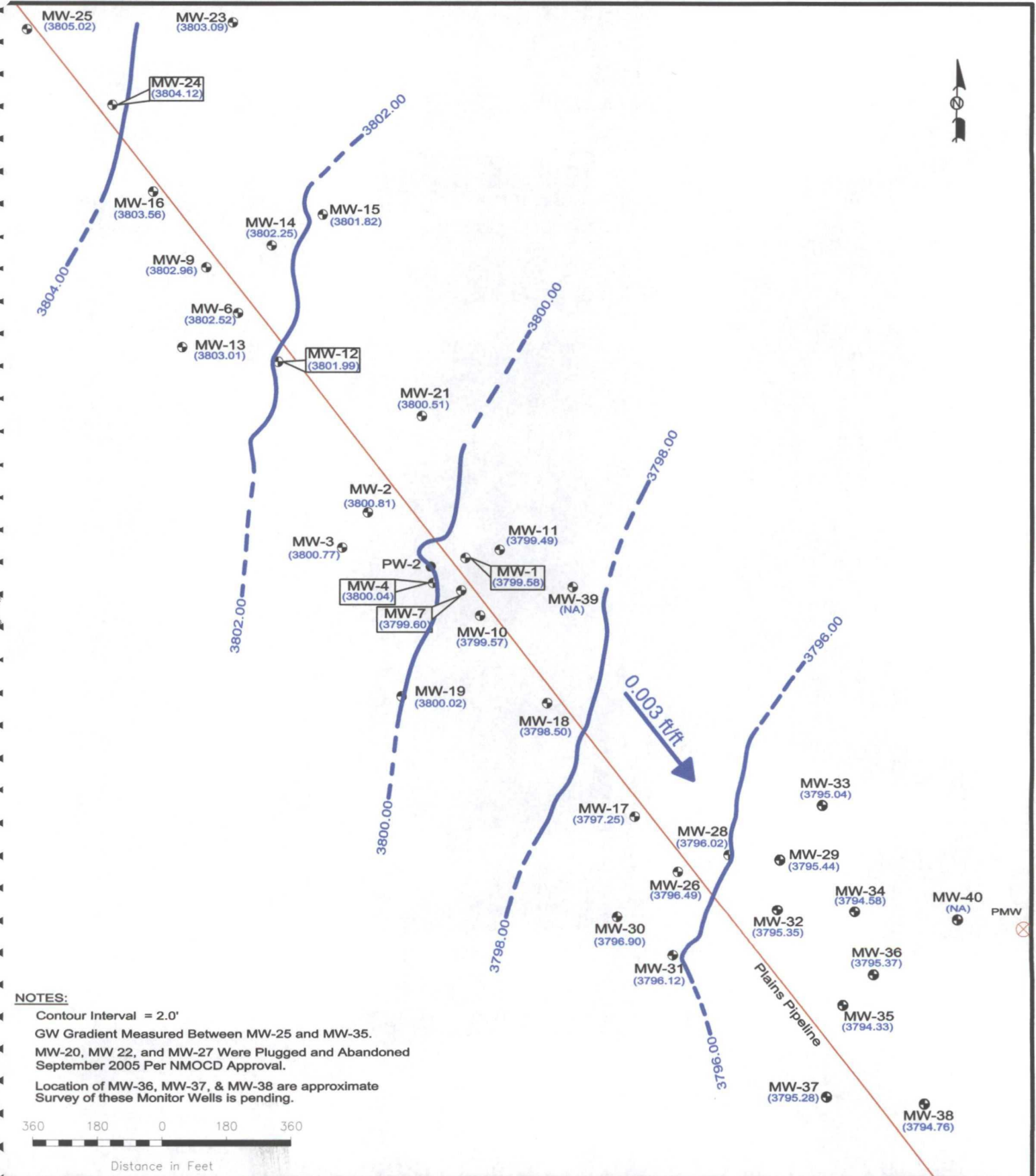
Figure 3A
Inferred Groundwater
Groundwater Gradient Map
 (3/8/11 - 3/9/11)
 NMOCD Reference # GW-0294
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May 3, 2011	Scale: 1" = 360'	CAD By: TA	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	



NOTES:

- Contour Interval = 2.0'
- GW Gradient Measured Between MW-25 and MW-35.
- MW-20, MW 22, and MW-27 Were Plugged and Abandoned September 2005 Per NMOCD Approval.
- Location of MW-36, MW-37, & MW-38 are approximate Survey of these Monitor Wells is pending.



LEGEND:

- Groundwater Gradient Contour Line
- Groundwater Gradient and Magnitude (0.001 ft/ft)
- Soil Boring Location
- Producing Well Location
- Proposed Monitoring Well Location
- Monitoring Well Location
- (3796.13) Groundwater Elevation (feet)

Figure 3B
Inferred Groundwater
Groundwater Gradient Map
 (5/25/2011 - 5/26/2011)
 NMOCD Reference # GW-0294
 Plains Marketing, L.P.
 TNM SPS-11
 Lea County, NM

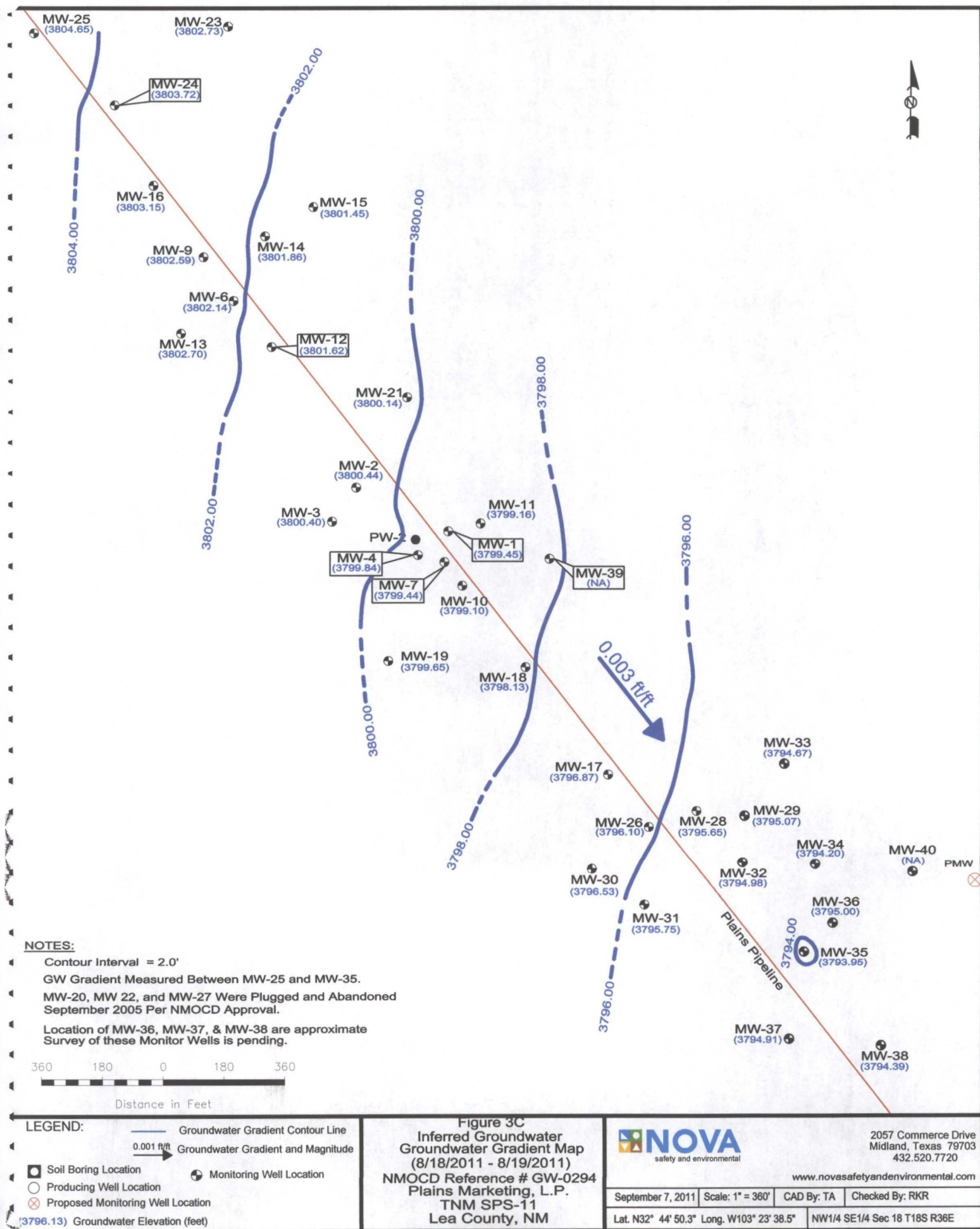


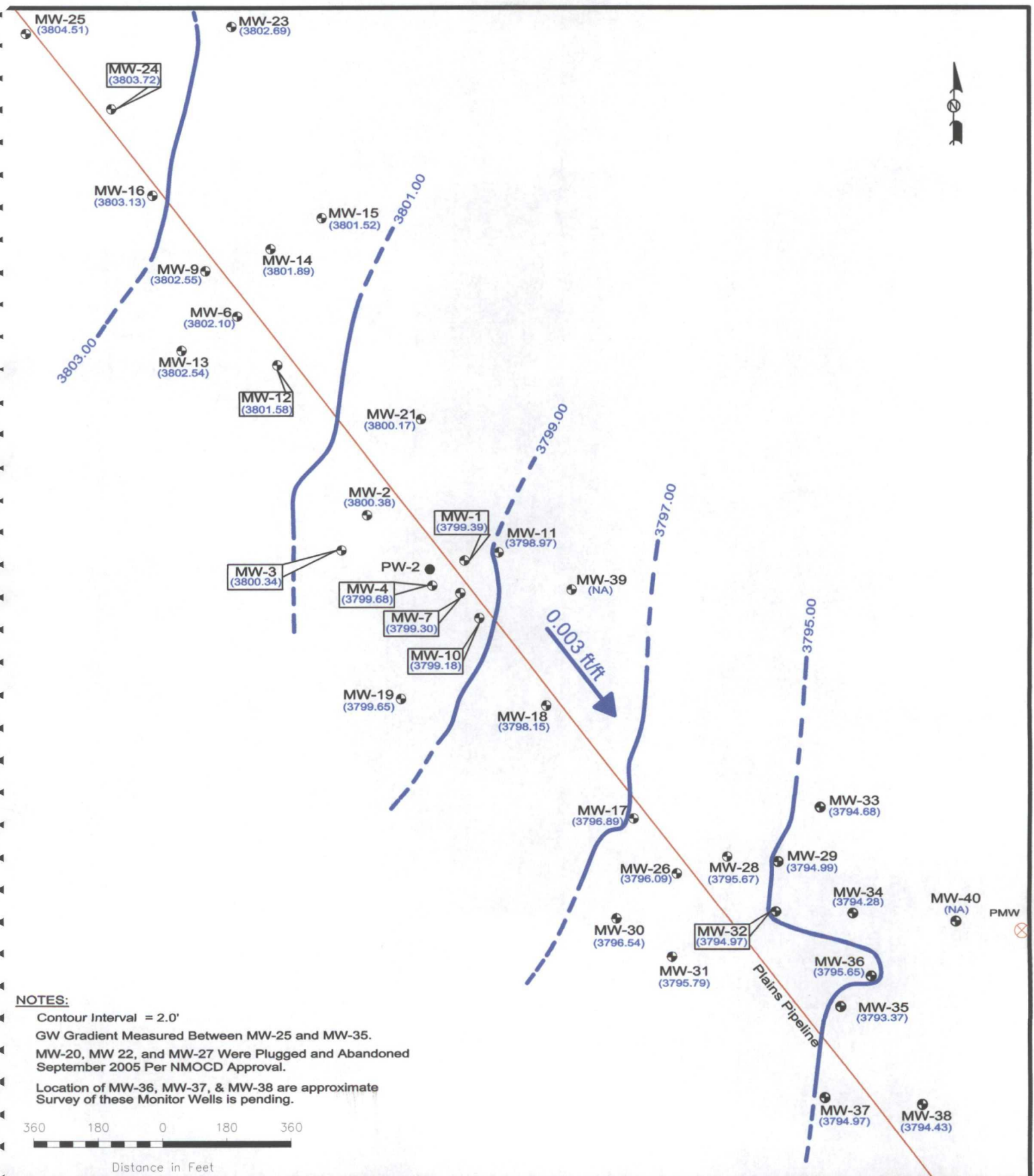
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June 9, 2011 Scale: 1" = 360' CAD By: TA Checked By: RKR

Lat. N32° 44' 50.3" Long. W103° 23' 38.5" NW1/4 SE1/4 Sec 18 T18S R36E





LEGEND:

- Groundwater Gradient Contour Line
- Groundwater Gradient and Magnitude
- Soil Boring Location
- Monitoring Well Location
- Producing Well Location
- Proposed Monitoring Well Location
- Groundwater Elevation (feet)

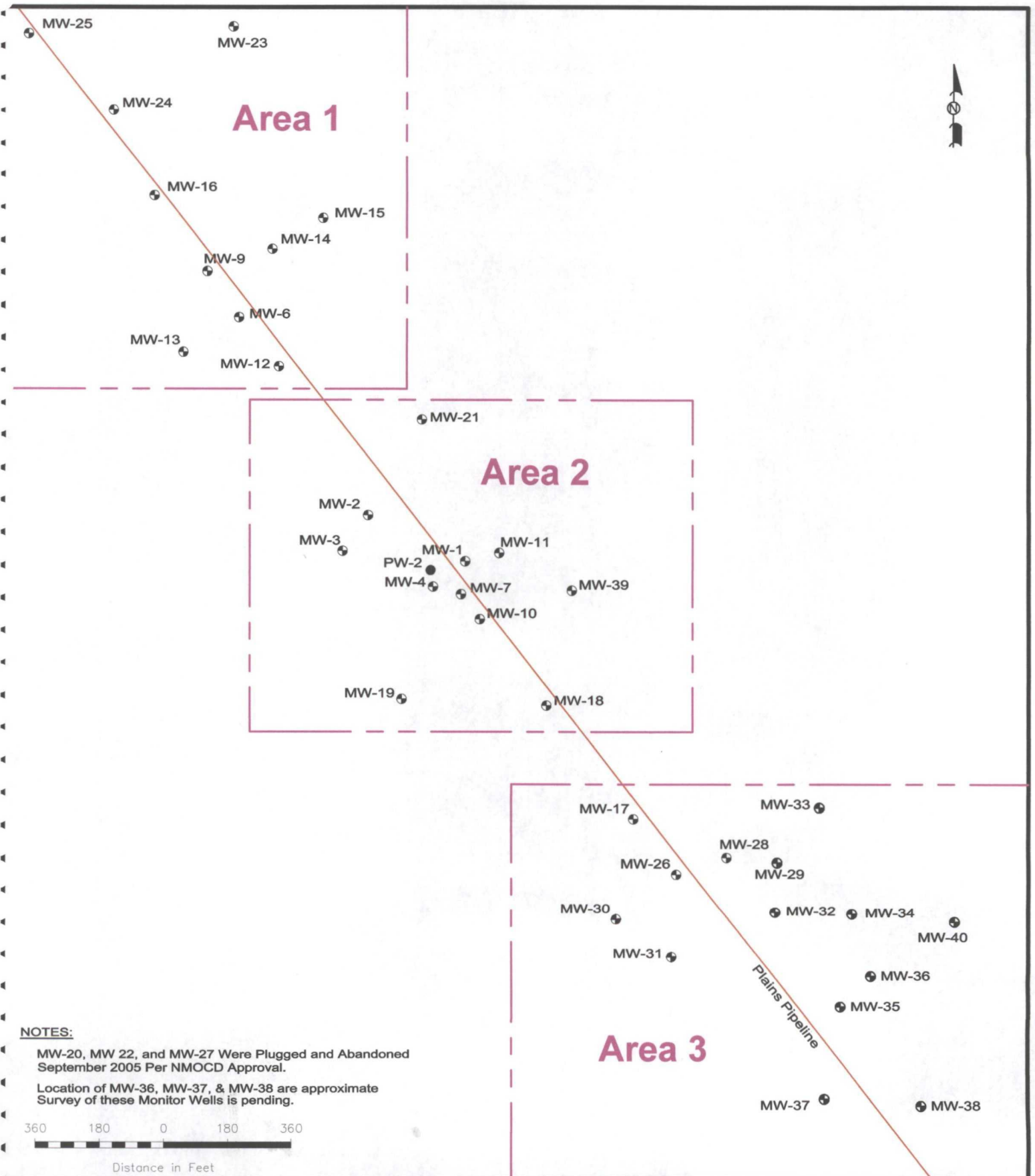
Figure 3D
Inferred Groundwater
Groundwater Gradient Map
(11/15/2011)
NMOCD Reference # GW-0294
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Lea County, NM



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November 21, 2011	Scale: 1" = 360'	CAD By: TA	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	



NOTES:

MW-20, MW 22, and MW-27 Were Plugged and Abandoned September 2005 Per NMOCD Approval.

Location of MW-36, MW-37, & MW-38 are approximate Survey of these Monitor Wells is pending.

360 180 0 180 360

Distance in Feet

LEGEND:

- Monitoring Well Location
- Soil Boring Location
- Producing Well Location
- ⊗ Proposed Monitoring Well Location

Figure 4

Differentiated Site Map
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

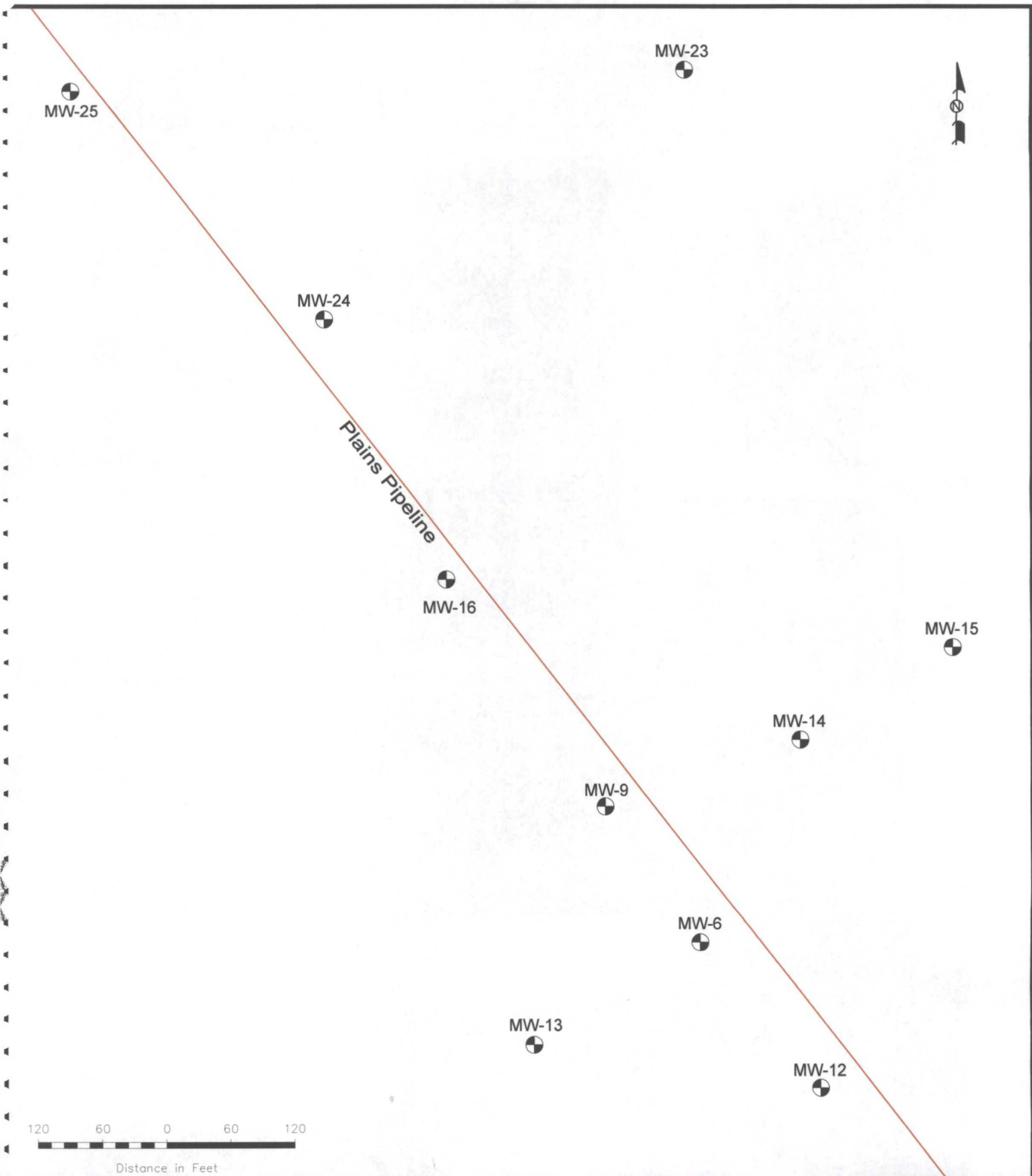


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April 5, 2011 Scale: 1" = 360' CAD By: TA Checked By: RKR

Lat. N32° 44' 50.3" Long. W103° 23' 38.5" NW1/4 SE1/4 Sec 18 T18S R36E



LEGEND:

- Monitoring Well Location
- Soil Boring Location
- Producing Well Location
- Proposed Monitoring Well Location

Figure 5

Area 1
Site Map
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM



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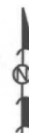
www.novasafetyandenvironmental.com

February 23, 2012	Scale: 1" = 120'	CAD By: TA	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	

MW-25
(NS)

MW-23

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L



MW-24

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

Plains Pipeline

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-16

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-15

Benzene	0.0375 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	0.0597 mg/L
Xylene	0.0565 mg/L

MW-9

MW-14

Benzene	6.360 mg/L
Toluene	<0.050 mg/L
Ethylbenzene	0.671 mg/L
Xylene	<0.050 mg/L

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-6

MW-13
(NS)

MW-12

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

120 60 0 60 120

Distance in Feet

LEGEND:

- Monitoring Well Location
- Soil Boring Location
- Producing Well Location
- Proposed Monitoring Well Location
- Plug & Abandoned Well
- Inferred PSH Extent
- PSH Thickness (Feet)
- <0.001** Constituent Concentration (mg/L)
- (NS)** Not Sampled
- 0.01'** PSH Thickness (Feet)

Figure 5A
Inferred PSH Extent and
BTEX Concentration Map - Area 1
(3/9/2011)
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Lat. N32° 44' 50.3" Long. W103° 23' 38.5" NW1/4 SE1/4 Sec 18 T18S R36E

MW-25
(NS)

MW-23

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L



MW-24

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

Plains Pipeline

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-16

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-15

Benzene	0.358 mg/L
Toluene	<0.005 mg/L
Ethylbenzene	0.0680 mg/L
Xylene	0.0818 mg/L

MW-9

MW-14

Benzene	6.68 mg/L
Toluene	<0.050 mg/L
Ethylbenzene	0.456 mg/L
Xylene	<0.050 mg/L

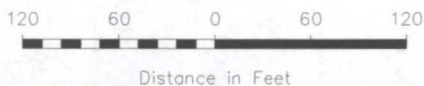
Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-6

MW-13
(NS)

MW-12

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L



LEGEND:

- Monitoring Well Location
- Soil Boring Location
- Producing Well Location
- Proposed Monitoring Well Location
- Plug & Abandoned Well
- Inferred PSH Extent
- 0.01' PSH Thickness (Feet)
- (NS) Not Sampled
- <0.001 Constituent Concentration (mg/L)

Figure 5B
Inferred PSH Extent and
BTEX Concentration Map - Area 1
(5/25/2011 - 5/26/2011)
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February 23, 2012 Scale: 1" = 120' CAD By: TA Checked By: RKR

Lat. N32° 44' 50.3" Long. W103° 23' 38.5" NW1/4 SE1/4 Sec 18 T18S R36E

MW-25
(NS)

MW-23

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-24

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

Plains Pipeline

Benzene	0.0049 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-16

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-15

Benzene	0.382 mg/L
Toluene	<0.005 mg/L
Ethylbenzene	<0.005 mg/L
Xylene	<0.005 mg/L

MW-9

MW-14

Benzene	6.08 mg/L
Toluene	<0.050 mg/L
Ethylbenzene	<0.050 mg/L
Xylene	<0.050 mg/L

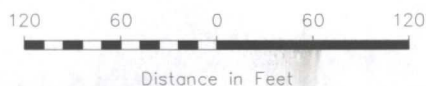
Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-6

MW-13
(NS)

MW-12

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L



LEGEND:

- Monitoring Well Location
- Soil Boring Location
- Producing Well Location
- Proposed Monitoring Well Location
- Plug & Abandoned Well
- <0.001 Constituent Concentration (mg/L)
- (NS) Not Sampled
- Inferred PSH Extent
- 0.01' PSH Thickness (Feet)

Figure 5C
Inferred PSH Extent and
BTEX Concentration Map - Area 1
(8/18/2011 - 8/19/2011)
NMOC Reference # GW-0294
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Lea County, NM



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Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	

MW-25

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-23

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-24

Benzene	<0.001 mg/L
Toluene	0.0018 mg/L
Ethylbenzene	0.0024 mg/L
Xylene	0.0033 mg/L

MW-16

Benzene	0.0059 mg/L
Toluene	0.0054 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	0.0026 mg/L

MW-15

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-9

Benzene	0.924 mg/L
Toluene	<0.005 mg/L
Ethylbenzene	0.0345 mg/L
Xylene	<0.005 mg/L

MW-14

Benzene	4.28 mg/L
Toluene	<0.050 mg/L
Ethylbenzene	<0.050 mg/L
Xylene	<0.050 mg/L

MW-6

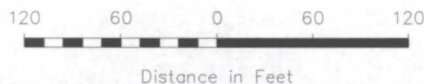
Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-13

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-12

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L



LEGEND:

	Monitoring Well Location
	Soil Boring Location
	Producing Well Location
	Proposed Monitoring Well Location
	Plug & Abandoned Well
	Inferred PSH Extent
	PSH Thickness (Feet)

Figure 5D
Inferred PSH Extent and
BTEX Concentration Map - Area 1
 (11/15/2011)
 NMOC Reference # GW-0294
 Plains Marketing, L.P.
 TNM SPS-11
 Lea County, NM



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 432.520.7720

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February 23, 2012	Scale: 1" = 120'	CAD By: TA	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	



MW-21

MW-2

MW-3

Plains Pipeline

PW-2

MW-4

MW-1

MW-11

MW-39

MW-7

MW-10

MW-19

MW-18

120 60 0 60 120

Distance in Feet

LEGEND:

-  Monitoring Well Location
-  Soil Boring Location
-  Producing Well Location
-  Proposed Monitoring Well Location

Figure 6

Area 2
Site Map
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM



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February 23, 2012	Scale: 1" = 120'	CAD By: TA	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	



Plains Pipeline

MW-21
(NS)

MW-2
(NS)

MW-3
(NS)

PW-2

MW-4
2.53'

MW-7
1.45'

MW-1
1.47'

MW-10

MW-11

MW-39

MW-18
(NS)

MW-19
(NS)

Benzene	5.15 mg/L
Toluene	<0.050 mg/L
Ethylbenzene	1.43 mg/L
Xylene	1.26 mg/L

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

Benzene	0.0174 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

120 60 0 60 120

Distance in Feet

LEGEND:

- | | | | |
|--|-----------------------------------|--------|----------------------------------|
| | Monitoring Well Location | <0.001 | Constituent Concentration (mg/L) |
| | Soil Boring Location | (NS) | Not Sampled |
| | Producing Well Location | 0.01' | PSH Thickness (Feet) |
| | Proposed Monitoring Well Location | | |
| | Plug & Abandoned Well | | |

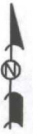
Figure 6A
Inferred PSH Extent and
BTEX Concentration Map Area 2
(3/9/2011)
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM



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February 23, 2012	Scale: 1" = 360'	CAD By: TA	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	



MW-21
(NS)

MW-2
(NS)

MW-3
(NS)

Plains Pipeline

PW-2

MW-4
3.79'

MW-1
5.35'

MW-7
5.04'

MW-10

MW-11

Benzene	5.71 mg/L
Toluene	<0.050 mg/L
Ethylbenzene	1.30 mg/L
Xylene	1.19 mg/L

MW-39

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-19
(NS)

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-18

120 60 0 60 120

Distance in Feet

LEGEND:

- | | | | |
|--|-----------------------------------|--|----------------------|
| | Monitoring Well Location | | Inferred PSH Extent |
| | Soil Boring Location | | PSH Thickness (Feet) |
| | Producing Well Location | | |
| | Proposed Monitoring Well Location | | |
| | Plug & Abandoned Well | | |
- <0.001 Constituent Concentration (mg/L)
(NS) Not Sampled
0.01' PSH Thickness (Feet)

Figure 6B
Inferred PSH Extent and
BTEX Concentration Map Area 2
(5/25/2011 - 5/26/2011)
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM



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February 23, 2012	Scale: 1" = 360'	CAD By: TA	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	



Plains Pipeline

MW-21
(NS)

MW-2
(NS)

MW-3
(NS)

MW-11
1.84'

MW-1
1.60'

PW-2

MW-4
2.20'

MW-7
1.00'

MW-10

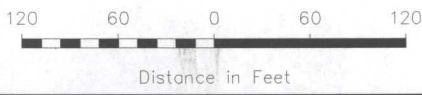
MW-39

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

Benzene	0.0066 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-19
(NS)

MW-18
(NS)



LEGEND:	
	Monitoring Well Location
	Soil Boring Location
	Producing Well Location
	Proposed Monitoring Well Location
	Plug & Abandoned Well
	Inferred PSH Extent
	PSH Thickness (Feet)
	Concentration (mg/L)
	Not Sampled

Figure 6C
Inferred PSH Extent and
BTEX Concentration Map Area 2
(8/18/2011 - 8/19/2011)
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

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February 23, 2012	Scale: 1" = 360'	CAD By: TA	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	



MW-21

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

Plains Pipeline

MW-2

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-3

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-11

2.70'

MW-1

2.07'

PW-2

MW-4

2.25'

MW-7

1.11'

MW-10

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-39

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-19

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

Benzene	<0.001 mg/L
Toluene	<0.001 mg/L
Ethylbenzene	<0.001 mg/L
Xylene	<0.001 mg/L

MW-18

120 60 0 60 120

Distance in Feet

LEGEND:

- Monitoring Well Location
- Soil Boring Location
- Producing Well Location
- Proposed Monitoring Well Location
- Plug & Abandoned Well
- <0.001 Constituent Concentration (mg/L)
- (NS) Not Sampled
- Inferred PSH Extent
- 0.01' PSH Thickness (Feet)

Figure 6D
Inferred PSH Extent and
BTEX Concentration Map Area 2
(11/15/2011)
NMOC Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM



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February 23, 2012	Scale: 1" = 360'	CAD By: TA	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	



MW-17

MW-33

MW-28

MW-29

MW-26

MW-30

MW-32

MW-34

MW-40

MW-31

Plains Pipeline

MW-36

MW-35

MW-37

MW-38

150 75 0 75 150

Distance in Feet

LEGEND:

-  Monitoring Well Location
-  Soil Boring Location
-  Producing Well Location
-  Proposed Monitoring Well Location

Figure 7

Area 3
Site Map
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

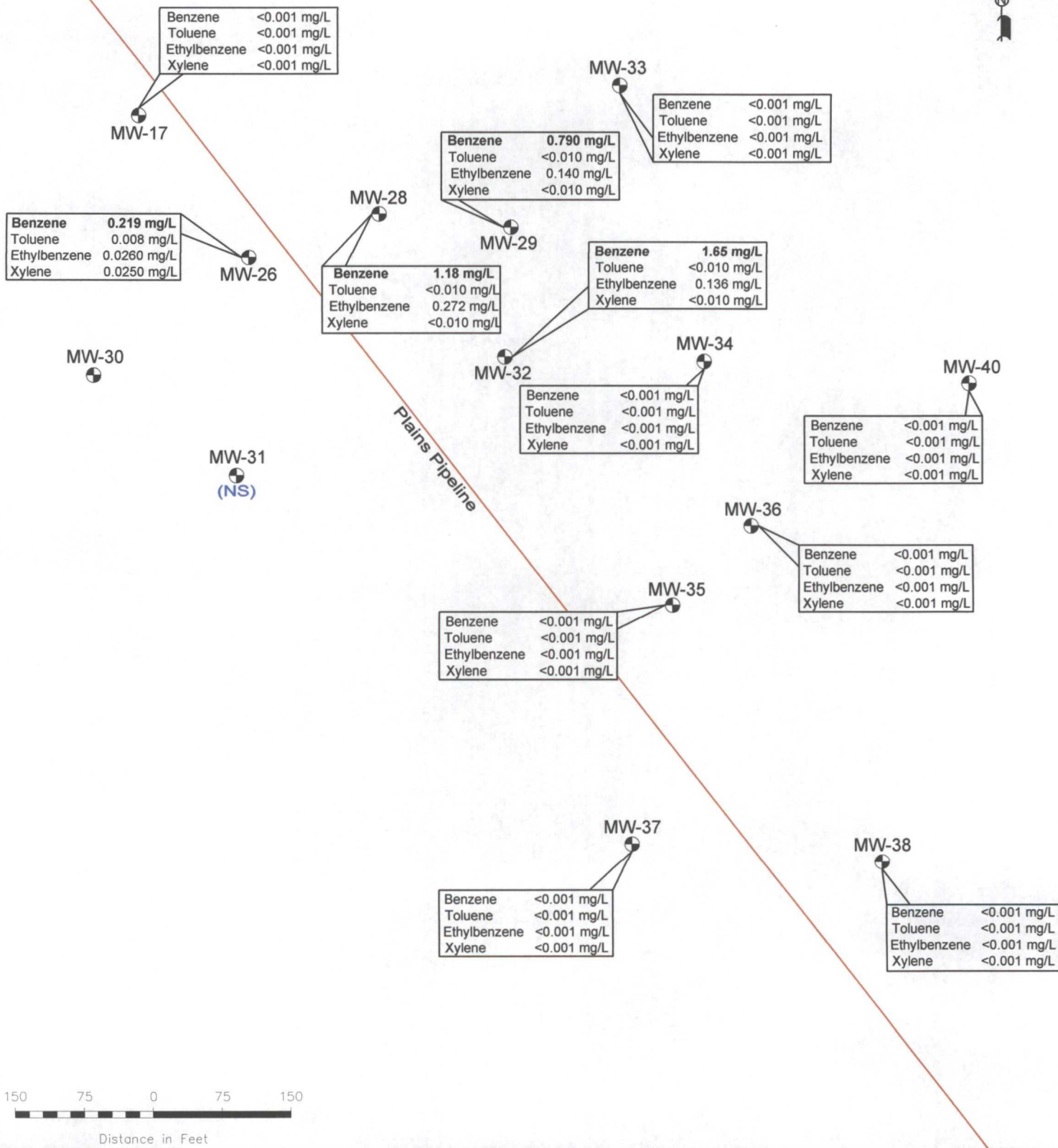
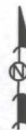


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February 23, 2012 Scale: 1" = 150' CAD By: TA Checked By: RKR

Lat. N32° 44' 50.3" Long. W103° 23' 38.5" NW1/4 SE1/4 Sec 18 T18S R36E



- LEGEND:**
- Monitoring Well Location
 - Soil Boring Location
 - Producing Well Location
 - Proposed Monitoring Well Location
 - Plug & Abandoned Well
- Concentration Legend:**
- <0.001 Constituent Concentration (mg/L)
 - (NS) Not Sampled
- PSH Legend:**
- Inferred PSH Extent
 - 0.01' PSH Thickness (Feet)

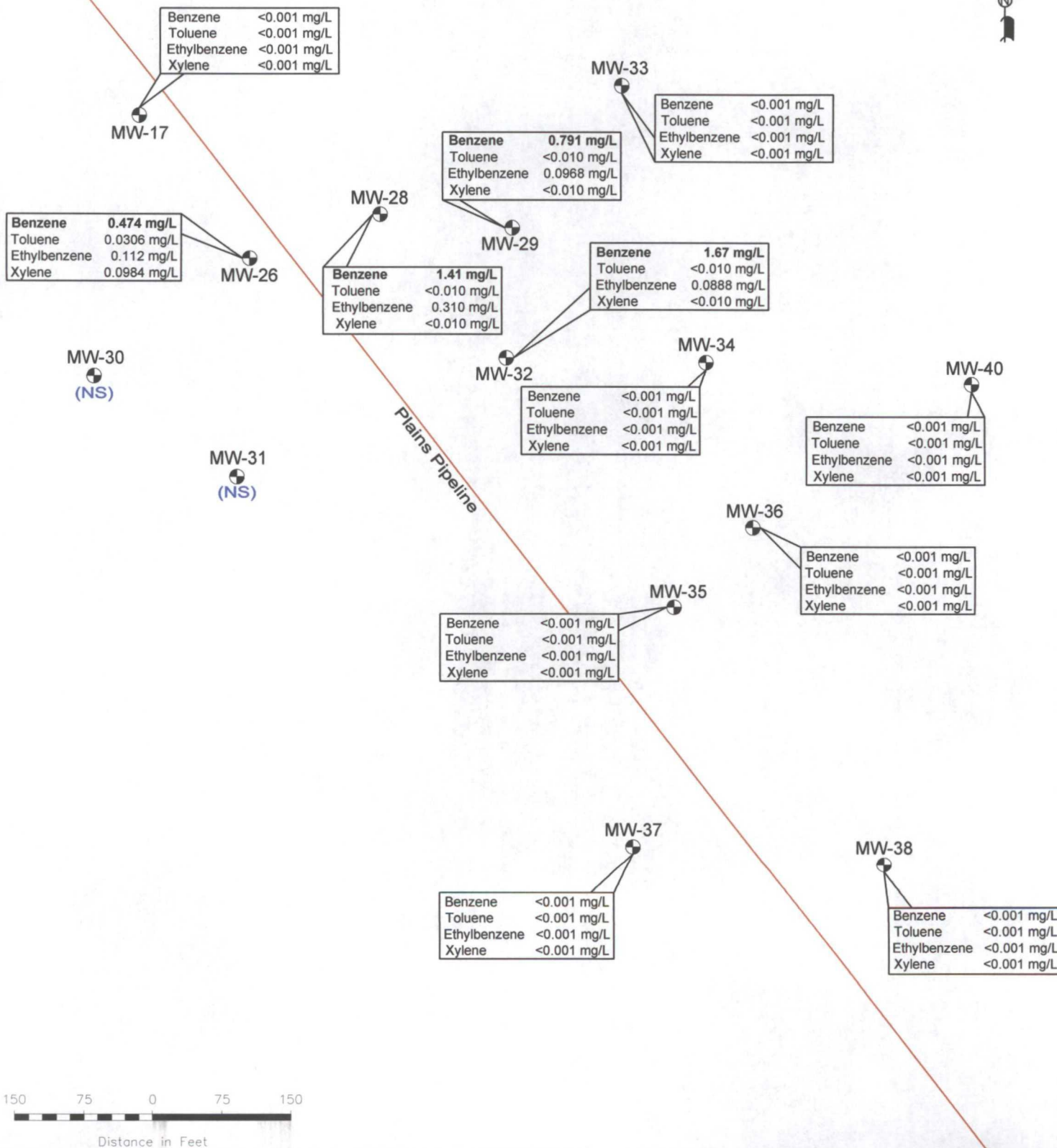
Figure 7A
Inferred PSH Extent and
BTEX Concentration Map Area 3
(3/9/2011)
NMOC Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM



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February 23, 2012	Scale: 1" = 360'	CAD By: TA	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	



LEGEND:

- Monitoring Well Location
- Soil Boring Location
- Producing Well Location
- Proposed Monitoring Well Location
- Plug & Abandoned Well
- <0.001 Constituent Concentration (mg/L)
- (NS) Not Sampled
- Inferred PSH Extent
- 0.01' PSH Thickness (Feet)

Figure 7B
Inferred PSH Extent and
BTEX Concentration Map Area 3
(5/25/2011 - 5/26/2011)
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

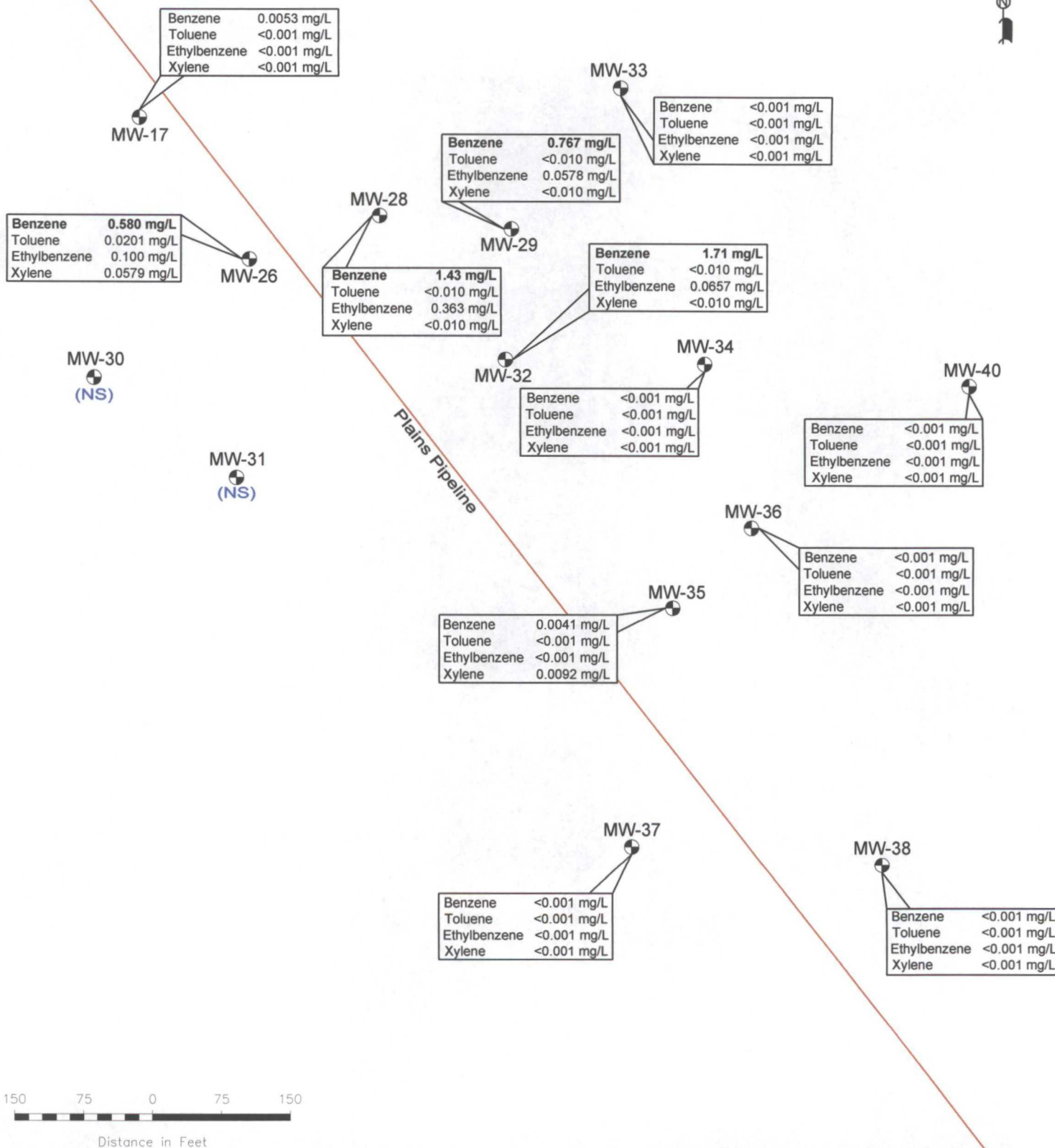


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February 23, 2012 Scale: 1" = 360' CAD By: TA Checked By: RKR

Lat. N32° 44' 50.3" Long. W103° 23' 38.5" NW1/4 SE1/4 Sec 18 T18S R36E



LEGEND:

- Monitoring Well Location
- Soil Boring Location
- Producing Well Location
- Proposed Monitoring Well Location
- Plug & Abandoned Well
- <0.001 Constituent Concentration (mg/L)
- (NS) Not Sampled
- Inferred PSH Extent
- 0.01' PSH Thickness (Feet)

Figure 7C
Inferred PSH Extent and
BTEX Concentration Map Area 3
(8/18/2011 - 8/19/2011)
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM

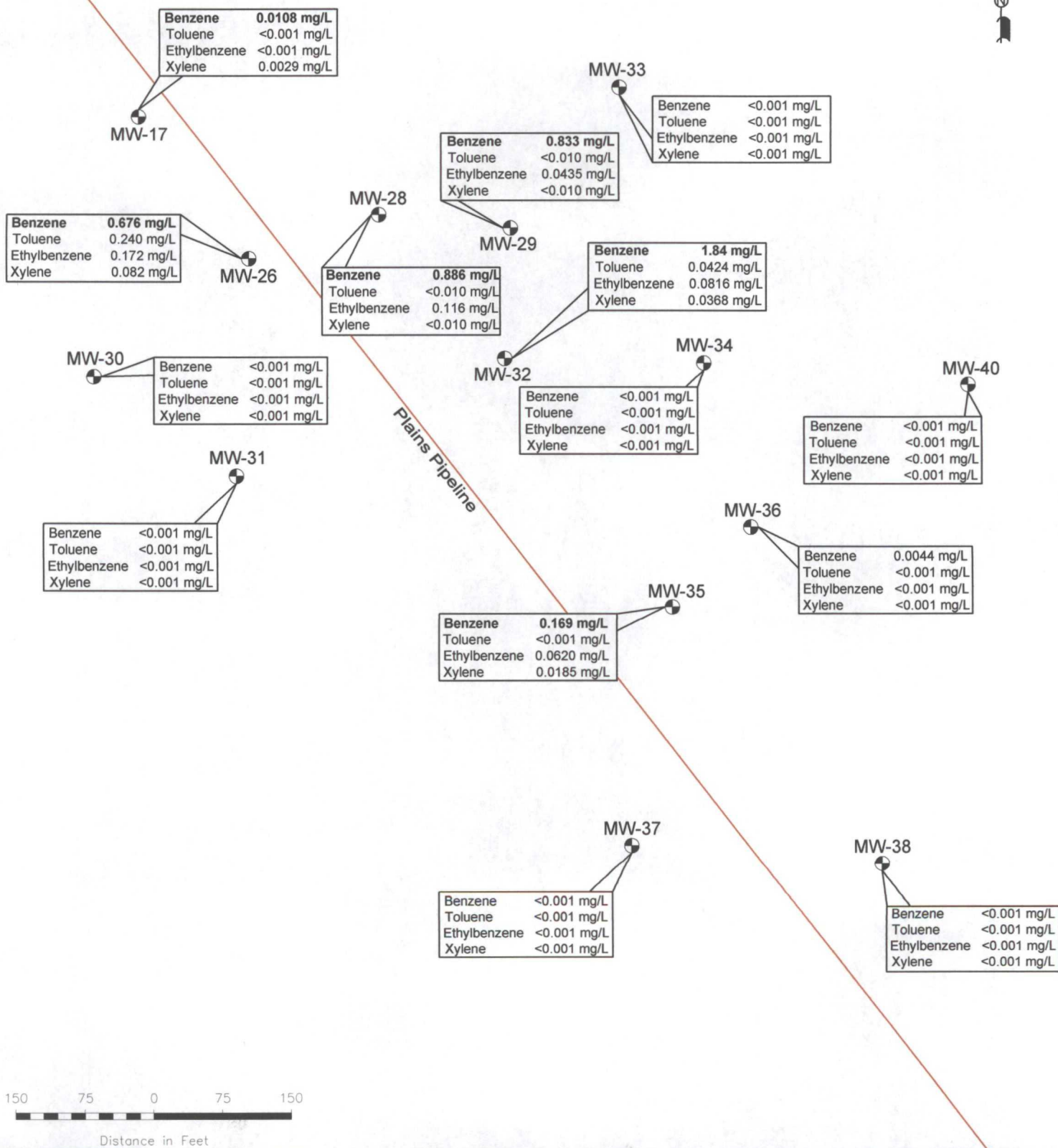


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February 23, 2012 Scale: 1" = 360' CAD By: TA Checked By: RKR

Lat. N32° 44' 50.3" Long. W103° 23' 38.5" NW1/4 SE1/4 Sec 18 T18S R36E



LEGEND:

- Monitoring Well Location
- Soil Boring Location
- Producing Well Location
- Proposed Monitoring Well Location
- Plug & Abandoned Well
- <0.001 Constituent Concentration (mg/L)
- (NS) Not Sampled
- Inferred PSH Extent
- 0.01' PSH Thickness (Feet)

Figure 7D
Inferred PSH Extent and
BTEX Concentration Map Area 3
(11/15/2011)
NMOC Reference # GW-0294
Plains Marketing, L.P.
TNM SPS-11
Lea County, NM



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February 23, 2012	Scale: 1" = 360'	CAD By: TA	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	

Tables

TABLE 1

GROUNDWATER ELEVATION DATA - 2011

TNM SPS - 11
 PLAINS MARKETING, L.P.
 LEA COUNTY, NEW MEXICO
 NMOC REFERENCE NUMBER GW-0140

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 1	01/13/11	3859.08	58.76	60.37	1.61	3800.08
MW - 1	01/27/11	3859.08	58.97	61.30	2.33	3799.76
MW - 1	03/08/11	3859.08	58.80	60.27	1.47	3800.06
MW - 1	04/28/11	3859.08	58.66	64.08	5.42	3799.61
MW - 1	05/11/11	3859.08	58.58	63.97	5.39	3799.69
MW - 1	05/18/11	3859.08	58.60	64.02	5.42	3799.67
MW - 1	05/23/11	3859.08	58.70	64.05	5.35	3799.58
MW - 1	05/26/11	3859.08	58.70	64.05	5.35	3799.58
MW - 1	06/02/11	3859.08	58.66	64.40	5.74	3799.56
MW - 1	06/08/11	3859.08	59.23	64.30	5.07	3799.09
MW - 1	06/16/11	3859.08	58.91	64.19	5.28	3799.38
MW - 1	06/22/11	3859.08	58.90	64.31	5.41	3799.37
MW - 1	06/30/11	3859.08	59.00	63.88	4.88	3799.35
MW - 1	07/06/11	3859.08	59.34	63.70	4.36	3799.09
MW - 1	07/13/11	3859.08	59.28	62.80	3.52	3799.27
MW - 1	07/19/11	3859.08	59.39	61.44	2.05	3799.38
MW - 1	07/26/11	3859.08	59.31	60.91	1.60	3799.53
MW - 1	08/12/11	3859.08	59.27	61.38	2.11	3799.49
MW - 1	08/16/11	3859.08	59.39	60.55	1.16	3799.52
MW - 1	08/19/11	3859.08	59.39	60.99	1.60	3799.45
MW - 1	08/23/11	3859.08	59.41	60.52	1.11	3799.50
MW - 1	09/06/11	3859.08	59.42	62.49	3.07	3799.20
MW - 1	09/13/11	3859.08	59.43	60.81	1.38	3799.44
MW - 1	10/13/11	3859.08	59.41	60.82	1.41	3799.46
MW - 1	11/15/11	3859.08	59.38	61.45	2.07	3799.39
MW - 2	03/08/11	3860.76	-	59.96	0.00	3800.80
MW - 2	05/26/11	3860.76	-	59.95	0.00	3800.81
MW - 2	08/18/11	3860.76	-	60.32	0.00	3800.44
MW - 2	11/15/11	3860.76	-	60.38	0.00	3800.38
MW - 3	03/08/11	3861.15	-	60.39	0.00	3800.76
MW - 3	05/26/11	3861.15	-	60.38	0.00	3800.77
MW - 3	07/06/11	3861.15	-	60.71	0.00	3800.44
MW - 3	07/13/11	3861.15	-	60.72	0.00	3800.43
MW - 3	07/19/11	3861.15	-	60.68	0.00	3800.47
MW - 3	07/26/11	3861.15	-	60.67	0.00	3800.48
MW - 3	08/12/11	3861.15	-	60.72	0.00	3800.43
MW - 3	08/16/11	3861.15	-	60.75	0.00	3800.40
MW - 3	08/18/11	3861.15	-	60.75	0.00	3800.40
MW - 3	08/23/11	3861.15	-	60.73	0.00	3800.42
MW - 3	11/15/11	3861.15	-	60.81	0.00	3800.34
MW - 4	01/13/11	3859.62	58.94	61.48	2.54	3800.30
MW - 4	01/27/11	3859.62	58.95	61.41	2.46	3800.30
MW - 4	03/08/11	3859.62	58.90	61.43	2.53	3800.34
MW - 4	04/28/11	3859.62	59.10	63.02	3.92	3799.93
MW - 4	05/11/11	3859.62	59.13	63.15	4.02	3799.89

TABLE 1

GROUNDWATER ELEVATION DATA - 2011

TNM SPS - 11
 PLAINS MARKETING, L.P.
 LEA COUNTY, NEW MEXICO
 NMOC D REFERENCE NUMBER GW-0140

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 4	05/18/11	3859.62	59.10	63.15	4.05	3799.91
MW - 4	05/23/11	3859.62	59.01	62.81	3.80	3800.04
MW - 4	05/26/11	3859.62	59.01	62.80	3.79	3800.04
MW - 4	06/02/11	3859.62	59.15	62.97	3.82	3799.90
MW - 4	06/08/11	3859.62	59.37	61.96	2.59	3799.86
MW - 4	06/16/11	3859.62	59.23	62.20	2.97	3799.94
MW - 4	06/22/11	3859.62	59.26	62.03	2.77	3799.94
MW - 4	06/30/11	3859.62	59.25	62.75	3.50	3799.85
MW - 4	07/06/11	3859.62	59.30	62.18	2.88	3799.89
MW - 4	07/13/11	3859.62	59.35	62.40	3.05	3799.81
MW - 4	07/19/11	3859.62	59.37	62.16	2.79	3799.83
MW - 4	07/26/11	3859.62	59.33	62.55	3.22	3799.81
MW - 4	08/12/11	3859.62	59.35	62.60	3.25	3799.78
MW - 4	08/16/11	3859.62	59.45	61.95	2.50	3799.80
MW - 4	08/19/11	3859.62	59.45	61.65	2.20	3799.84
MW - 4	08/23/11	3859.62	59.40	62.20	2.80	3799.80
MW - 4	09/06/11	3859.62	59.38	60.99	1.61	3800.00
MW - 4	09/13/11	3859.62	59.42	62.48	3.06	3799.74
MW - 4	10/13/11	3859.62	59.56	61.55	1.99	3799.76
MW - 4	11/15/11	3859.62	59.60	61.85	2.25	3799.68
MW - 6	03/08/11	3862.47	-	59.95	0.00	3802.52
MW - 6	05/26/11	3862.47	-	59.95	0.00	3802.52
MW - 6	08/18/11	3862.47	-	60.33	0.00	3802.14
MW - 6	11/15/11	3862.47	-	60.37	0.00	3802.10
MW - 7	01/13/11	3859.31	59.08	60.69	1.61	3799.99
MW - 7	01/27/11	3859.31	59.20	60.50	1.30	3799.92
MW - 7	03/08/11	3859.31	59.12	60.57	1.45	3799.97
MW - 7	04/28/11	3859.31	59.03	64.00	4.97	3799.53
MW - 7	05/11/11	3859.31	59.09	63.89	4.80	3799.50
MW - 7	05/18/11	3859.31	59.17	63.87	4.70	3799.44
MW - 7	05/23/11	3859.31	58.95	63.99	5.04	3799.60
MW - 7	05/26/11	3859.31	58.95	63.99	5.04	3799.60
MW - 7	06/02/11	3859.31	59.04	64.07	5.03	3799.52
MW - 7	06/08/11	3859.31	59.34	61.89	2.55	3799.59
MW - 7	06/16/11	3859.31	59.18	64.14	4.96	3799.39
MW - 7	06/22/11	3859.31	59.00	64.04	5.04	3799.55
MW - 7	06/30/11	3859.31	59.36	63.68	4.32	3799.30
MW - 7	07/06/11	3859.31	59.59	62.27	2.68	3799.32
MW - 7	07/13/11	3859.31	59.54	62.02	2.48	3799.40
MW - 7	07/19/11	3859.31	59.63	61.58	1.95	3799.39
MW - 7	07/26/11	3859.31	59.63	61.10	1.47	3799.46
MW - 7	08/12/11	3859.31	59.62	61.22	1.60	3799.45
MW - 7	08/19/11	3859.31	59.72	60.72	1.00	3799.44
MW - 7	08/23/11	3859.31	59.72	60.60	0.88	3799.46
MW - 7	09/06/11	3859.31	59.67	61.37	1.70	3799.39
MW - 7	09/13/11	3859.31	59.71	61.10	1.39	3799.39
MW - 7	10/13/11	3859.31	59.83	60.47	0.64	3799.38
MW - 7	11/15/11	3859.31	59.84	60.95	1.11	3799.30

TABLE 1

GROUNDWATER ELEVATION DATA - 2011

TNM SPS - 11
 PLAINS MARKETING, L.P.
 LEA COUNTY, NEW MEXICO
 NMOC D REFERENCE NUMBER GW-0140

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 9	03/08/11	3861.88	-	58.91	0.00	3802.97
MW - 9	05/25/11	3861.88	-	58.92	0.00	3802.96
MW - 9	08/19/11	3861.88	-	59.29	0.00	3802.59
MW - 9	10/13/11	3861.88	-	59.31	0.00	3802.57
MW - 9	11/15/11	3861.88	-	59.33	0.00	3802.55
MW - 10	03/08/11	3860.58	-	61.02	0.00	3799.56
MW - 10	05/25/11	3860.58	-	61.01	0.00	3799.57
MW - 10	08/19/11	3860.58	-	61.39	0.00	3799.19
MW - 10	11/15/11	3860.58	-	61.40	0.00	3799.18
MW - 11	03/08/11	3860.00	-	60.50	0.00	3799.50
MW - 11	05/25/11	3860.00	-	60.51	0.00	3799.49
MW - 11	08/19/11	3860.00	60.56	62.40	1.84	3799.16
MW - 11	09/06/11	3860.00	60.50	62.95	2.45	3799.13
MW - 11	09/13/11	3860.00	60.60	62.42	1.82	3799.13
MW - 11	10/13/11	3860.00	60.55	62.78	2.23	3799.12
MW - 11	11/15/11	3860.00	60.63	63.33	2.70	3798.97
MW - 12	03/08/11	3863.10	-	61.11	0.00	3801.99
MW - 12	05/25/11	3863.10	-	61.11	0.00	3801.99
MW - 12	08/18/11	3863.10	-	61.48	0.00	3801.62
MW - 12	11/15/11	3863.10	-	61.52	0.00	3801.58
MW - 13	03/08/11	3862.44	-	59.43	0.00	3803.01
MW - 13	05/25/11	3862.44	-	59.43	0.00	3803.01
MW - 13	08/18/11	3862.44	-	59.74	0.00	3802.70
MW - 13	11/15/11	3862.44	-	59.90	0.00	3802.54
MW - 14	03/08/11	3862.95	-	60.70	0.00	3802.25
MW - 14	05/25/11	3862.95	-	60.70	0.00	3802.25
MW - 14	08/19/11	3862.95	-	61.09	0.00	3801.86
MW - 14	11/15/11	3862.95	-	61.06	0.00	3801.89
MW - 15	03/08/11	3861.70	-	58.89	0.00	3802.81
MW - 15	05/25/11	3861.70	-	59.88	0.00	3801.82
MW - 15	08/18/11	3861.70	-	60.25	0.00	3801.45
MW - 15	11/15/11	3861.70	-	60.18	0.00	3801.52
MW - 16	03/08/11	3863.15	-	59.57	0.00	3803.58
MW - 16	05/25/11	3863.15	-	59.59	0.00	3803.56
MW - 16	08/18/11	3863.15	-	60.00	0.00	3803.15
MW - 16	11/15/11	3863.15	-	60.02	0.00	3803.13
MW - 17	03/08/11	3859.17	-	61.94	0.00	3797.23
MW - 17	05/25/11	3859.17	-	61.92	0.00	3797.25
MW - 17	08/18/11	3859.17	-	62.30	0.00	3796.87
MW - 17	11/15/11	3859.17	-	62.28	0.00	3796.89

TABLE 1
GROUNDWATER ELEVATION DATA - 2011

TNM SPS - 11
PLAINS MARKETING, L.P.
LEA COUNTY, NEW MEXICO
NMOC D REFERENCE NUMBER GW-0140

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 18	03/08/11	3859.98	-	61.47	0.00	3798.51
MW - 18	05/25/11	3859.98	-	61.48	0.00	3798.50
MW - 18	08/18/11	3859.98	-	61.85	0.00	3798.13
MW - 18	11/15/11	3859.98	-	61.83	0.00	3798.15
MW - 19	03/09/11	3862.30	-	62.30	0.00	3800.00
MW - 19	05/25/11	3862.30	-	62.28	0.00	3800.02
MW - 19	08/18/11	3862.30	-	62.65	0.00	3799.65
MW - 19	11/15/11	3862.30	-	62.75	0.00	3799.55
MW - 21	03/08/11	3862.30	-	61.78	0.00	3800.52
MW - 21	05/25/11	3862.30	-	61.79	0.00	3800.51
MW - 21	08/18/11	3862.30	-	62.16	0.00	3800.14
MW - 21	11/15/11	3862.30	-	62.13	0.00	3800.17
MW - 23	03/08/11	3862.44	-	59.35	0.00	3803.09
MW - 23	05/25/11	3862.44	-	59.35	0.00	3803.09
MW - 23	08/18/11	3862.44	-	59.71	0.00	3802.73
MW - 23	11/15/11	3862.44	-	59.75	0.00	3802.69
MW - 24	03/08/11	3864.36	-	60.23	0.00	3804.13
MW - 24	05/25/11	3864.36	-	60.24	0.00	3804.12
MW - 24	08/18/11	3864.36	-	60.64	0.00	3803.72
MW - 24	11/15/11	3864.36	-	60.64	0.00	3803.72
MW - 25	03/08/11	3864.16	-	59.15	0.00	3805.01
MW - 25	05/25/11	3864.16	-	59.14	0.00	3805.02
MW - 25	08/18/11	3864.16	-	59.51	0.00	3804.65
MW - 25	11/15/11	3864.16	-	59.65	0.00	3804.51
MW - 26	03/08/11	3858.79	-	62.32	0.00	3796.47
MW - 26	05/25/11	3858.79	-	62.30	0.00	3796.49
MW - 26	08/19/11	3858.79	-	62.69	0.00	3796.10
MW - 26	11/15/11	3858.79	-	62.70	0.00	3796.09
MW - 28	03/08/11	3858.60	-	62.58	0.00	3796.02
MW - 28	05/25/11	3858.60	-	62.58	0.00	3796.02
MW - 28	08/19/11	3858.60	-	62.95	0.00	3795.65
MW - 28	11/15/11	3858.60	-	62.93	0.00	3795.67
MW - 29	03/08/11	3858.54	-	63.08	0.00	3795.46
MW - 29	05/25/11	3858.54	-	63.10	0.00	3795.44
MW - 29	08/19/11	3858.54	-	63.47	0.00	3795.07
MW - 29	11/15/11	3858.54	-	63.55	0.00	3794.99
MW - 30	03/08/11	3858.35	-	61.45	0.00	3796.90
MW - 30	05/25/11	3858.35	-	61.45	0.00	3796.90
MW - 30	08/18/11	3858.35	-	61.82	0.00	3796.53
MW - 30	11/15/11	3858.35	-	61.81	0.00	3796.54

TABLE 1

GROUNDWATER ELEVATION DATA - 2011

TNM SPS - 11
 PLAINS MARKETING, L.P.
 LEA COUNTY, NEW MEXICO
 NMOC D REFERENCE NUMBER GW-0140

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 31	03/08/11	3858.52	-	62.39	0.00	3796.13
MW - 31	05/25/11	3858.52	-	62.40	0.00	3796.12
MW - 31	08/18/11	3858.52	-	62.77	0.00	3795.75
MW - 31	11/15/11	3858.52	-	62.73	0.00	3795.79
MW-32	03/08/11	3858.07	-	62.73	0.00	3795.34
MW-32	05/25/11	3858.07	-	62.72	0.00	3795.35
MW-32	08/19/11	3858.07	-	63.09	0.00	3794.98
MW-32	11/15/11	3858.07	-	63.10	0.00	3794.97
MW-33	03/08/11	3858.36	-	63.33	0.00	3795.03
MW-33	05/25/11	3858.36	-	63.32	0.00	3795.04
MW-33	08/18/11	3858.36	-	63.69	0.00	3794.67
MW-33	11/15/11	3858.36	-	63.68	0.00	3794.68
MW-34	03/08/11	3857.91	-	63.34	0.00	3794.57
MW-34	05/25/11	3857.91	-	63.33	0.00	3794.58
MW-34	08/18/11	3857.91	-	63.71	0.00	3794.20
MW-34	11/15/11	3857.91	-	63.63	0.00	3794.28
MW-35	03/08/11	3857.16	-	62.83	0.00	3794.33
MW-35	05/25/11	3857.16	-	62.83	0.00	3794.33
MW-35	08/19/11	3857.16	-	63.21	0.00	3793.95
MW-35	11/15/11	3857.16	-	63.79	0.00	3793.37
MW-36	03/08/11	3858.80	-	63.47	0.00	3795.33
MW-36	05/25/11	3858.80	-	63.43	0.00	3795.37
MW-36	08/19/11	3858.80	-	63.80	0.00	3795.00
MW-36	11/15/11	3858.80	-	63.15	0.00	3795.65
MW-37	03/08/11	3857.69	-	62.40	0.00	3795.29
MW-37	05/25/11	3857.69	-	62.41	0.00	3795.28
MW-37	08/18/11	3857.69	-	62.78	0.00	3794.91
MW-37	11/15/11	3857.69	-	62.72	0.00	3794.97
MW-38	03/08/11	3855.95	-	61.17	0.00	3794.78
MW-38	05/25/11	3855.95	-	61.19	0.00	3794.76
MW-38	08/18/11	3855.95	-	61.56	0.00	3794.39
MW-38	11/15/11	3855.95	-	61.52	0.00	3794.43
MW-39	03/08/11		-	62.04	0.00	-62.04
MW-39	05/25/11		-	62.03	0.00	-62.03
MW-39	08/18/11		-	62.40	0.00	-62.40
MW-39	11/15/11		-	62.40	0.00	-62.40
MW-40	03/08/11		-	64.10	0.00	-64.10
MW-40	05/25/11		-	64.08	0.00	-64.08
MW-40	08/19/11		-	64.45	0.00	-64.45
MW-40	11/15/11		-	64.38	0.00	-64.38

* Complete Historical Tables are provided on the attached CD.

TABLE 2
CONCENTRATIONS OF BTEX IN GROUNDWATER - 2011

PLAINS MARKETING, L.P.
TNM - SPS 11
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER GW-0140

All concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	SW 846-8260b				
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE
NMOCD REGULATORY LIMIT		0.0100	0.75	0.75	0.62	
MW - 1	03/09/11	Not Sampled Due to PSH in Well				
MW - 1	05/26/11	Not Sampled Due to PSH in Well				
MW - 1	08/18/11	Not Sampled Due to PSH in Well				
MW - 1	11/15/11	Not Sampled Due to PSH in Well				
MW - 2	03/09/11	Not Sampled on Current Sample Schedule				
MW - 2	05/26/11	Not Sampled on Current Sample Schedule				
MW - 2	08/18/11	Not Sampled on Current Sample Schedule				
MW - 2	11/15/11	<0.001	<0.001	<0.001	<0.001	
MW - 3	03/09/11	Not Sampled on Current Sample Schedule				
MW - 3	05/26/11	Not Sampled on Current Sample Schedule				
MW - 3	08/18/11	Not Sampled on Current Sample Schedule				
MW - 3	11/15/11	<0.001	<0.001	<0.001	<0.001	
MW - 4	03/09/11	Not Sampled Due to PSH in Well				
MW - 4	05/26/11	Not Sampled Due to PSH in Well				
MW - 4	08/18/11	Not Sampled Due to PSH in Well				
MW - 4	11/15/11	Not Sampled Due to PSH in Well				
MW - 6	03/09/11	<0.001	<0.001	<0.001	<0.001	
MW - 6	05/26/11	<0.001	<0.001	<0.001	<0.001	
MW - 6	08/18/11	<0.001	<0.001	<0.001	<0.001	
MW - 6	11/15/11	<0.001	<0.001	<0.001	<0.001	
MW - 7	03/09/11	Not Sampled Due to PSH in Well				
MW - 7	05/26/11	Not Sampled Due to PSH in Well				
MW - 7	08/19/11	Not Sampled Due to PSH in Well				
MW - 7	11/15/11	Not Sampled Due to PSH in Well				
MW - 9	03/09/11	0.0375	<0.001	0.0597	0.0565	
MW - 9	05/26/11	0.3580	<0.005	0.068	0.0818	
MW - 9	08/19/11	0.3820	<0.005	<0.005	<0.005	
MW - 9	11/15/11	0.9240	<0.005	0.0345	<0.005	
MW - 10	03/09/11	0.0174	<0.001	<0.001	<0.001	
MW - 10	05/26/11	0.0134	<0.001	<0.001	<0.001	
MW - 10	08/19/11	0.0066	<0.001	<0.001	<0.001	
MW - 10	11/15/11	<0.001	<0.001	<0.001	<0.001	
MW - 11	03/09/11	5.150	<0.050	1.430	1.260	
MW - 11	05/26/11	5.710	<0.050	1.300	1.190	
MW - 11	08/19/11	Not Sampled Due to PSH in Well				
MW - 11	11/15/11	Not Sampled Due to PSH in Well				

TABLE 2
CONCENTRATIONS OF BTEX IN GROUNDWATER - 2011

PLAINS MARKETING, L.P.
TNM - SPS 11
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER GW-0140

All concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	SW 846-8260b				
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE
NMOCD REGULATORY LIMIT		0.0100	0.75	0.75	0.62	
MW - 12	03/09/11	<0.001	<0.001	<0.001	<0.001	
MW - 12	05/26/11	<0.001	<0.001	<0.001	<0.001	
MW - 12	08/18/11	<0.001	<0.001	<0.001	<0.001	
MW - 12	11/15/11	<0.001	<0.001	<0.001	<0.001	
MW - 13	03/09/11	Not Sampled on Current Sample Schedule				
MW - 13	05/26/11	Not Sampled on Current Sample Schedule				
MW - 13	08/18/11	Not Sampled on Current Sample Schedule				
MW - 13	11/15/11	<0.001	<0.001	<0.001	<0.001	
MW - 14	03/09/11	6.360	<0.050	0.671	<0.050	
MW - 14	05/26/11	6.680	<0.050	0.456	<0.050	
MW - 14	08/19/11	6.080	<0.050	<0.050	<0.050	
MW - 14	11/15/11	4.280	<0.050	<0.050	<0.050	
MW - 15	03/09/11	<0.001	<0.001	<0.001	<0.001	
MW - 15	05/26/11	<0.001	<0.001	<0.001	<0.001	
MW - 15	08/18/11	<0.001	<0.001	<0.001	<0.001	
MW - 15	11/15/11	<0.001	<0.001	<0.001	<0.001	
MW - 16	03/09/11	<0.001	<0.001	<0.001	<0.001	
MW - 16	05/26/11	<0.001	<0.001	<0.001	<0.001	
MW - 16	08/18/11	0.0049	<0.001	<0.001	<0.001	
MW - 16	11/15/11	0.0059	0.0054	<0.001	0.0026	
MW - 17	03/09/11	<0.001	<0.001	<0.001	<0.001	
MW - 17	05/26/11	<0.001	<0.001	<0.001	<0.001	
MW - 17	08/18/11	0.0053	<0.001	<0.001	<0.001	
MW - 17	11/15/11	0.0108	<0.001	<0.001	0.0029	
MW - 18	03/09/11	Not Sampled on Current Sample Schedule				
MW - 18	05/26/11	<0.001	<0.001	<0.001	<0.001	
MW - 18	08/18/11	Not Sampled on Current Sample Schedule				
MW - 18	11/15/11	<0.001	<0.001	<0.001	<0.001	
MW - 19	03/09/11	Not Sampled on Current Sample Schedule				
MW - 19	05/26/11	Not Sampled on Current Sample Schedule				
MW - 19	08/18/11	Not Sampled on Current Sample Schedule				
MW - 19	11/15/11	<0.001	<0.001	<0.001	<0.001	
MW - 21	03/09/11	Not Sampled on Current Sample Schedule				
MW - 21	05/26/11	Not Sampled on Current Sample Schedule				
MW - 21	08/18/11	Not Sampled on Current Sample Schedule				
MW - 21	11/15/11	<0.001	<0.001	<0.001	<0.001	

TABLE 2
CONCENTRATIONS OF BTEX IN GROUNDWATER - 2011

PLAINS MARKETING, L.P.
TNM - SPS 11
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER GW-0140

All concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	SW 846-8260b				
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE
NMOCD REGULATORY LIMIT		0.0100	0.75	0.75	0.62	
MW - 23	03/09/11	<0.001	<0.001	<0.001	<0.001	
MW - 23	05/26/11	<0.001	<0.001	<0.001	<0.001	
MW - 23	08/18/11	<0.001	<0.001	<0.001	<0.001	
MW - 23	11/15/11	<0.001	<0.001	<0.001	<0.001	
MW - 24	03/09/11	<0.001	<0.001	<0.001	<0.001	
MW - 24	05/26/11	<0.001	<0.001	<0.001	<0.001	
MW - 24	08/18/11	<0.001	<0.001	<0.001	<0.001	
MW - 24	11/15/11	<0.001	0.0018	0.0024	0.0033	
MW - 25	03/09/11	Not Sampled on Current Sample Schedule				
MW - 25	05/26/11	Not Sampled on Current Sample Schedule				
MW - 25	08/18/11	Not Sampled on Current Sample Schedule				
MW - 25	11/22/11	<0.001	<0.001	<0.001	<0.001	
MW - 26	03/09/11	0.219	0.008	0.026	0.025	
MW - 26	05/26/11	0.474	0.0306	0.112	0.0984	
MW - 26	08/19/11	0.580	0.0201	0.100	0.0579	
MW - 26	11/15/11	0.676	0.240	0.172	0.082	
MW - 28	03/09/11	1.180	<0.001	0.272	<0.010	
MW - 28	05/26/11	1.410	<0.010	0.310	<0.010	
MW - 28	08/19/11	1.430	<0.010	0.363	<0.010	
MW - 28	11/15/11	0.886	<0.010	0.116	<0.010	
MW - 29	03/09/11	0.790	<0.010	0.14	<0.010	
MW - 29	05/26/11	0.791	<0.010	0.0968	<0.010	
MW - 29	08/19/11	0.767	<0.010	0.0578	<0.010	
MW - 29	11/15/11	0.833	<0.010	0.0435	<0.010	
MW - 30	03/09/11	Not Sampled on Current Sample Schedule				
MW - 30	05/26/11	Not Sampled on Current Sample Schedule				
MW - 30	08/19/11	Not Sampled on Current Sample Schedule				
MW - 30	11/15/11	<0.001	<0.001	<0.001	<0.001	
MW - 31	03/09/11	Not Sampled on Current Sample Schedule				
MW - 31	05/26/11	Not Sampled on Current Sample Schedule				
MW - 31	08/19/11	Not Sampled on Current Sample Schedule				
MW - 31	11/15/11	<0.001	<0.001	<0.001	<0.001	
MW - 32	03/09/11	1.650	<0.010	0.136	<0.010	
MW - 32	05/26/11	1.670	<0.010	0.0888	<0.010	
MW - 32	08/19/11	1.710	<0.010	0.0657	<0.010	
MW - 32	11/15/11	1.840	0.0424	0.0816	0.0368	

TABLE 2
CONCENTRATIONS OF BTEX IN GROUNDWATER - 2011

PLAINS MARKETING, L.P.
TNM - SPS 11
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER GW-0140

All concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	SW 846-8260b			
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES o - XYLENE
NMOCD REGULATORY LIMIT		0.0100	0.75	0.75	0.62
MW - 33	03/09/11	<0.001	<0.001	<0.001	<0.001
MW - 33	05/26/11	<0.001	<0.001	<0.001	<0.001
MW - 33	08/18/11	<0.001	<0.001	<0.001	<0.001
MW - 33	11/15/11	<0.001	<0.001	<0.001	<0.001
MW - 34	03/09/11	<0.001	<0.001	<0.001	<0.001
MW - 34	05/26/11	<0.001	<0.001	<0.001	<0.001
MW - 34	08/18/11	<0.001	<0.001	<0.001	<0.001
MW - 34	11/15/11	<0.001	<0.001	<0.001	<0.001
MW - 35	03/09/11	<0.001	<0.001	<0.001	<0.001
MW - 35	05/26/11	<0.001	<0.001	<0.001	<0.001
MW - 35	08/19/11	0.0041	<0.001	<0.001	0.0092
MW - 35	11/15/11	0.169	<0.001	0.062	0.0185
MW - 36	03/09/11	<0.001	<0.001	<0.001	<0.001
MW - 36	05/26/11	<0.001	<0.001	<0.001	<0.001
MW - 36	08/19/11	<0.001	<0.001	<0.001	<0.001
MW - 36	11/15/11	0.0044	<0.001	<0.001	<0.001
MW - 37	03/09/11	<0.001	<0.001	<0.001	<0.001
MW - 37	05/26/11	<0.001	<0.001	<0.001	<0.001
MW - 37	08/18/11	<0.001	<0.001	<0.001	<0.001
MW - 37	11/15/11	<0.001	<0.001	<0.001	<0.001
MW - 38	03/09/11	<0.001	<0.001	<0.001	<0.001
MW - 38	05/26/11	<0.001	<0.001	<0.001	<0.001
MW - 38	08/18/11	<0.001	<0.001	<0.001	<0.001
MW - 38	11/15/11	<0.001	<0.001	<0.001	<0.001
MW - 39	03/09/11	<0.001	<0.001	<0.001	<0.001
MW - 39	05/26/11	<0.001	<0.001	<0.001	<0.001
MW - 39	08/18/11	<0.001	<0.001	<0.001	<0.001
MW - 39	11/15/11	<0.001	<0.001	<0.001	<0.001
MW - 40	03/09/11	<0.001	<0.001	<0.001	<0.001
MW - 40	05/26/11	<0.001	<0.001	<0.001	<0.001
MW - 40	08/19/11	<0.001	<0.001	<0.001	<0.001
MW - 40	11/15/11	<0.001	<0.001	<0.001	<0.001

* Complete Historical Tables are provided on the attached CD.

TABLE 3

POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

PLAINS MARKETING, L.P.

TNM SPS-11

LEA COUNTY, NEW MEXICO

NMOC REFERENCE NUMBER GW-0140

All water concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	EPA SW846-8270C, 3510																	
		Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Phenanthrene	Pyrene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Dibenzofuran
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		—	—	0.001 mg/L	0.0001 mg/L	0.0007 mg/L	0.001 mg/L	—	0.001 mg/L	0.0002 mg/L	0.0003 mg/L	0.001 mg/L	0.001 mg/L	0.0004 mg/L	0.001 mg/L	0.03 mg/L	0.03 mg/L	0.03 mg/L	—
MW-1	12/11/08	Not Sampled Due to Insufficient Water Volume																	
	12/10/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	0.0105	<0.000184	0.0155	<0.000184	0.0744	0.140	0.130	0.0111
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled due to the presence of PSH.																	
MW-2	12/11/08	<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
	12/09/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																	
MW-3	12/11/08	<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
	12/09/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																	
MW-4	12/11/08	Not Sampled Due to Insufficient Water Volume																	
	12/10/09	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	<0.00183	0.0766	<0.00183	0.226	0.616	0.578	0.0478
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled due to the presence of PSH.																	
MW-6	12/11/08	<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	0.000207	<0.000184	<0.000184	<0.000184
	12/09/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																	
MW-7	12/11/08	<0.000917	<0.000917	0.00181	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	0.0188	<0.000917	0.0287	<0.000917	0.109	0.232	0.197	0.0205
	12/10/09	<0.00463	<0.00463	<0.00463	<0.00463	<0.00463	<0.00463	<0.00463	<0.00463	<0.00463	<0.00463	<0.00463	<0.00463	0.461	<0.00463	1.27	3.48	3.24	0.284
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled due to the presence of PSH.																	
MW-9	12/11/08	<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	0.000278	0.000431	<0.000184	0.000624
	12/10/09	<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	0.00149	0.0013	0.00042	0.000837
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																	

TABLE 3

POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

PLAINS MARKETING, L.P.

TNM SPS-11

LEA COUNTY, NEW MEXICO

NMOCD REFERENCE NUMBER GW-0140

All water concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	EPA SW846-8270C, 3510																	
		Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Phenanthrene	Pyrene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Dibenzofuran
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		—	—	0.001 mg/L	0.0001 mg/L	0.0007 mg/L	0.001 mg/L	—	0.001 mg/L	0.0002 mg/L	0.0003 mg/L	0.001 mg/L	0.001 mg/L	0.0004 mg/L	0.001 mg/L	0.001 mg/L	0.03 mg/L		—
MW-10	12/11/08	<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
	12/10/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																	
MW-11	12/11/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.000386	<0.000183	0.00228	0.00306	0.000266	0.00105
	12/10/09	<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	0.00621	0.00664	0.00103	0.00103
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled due to the presence of PSH.																	
MW-12	12/11/08	<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
	12/09/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																	
MW-13	12/11/08	<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
	12/09/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																	
MW-14	12/11/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.00138	<0.000183	0.00105	<0.000183	0.0374	0.0259	0.0207	0.00177	
	12/10/09	<0.000184	<0.000184	0.00103	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	0.00101	<0.000184	0.00746	0.0121	0.00844	0.00113	
	11/30/10	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	0.0116	<0.000184	0.000769	<0.000184	0.0313	0.0206	0.0165	0.00132	
	12/16/11	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.00106	<0.000183	0.000973	<0.000183	0.0355	0.0256	0.0224	0.00178	
MW-15	12/11/08	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185
	12/09/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																	
MW-16	12/11/08	<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
	12/10/09	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																	
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																	

POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

All water concentrations are reported in mg/L

Page 3 of 5

TABLE 3

POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

PLAINS MARKETING, L.P.
TNM SPS-11
LEA COUNTY, NEW MEXICO
NMOC REFERENCE NUMBER GW-0140

All water concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	EPA SW846-8270C, 3510																		
		Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Phenanthrene	Pyrene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Dibenzofuran
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		—	—	0.001 mg/L	0.0001 mg/L	0.0007 mg/L	0.001 mg/L	—	0.001 mg/L	0.0002 mg/L	0.0003 mg/L	0.001 mg/L	0.001 mg/L	0.0004 mg/L	0.001 mg/L	0.001 mg/L	0.03 mg/L		—	
MW-26	12/11/08	<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	0.00106	0.000552	0.000224	<0.000183
	12/10/09	<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	0.00128	<0.000184	<0.000184	<0.000184
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-28	12/11/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.000215	<0.000183	<0.000183	<0.000183	<0.000183	0.00247	0.00148	0.000516	0.000618
	12/10/09	<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	0.00315	0.00217	0.000988	0.000758
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-29	12/11/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.000628	<0.000183	0.000394	<0.000183	<0.000183	0.00944	0.00384	0.00161	0.000995
	12/10/09	<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	0.0136	0.00668	0.00332	0.00125
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-30	12/11/08	<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
	12/09/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-31	12/11/08	<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
	12/09/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-32	12/11/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.000357	<0.000183	<0.000183	<0.000183	<0.000183	0.000798	0.000604	<0.000183	0.000688
	12/10/09	<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	0.00284	0.00181	<0.000184	0.000877
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-33	12/11/08	<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
	12/09/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		

TABLE 3

POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

PLAINS MARKETING, L.P.

TNM SPS-11

LEA COUNTY, NEW MEXICO

NMOC REFERENCE NUMBER GW-0140

All water concentrations are reported in mg/L

EPA SW846-8270C, 3510

SAMPLE LOCATION	SAMPLE DATE	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Phenanthrene	Pyrene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Dibenzofuran
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.				0.001 mg/L	0.0001 mg/L	0.0007 mg/L	0.001 mg/L		0.001 mg/L	0.0002 mg/L	0.0003 mg/L	0.001 mg/L	0.001 mg/L	0.0004 mg/L	0.001 mg/L	0.001 mg/L		0.03 mg/L		
MW-34	12/11/08	<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
	12/10/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-35	12/11/08	<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
	12/10/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-36	12/11/08	<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	0.000315	<0.000184	0.00744	0.0012	0.000186	0.000517
	12/10/09	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	0.000516	<0.000185	<0.000185	<0.000185
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-37	12/11/08	<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
	12/09/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-38	12/11/08	<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
	12/09/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-39	12/11/08	<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
	12/09/09	<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
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-40	12/11/08	<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
	12/10/09	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185
	11/30/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/16/11	Not Sampled as part of Quarterly Monitoring Event.																		

Appendices

Appendix A
Release Notification and Corrective Action
(Form C-141)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

x Initial Report ☐ Final Report

Name of Company	Plains Pipeline, LP	Contact:	Camille Reynolds
Address:	3705 E. Hwy 158, Midland, TX 79706	Telephone No.	505-441-0965
Facility Name	SPS #11	Facility Type:	Pipeline

Surface Owner:	Mineral Owner	Lease No.
New Mexico State Land Office		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	18	18S	36E					Lea

Latitude 32 degrees 44' 50.3" Longitude 103 degrees 23' 36.5"

NATURE OF RELEASE

Type of Release:	Volume of Release:	Volume Recovered
Source of Release:	Date and Hour of Occurrence	Date and Hour of Discovery
	Unknown	
Was Immediate Notice Given?	If YES, To Whom?	
Yes ☐ No ☐ Not Required ☐		
By Whom?	Date and Hour	
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.	
☐ Yes ☒ No		

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Describe Area Affected and Cleanup Action Taken.*

NOTE: Texas-New Mexico Pipeline was the owner/operator of the pipeline system at the time of the release, initial response information is unavailable .

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

OIL CONSERVATION DIVISION

Signature:	Approved by District Supervisor:		
Printed Name: Camille Reynolds			
Title: Remediation Coordinator	Approval Date:	Expiration Date:	
E-mail Address: cjreynolds@paalp.com	Conditions of Approval:		Attached ☐
Date: 3/21/2005	Phone: (505)441-0965		

* Attach Additional Sheets If Necessary

Laboratory Analytical Reports



5701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 806•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
5015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

E-mail Reports
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: March 23, 2011

Work Order: 11031031

Project Location: North of Hobbs, Lea Co., NM
Project Name: SPS 11
Project Number: TNM-SPS-11

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
260174	MW-15	water	2011-03-09	07:00	2011-03-10
260175	MW-33	water	2011-03-09	07:30	2011-03-10
260176	MW-6	water	2011-03-09	08:30	2011-03-10
260177	MW-39	water	2011-03-09	09:00	2011-03-10
260178	MW-37	water	2011-03-09	09:30	2011-03-10
260179	MW-10	water	2011-03-09	10:00	2011-03-10
260180	MW-23	water	2011-03-09	10:30	2011-03-10
260181	MW-24	water	2011-03-09	11:00	2011-03-10
260182	MW-12	water	2011-03-09	11:30	2011-03-10
260183	MW-34	water	2011-03-09	12:00	2011-03-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
260184	MW-17	water	2011-03-09	12:30	2011-03-10
260185	MW-16	water	2011-03-09	13:00	2011-03-10
260186	MW-38	water	2011-03-09	13:30	2011-03-10
260187	MW-35	water	2011-03-09	14:00	2011-03-10
260188	MW-36	water	2011-03-09	14:30	2011-03-10
260189	MW-40	water	2011-03-09	15:00	2011-03-10
260190	MW-9	water	2011-03-09	16:00	2011-03-10
260191	MW-26	water	2011-03-09	16:30	2011-03-10
260192	MW-29	water	2011-03-09	17:00	2011-03-10
260193	MW-28	water	2011-03-09	17:30	2011-03-10
260194	MW-32	water	2011-03-09	18:00	2011-03-10
260195	MW-11	water	2011-03-09	18:30	2011-03-10
260196	MW-14	water	2011-03-09	19:00	2011-03-10

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.

This report consists of a total of 18 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project SPS 11 were received by TraceAnalysis, Inc. on 2011-03-10 and assigned to work order 11031031. Samples for work order 11031031 were received intact without headspace and at a temperature of 4.0 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	67576	2011-03-21 at 14:22	79654	2011-03-21 at 14:22
BTEX	S 8021B	67577	2011-03-21 at 14:22	79655	2011-03-22 at 17:38

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11031031 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.

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 4 of 18
North of Hobbs, Lea Co., NM

Analytical Report

Sample: 260174 - MW-15

Laboratory: Midland
Analysis: BTEX
QC Batch: 79654
Prep Batch: 67576

Analytical Method: S 8021B
Date Analyzed: 2011-03-21
Sample Preparation: 2011-03-21

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.102	mg/L	1	0.100	102	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.116	mg/L	1	0.100	116	51.1 - 128

Sample: 260175 - MW-33

Laboratory: Midland
Analysis: BTEX
QC Batch: 79654
Prep Batch: 67576

Analytical Method: S 8021B
Date Analyzed: 2011-03-21
Sample Preparation: 2011-03-21

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.101	mg/L	1	0.100	101	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.115	mg/L	1	0.100	115	51.1 - 128

Sample: 260176 - MW-6

Laboratory: Midland
Analysis: BTEX
QC Batch: 79654
Prep Batch: 67576

Analytical Method: S 8021B
Date Analyzed: 2011-03-21
Sample Preparation: 2011-03-21

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 5 of 18
North of Hobbs, Lea Co., NM

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.103	mg/L	1	0.100	103	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.116	mg/L	1	0.100	116	51.1 - 128

Sample: 260177 - MW-39

Laboratory: Midland

Analysis: BTEX

QC Batch: 79654

Prep Batch: 67576

Analytical Method: S 8021B

Date Analyzed: 2011-03-21

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.101	mg/L	1	0.100	101	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.112	mg/L	1	0.100	112	51.1 - 128

Sample: 260178 - MW-37

Laboratory: Midland

Analysis: BTEX

QC Batch: 79654

Prep Batch: 67576

Analytical Method: S 8021B

Date Analyzed: 2011-03-21

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 6 of 18
North of Hobbs, Lea Co., NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.103	mg/L	1	0.100	103	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.115	mg/L	1	0.100	115	51.1 - 128

Sample: 260179 - MW-10

Laboratory: Midland

Analysis: BTEX

QC Batch: 79654

Prep Batch: 67576

Analytical Method: S 8021B

Date Analyzed: 2011-03-21

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.0174	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.101	mg/L	1	0.100	101	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.116	mg/L	1	0.100	116	51.1 - 128

Sample: 260180 - MW-23

Laboratory: Midland

Analysis: BTEX

QC Batch: 79654

Prep Batch: 67576

Analytical Method: S 8021B

Date Analyzed: 2011-03-21

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.105	mg/L	1	0.100	105	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.118	mg/L	1	0.100	118	51.1 - 128

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 7 of 18
North of Hobbs, Lea Co., NM

Sample: 260181 - MW-24

Laboratory: Midland
Analysis: BTEX
QC Batch: 79654
Prep Batch: 67576

Analytical Method: S 8021B
Date Analyzed: 2011-03-21
Sample Preparation: 2011-03-21

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.104	mg/L	1	0.100	104	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.117	mg/L	1	0.100	117	51.1 - 128

Sample: 260182 - MW-12

Laboratory: Midland
Analysis: BTEX
QC Batch: 79655
Prep Batch: 67577

Analytical Method: S 8021B
Date Analyzed: 2011-03-22
Sample Preparation: 2011-03-21

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.104	mg/L	1	0.100	104	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.117	mg/L	1	0.100	117	51.1 - 128

Sample: 260183 - MW-34

Laboratory: Midland
Analysis: BTEX
QC Batch: 79655
Prep Batch: 67577

Analytical Method: S 8021B
Date Analyzed: 2011-03-22
Sample Preparation: 2011-03-21

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 8 of 18
North of Hobbs, Lea Co., NM

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.102	mg/L	1	0.100	102	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.107	mg/L	1	0.100	107	51.1 - 128

Sample: 260184 - MW-17

Laboratory: Midland

Analysis: BTEX

QC Batch: 79655

Prep Batch: 67577

Analytical Method: S 8021B

Date Analyzed: 2011-03-22

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.103	mg/L	1	0.100	103	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.116	mg/L	1	0.100	116	51.1 - 128

Sample: 260185 - MW-16

Laboratory: Midland

Analysis: BTEX

QC Batch: 79655

Prep Batch: 67577

Analytical Method: S 8021B

Date Analyzed: 2011-03-22

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 9 of 18
North of Hobbs, Lea Co., NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.103	mg/L	1	0.100	103	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.115	mg/L	1	0.100	115	51.1 - 128

Sample: 260186 - MW-38

Laboratory: Midland

Analysis: BTEX

QC Batch: 79655

Prep Batch: 67577

Analytical Method: S 8021B

Date Analyzed: 2011-03-22

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.101	mg/L	1	0.100	101	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.114	mg/L	1	0.100	114	51.1 - 128

Sample: 260187 - MW-35

Laboratory: Midland

Analysis: BTEX

QC Batch: 79655

Prep Batch: 67577

Analytical Method: S 8021B

Date Analyzed: 2011-03-22

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.108	mg/L	1	0.100	108	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.117	mg/L	1	0.100	117	51.1 - 128

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 10 of 18
North of Hobbs, Lea Co., NM

Sample: 260188 - MW-36

Laboratory: Midland

Analysis: BTEX

QC Batch: 79655

Prep Batch: 67577

Analytical Method: S 8021B

Date Analyzed: 2011-03-22

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.103	mg/L	1	0.100	103	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.120	mg/L	1	0.100	120	51.1 - 128

Sample: 260189 - MW-40

Laboratory: Midland

Analysis: BTEX

QC Batch: 79655

Prep Batch: 67577

Analytical Method: S 8021B

Date Analyzed: 2011-03-22

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.102	mg/L	1	0.100	102	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.114	mg/L	1	0.100	114	51.1 - 128

Sample: 260190 - MW-9

Laboratory: Midland

Analysis: BTEX

QC Batch: 79655

Prep Batch: 67577

Analytical Method: S 8021B

Date Analyzed: 2011-03-22

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 11 of 18
North of Hobbs, Lea Co., NM

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.0375	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		0.0597	mg/L	1	0.00100
Xylene		0.0565	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.100	mg/L	1	0.100	100	67.8 - 129
4-Bromofluorobenzene (4-BFB)	¹	0.132	mg/L	1	0.100	132	51.1 - 128

Sample: 260191 - MW-26

Laboratory: Midland

Analysis: BTEX

QC Batch: 79655

Prep Batch: 67577

Analytical Method: S 8021B

Date Analyzed: 2011-03-22

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.219	mg/L	1	0.00100
Toluene		0.00800	mg/L	1	0.00100
Ethylbenzene		0.0260	mg/L	1	0.00100
Xylene		0.0250	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.101	mg/L	1	0.100	101	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.127	mg/L	1	0.100	127	51.1 - 128

Sample: 260192 - MW-29

Laboratory: Midland

Analysis: BTEX

QC Batch: 79655

Prep Batch: 67577

Analytical Method: S 8021B

Date Analyzed: 2011-03-22

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.790	mg/L	10	0.00100
Toluene		<0.0100	mg/L	10	0.00100
Ethylbenzene		0.140	mg/L	10	0.00100
Xylene		<0.0100	mg/L	10	0.00100

¹High surrogate recovery due to peak interference.

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 12 of 18
North of Hobbs, Lea Co., NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.972	mg/L	10	1.00	97	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1.17	mg/L	10	1.00	117	51.1 - 128

Sample: 260193 - MW-28

Laboratory: Midland

Analysis: BTEX

QC Batch: 79655

Prep Batch: 67577

Analytical Method: S 8021B

Date Analyzed: 2011-03-22

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		1.18	mg/L	10	0.00100
Toluene		<0.0100	mg/L	10	0.00100
Ethylbenzene		0.272	mg/L	10	0.00100
Xylene		<0.0100	mg/L	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.874	mg/L	10	1.00	87	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1.05	mg/L	10	1.00	105	51.1 - 128

Sample: 260194 - MW-32

Laboratory: Midland

Analysis: BTEX

QC Batch: 79655

Prep Batch: 67577

Analytical Method: S 8021B

Date Analyzed: 2011-03-22

Sample Preparation: 2011-03-21

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		1.65	mg/L	10	0.00100
Toluene		<0.0100	mg/L	10	0.00100
Ethylbenzene		0.136	mg/L	10	0.00100
Xylene		<0.0100	mg/L	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.950	mg/L	10	1.00	95	67.8 - 129
4-Bromofluorobenzene (4-BFB)		1.15	mg/L	10	1.00	115	51.1 - 128

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 13 of 18
North of Hobbs, Lea Co., NM

Sample: 260195 - MW-11

Laboratory: Midland
Analysis: BTEX
QC Batch: 79655
Prep Batch: 67577

Analytical Method: S 8021B
Date Analyzed: 2011-03-22
Sample Preparation: 2011-03-21

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		5.15	mg/L	50	0.00100
Toluene		<0.0500	mg/L	50	0.00100
Ethylbenzene		1.43	mg/L	50	0.00100
Xylene		1.26	mg/L	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.77	mg/L	50	5.00	95	67.8 - 129
4-Bromofluorobenzene (4-BFB)		5.42	mg/L	50	5.00	108	51.1 - 128

Sample: 260196 - MW-14

Laboratory: Midland
Analysis: BTEX
QC Batch: 79655
Prep Batch: 67577

Analytical Method: S 8021B
Date Analyzed: 2011-03-22
Sample Preparation: 2011-03-21

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		6.36	mg/L	50	0.00100
Toluene		<0.0500	mg/L	50	0.00100
Ethylbenzene		0.671	mg/L	50	0.00100
Xylene		<0.0500	mg/L	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.77	mg/L	50	5.00	95	67.8 - 129
4-Bromofluorobenzene (4-BFB)		5.42	mg/L	50	5.00	108	51.1 - 128

Method Blank (1) QC Batch: 79654

QC Batch: 79654
Prep Batch: 67576

Date Analyzed: 2011-03-21
QC Preparation: 2011-03-21

Analyzed By: ME
Prepared By: ME

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 14 of 18
North of Hobbs, Lea Co., NM

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000400	mg/L	0.001
Toluene		<0.000300	mg/L	0.001
Ethylbenzene		<0.000300	mg/L	0.001
Xylene		<0.000333	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0916	mg/L	1	0.100	92	70.2 - 118
4-Bromofluorobenzene (4-BFB)		0.109	mg/L	1	0.100	109	47.3 - 116

Method Blank (1) QC Batch: 79655

QC Batch: 79655
Prep Batch: 67577

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-21

Analyzed By: ME
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000400	mg/L	0.001
Toluene		<0.000300	mg/L	0.001
Ethylbenzene		<0.000300	mg/L	0.001
Xylene		<0.000333	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0881	mg/L	1	0.100	88	70.2 - 118
4-Bromofluorobenzene (4-BFB)		0.0917	mg/L	1	0.100	92	47.3 - 116

Laboratory Control Spike (LCS-1)

QC Batch: 79654
Prep Batch: 67576

Date Analyzed: 2011-03-21
QC Preparation: 2011-03-21

Analyzed By: ME
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0925	mg/L	1	0.100	<0.000400	92	76.8 - 110
Toluene	0.0997	mg/L	1	0.100	<0.000300	100	81 - 108
Ethylbenzene	0.112	mg/L	1	0.100	<0.000300	112	78.8 - 118
Xylene	0.340	mg/L	1	0.300	<0.000333	113	80.3 - 119

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

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 15 of 18
North of Hobbs, Lea Co., NM

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0979	mg/L	1	0.100	<0.000400	98	76.8 - 110	6	20
Toluene	0.106	mg/L	1	0.100	<0.000300	106	81 - 108	6	20
Ethylbenzene	0.116	mg/L	1	0.100	<0.000300	116	78.8 - 118	4	20
Xylene	0.358	mg/L	1	0.300	<0.000333	119	80.3 - 119	5	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0974	0.0863	mg/L	1	0.100	97	86	66.6 - 114
4-Bromofluorobenzene (4-BFB)	0.122	0.109	mg/L	1	0.100	122	109	68.2 - 124

Laboratory Control Spike (LCS-1)

QC Batch: 79655
Prep Batch: 67577

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-21

Analyzed By: ME
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0989	mg/L	1	0.100	<0.000400	99	76.8 - 110
Toluene	0.102	mg/L	1	0.100	<0.000300	102	81 - 108
Ethylbenzene	0.109	mg/L	1	0.100	<0.000300	109	78.8 - 118
Xylene	0.333	mg/L	1	0.300	<0.000333	111	80.3 - 119

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.103	mg/L	1	0.100	<0.000400	103	76.8 - 110	4	20
Toluene	0.106	mg/L	1	0.100	<0.000300	106	81 - 108	4	20
Ethylbenzene	0.116	mg/L	1	0.100	<0.000300	116	78.8 - 118	6	20
Xylene	0.353	mg/L	1	0.300	<0.000333	118	80.3 - 119	6	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0904	0.0930	mg/L	1	0.100	90	93	66.6 - 114
4-Bromofluorobenzene (4-BFB)	0.108	0.111	mg/L	1	0.100	108	111	68.2 - 124

Matrix Spike (MS-1) Spiked Sample: 260125

QC Batch: 79654
Prep Batch: 67576

Date Analyzed: 2011-03-21
QC Preparation: 2011-03-21

Analyzed By: ME
Prepared By: ME

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 16 of 18
North of Hobbs, Lea Co., NM

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	11.0	mg/L	50	5.00	5.7675	105	77.9 - 114
Toluene	5.15	mg/L	50	5.00	<0.0150	103	78.3 - 111
Ethylbenzene	6.20	mg/L	50	5.00	0.7803	108	75.3 - 110
Xylene	17.1	mg/L	50	15.0	0.9691	108	75.7 - 109

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	11.2	mg/L	50	5.00	5.7675	109	77.9 - 114	2	20
Toluene	5.27	mg/L	50	5.00	<0.0150	105	78.3 - 111	2	20
Ethylbenzene	6.28	mg/L	50	5.00	0.7803	110	75.3 - 110	1	20
Xylene	² 17.4	mg/L	50	15.0	0.9691	110	75.7 - 109	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)	4.96	5.00	mg/L	50	5	99	100	68.3 - 107
4-Bromofluorobenzene (4-BFB)	5.91	5.91	mg/L	50	5	118	118	60.1 - 135

Matrix Spike (MS-1) Spiked Sample: 260194

QC Batch: 79655
Prep Batch: 67577

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-21

Analyzed By: ME
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.61	mg/L	10	1.00	1.6547	96	77.9 - 114
Toluene	1.01	mg/L	10	1.00	<0.00300	101	78.3 - 111
Ethylbenzene	1.14	mg/L	10	1.00	0.1365	100	75.3 - 110
Xylene	³ 3.32	mg/L	10	3.00	<0.00333	111	75.7 - 109

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.65	mg/L	10	1.00	1.6547	100	77.9 - 114	2	20
Toluene	1.03	mg/L	10	1.00	<0.00300	103	78.3 - 111	2	20
Ethylbenzene	1.18	mg/L	10	1.00	0.1365	104	75.3 - 110	3	20
Xylene	⁴ 3.43	mg/L	10	3.00	<0.00333	114	75.7 - 109	3	20

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

²MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

³Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

⁴Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 17 of 18
North of Hobbs, Lea Co., NM

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.901	0.939	mg/L	10	1	90	94	68.3 - 107
4-Bromofluorobenzene (4-BFB)	1.16	1.17	mg/L	10	1	116	117	60.1 - 135

Standard (CCV-2)

QC Batch: 79654

Date Analyzed: 2011-03-21

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0898	90	80 - 120	2011-03-21
Toluene		mg/L	0.100	0.0960	96	80 - 120	2011-03-21
Ethylbenzene		mg/L	0.100	0.106	106	80 - 120	2011-03-21
Xylene		mg/L	0.300	0.322	107	80 - 120	2011-03-21

Standard (CCV-3)

QC Batch: 79654

Date Analyzed: 2011-03-21

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.100	100	80 - 120	2011-03-21
Toluene		mg/L	0.100	0.104	104	80 - 120	2011-03-21
Ethylbenzene		mg/L	0.100	0.113	113	80 - 120	2011-03-21
Xylene		mg/L	0.300	0.346	115	80 - 120	2011-03-21

Standard (CCV-1)

QC Batch: 79655

Date Analyzed: 2011-03-22

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.100	100	80 - 120	2011-03-22
Toluene		mg/L	0.100	0.104	104	80 - 120	2011-03-22
Ethylbenzene		mg/L	0.100	0.113	113	80 - 120	2011-03-22
Xylene		mg/L	0.300	0.346	115	80 - 120	2011-03-22

Standard (CCV-2)

QC Batch: 79655

Date Analyzed: 2011-03-22

Analyzed By: ME

Report Date: March 23, 2011
TNM-SPS-11

Work Order: 11031031
SPS 11

Page Number: 18 of 18
North of Hobbs, Lea Co., NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.104	104	80 - 120	2011-03-22
Toluene		mg/L	0.100	0.106	106	80 - 120	2011-03-22
Ethylbenzene		mg/L	0.100	0.113	113	80 - 120	2011-03-22
Xylene		mg/L	0.300	0.347	116	80 - 120	2011-03-22

Standard (CCV-3)

QC Batch: 79655

Date Analyzed: 2011-03-22

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.102	102	80 - 120	2011-03-22
Toluene		mg/L	0.100	0.104	104	80 - 120	2011-03-22
Ethylbenzene		mg/L	0.100	0.113	113	80 - 120	2011-03-22
Xylene		mg/L	0.300	0.348	116	80 - 120	2011-03-22

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

(Circle or Specify Method No.)

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Units Are Needed

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[Signature]

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: June 1, 2011

Work Order: 11052745

Project Location: North of Hobbs, Lea Co., NM
Project Name: SPS 11
Project Number: TNM-SPS-11

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
267674	MW-18	water	2011-05-25	15:00	2011-05-27
267675	MW-15	water	2011-05-25	15:30	2011-05-27
267676	MW-33	water	2011-05-25	16:00	2011-05-27
267677	MW-6	water	2011-05-25	17:00	2011-05-27
267678	MW-39	water	2011-05-26	08:00	2011-05-27
267679	MW-37	water	2011-05-26	08:30	2011-05-27
267680	MW-10	water	2011-05-26	09:00	2011-05-27
267681	MW-23	water	2011-05-26	09:30	2011-05-27
267682	MW-24	water	2011-05-26	10:00	2011-05-27
267683	MW-12	water	2011-05-26	10:30	2011-05-27
267684	MW-34	water	2011-05-26	11:00	2011-05-27
267685	MW-38	water	2011-05-26	11:30	2011-05-27
267686	MW-35	water	2011-05-26	12:00	2011-05-27
267687	MW-17	water	2011-05-26	12:30	2011-05-27
267688	MW-16	water	2011-05-26	13:00	2011-05-27
267689	MW-36	water	2011-05-26	13:30	2011-05-27
267690	MW-40	water	2011-05-26	14:00	2011-05-27
267691	MW-9	water	2011-05-26	15:30	2011-05-27

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
267692	MW-26	water	2011-05-26	16:00	2011-05-27
267693	MW-29	water	2011-05-26	16:30	2011-05-27
267694	MW-28	water	2011-05-26	17:00	2011-05-27
267695	MW-32	water	2011-05-26	17:30	2011-05-27
267696	MW-11	water	2011-05-26	18:00	2011-05-27
267697	MW-14	water	2011-05-26	18:30	2011-05-27

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.

This report consists of a total of 24 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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

Report Contents

Case Narrative	5
Analytical Report	6
Sample 267674 (MW-18)	6
Sample 267675 (MW-15)	6
Sample 267676 (MW-33)	6
Sample 267677 (MW-6)	7
Sample 267678 (MW-39)	7
Sample 267679 (MW-37)	8
Sample 267680 (MW-10)	8
Sample 267681 (MW-23)	9
Sample 267682 (MW-24)	9
Sample 267683 (MW-12)	10
Sample 267684 (MW-34)	10
Sample 267685 (MW-38)	11
Sample 267686 (MW-35)	11
Sample 267687 (MW-17)	12
Sample 267688 (MW-16)	12
Sample 267689 (MW-36)	13
Sample 267690 (MW-40)	13
Sample 267691 (MW-9)	14
Sample 267692 (MW-26)	14
Sample 267693 (MW-29)	15
Sample 267694 (MW-28)	15
Sample 267695 (MW-32)	16
Sample 267696 (MW-11)	16
Sample 267697 (MW-14)	17
Method Blanks	18
QC Batch 81776 - Method Blank (1)	18
QC Batch 81777 - Method Blank (1)	18
Laboratory Control Spikes	19
QC Batch 81776 - LCS (1)	19
QC Batch 81777 - LCS (1)	19
QC Batch 81776 - MS (1)	20
QC Batch 81777 - MS (1)	20
Calibration Standards	22
QC Batch 81776 - CCV (1)	22
QC Batch 81776 - CCV (2)	22
QC Batch 81776 - CCV (3)	22
QC Batch 81777 - CCV (1)	22
QC Batch 81777 - CCV (2)	23
Appendix	24

Laboratory Certifications	24
Standard Flags	24
Attachments	24

Case Narrative

Samples for project SPS 11 were received by TraceAnalysis, Inc. on 2011-05-27 and assigned to work order 11052745. Samples for work order 11052745 were received intact without headspace and at a temperature of 3.4 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	69436	2011-05-31 at 09:27	81776	2011-05-31 at 09:27
BTEX	S 8021B	69437	2011-05-31 at 09:27	81777	2011-05-31 at 23:51

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 11052745 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: 267674 - MW-18

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0781	mg/L	1	0.100	78	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0770	mg/L	1	0.100	77	51.1 - 128

Sample: 267675 - MW-15

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0801	mg/L	1	0.100	80	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0784	mg/L	1	0.100	78	51.1 - 128

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 7 of 24
North of Hobbs, Lea Co., NM

Sample: 267676 - MW-33

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0833	mg/L	1	0.100	83	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0806	mg/L	1	0.100	81	51.1 - 128

Sample: 267677 - MW-6

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0808	mg/L	1	0.100	81	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0786	mg/L	1	0.100	79	51.1 - 128

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 8 of 24
North of Hobbs, Lea Co., NM

Sample: 267678 - MW-39

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0839	mg/L	1	0.100	84	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0796	mg/L	1	0.100	80	51.1 - 128

Sample: 267679 - MW-37

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0807	mg/L	1	0.100	81	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0789	mg/L	1	0.100	79	51.1 - 128

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 9 of 24
North of Hobbs, Lea Co., NM

Sample: 267680 - MW-10

Laboratory: Midland

Analysis: BTEX

QC Batch: 81776

Prep Batch: 69436

Analytical Method: S 8021B

Date Analyzed: 2011-05-31

Sample Preparation: 2011-05-31

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.0134	mg/L	1	0.00100
Toluene		1	<0.00100	mg/L	1	0.00100
Ethylbenzene		1	<0.00100	mg/L	1	0.00100
Xylene		1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0840	mg/L	1	0.100	84	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0808	mg/L	1	0.100	81	51.1 - 128

Sample: 267681 - MW-23

Laboratory: Midland

Analysis: BTEX

QC Batch: 81776

Prep Batch: 69436

Analytical Method: S 8021B

Date Analyzed: 2011-05-31

Sample Preparation: 2011-05-31

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0861	mg/L	1	0.100	86	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0830	mg/L	1	0.100	83	51.1 - 128

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 10 of 24
North of Hobbs, Lea Co., NM

Sample: 267682 - MW-24

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0808	mg/L	1	0.100	81	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0785	mg/L	1	0.100	78	51.1 - 128

Sample: 267683 - MW-12

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0723	mg/L	1	0.100	72	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0706	mg/L	1	0.100	71	51.1 - 128

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 11 of 24
North of Hobbs, Lea Co., NM

Sample: 267684 - MW-34

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0816	mg/L	1	0.100	82	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0777	mg/L	1	0.100	78	51.1 - 128

Sample: 267685 - MW-38

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0759	mg/L	1	0.100	76	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0730	mg/L	1	0.100	73	51.1 - 128

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 12 of 24
North of Hobbs, Lea Co., NM

Sample: 267686 - MW-35

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0818	mg/L	1	0.100	82	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0782	mg/L	1	0.100	78	51.1 - 128

Sample: 267687 - MW-17

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0768	mg/L	1	0.100	77	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0729	mg/L	1	0.100	73	51.1 - 128

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 13 of 24
North of Hobbs, Lea Co., NM

Sample: 267688 - MW-16

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0809	mg/L	1	0.100	81	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0769	mg/L	1	0.100	77	51.1 - 128

Sample: 267689 - MW-36

Laboratory: Midland
Analysis: BTEX
QC Batch: 81776
Prep Batch: 69436

Analytical Method: S 8021B
Date Analyzed: 2011-05-31
Sample Preparation: 2011-05-31

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0832	mg/L	1	0.100	83	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0837	mg/L	1	0.100	84	51.1 - 128

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 14 of 24
North of Hobbs, Lea Co., NM

Sample: 267690 - MW-40

Laboratory: Midland

Analysis: BTEX

QC Batch: 81776

Prep Batch: 69436

Analytical Method: S 8021B

Date Analyzed: 2011-05-31

Sample Preparation: 2011-05-31

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0816	mg/L	1	0.100	82	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0771	mg/L	1	0.100	77	51.1 - 128

Sample: 267691 - MW-9

Laboratory: Midland

Analysis: BTEX

QC Batch: 81776

Prep Batch: 69436

Analytical Method: S 8021B

Date Analyzed: 2011-05-31

Sample Preparation: 2011-05-31

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.358	mg/L	5	0.00100
Toluene		1	<0.00500	mg/L	5	0.00100
Ethylbenzene		1	0.0680	mg/L	5	0.00100
Xylene		1	0.0818	mg/L	5	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.389	mg/L	5	0.500	78	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.409	mg/L	5	0.500	82	51.1 - 128

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 15 of 24
North of Hobbs, Lea Co., NM

Sample: 267692 - MW-26

Laboratory: Midland

Analysis: BTEX

QC Batch: 81777

Prep Batch: 69437

Analytical Method: S 8021B

Date Analyzed: 2011-05-31

Sample Preparation: 2011-05-31

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.474	mg/L	5	0.00100
Toluene		1	0.0306	mg/L	5	0.00100
Ethylbenzene		1	0.112	mg/L	5	0.00100
Xylene		1	0.0984	mg/L	5	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.382	mg/L	5	0.500	76	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.377	mg/L	5	0.500	75	51.1 - 128

Sample: 267693 - MW-29

Laboratory: Midland

Analysis: BTEX

QC Batch: 81777

Prep Batch: 69437

Analytical Method: S 8021B

Date Analyzed: 2011-05-31

Sample Preparation: 2011-05-31

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.791	mg/L	10	0.00100
Toluene		1	<0.0100	mg/L	10	0.00100
Ethylbenzene		1	0.0968	mg/L	10	0.00100
Xylene		1	<0.0100	mg/L	10	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.728	mg/L	10	1.00	73	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.736	mg/L	10	1.00	74	51.1 - 128

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 16 of 24
North of Hobbs, Lea Co., NM

Sample: 267694 - MW-28

Laboratory: Midland

Analysis: BTEX

QC Batch: 81777

Prep Batch: 69437

Analytical Method: S 8021B

Date Analyzed: 2011-05-31

Sample Preparation: 2011-05-31

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	1.41	mg/L	10	0.00100
Toluene		1	<0.0100	mg/L	10	0.00100
Ethylbenzene		1	0.310	mg/L	10	0.00100
Xylene		1	<0.0100	mg/L	10	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.798	mg/L	10	1.00	80	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.784	mg/L	10	1.00	78	51.1 - 128

Sample: 267695 - MW-32

Laboratory: Midland

Analysis: BTEX

QC Batch: 81777

Prep Batch: 69437

Analytical Method: S 8021B

Date Analyzed: 2011-05-31

Sample Preparation: 2011-05-31

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	1.67	mg/L	10	0.00100
Toluene		1	<0.0100	mg/L	10	0.00100
Ethylbenzene		1	0.0888	mg/L	10	0.00100
Xylene		1	<0.0100	mg/L	10	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.729	mg/L	10	1.00	73	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.721	mg/L	10	1.00	72	51.1 - 128

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 17 of 24
North of Hobbs, Lea Co., NM

Sample: 267696 - MW-11

Laboratory: Midland

Analysis: BTEX

QC Batch: 81777

Prep Batch: 69437

Analytical Method: S 8021B

Date Analyzed: 2011-05-31

Sample Preparation: 2011-05-31

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	5.71	mg/L	50	0.00100
Toluene		1	<0.0500	mg/L	50	0.00100
Ethylbenzene		1	1.30	mg/L	50	0.00100
Xylene		1	1.19	mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.79	mg/L	50	5.00	76	67.8 - 129
4-Bromofluorobenzene (4-BFB)			3.64	mg/L	50	5.00	73	51.1 - 128

Sample: 267697 - MW-14

Laboratory: Midland

Analysis: BTEX

QC Batch: 81777

Prep Batch: 69437

Analytical Method: S 8021B

Date Analyzed: 2011-05-31

Sample Preparation: 2011-05-31

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	6.68	mg/L	50	0.00100
Toluene		1	<0.0500	mg/L	50	0.00100
Ethylbenzene		1	0.456	mg/L	50	0.00100
Xylene		1	<0.0500	mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.98	mg/L	50	5.00	80	67.8 - 129
4-Bromofluorobenzene (4-BFB)			3.78	mg/L	50	5.00	76	51.1 - 128

Method Blanks

Method Blank (1) QC Batch: 81776

QC Batch: 81776
Prep Batch: 69436

Date Analyzed: 2011-05-31
QC Preparation: 2011-05-31

Analyzed By: ME
Prepared By: ME

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000400	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000300	mg/L	0.001
Xylene		1	<0.000333	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0784	mg/L	1	0.100	78	70.2 - 118
4-Bromofluorobenzene (4-BFB)			0.0740	mg/L	1	0.100	74	47.3 - 116

Method Blank (1) QC Batch: 81777

QC Batch: 81777
Prep Batch: 69437

Date Analyzed: 2011-05-31
QC Preparation: 2011-05-31

Analyzed By: ME
Prepared By: ME

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000400	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000300	mg/L	0.001
Xylene		1	<0.000333	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0799	mg/L	1	0.100	80	70.2 - 118
4-Bromofluorobenzene (4-BFB)			0.0733	mg/L	1	0.100	73	47.3 - 116

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 19 of 24
North of Hobbs, Lea Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 81776
Prep Batch: 69436

Date Analyzed: 2011-05-31
QC Preparation: 2011-05-31

Analyzed By: ME
Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0985	mg/L	1	0.100	<0.000400	98	76.8 - 110
Toluene		1	0.104	mg/L	1	0.100	<0.000300	104	81 - 118
Ethylbenzene		1	0.0874	mg/L	1	0.100	<0.000300	87	78.8 - 118
Xylene		1	0.262	mg/L	1	0.300	<0.000333	87	80.3 - 119

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

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0962	mg/L	1	0.100	<0.000400	96	76.8 - 110	2	20
Toluene		1	0.102	mg/L	1	0.100	<0.000300	102	81 - 118	2	20
Ethylbenzene		1	0.0858	mg/L	1	0.100	<0.000300	86	78.8 - 118	2	20
Xylene		1	0.258	mg/L	1	0.300	<0.000333	86	80.3 - 119	2	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0847	0.0776	mg/L	1	0.100	85	78	66.6 - 114
4-Bromofluorobenzene (4-BFB)	0.0853	0.0783	mg/L	1	0.100	85	78	68.2 - 124

Laboratory Control Spike (LCS-1)

QC Batch: 81777
Prep Batch: 69437

Date Analyzed: 2011-05-31
QC Preparation: 2011-05-31

Analyzed By: ME
Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0980	mg/L	1	0.100	<0.000400	98	76.8 - 110
Toluene		1	0.102	mg/L	1	0.100	<0.000300	102	81 - 118
Ethylbenzene		1	0.0865	mg/L	1	0.100	<0.000300	86	78.8 - 118
Xylene		1	0.258	mg/L	1	0.300	<0.000333	86	80.3 - 119

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

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 20 of 24
North of Hobbs, Lea Co., NM

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0982	mg/L	1	0.100	<0.000400	98	76.8 - 110	0	20
Toluene		1	0.103	mg/L	1	0.100	<0.000300	103	81 - 118	1	20
Ethylbenzene		1	0.0873	mg/L	1	0.100	<0.000300	87	78.8 - 118	1	20
Xylene		1	0.260	mg/L	1	0.300	<0.000333	87	80.3 - 119	1	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)	0.0759	0.0793	mg/L	1	0.100	76	79	66.6 - 114
4-Bromofluorobenzene (4-BFB)	0.0737	0.0772	mg/L	1	0.100	74	77	68.2 - 124

Matrix Spike (MS-1) Spiked Sample: 267691

QC Batch: 81776
Prep Batch: 69436

Date Analyzed: 2011-05-31
QC Preparation: 2011-05-31

Analyzed By: ME
Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.746	mg/L	5	0.500	0.3583	78	77.9 - 114
Toluene		1	0.442	mg/L	5	0.500	<0.00150	88	78.3 - 111
Ethylbenzene		1	0.420	mg/L	5	0.500	0.068	70	75.3 - 110
Xylene		1	1.11	mg/L	5	1.50	0.0818	68	75.7 - 109

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	0.792	mg/L	5	0.500	0.3583	87	77.9 - 114	6	20
Toluene		1	0.471	mg/L	5	0.500	<0.00150	94	78.3 - 111	6	20
Ethylbenzene		1	0.453	mg/L	5	0.500	0.068	77	75.3 - 110	8	20
Xylene		1	1.20	mg/L	5	1.50	0.0818	74	75.7 - 109	8	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.376	0.392	mg/L	5	0.5	75	78	68.3 - 107
4-Bromofluorobenzene (4-BFB)	0.402	0.424	mg/L	5	0.5	80	85	60.1 - 135

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 21 of 24
North of Hobbs, Lea Co., NM

Matrix Spike (MS-1) Spiked Sample: 267697

QC Batch: 81777
Prep Batch: 69437

Date Analyzed: 2011-05-31
QC Preparation: 2011-05-31

Analyzed By: ME
Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	10.4	mg/L	50	5.00	6.6816	74	77.9 - 114
Toluene		1	4.65	mg/L	50	5.00	<0.0150	93	78.3 - 111
Ethylbenzene		1	4.14	mg/L	50	5.00	0.4555	74	75.3 - 110
Xylene		1	11.6	mg/L	50	15.0	<0.0166	77	75.7 - 109

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	50	5.00	6.6816	72	77.9 - 114	1	20
Toluene		1	4.55	mg/L	50	5.00	<0.0150	91	78.3 - 111	2	20
Ethylbenzene		1	4.01	mg/L	50	5.00	0.4555	71	75.3 - 110	3	20
Xylene		1	11.3	mg/L	50	15.0	<0.0166	75	75.7 - 109	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)	3.93	3.82	mg/L	50	5	79	76	68.3 - 107
4-Bromofluorobenzene (4-BFB)	3.76	3.72	mg/L	50	5	75	74	60.1 - 135

Calibration Standards

Standard (CCV-1)

QC Batch: 81776

Date Analyzed: 2011-05-31

Analyzed By: ME

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	2011-05-31
Toluene		1	mg/L	0.100	0.107	107	80 - 120	2011-05-31
Ethylbenzene		1	mg/L	0.100	0.0880	88	80 - 120	2011-05-31
Xylene		1	mg/L	0.300	0.266	89	80 - 120	2011-05-31

Standard (CCV-2)

QC Batch: 81776

Date Analyzed: 2011-05-31

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0997	100	80 - 120	2011-05-31
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2011-05-31
Ethylbenzene		1	mg/L	0.100	0.0880	88	80 - 120	2011-05-31
Xylene		1	mg/L	0.300	0.262	87	80 - 120	2011-05-31

Standard (CCV-3)

QC Batch: 81776

Date Analyzed: 2011-05-31

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0966	97	80 - 120	2011-05-31
Toluene		1	mg/L	0.100	0.102	102	80 - 120	2011-05-31
Ethylbenzene		1	mg/L	0.100	0.0864	86	80 - 120	2011-05-31
Xylene		1	mg/L	0.300	0.258	86	80 - 120	2011-05-31

Report Date: June 1, 2011
TNM-SPS-11

Work Order: 11052745
SPS 11

Page Number: 23 of 24
North of Hobbs, Lea Co., NM

Standard (CCV-1)

QC Batch: 81777

Date Analyzed: 2011-05-31

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0983	98	80 - 120	2011-05-31
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2011-05-31
Ethylbenzene		1	mg/L	0.100	0.0893	89	80 - 120	2011-05-31
Xylene		1	mg/L	0.300	0.266	89	80 - 120	2011-05-31

Standard (CCV-2)

QC Batch: 81777

Date Analyzed: 2011-05-31

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0960	96	80 - 120	2011-05-31
Toluene		1	mg/L	0.100	0.101	101	80 - 120	2011-05-31
Ethylbenzene		1	mg/L	0.100	0.0867	87	80 - 120	2011-05-31
Xylene		1	mg/L	0.300	0.259	86	80 - 120	2011-05-31

Appendix

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	T104704392-10-TX	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 than 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.
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 #

11052745

Page 1 of 3

Trace Analysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-12965002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443Bioanalytic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name:

ANAL

Phone #:

432-520-7720

Address: (Street, City, Zip)

Fax #:

2057 Commerce Midland TX 79703

E-mail:

Contact Person: Bob E

E-mail:

432-520-7701

Invoice to:

(If different from above)

Project #:

TALU SPS-11

Project Name:

SPS-11

Project Location (including state):

New Mexico

Sampler Signature:

[Signature]

LAB #

(LAB USE ONLY)

FIELD CODE

CONTAINERS

Volume / Amount

MATRIX

WATER

SOIL

AIR

SLUDGE

HCl

HNO₃H₂SO₄

NaOH

ICE

NONE

DATE

TIME

SAMPLING

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, S04, NO3, NO2, Alkalinity

Na, Ca, Mg, K, TDS, EC

Turn Around Time if different from standard

Hold

(Circle or Specify Method No.)

ANALYSIS REQUEST

Relinquished by:

Company:

Date:

Time:

Received by:

Company:

Date:

Time:

INST

OBS

COR

LAB USE ONLY

REMARKS:

X All tests Midland

Relinquished by:

Company:

Date:

Time:

Received by:

Company:

Date:

Time:

INST

OBS

COR

LAB USE ONLY

REMARKS:

X All tests Midland

Relinquished by:

Company:

Date:

Time:

Received by:

Company:

Date:

Time:

INST

OBS

COR

LAB USE ONLY

REMARKS:

X All tests Midland

Relinquished by:

Company:

Date:

Time:

Received by:

Company:

Date:

Time:

INST

OBS

COR

LAB USE ONLY

REMARKS:

X All tests Midland

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

ORIGINAL COPY

Carrier #

[Signature]

LAB Order ID # 11052745Page 2 of 3**TraceAnalysis, Inc.**

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-12965002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name: <u>UNAC</u>	Phone #: <u>432-520-7720</u>
Address: (Street, City, Zip) <u>2057 Commerce Midland TX 79703</u>	Fax #: <u>432-520-7701</u>
Contact Person: <u>Ron R.</u>	E-mail:
Invoice to: (If different from above)	
Project #: <u>TAM BPS-11</u>	Project Name: <u>SPS-11</u>
Project Location (including state): <u>New Mexico</u>	Sampler Signature: <u>[Signature]</u>

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		MTBE 8021 / 602	BTEX 8021 / 602 / 816 / 8260 / 625	TPH 418.1 / TX1005	TPH 8015 GRO / DRO	PAH 8270 / 625	Total Metals Ag As Ba C	TCLP Metals Ag As	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 6	GC/MS Semi. Vol. 8	PCB's 8082 / 608	Pesticides 8081 / 60	BOD, TSS, pH	Moisture Content	Cl, Fl, S04, NO3, NO	Na, Ca, Mg, K, TDS,	Turn Around Time if	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME																					
267685	mw-38	3	unq	X				X			X			8-26	11:30	X																				
686	mw-35														12:00																					
687	mw-17														12:30																					
688	mw-16														13:00																					
689	mw-36														13:30																					
690	mw-40														14:00																					
691	mw-9														15:30																					
692	mw-26														16:00																					
693	mw-29														16:30																					
694	mw-28														17:00																					
695	mw-32														17:30																					

Relinquished by: <u>[Signature]</u>	Company: <u>unac</u>	Date: <u>8-27</u>	Time: <u>8:40</u>	Received by: <u>[Signature]</u>	Company: <u>1/A</u>	Date: <u>5/27/11</u>	Time: <u>14:40</u>	INST <u>3.4</u>	OBS <u>3.4</u>	COR <u>0</u>
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR

LAB USE ONLYIntact Y / N
Headspace Y / N / NA☐ 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.

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Carrier # Cargis

11052745

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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Lubbock, Texas 79424
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El Paso, Texas 79922
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1 (888) 588-3443BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name:	Phone #:
Address: (Street, City, Zip)	Fax #:
Contact Person:	E-mail:
Invoice to:	
(If different from above)	
Project #:	Project Name:
Project Location (including state):	Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		MTBE 8021 / 602 / 8260 / 625	TEX 8022 / 602 / 8260 / 625	TPH 418.1 / TX1005	TPH 8015 GRO / DRO	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 / 625	GC/MS Semi. Vol. 8270 / 625	PCBs 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, Fl, S04, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME																					
21676	mw-11	3	1000	X				X			X			5-26	18:00	X																				
67	mw-14	1	1000	X				X			X			↓	18:30	↓																				

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR

LAB USE ONLY

Inter Y	N
Headspace	Y/N/NA
Log-In-Review	

REMARKS:

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

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

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E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: August 25, 2011

Work Order: 11082209

Project Location: North of Hobbs, Lea Co., NM
Project Name: SPS 11
Project Number: TNM-SPS-11

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
275139	MW-33	water	2011-08-18	11:00	2011-08-22
275140	MW-6	water	2011-08-18	12:00	2011-08-22
275141	MW-39	water	2011-08-18	13:00	2011-08-22
275142	MW-37	water	2011-08-18	13:30	2011-08-22
275143	MW-23	water	2011-08-18	14:00	2011-08-22
275144	MW-12	water	2011-08-18	14:30	2011-08-22
275145	MW-34	water	2011-08-18	15:00	2011-08-22
275146	MW-38	water	2011-08-18	15:30	2011-08-22
275147	MW-15	water	2011-08-18	16:00	2011-08-22
275148	MW-24	water	2011-08-18	16:30	2011-08-22
275149	MW-16	water	2011-08-18	17:00	2011-08-22
275150	MW-17	water	2011-08-18	17:30	2011-08-22
275151	MW-35	water	2011-08-19	10:00	2011-08-22
275152	MW-36	water	2011-08-19	10:30	2011-08-22
275153	MW-40	water	2011-08-19	11:00	2011-08-22
275154	MW-10	water	2011-08-19	11:30	2011-08-22
275155	MW-9	water	2011-08-19	12:30	2011-08-22
275156	MW-26	water	2011-08-19	13:00	2011-08-22

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
275157	MW-29	water	2011-08-19	13:30	2011-08-22
275158	MW-28	water	2011-08-19	14:00	2011-08-22
275159	MW-32	water	2011-08-19	14:30	2011-08-22
275160	MW-14	water	2011-08-19	15:00	2011-08-22

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.

This report consists of a total of 23 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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

Report Contents

Case Narrative	5
Analytical Report	6
Sample 275139 (MW-33)	6
Sample 275140 (MW-6)	6
Sample 275141 (MW-39)	6
Sample 275142 (MW-37)	7
Sample 275143 (MW-23)	7
Sample 275144 (MW-12)	8
Sample 275145 (MW-34)	8
Sample 275146 (MW-38)	9
Sample 275147 (MW-15)	9
Sample 275148 (MW-24)	10
Sample 275149 (MW-16)	10
Sample 275150 (MW-17)	11
Sample 275151 (MW-35)	11
Sample 275152 (MW-36)	12
Sample 275153 (MW-40)	12
Sample 275154 (MW-10)	13
Sample 275155 (MW-9)	13
Sample 275156 (MW-26)	14
Sample 275157 (MW-29)	14
Sample 275158 (MW-28)	15
Sample 275159 (MW-32)	15
Sample 275160 (MW-14)	16
Method Blanks	17
QC Batch 84191 - Method Blank (1)	17
QC Batch 84231 - Method Blank (1)	17
Laboratory Control Spikes	18
QC Batch 84191 - LCS (1)	18
QC Batch 84231 - LCS (1)	18
QC Batch 84191 - MS (1)	19
QC Batch 84231 - MS (1)	19
Calibration Standards	21
QC Batch 84191 - CCV (1)	21
QC Batch 84191 - CCV (2)	21
QC Batch 84231 - CCV (1)	21
QC Batch 84231 - CCV (2)	21
QC Batch 84231 - CCV (3)	22
Appendix	23
Laboratory Certifications	23
Standard Flags	23

Attachments	23
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Case Narrative

Samples for project SPS 11 were received by TraceAnalysis, Inc. on 2011-08-22 and assigned to work order 11082209. Samples for work order 11082209 were received intact without headspace and at a temperature of 1.3 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	71487	2011-08-23 at 08:50	84191	2011-08-23 at 08:50
BTEX	S 8021B	71518	2011-08-24 at 10:21	84231	2011-08-24 at 10:21

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 11082209 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.

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 6 of 23
North of Hobbs, Lea Co., NM

Analytical Report

Sample: 275139 - MW-33

Laboratory: Midland
Analysis: BTEX
QC Batch: 84191
Prep Batch: 71487

Analytical Method: S 8021B
Date Analyzed: 2011-08-23
Sample Preparation: 2011-08-23

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.100	mg/L	1	0.100	100	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0937	mg/L	1	0.100	94	67.5 - 140.8

Sample: 275140 - MW-6

Laboratory: Midland
Analysis: BTEX
QC Batch: 84191
Prep Batch: 71487

Analytical Method: S 8021B
Date Analyzed: 2011-08-23
Sample Preparation: 2011-08-23

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.104	mg/L	1	0.100	104	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0981	mg/L	1	0.100	98	67.5 - 140.8

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 7 of 23
North of Hobbs, Lea Co., NM

Sample: 275141 - MW-39

Laboratory: Midland
Analysis: BTEX
QC Batch: 84191
Prep Batch: 71487

Analytical Method: S 8021B
Date Analyzed: 2011-08-23
Sample Preparation: 2011-08-23

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.104	mg/L	1	0.100	104	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0976	mg/L	1	0.100	98	67.5 - 140.8

Sample: 275142 - MW-37

Laboratory: Midland
Analysis: BTEX
QC Batch: 84191
Prep Batch: 71487

Analytical Method: S 8021B
Date Analyzed: 2011-08-23
Sample Preparation: 2011-08-23

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.101	mg/L	1	0.100	101	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0964	mg/L	1	0.100	96	67.5 - 140.8

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 8 of 23
North of Hobbs, Lea Co., NM

Sample: 275143 - MW-23

Laboratory: Midland

Analysis: BTEX

QC Batch: 84191

Prep Batch: 71487

Analytical Method: S 8021B

Date Analyzed: 2011-08-23

Sample Preparation: 2011-08-23

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.102	mg/L	1	0.100	102	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0979	mg/L	1	0.100	98	67.5 - 140.8

Sample: 275144 - MW-12

Laboratory: Midland

Analysis: BTEX

QC Batch: 84191

Prep Batch: 71487

Analytical Method: S 8021B

Date Analyzed: 2011-08-23

Sample Preparation: 2011-08-23

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.103	mg/L	1	0.100	103	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0990	mg/L	1	0.100	99	67.5 - 140.8

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 9 of 23
North of Hobbs, Lea Co., NM

Sample: 275145 - MW-34

Laboratory: Midland
Analysis: BTEX
QC Batch: 84191
Prep Batch: 71487

Analytical Method: S 8021B
Date Analyzed: 2011-08-23
Sample Preparation: 2011-08-23

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.104	mg/L	1	0.100	104	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0983	mg/L	1	0.100	98	67.5 - 140.8

Sample: 275146 - MW-38

Laboratory: Midland
Analysis: BTEX
QC Batch: 84191
Prep Batch: 71487

Analytical Method: S 8021B
Date Analyzed: 2011-08-23
Sample Preparation: 2011-08-23

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0982	mg/L	1	0.100	98	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0947	mg/L	1	0.100	95	67.5 - 140.8

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 10 of 23
North of Hobbs, Lea Co., NM

Sample: 275147 - MW-15

Laboratory: Midland

Analysis: BTEX

QC Batch: 84231

Prep Batch: 71518

Analytical Method: S 8021B

Date Analyzed: 2011-08-24

Sample Preparation: 2011-08-24

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.109	mg/L	1	0.100	109	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.104	mg/L	1	0.100	104	67.5 - 140.8

Sample: 275148 - MW-24

Laboratory: Midland

Analysis: BTEX

QC Batch: 84231

Prep Batch: 71518

Analytical Method: S 8021B

Date Analyzed: 2011-08-24

Sample Preparation: 2011-08-24

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.112	mg/L	1	0.100	112	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.108	mg/L	1	0.100	108	67.5 - 140.8

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 11 of 23
North of Hobbs, Lea Co., NM

Sample: 275149 - MW-16

Laboratory: Midland

Analysis: BTEX

QC Batch: 84231

Prep Batch: 71518

Analytical Method: S 8021B

Date Analyzed: 2011-08-24

Sample Preparation: 2011-08-24

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL	Units	Dilution	RL
			Result			
Benzene		1	0.00490	mg/L	1	0.00100
Toluene	u	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	u	1	<0.00100	mg/L	1	0.00100
Xylene	u	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.108	mg/L	1	0.100	108	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.102	mg/L	1	0.100	102	67.5 - 140.8

Sample: 275150 - MW-17

Laboratory: Midland

Analysis: BTEX

QC Batch: 84231

Prep Batch: 71518

Analytical Method: S 8021B

Date Analyzed: 2011-08-24

Sample Preparation: 2011-08-24

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL	Units	Dilution	RL
			Result			
Benzene		1	0.00530	mg/L	1	0.00100
Toluene	u	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	u	1	<0.00100	mg/L	1	0.00100
Xylene	u	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.107	mg/L	1	0.100	107	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.102	mg/L	1	0.100	102	67.5 - 140.8

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 12 of 23
North of Hobbs, Lea Co., NM

Sample: 275151 - MW-35

Laboratory: Midland
Analysis: BTEX
QC Batch: 84231
Prep Batch: 71518

Analytical Method: S 8021B
Date Analyzed: 2011-08-24
Sample Preparation: 2011-08-24

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.00410	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	0.00920	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.109	mg/L	1	0.100	109	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.104	mg/L	1	0.100	104	67.5 - 140.8

Sample: 275152 - MW-36

Laboratory: Midland
Analysis: BTEX
QC Batch: 84231
Prep Batch: 71518

Analytical Method: S 8021B
Date Analyzed: 2011-08-24
Sample Preparation: 2011-08-24

Prep Method: S 5030B
Analyzed By: ME
Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.106	mg/L	1	0.100	106	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.105	mg/L	1	0.100	105	67.5 - 140.8

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 13 of 23
North of Hobbs, Lea Co., NM

Sample: 275153 - MW-40

Laboratory: Midland

Analysis: BTEX

QC Batch: 84231

Prep Batch: 71518

Analytical Method: S 8021B

Date Analyzed: 2011-08-24

Sample Preparation: 2011-08-24

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.110	mg/L	1	0.100	110	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.103	mg/L	1	0.100	103	67.5 - 140.8

Sample: 275154 - MW-10

Laboratory: Midland

Analysis: BTEX

QC Batch: 84231

Prep Batch: 71518

Analytical Method: S 8021B

Date Analyzed: 2011-08-24

Sample Preparation: 2011-08-24

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.00660	mg/L	1	0.00100
Toluene	u	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	u	1	<0.00100	mg/L	1	0.00100
Xylene	u	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.106	mg/L	1	0.100	106	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.101	mg/L	1	0.100	101	67.5 - 140.8

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 14 of 23
North of Hobbs, Lea Co., NM

Sample: 275155 - MW-9

Laboratory: Midland

Analysis: BTEX

QC Batch: 84231

Prep Batch: 71518

Analytical Method: S 8021B

Date Analyzed: 2011-08-24

Sample Preparation: 2011-08-24

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.382	mg/L	5	0.00100
Toluene	u	1	<0.00500	mg/L	5	0.00100
Ethylbenzene	u	1	<0.00500	mg/L	5	0.00100
Xylene	u	1	<0.00500	mg/L	5	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.480	mg/L	5	0.500	96	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.520	mg/L	5	0.500	104	67.5 - 140.8

Sample: 275156 - MW-26

Laboratory: Midland

Analysis: BTEX

QC Batch: 84231

Prep Batch: 71518

Analytical Method: S 8021B

Date Analyzed: 2011-08-24

Sample Preparation: 2011-08-24

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.580	mg/L	5	0.00100
Toluene		1	0.0201	mg/L	5	0.00100
Ethylbenzene		1	0.100	mg/L	5	0.00100
Xylene		1	0.0579	mg/L	5	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.469	mg/L	5	0.500	94	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.471	mg/L	5	0.500	94	67.5 - 140.8

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 15 of 23
North of Hobbs, Lea Co., NM

Sample: 275157 - MW-29

Laboratory: Midland

Analysis: BTEX

QC Batch: 84231

Prep Batch: 71518

Analytical Method: S 8021B

Date Analyzed: 2011-08-24

Sample Preparation: 2011-08-24

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.767	mg/L	10	0.00100
Toluene	u	1	<0.0100	mg/L	10	0.00100
Ethylbenzene		1	0.0578	mg/L	10	0.00100
Xylene	u	1	<0.0100	mg/L	10	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.956	mg/L	10	1.00	96	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.966	mg/L	10	1.00	97	67.5 - 140.8

Sample: 275158 - MW-28

Laboratory: Midland

Analysis: BTEX

QC Batch: 84231

Prep Batch: 71518

Analytical Method: S 8021B

Date Analyzed: 2011-08-24

Sample Preparation: 2011-08-24

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	1.43	mg/L	10	0.00100
Toluene	u	1	<0.0100	mg/L	10	0.00100
Ethylbenzene		1	0.363	mg/L	10	0.00100
Xylene	u	1	<0.0100	mg/L	10	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.963	mg/L	10	1.00	96	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.973	mg/L	10	1.00	97	67.5 - 140.8

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 16 of 23
North of Hobbs, Lea Co., NM

Sample: 275159 - MW-32

Laboratory: Midland

Analysis: BTEX

QC Batch: 84231

Prep Batch: 71518

Analytical Method: S 8021B

Date Analyzed: 2011-08-24

Sample Preparation: 2011-08-24

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	1.71	mg/L	10	0.00100
Toluene	u	1	<0.0100	mg/L	10	0.00100
Ethylbenzene		1	0.0657	mg/L	10	0.00100
Xylene	u	1	<0.0100	mg/L	10	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.917	mg/L	10	1.00	92	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.936	mg/L	10	1.00	94	67.5 - 140.8

Sample: 275160 - MW-14

Laboratory: Midland

Analysis: BTEX

QC Batch: 84231

Prep Batch: 71518

Analytical Method: S 8021B

Date Analyzed: 2011-08-24

Sample Preparation: 2011-08-24

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	6.08	mg/L	50	0.00100
Toluene	u	1	<0.0500	mg/L	50	0.00100
Ethylbenzene	u	1	<0.0500	mg/L	50	0.00100
Xylene	u	1	<0.0500	mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.75	mg/L	50	5.00	95	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			4.69	mg/L	50	5.00	94	67.5 - 140.8

Method Blanks

Method Blank (1) QC Batch: 84191

QC Batch: 84191
Prep Batch: 71487

Date Analyzed: 2011-08-23
QC Preparation: 2011-08-23

Analyzed By: ME
Prepared By: ME

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000400	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000300	mg/L	0.001
Xylene		1	<0.000333	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0977	mg/L	1	0.100	98	61.1 - 118.4
4-Bromofluorobenzene (4-BFB)			0.0909	mg/L	1	0.100	91	45.9 - 126.4

Method Blank (1) QC Batch: 84231

QC Batch: 84231
Prep Batch: 71518

Date Analyzed: 2011-08-24
QC Preparation: 2011-08-24

Analyzed By: ME
Prepared By: ME

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000400	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000300	mg/L	0.001
Xylene		1	<0.000333	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0992	mg/L	1	0.100	99	61.1 - 118.4
4-Bromofluorobenzene (4-BFB)			0.0926	mg/L	1	0.100	93	45.9 - 126.4

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 18 of 23
North of Hobbs, Lea Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 84191
Prep Batch: 71487

Date Analyzed: 2011-08-23
QC Preparation: 2011-08-23

Analyzed By: ME
Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.100	mg/L	1	0.100	<0.000400	100	76.8 - 110.3
Toluene		1	0.102	mg/L	1	0.100	<0.000300	102	90.9 - 122.2
Ethylbenzene		1	0.101	mg/L	1	0.100	<0.000300	101	72.7 - 120.2
Xylene		1	0.306	mg/L	1	0.300	<0.000333	102	72.1 - 121.5

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

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.105	mg/L	1	0.100	<0.000400	105	76.8 - 110.3	5	20
Toluene		1	0.106	mg/L	1	0.100	<0.000300	106	90.9 - 122.2	4	20
Ethylbenzene		1	0.106	mg/L	1	0.100	<0.000300	106	72.7 - 120.2	5	20
Xylene		1	0.319	mg/L	1	0.300	<0.000333	106	72.1 - 121.5	4	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0914	0.0952	mg/L	1	0.100	91	95	61.9 - 119.2
4-Bromofluorobenzene (4-BFB)	0.0901	0.0935	mg/L	1	0.100	90	94	56.4 - 127.9

Laboratory Control Spike (LCS-1)

QC Batch: 84231
Prep Batch: 71518

Date Analyzed: 2011-08-24
QC Preparation: 2011-08-24

Analyzed By: ME
Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.105	mg/L	1	0.100	<0.000400	105	76.8 - 110.3
Toluene		1	0.107	mg/L	1	0.100	<0.000300	107	90.9 - 122.2
Ethylbenzene		1	0.106	mg/L	1	0.100	<0.000300	106	72.7 - 120.2
Xylene		1	0.321	mg/L	1	0.300	<0.000333	107	72.1 - 121.5

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

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.109	mg/L	1	0.100	<0.000400	109	76.8 - 110.3	4	20
Toluene		1	0.112	mg/L	1	0.100	<0.000300	112	90.9 - 122.2	5	20
Ethylbenzene		1	0.113	mg/L	1	0.100	<0.000300	113	72.7 - 120.2	6	20
Xylene		1	0.339	mg/L	1	0.300	<0.000333	113	72.1 - 121.5	5	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.106	0.109	mg/L	1	0.100	106	109	61.9 - 119.2
4-Bromofluorobenzene (4-BFB)	0.105	0.108	mg/L	1	0.100	105	108	56.4 - 127.9

Matrix Spike (MS-1) Spiked Sample: 274736

QC Batch: 84191
Prep Batch: 71487

Date Analyzed: 2011-08-23
QC Preparation: 2011-08-23

Analyzed By: ME
Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.89	mg/L	10	1.00	0.9466	94	66.9 - 128.2
Toluene		1	1.22	mg/L	10	1.00	0.242	98	81.6 - 122.9
Ethylbenzene		1	0.990	mg/L	10	1.00	<0.00300	99	62.7 - 117.9
Xylene		1	3.12	mg/L	10	3.00	0.205	97	62.9 - 118.2

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	1.94	mg/L	10	1.00	0.9466	99	66.9 - 128.2	3	20
Toluene		1	1.26	mg/L	10	1.00	0.242	102	81.6 - 122.9	3	20
Ethylbenzene		1	1.03	mg/L	10	1.00	<0.00300	103	62.7 - 117.9	4	20
Xylene		1	3.24	mg/L	10	3.00	0.205	101	62.9 - 118.2	4	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)	0.986	0.989	mg/L	10	1	99	99	58.6 - 119.7
4-Bromofluorobenzene (4-BFB)	0.996	1.01	mg/L	10	1	100	101	52.2 - 135.8

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 20 of 23
North of Hobbs, Lea Co., NM

Matrix Spike (MS-1) Spiked Sample: 275160

QC Batch: 84231
Prep Batch: 71518

Date Analyzed: 2011-08-24
QC Preparation: 2011-08-24

Analyzed By: ME
Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	10.8	mg/L	50	5.00	6.0842	94	66.9 - 128.2
Toluene		1	4.89	mg/L	50	5.00	<0.0150	98	81.6 - 122.9
Ethylbenzene		1	5.04	mg/L	50	5.00	<0.0150	101	62.7 - 117.9
Xylene		1	14.6	mg/L	50	15.0	<0.0166	97	62.9 - 118.2

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	11.0	mg/L	50	5.00	6.0842	98	66.9 - 128.2	2	20
Toluene		1	5.07	mg/L	50	5.00	<0.0150	101	81.6 - 122.9	4	20
Ethylbenzene		1	5.24	mg/L	50	5.00	<0.0150	105	62.7 - 117.9	4	20
Xylene		1	15.2	mg/L	50	15.0	<0.0166	101	62.9 - 118.2	4	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	4.98	5.15	mg/L	50	5	100	103	58.6 - 119.7
4-Bromofluorobenzene (4-BFB)	5.02	5.15	mg/L	50	5	100	103	52.2 - 135.8

Calibration Standards

Standard (CCV-1)

QC Batch: 84191

Date Analyzed: 2011-08-23

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.101	101	80 - 120	2011-08-23
Toluene		1	mg/L	0.100	0.100	100	80 - 120	2011-08-23
Ethylbenzene		1	mg/L	0.100	0.0973	97	80 - 120	2011-08-23
Xylene		1	mg/L	0.300	0.296	99	80 - 120	2011-08-23

Standard (CCV-2)

QC Batch: 84191

Date Analyzed: 2011-08-23

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.106	106	80 - 120	2011-08-23
Toluene		1	mg/L	0.100	0.108	108	80 - 120	2011-08-23
Ethylbenzene		1	mg/L	0.100	0.107	107	80 - 120	2011-08-23
Xylene		1	mg/L	0.300	0.321	107	80 - 120	2011-08-23

Standard (CCV-1)

QC Batch: 84231

Date Analyzed: 2011-08-24

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.102	102	80 - 120	2011-08-24
Toluene		1	mg/L	0.100	0.105	105	80 - 120	2011-08-24
Ethylbenzene		1	mg/L	0.100	0.105	105	80 - 120	2011-08-24
Xylene		1	mg/L	0.300	0.316	105	80 - 120	2011-08-24

Report Date: August 25, 2011
TNM-SPS-11

Work Order: 11082209
SPS 11

Page Number: 22 of 23
North of Hobbs, Lea Co., NM

Standard (CCV-2)

QC Batch: 84231

Date Analyzed: 2011-08-24

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.102	102	80 - 120	2011-08-24
Toluene		1	mg/L	0.100	0.105	105	80 - 120	2011-08-24
Ethylbenzene		1	mg/L	0.100	0.104	104	80 - 120	2011-08-24
Xylene		1	mg/L	0.300	0.313	104	80 - 120	2011-08-24

Standard (CCV-3)

QC Batch: 84231

Date Analyzed: 2011-08-24

Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0989	99	80 - 120	2011-08-24
Toluene		1	mg/L	0.100	0.100	100	80 - 120	2011-08-24
Ethylbenzene		1	mg/L	0.100	0.0997	100	80 - 120	2011-08-24
Xylene		1	mg/L	0.300	0.300	100	80 - 120	2011-08-24

Appendix

Laboratory Certifications

	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	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 than 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.
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.

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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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: ADUG Phone #: 432-520-7720
Address: (Street, City, Zip) Fax #: 432-520-7701
2057 Commerce Midland TX
Contact Person: Ron R. E-mail:
Invoice to:
(If different from above)
Project #: TN.M.SPS-11 Project Name: SPB-11
Project Location (including state): New Mexico Sampler Signature: [Signature]

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		DATE	TIME	MTBE 8021 / 602 / 8260 / 624	TEX 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, S, O4, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE																									
275150	mw-17	3	vol	X				X				X				8-18	17:30	X																				
151	mw-35															8-19	10:00																					
152	mw-36																10:30																					
153	mw-40																11:00																					
154	mw-10																11:30																					
155	mw-9																12:30																					
156	mw-26																13:00																					
157	mw-29																13:30																					
158	mw-28																14:00																					
159	mw-32																14:30																					
160	mw-14																15:00																					

Relinquished by: [Signature] Company: ADUG Date: 8-22 Time: 8:15
Received by: [Signature] Company: TA Date: 9-22-11 Time: 8:15
INST 13
OBS 13
COR 13

LAB USE ONLY

REMARKS:

Relinquished by: _____ Company: _____ Date: _____ Time: _____
Received by: _____ Company: _____ Date: _____ Time: _____
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OBS _____
COR _____

Intact Y
Headspace Y

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

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
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Report Date: November 21, 2011

Work Order: 11111709

Project Location: North of Hobbs, Lea Co., NM
Project Name: SPS 11
Project Number: TNM-SPS-11

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
282529	MW 13	water	2011-11-15	11:30	2011-11-17
282530	MW 2	water	2011-11-15	11:50	2011-11-17
282531	MW 21	water	2011-11-15	11:45	2011-11-17
282532	MW 3	water	2011-11-15	12:05	2011-11-17
282533	MW 30	water	2011-11-15	12:25	2011-11-17
282534	MW 31	water	2011-11-15	12:20	2011-11-17
282535	MW 19	water	2011-11-15	12:35	2011-11-17
282536	MW 18	water	2011-11-15	12:35	2011-11-17
282537	MW 33	water	2011-11-15	12:45	2011-11-17
282538	MW 6	water	2011-11-15	13:00	2011-11-17
282539	MW 39	water	2011-11-15	13:15	2011-11-17
282540	MW 37	water	2011-11-15	13:26	2011-11-17
282541	MW 23	water	2011-11-15	13:30	2011-11-17
282542	MW 12	water	2011-11-15	13:45	2011-11-17
282543	MW 34	water	2011-11-15	14:00	2011-11-17
282544	MW 38	water	2011-11-15	14:00	2011-11-17
282545	MW 24	water	2011-11-15	14:20	2011-11-17
282546	MW 40	water	2011-11-15	14:15	2011-11-17

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
282547	MW 15	water	2011-11-15	14:40	2011-11-17
282548	MW 36	water	2011-11-15	14:45	2011-11-17
282549	MW 35	water	2011-11-15	15:00	2011-11-17
282550	MW 16	water	2011-11-15	15:10	2011-11-17
282551	MW 17	water	2011-11-15	15:30	2011-11-17
282552	MW 10	water	2011-11-15	15:40	2011-11-17
282553	MW 9	water	2011-11-15	15:45	2011-11-17
282554	MW 26	water	2011-11-15	16:00	2011-11-17
282555	MW 29	water	2011-11-15	16:00	2011-11-17
282556	MW 28	water	2011-11-15	16:15	2011-11-17
282557	MW 32	water	2011-11-15	16:15	2011-11-17
282558	MW 14	water	2011-11-15	16:40	2011-11-17

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.

This report consists of a total of 27 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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

Report Contents

Case Narrative	5
Analytical Report	6
Sample 282529 (MW 13)	6
Sample 282530 (MW 2)	6
Sample 282531 (MW 21)	6
Sample 282532 (MW 3)	7
Sample 282533 (MW 30)	7
Sample 282534 (MW 31)	8
Sample 282535 (MW 19)	8
Sample 282536 (MW 18)	9
Sample 282537 (MW 33)	9
Sample 282538 (MW 6)	10
Sample 282539 (MW 39)	10
Sample 282540 (MW 37)	11
Sample 282541 (MW 23)	11
Sample 282542 (MW 12)	12
Sample 282543 (MW 34)	12
Sample 282544 (MW 38)	13
Sample 282545 (MW 24)	13
Sample 282546 (MW 40)	14
Sample 282547 (MW 15)	14
Sample 282548 (MW 36)	15
Sample 282549 (MW 35)	15
Sample 282550 (MW 16)	16
Sample 282551 (MW 17)	16
Sample 282552 (MW 10)	17
Sample 282553 (MW 9)	17
Sample 282554 (MW 26)	18
Sample 282555 (MW 29)	18
Sample 282556 (MW 28)	19
Sample 282557 (MW 32)	19
Sample 282558 (MW 14)	20
Method Blanks	21
QC Batch 86595 - Method Blank (1)	21
QC Batch 86596 - Method Blank (1)	21
Laboratory Control Spikes	22
QC Batch 86595 - LCS (1)	22
QC Batch 86596 - LCS (1)	22
QC Batch 86595 - MS (1)	23
QC Batch 86596 - MS (1)	23
Calibration Standards	25
QC Batch 86595 - CCV (1)	25

QC Batch 86595 - CCV (2)	25
QC Batch 86595 - CCV (3)	25
QC Batch 86596 - CCV (1)	25
QC Batch 86596 - CCV (2)	26
QC Batch 86596 - CCV (3)	26
Appendix	27
Report Definitions	27
Laboratory Certifications	27
Standard Flags	27
Attachments	27

Case Narrative

Samples for project SPS 11 were received by TraceAnalysis, Inc. on 2011-11-17 and assigned to work order 11111709. Samples for work order 11111709 were received intact without headspace and at a temperature of 6.1 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	73532	2011-11-19 at 11:00	86595	2011-11-19 at 16:33
BTEX	S 8021B	73532	2011-11-19 at 11:00	86596	2011-11-20 at 06:49

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 11111709 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: 282529 - MW 13

Laboratory: Midland
Analysis: BTEX
QC Batch: 86595
Prep Batch: 73532

Analytical Method: S 8021B
Date Analyzed: 2011-11-19
Sample Preparation: 2011-11-19

Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0797	mg/L	1	0.100	80	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	0.0658	mg/L	1	0.100	66	67.5 - 140.8

Sample: 282530 - MW 2

Laboratory: Midland
Analysis: BTEX
QC Batch: 86595
Prep Batch: 73532

Analytical Method: S 8021B
Date Analyzed: 2011-11-19
Sample Preparation: 2011-11-19

Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0833	mg/L	1	0.100	83	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0697	mg/L	1	0.100	70	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 7 of 27
North of Hobbs, Lea Co., NM

Sample: 282531 - MW 21

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0847	mg/L	1	0.100	85	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0732	mg/L	1	0.100	73	67.5 - 140.8

Sample: 282532 - MW 3

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0852	mg/L	1	0.100	85	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0702	mg/L	1	0.100	70	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 8 of 27
North of Hobbs, Lea Co., NM

Sample: 282533 - MW 30

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0819	mg/L	1	0.100	82	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0693	mg/L	1	0.100	69	67.5 - 140.8

Sample: 282534 - MW 31

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0849	mg/L	1	0.100	85	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0718	mg/L	1	0.100	72	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 9 of 27
North of Hobbs, Lea Co., NM

Sample: 282535 - MW 19

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0862	mg/L	1	0.100	86	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0800	mg/L	1	0.100	80	67.5 - 140.8

Sample: 282536 - MW 18

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0896	mg/L	1	0.100	90	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0858	mg/L	1	0.100	86	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 10 of 27
North of Hobbs, Lea Co., NM

Sample: 282537 - MW 33

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0856	mg/L	1	0.100	86	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0785	mg/L	1	0.100	78	67.5 - 140.8

Sample: 282538 - MW 6

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0868	mg/L	1	0.100	87	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0812	mg/L	1	0.100	81	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 11 of 27
North of Hobbs, Lea Co., NM

Sample: 282539 - MW 39

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0856	mg/L	1	0.100	86	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0768	mg/L	1	0.100	77	67.5 - 140.8

Sample: 282540 - MW 37

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0834	mg/L	1	0.100	83	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0757	mg/L	1	0.100	76	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 12 of 27
North of Hobbs, Lea Co., NM

Sample: 282541 - MW 23

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0857	mg/L	1	0.100	86	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0763	mg/L	1	0.100	76	67.5 - 140.8

Sample: 282542 - MW 12

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0847	mg/L	1	0.100	85	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0739	mg/L	1	0.100	74	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 13 of 27
North of Hobbs, Lea Co., NM

Sample: 282543 - MW 34

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0836	mg/L	1	0.100	84	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0778	mg/L	1	0.100	78	67.5 - 140.8

Sample: 282544 - MW 38

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0845	mg/L	1	0.100	84	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0771	mg/L	1	0.100	77	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 14 of 27
North of Hobbs, Lea Co., NM

Sample: 282545 - MW 24

Laboratory: Midland

Analysis: BTEX

QC Batch: 86595

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-19

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	<0.00100	mg/L	1	0.00100
Toluene		1	0.00180	mg/L	1	0.00100
Ethylbenzene		1	0.00240	mg/L	1	0.00100
Xylene		1	0.00330	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0866	mg/L	1	0.100	87	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0794	mg/L	1	0.100	79	67.5 - 140.8

Sample: 282546 - MW 40

Laboratory: Midland

Analysis: BTEX

QC Batch: 86596

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-20

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0853	mg/L	1	0.100	85	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0768	mg/L	1	0.100	77	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 15 of 27
North of Hobbs, Lea Co., NM

Sample: 282547 - MW 15

Laboratory: Midland

Analysis: BTEX

QC Batch: 86596

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-20

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0819	mg/L	1	0.100	82	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0692	mg/L	1	0.100	69	67.5 - 140.8

Sample: 282548 - MW 36

Laboratory: Midland

Analysis: BTEX

QC Batch: 86596

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-20

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

Parameter	Flag	Cert	RL		Units	Dilution	RL
			Result				
Benzene			1	0.00440	mg/L	1	0.00100
Toluene	u	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	u	U	1	<0.00100	mg/L	1	0.00100
Xylene	u	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0819	mg/L	1	0.100	82	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0785	mg/L	1	0.100	78	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 16 of 27
North of Hobbs, Lea Co., NM

Sample: 282549 - MW 35

Laboratory: Midland

Analysis: BTEX

QC Batch: 86596

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-20

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.169	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene		1	0.0620	mg/L	1	0.00100
Xylene		1	0.0185	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0824	mg/L	1	0.100	82	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0910	mg/L	1	0.100	91	67.5 - 140.8

Sample: 282550 - MW 16

Laboratory: Midland

Analysis: BTEX

QC Batch: 86596

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-20

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.00590	mg/L	1	0.00100
Toluene		1	0.00540	mg/L	1	0.00100
Ethylbenzene		1	<0.00100	mg/L	1	0.00100
Xylene		1	0.00260	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0843	mg/L	1	0.100	84	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0751	mg/L	1	0.100	75	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 17 of 27
North of Hobbs, Lea Co., NM

Sample: 282551 - MW 17

Laboratory: Midland

Analysis: BTEX

QC Batch: 86596

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-20

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

Parameter	Flag	Cert	RL		Units	Dilution	RL
			Result				
Benzene		1	0.0108		mg/L	1	0.00100
Toluene	u	U	<0.00100		mg/L	1	0.00100
Ethylbenzene	u	U	<0.00100		mg/L	1	0.00100
Xylene		1	0.00290		mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0850	mg/L	1	0.100	85	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0742	mg/L	1	0.100	74	67.5 - 140.8

Sample: 282552 - MW 10

Laboratory: Midland

Analysis: BTEX

QC Batch: 86596

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-20

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0844	mg/L	1	0.100	84	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.0731	mg/L	1	0.100	73	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 18 of 27
North of Hobbs, Lea Co., NM

Sample: 282553 - MW 9

Laboratory: Midland

Analysis: BTEX

QC Batch: 86596

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-20

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.924	mg/L	5	0.00100
Toluene	u	1	<0.00500	mg/L	5	0.00100
Ethylbenzene		1	0.0345	mg/L	5	0.00100
Xylene	u	1	<0.00500	mg/L	5	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.416	mg/L	5	0.500	83	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.401	mg/L	5	0.500	80	67.5 - 140.8

Sample: 282554 - MW 26

Laboratory: Midland

Analysis: BTEX

QC Batch: 86596

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-20

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.676	mg/L	5	0.00100
Toluene		1	0.240	mg/L	5	0.00100
Ethylbenzene		1	0.172	mg/L	5	0.00100
Xylene		1	0.0820	mg/L	5	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.412	mg/L	5	0.500	82	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.381	mg/L	5	0.500	76	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 19 of 27
North of Hobbs, Lea Co., NM

Sample: 282555 - MW 29

Laboratory: Midland

Analysis: BTEX

QC Batch: 86596

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-20

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.833	mg/L	10	0.00100
Toluene	u	U	<0.0100	mg/L	10	0.00100
Ethylbenzene		1	0.0435	mg/L	10	0.00100
Xylene	u	U	<0.0100	mg/L	10	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.850	mg/L	10	1.00	85	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.786	mg/L	10	1.00	79	67.5 - 140.8

Sample: 282556 - MW 28

Laboratory: Midland

Analysis: BTEX

QC Batch: 86596

Prep Batch: 73532

Analytical Method: S 8021B

Date Analyzed: 2011-11-20

Sample Preparation: 2011-11-19

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	0.886	mg/L	10	0.00100
Toluene	u	U	<0.0100	mg/L	10	0.00100
Ethylbenzene		1	0.116	mg/L	10	0.00100
Xylene	u	U	<0.0100	mg/L	10	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.809	mg/L	10	1.00	81	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.724	mg/L	10	1.00	72	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 20 of 27
North of Hobbs, Lea Co., NM

Sample: 282557 - MW 32

Laboratory: Midland
Analysis: BTEX
QC Batch: 86596
Prep Batch: 73532

Analytical Method: S 8021B
Date Analyzed: 2011-11-20
Sample Preparation: 2011-11-19

Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	1.84	mg/L	10	0.00100
Toluene		1	0.0424	mg/L	10	0.00100
Ethylbenzene		1	0.0816	mg/L	10	0.00100
Xylene		1	0.0368	mg/L	10	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.819	mg/L	10	1.00	82	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.743	mg/L	10	1.00	74	67.5 - 140.8

Sample: 282558 - MW 14

Laboratory: Midland
Analysis: BTEX
QC Batch: 86596
Prep Batch: 73532

Analytical Method: S 8021B
Date Analyzed: 2011-11-20
Sample Preparation: 2011-11-19

Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	4.28	mg/L	50	0.00100
Toluene	u	U	<0.0500	mg/L	50	0.00100
Ethylbenzene	u	U	<0.0500	mg/L	50	0.00100
Xylene	u	U	<0.0500	mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.17	mg/L	50	5.00	83	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			3.69	mg/L	50	5.00	74	67.5 - 140.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 21 of 27
North of Hobbs, Lea Co., NM

Method Blanks

Method Blank (1) QC Batch: 86595

QC Batch: 86595
Prep Batch: 73532

Date Analyzed: 2011-11-19
QC Preparation: 2011-11-19

Analyzed By: AG
Prepared By: AG

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000400	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000300	mg/L	0.001
Xylene		1	<0.000333	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0832	mg/L	1	0.100	83	61.1 - 118.4
4-Bromofluorobenzene (4-BFB)			0.0760	mg/L	1	0.100	76	45.9 - 126.4

Method Blank (1) QC Batch: 86596

QC Batch: 86596
Prep Batch: 73532

Date Analyzed: 2011-11-20
QC Preparation: 2011-11-19

Analyzed By: AG
Prepared By: AG

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000400	mg/L	0.001
Toluene		1	<0.000300	mg/L	0.001
Ethylbenzene		1	<0.000300	mg/L	0.001
Xylene		1	<0.000333	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0804	mg/L	1	0.100	80	61.1 - 118.4
4-Bromofluorobenzene (4-BFB)			0.0717	mg/L	1	0.100	72	45.9 - 126.4

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 86595
Prep Batch: 73532

Date Analyzed: 2011-11-19
QC Preparation: 2011-11-19

Analyzed By: AG
Prepared By: AG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.105	mg/L	1	0.100	<0.000400	105	76.8 - 120.3
Toluene		1	0.0986	mg/L	1	0.100	<0.000300	99	80.9 - 122.2
Ethylbenzene		1	0.0910	mg/L	1	0.100	<0.000300	91	72.7 - 120.2
Xylene		1	0.275	mg/L	1	0.300	<0.000333	92	72.1 - 121.5

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	0.105	mg/L	1	0.100	<0.000400	105	76.8 - 120.3	0	20
Toluene		1	0.0994	mg/L	1	0.100	<0.000300	99	80.9 - 122.2	1	20
Ethylbenzene		1	0.0910	mg/L	1	0.100	<0.000300	91	72.7 - 120.2	0	20
Xylene		1	0.276	mg/L	1	0.300	<0.000333	92	72.1 - 121.5	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)	0.0842	0.0842	mg/L	1	0.100	84	84	61.9 - 119.2
4-Bromofluorobenzene (4-BFB)	0.0849	0.0838	mg/L	1	0.100	85	84	56.4 - 127.9

Laboratory Control Spike (LCS-1)

QC Batch: 86596
Prep Batch: 73532

Date Analyzed: 2011-11-20
QC Preparation: 2011-11-19

Analyzed By: AG
Prepared By: AG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.103	mg/L	1	0.100	<0.000400	103	76.8 - 120.3
Toluene		1	0.0959	mg/L	1	0.100	<0.000300	96	80.9 - 122.2
Ethylbenzene		1	0.0902	mg/L	1	0.100	<0.000300	90	72.7 - 120.2
Xylene		1	0.270	mg/L	1	0.300	<0.000333	90	72.1 - 121.5

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

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 23 of 27
North of Hobbs, Lea Co., NM

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	<0.000400	104	76.8 - 120.3	1	20
Toluene		1	0.0968	mg/L	1	0.100	<0.000300	97	80.9 - 122.2	1	20
Ethylbenzene		1	0.0899	mg/L	1	0.100	<0.000300	90	72.7 - 120.2	0	20
Xylene		1	0.272	mg/L	1	0.300	<0.000333	91	72.1 - 121.5	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0792	0.0781	mg/L	1	0.100	79	78	61.9 - 119.2
4-Bromofluorobenzene (4-BFB)	0.0823	0.0830	mg/L	1	0.100	82	83	56.4 - 127.9

Matrix Spike (MS-1) Spiked Sample: 282545

QC Batch: 86595
Prep Batch: 73532

Date Analyzed: 2011-11-19
QC Preparation: 2011-11-19

Analyzed By: AG
Prepared By: AG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.108	mg/L	1	0.100	0.0006	107	66.9 - 128.2
Toluene		1	0.102	mg/L	1	0.100	0.0018	100	81.6 - 122.9
Ethylbenzene		1	0.0943	mg/L	1	0.100	0.0024	92	62.7 - 117.9
Xylene		1	0.279	mg/L	1	0.300	0.0041	92	62.9 - 118.2

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	0.109	mg/L	1	0.100	0.0006	108	66.9 - 128.2	1	20
Toluene		1	0.104	mg/L	1	0.100	0.0018	102	81.6 - 122.9	2	20
Ethylbenzene		1	0.0991	mg/L	1	0.100	0.0024	97	62.7 - 117.9	5	20
Xylene		1	0.293	mg/L	1	0.300	0.0041	96	62.9 - 118.2	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)	0.0840	0.0849	mg/L	1	0.1	84	85	58.6 - 119.7
4-Bromofluorobenzene (4-BFB)	0.0840	0.0844	mg/L	1	0.1	84	84	52.2 - 135.8

Report Date: November 21, 2011
TNM-SPS-11

Work Order: 11111709
SPS 11

Page Number: 24 of 27
North of Hobbs, Lea Co., NM

Matrix Spike (MS-1) Spiked Sample: 282636

QC Batch: 86596
Prep Batch: 73532

Date Analyzed: 2011-11-20
QC Preparation: 2011-11-19

Analyzed By: AG
Prepared By: AG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.41	mg/L	5	0.500	0.8786	106	66.9 - 128.2
Toluene		1	0.717	mg/L	5	0.500	0.2394	96	81.6 - 122.9
Ethylbenzene		1	0.443	mg/L	5	0.500	0.025	84	62.7 - 117.9
Xylene		1	1.42	mg/L	5	1.50	0.1508	85	62.9 - 118.2

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	1.44	mg/L	5	0.500	0.8786	112	66.9 - 128.2	2	20
Toluene		1	0.766	mg/L	5	0.500	0.2394	105	81.6 - 122.9	7	20
Ethylbenzene		1	0.494	mg/L	5	0.500	0.025	94	62.7 - 117.9	11	20
Xylene		1	1.56	mg/L	5	1.50	0.1508	94	62.9 - 118.2	9	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)	0.419	0.430	mg/L	5	0.5	84	86	58.6 - 119.7
4-Bromofluorobenzene (4-BFB)	0.406	0.409	mg/L	5	0.5	81	82	52.2 - 135.8

Calibration Standards

Standard (CCV-1)

QC Batch: 86595

Date Analyzed: 2011-11-19

Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.102	102	80 - 120	2011-11-19
Toluene		1	mg/L	0.100	0.0963	96	80 - 120	2011-11-19
Ethylbenzene		1	mg/L	0.100	0.0897	90	80 - 120	2011-11-19
Xylene		1	mg/L	0.300	0.272	91	80 - 120	2011-11-19

Standard (CCV-2)

QC Batch: 86595

Date Analyzed: 2011-11-19

Analyzed By: AG

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	2011-11-19
Toluene		1	mg/L	0.100	0.0953	95	80 - 120	2011-11-19
Ethylbenzene		1	mg/L	0.100	0.0871	87	80 - 120	2011-11-19
Xylene		1	mg/L	0.300	0.262	87	80 - 120	2011-11-19

Standard (CCV-3)

QC Batch: 86595

Date Analyzed: 2011-11-19

Analyzed By: AG

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	2011-11-19
Toluene		1	mg/L	0.100	0.0953	95	80 - 120	2011-11-19
Ethylbenzene		1	mg/L	0.100	0.0871	87	80 - 120	2011-11-19
Xylene		1	mg/L	0.300	0.262	87	80 - 120	2011-11-19

Standard (CCV-1)

QC Batch: 86596

Date Analyzed: 2011-11-20

Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.101	101	80 - 120	2011-11-20
Toluene		1	mg/L	0.100	0.0951	95	80 - 120	2011-11-20
Ethylbenzene		1	mg/L	0.100	0.0888	89	80 - 120	2011-11-20
Xylene		1	mg/L	0.300	0.267	89	80 - 120	2011-11-20

Standard (CCV-2)

QC Batch: 86596

Date Analyzed: 2011-11-20

Analyzed By: AG

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	2011-11-20
Toluene		1	mg/L	0.100	0.0985	98	80 - 120	2011-11-20
Ethylbenzene		1	mg/L	0.100	0.0906	91	80 - 120	2011-11-20
Xylene		1	mg/L	0.300	0.272	91	80 - 120	2011-11-20

Standard (CCV-3)

QC Batch: 86596

Date Analyzed: 2011-11-20

Analyzed By: AG

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	2011-11-20
Toluene		1	mg/L	0.100	0.0972	97	80 - 120	2011-11-20
Ethylbenzene		1	mg/L	0.100	0.0885	88	80 - 120	2011-11-20
Xylene		1	mg/L	0.300	0.269	90	80 - 120	2011-11-20

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	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 than 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.
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.

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
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Fax (432) 689-6313200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750Company Name: NOVA Safety & Environmental Phone #: 432-520-7720Address: (Street, City, Zip) 2057 Commerce Fax #:Contact Person: Ron Rounsaville E-mail:Invoice to:
(If different from above)Project #: Project Name: SPS-11Project Location (Including state): Livingston, NM Sampler Signature: [Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		MTBE 8021 / 602 / 8260 / 624 BTX 8021 / 602 / 8260 / 624 TPH 418.1 / TX1005	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, S, O ₄ , NO ₃ , NO ₂ , Alkalinity	Na, Ca, Mg, K, TDS, EC			Turn Around Time if different from standard	Hold																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Relinquished by: [Signature] Company: NOVA Date: 11/17 Time: 0900 Received by: [Signature] Company: TA Date: 11/17/11 Time: 9:30 INST 61 OBS 61 COR 61

Relinquished by: Company: Date: Time: Received by: Company: Date: Time: INST OBS COR

Relinquished by: Company: Date: Time: Received by: Company: Date: Time: INST OBS COR

LAB USE ONLYIntact Y / N
Headspace Y / NA
Log-in-Review Y / NAREMARKS: All tests Midland

- ☐
- 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.

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Carrier # Cargill

LAB Order ID # 1111709

Page 2 of 3

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
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1 (800) 378-12965002 Basin Street, Suite A1
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Fax (432) 689-6313200 East Sunset Rd., Suite E
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Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name:

MMLA

(Street, City, Zip)

2657 Commerce

Contact Person:

Ron Rounsaville

Invoice to:

(if different from above)

Project #:

Project Location (including state):

Livingston, TX

Phone #: 432-520-7726
Fax #: 432-520-7726
E-mail:
Project Name:
SPS-11
Sample Signature:

FIELD CODE

LAB USE ONLY

CONTAINERS
Volume / AmountWATER
SOIL
AIR
SLUDGEHCl
HNO₃
H₂SO₄
NaOH
ICE
NONEDATE
TIME

MTBE 8021 / 602 / 8260 / 624

TEX 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, FI, SO₄, NO₃, NO₂, Alkalinity

Na, Ca, Mg, K, TDS, EC

Turn Around Time if different from standard

Hold

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB #	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX	PRESERVATIVE METHOD	SAMPLING	DATE	TIME	MTBE 8021 / 602 / 8260 / 624	TEX 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, FI, SO ₄ , NO ₃ , NO ₂ , Alkalinity	Na, Ca, Mg, K, TDS, EC	
539	MW39	3	Vol	X		X	11/15	1315																				
540	MW37							1326																				
541	MW23							1330																				
542	MW12							1345																				
543	MW34							1400																				
544	MW38							1400																				
545	MW24							1420																				
546	MW40							1445																				
547	MW15							1440																				
548	MW36							1445																				
549	MW35							1500																				

LAB USE ONLY

REMARKS:

Relinquished by: Company: Date: Time: 11/17 0900

Received by: Company: Date: Time: 11/17 9:30

Relinquished by: Company: Date: Time:

Received by: Company: Date: Time:

Relinquished by: Company: Date: Time:

Received by: Company: Date: Time:

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Carrier #

Log-In/Review

Dry Weight Basis Required

TRRP Report Required

Check if Special Reporting Limits Are Needed

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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Lubbock, Texas 79424
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2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name:

NOVA

Phone #:

432-520-7720

Address: (Street, City, Zip)

Fax #:

Contact Person:

Ken Rounsaville

E-mail:

Invoice to:

(If different from above)

Project #:

Project Name:

Project Location (including state):

Lovington, NM

Sampler Signature:

[Signature]

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		MTBE 8021 / 602 PTX 8021 / 602 / 8260 / 624 TPH 8015 GRO / DRO / TVHC 8015 / 1 TX1005	PAH 8270 / 625	Total Metals Ag As Ba C	TCLP Metals Ag As	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCBs 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, S04, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold		
				WATER	SOIL	AIR	SLUDGE	HCl	HNO3	H2SO4	NaOH	ICE	NONE	DATE	TIME																				
2550 MW16		3	VOL	X				X					X		11/15	1516																			
551 MW17																1530																			
550 MW10																1540																			
553 MW19																1545																			
554 MW26																1600																			
555 MW29																1600																			
556 MW28																1615																			
557 MW32																1615																			
558 MW14																1640																			

Relinquished by:

Company:

NOVA

Date:

11/17

Time:

0900

Received by:

[Signature]

Company:

T/A

Date:

11/17/11

Time:

9:30

INST

OBS

COR

Relinquished by:

Company:

Date:

Time:

Received by:

[Signature]

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INST

OBS

COR

Relinquished by:

Company:

Date:

Time:

Received by:

[Signature]

Company:

Date:

Time:

INST

OBS

COR

LAB USE

ONLY

Intact

Headspace

Y/N/NA

Log-In-Review

REMARKS:

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

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5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ron Rounsaville
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: January 5, 2012

Work Order: 11122010

Project Location: North of Hobbs, Lea Co., NM
Project Name: SPS 11
Project Number: TNM-SPS-11

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
284926	MW-14	water	2011-12-16	16:15	2011-12-19

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.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

Report Contents

Case Narrative	3
Analytical Report	4
Sample 284926 (MW-14)	4
Method Blanks	5
QC Batch 87624 - Method Blank (1)	5
Laboratory Control Spikes	6
QC Batch 87624 - LCS (1)	6
Calibration Standards	8
QC Batch 87624 - CCV (2)	8
QC Batch 87624 - CCV (3)	8
Appendix	10
Report Definitions	10
Laboratory Certifications	10
Standard Flags	10
Attachments	10

Case Narrative

Samples for project SPS 11 were received by TraceAnalysis, Inc. on 2011-12-19 and assigned to work order 11122010. Samples for work order 11122010 were received intact at a temperature of 10.8 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
PAH	S 8270D	74399	2012-12-22 at 15:00	87624	2012-01-05 at 11:26

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 11122010 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: 284926 - MW-14

Laboratory: Lubbock
Analysis: PAH
QC Batch: 87624
Prep Batch: 74399

Analytical Method: S 8270D
Date Analyzed: 2012-01-05
Sample Preparation: 2012-12-22

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene		1	0.0355	mg/L	0.917	0.000200
2-Methylnaphthalene		1	0.0224	mg/L	0.917	0.000200
1-Methylnaphthalene			0.0256	mg/L	0.917	0.000200
Acenaphthylene		1	<0.000183	mg/L	0.917	0.000200
Acenaphthene	u	1	<0.000183	mg/L	0.917	0.000200
Dibenzofuran		1	0.00178	mg/L	0.917	0.000200
Fluorene		1	0.00106	mg/L	0.917	0.000200
Anthracene	u	1	<0.000183	mg/L	0.917	0.000200
Phenanthrene			0.000973	mg/L	0.917	0.000200
Fluoranthene	u		<0.000183	mg/L	0.917	0.000200
Pyrene	u	1	<0.000183	mg/L	0.917	0.000200
Benzo(a)anthracene	u		<0.000183	mg/L	0.917	0.000200
Chrysene	u	1	<0.000183	mg/L	0.917	0.000200
Benzo(b)fluoranthene	u		<0.000183	mg/L	0.917	0.000200
Benzo(k)fluoranthene	Qr,u	1	<0.000183	mg/L	0.917	0.000200
Benzo(a)pyrene	u	1	<0.000183	mg/L	0.917	0.000200
Indeno(1,2,3-cd)pyrene	u	1	<0.000183	mg/L	0.917	0.000200
Dibenzo(a,h)anthracene	u	1	<0.000183	mg/L	0.917	0.000200
Benzo(g,h,i)perylene	u		<0.000183	mg/L	0.917	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0538	mg/L	0.917	0.0800	67	10 - 117
2-Fluorobiphenyl			0.0592	mg/L	0.917	0.0800	74	10 - 99
Terphenyl-d14			0.0637	mg/L	0.917	0.0800	80	22.6 - 115

Method Blanks

Method Blank (1) QC Batch: 87624

QC Batch: 87624
Prep Batch: 74399

Date Analyzed: 2012-01-05
QC Preparation: 2012-12-22

Analyzed By: MN
Prepared By: MN

Parameter	Flag	Cert	MDL Result	Units	RL
Naphthalene		1	<0.0000904	mg/L	0.0002
2-Methylnaphthalene		1	<0.000184	mg/L	0.0002
1-Methylnaphthalene			<0.000120	mg/L	0.0002
Acenaphthylene		1	<0.000101	mg/L	0.0002
Acenaphthene		1	<0.000122	mg/L	0.0002
Dibenzofuran		1	<0.000119	mg/L	0.0002
Fluorene		1	<0.000198	mg/L	0.0002
Anthracene		1	<0.000190	mg/L	0.0002
Phenanthrene			<0.000190	mg/L	0.0002
Fluoranthene			<0.000122	mg/L	0.0002
Pyrene		1	<0.000142	mg/L	0.0002
Benzo(a)anthracene			<0.000138	mg/L	0.0002
Chrysene		1	<0.000155	mg/L	0.0002
Benzo(b)fluoranthene			<0.000179	mg/L	0.0002
Benzo(k)fluoranthene		1	<0.000185	mg/L	0.0002
Benzo(a)pyrene		1	<0.000169	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		1	<0.000139	mg/L	0.0002
Dibenzo(a,h)anthracene		1	<0.000107	mg/L	0.0002
Benzo(g,h,i)perylene			<0.000143	mg/L	0.0002

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0369	mg/L	1	0.0800	46	10 - 117
2-Fluorobiphenyl			0.0323	mg/L	1	0.0800	40	10 - 99
Terphenyl-d14			0.0357	mg/L	1	0.0800	45	22.6 - 115

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 87624
Prep Batch: 74399

Date Analyzed: 2012-01-05
QC Preparation: 2012-12-22

Analyzed By: MN
Prepared By: MN

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene		1	0.0281	mg/L	1	0.0800	<0.0000904	35	10 - 89.9
2-Methylnaphthalene		1	0.0325	mg/L	1	0.0800	<0.000184	41	13.8 - 98.4
1-Methylnaphthalene			0.0312	mg/L	1	0.0800	<0.000120	39	13.1 - 103
Acenaphthylene		1	0.0370	mg/L	1	0.0800	<0.000101	46	20 - 104
Acenaphthene		1	0.0357	mg/L	1	0.0800	<0.000122	45	21.6 - 94.6
Dibenzofuran		1	0.0392	mg/L	1	0.0800	<0.000119	49	22.9 - 74.9
Fluorene		1	0.0396	mg/L	1	0.0800	<0.000198	50	30.8 - 109
Anthracene		1	0.0426	mg/L	1	0.0800	<0.000190	53	37.6 - 96.4
Phenanthrene			0.0430	mg/L	1	0.0800	<0.000190	54	42.4 - 99.8
Fluoranthene			0.0469	mg/L	1	0.0800	<0.000122	59	48 - 118
Pyrene		1	0.0457	mg/L	1	0.0800	<0.000142	57	45.3 - 109
Benzo(a)anthracene			0.0548	mg/L	1	0.0800	<0.000138	68	48 - 113
Chrysene		1	0.0619	mg/L	1	0.0800	<0.000155	77	35.2 - 175
Benzo(b)fluoranthene			0.0384	mg/L	1	0.0800	<0.000179	48	16.6 - 106
Benzo(k)fluoranthene		1	0.0367	mg/L	1	0.0800	<0.000185	46	36.8 - 99.4
Benzo(a)pyrene		1	0.0384	mg/L	1	0.0800	<0.000169	48	32.3 - 99.7
Indeno(1,2,3-cd)pyrene		1	0.0420	mg/L	1	0.0800	<0.000139	52	34.1 - 106
Dibenzo(a,h)anthracene		1	0.0559	mg/L	1	0.0800	<0.000107	70	47.1 - 103
Benzo(g,h,i)perylene			0.0407	mg/L	1	0.0800	<0.000143	51	21.9 - 112

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		1	0.0317	mg/L	1	0.0800	<0.0000904	40	10 - 89.9	12	20
2-Methylnaphthalene		1	0.0374	mg/L	1	0.0800	<0.000184	47	13.8 - 98.4	14	20
1-Methylnaphthalene			0.0358	mg/L	1	0.0800	<0.000120	45	13.1 - 103	14	20
Acenaphthylene		1	0.0410	mg/L	1	0.0800	<0.000101	51	20 - 104	10	20
Acenaphthene		1	0.0398	mg/L	1	0.0800	<0.000122	50	21.6 - 94.6	11	20
Dibenzofuran		1	0.0434	mg/L	1	0.0800	<0.000119	54	22.9 - 74.9	10	20
Fluorene		1	0.0426	mg/L	1	0.0800	<0.000198	53	30.8 - 109	7	20
Anthracene		1	0.0475	mg/L	1	0.0800	<0.000190	59	37.6 - 96.4	11	20
Phenanthrene			0.0484	mg/L	1	0.0800	<0.000190	60	42.4 - 99.8	12	20
Fluoranthene			0.0516	mg/L	1	0.0800	<0.000122	64	48 - 118	10	20
Pyrene		1	0.0488	mg/L	1	0.0800	<0.000142	61	45.3 - 109	7	20

continued ...

control spikes continued ...

Param	F	C	LCSD			Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit	
			Result	Units	Dil.							
Benzo(a)anthracene			0.0608	mg/L	1	0.0800	<0.000138	76	48 - 113	10	20	
Chrysene		1	0.0687	mg/L	1	0.0800	<0.000155	86	35.2 - 175	10	20	
Benzo(b)fluoranthene			0.0390	mg/L	1	0.0800	<0.000179	49	16.6 - 106	2	20	
Benzo(k)fluoranthene	Qr	Qr	1	0.0458	mg/L	1	0.0800	<0.000185	57	36.8 - 99.4	22	20
Benzo(a)pyrene		1	0.0434	mg/L	1	0.0800	<0.000169	54	32.3 - 99.7	12	20	
Indeno(1,2,3-cd)pyrene		1	0.0470	mg/L	1	0.0800	<0.000139	59	34.1 - 106	11	20	
Dibenzo(a,h)anthracene		1	0.0627	mg/L	1	0.0800	<0.000107	78	47.1 - 103	12	20	
Benzo(g,h,i)perylene			0.0454	mg/L	1	0.0800	<0.000143	57	21.9 - 112	11	20	

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Nitrobenzene-d5	0.0368	0.0403	mg/L	1	0.0800	46	50	10 - 117
2-Fluorobiphenyl	0.0358	0.0402	mg/L	1	0.0800	45	50	10 - 99
Terphenyl-d14	0.0525	0.0562	mg/L	1	0.0800	66	70	22.6 - 115

Calibration Standards

Standard (CCV-2)

QC Batch: 87624

Date Analyzed: 2012-01-05

Analyzed By: MN

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		1	mg/L	60.0	55.0	92	80 - 120	2012-01-05
2-Methylnaphthalene		1	mg/L	60.0	55.2	92	80 - 120	2012-01-05
1-Methylnaphthalene			mg/L	60.0	56.0	93	80 - 120	2012-01-05
Acenaphthylene		1	mg/L	60.0	55.0	92	80 - 120	2012-01-05
Acenaphthene		1	mg/L	60.0	55.4	92	80 - 120	2012-01-05
Dibenzofuran		1	mg/L	60.0	53.6	89	80 - 120	2012-01-05
Fluorene		1	mg/L	60.0	51.1	85	80 - 120	2012-01-05
Anthracene		1	mg/L	60.0	53.2	89	80 - 120	2012-01-05
Phenanthrene			mg/L	60.0	53.7	90	80 - 120	2012-01-05
Fluoranthene			mg/L	60.0	60.8	101	80 - 120	2012-01-05
Pyrene		1	mg/L	60.0	51.8	86	80 - 120	2012-01-05
Benzo(a)anthracene			mg/L	60.0	58.8	98	80 - 120	2012-01-05
Chrysene		1	mg/L	60.0	55.0	92	80 - 120	2012-01-05
Benzo(b)fluoranthene			mg/L	60.0	49.6	83	80 - 120	2012-01-05
Benzo(k)fluoranthene		1	mg/L	60.0	51.8	86	80 - 120	2012-01-05
Benzo(a)pyrene		1	mg/L	60.0	52.8	88	80 - 120	2012-01-05
Indeno(1,2,3-cd)pyrene		1	mg/L	60.0	52.9	88	80 - 120	2012-01-05
Dibenzo(a,h)anthracene		1	mg/L	60.0	53.1	88	80 - 120	2012-01-05
Benzo(g,h,i)perylene			mg/L	60.0	53.0	88	80 - 120	2012-01-05

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			55.7	mg/L	1	60.0	93	-
2-Fluorobiphenyl			57.9	mg/L	1	60.0	96	-
Terphenyl-d14			52.4	mg/L	1	60.0	87	-

Standard (CCV-3)

QC Batch: 87624

Date Analyzed: 2012-01-05

Analyzed By: MN

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		1	mg/L	60.0	55.9	93	80 - 120	2012-01-05

continued ...

standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
2-Methylnaphthalene		1	mg/L	60.0	55.4	92	80 - 120	2012-01-05
1-Methylnaphthalene			mg/L	60.0	55.7	93	80 - 120	2012-01-05
Acenaphthylene		1	mg/L	60.0	55.5	92	80 - 120	2012-01-05
Acenaphthene		1	mg/L	60.0	56.2	94	80 - 120	2012-01-05
Dibenzofuran		1	mg/L	60.0	54.2	90	80 - 120	2012-01-05
Fluorene		1	mg/L	60.0	52.7	88	80 - 120	2012-01-05
Anthracene		1	mg/L	60.0	53.3	89	80 - 120	2012-01-05
Phenanthrene			mg/L	60.0	54.0	90	80 - 120	2012-01-05
Fluoranthene			mg/L	60.0	59.4	99	80 - 120	2012-01-05
Pyrene		1	mg/L	60.0	55.2	92	80 - 120	2012-01-05
Benzo(a)anthracene			mg/L	60.0	58.8	98	80 - 120	2012-01-05
Chrysene		1	mg/L	60.0	56.0	93	80 - 120	2012-01-05
Benzo(b)fluoranthene			mg/L	60.0	48.6	81	80 - 120	2012-01-05
Benzo(k)fluoranthene		1	mg/L	60.0	52.6	88	80 - 120	2012-01-05
Benzo(a)pyrene		1	mg/L	60.0	50.7	84	80 - 120	2012-01-05
Indeno(1,2,3-cd)pyrene		1	mg/L	60.0	53.3	89	80 - 120	2012-01-05
Dibenzo(a,h)anthracene		1	mg/L	60.0	53.8	90	80 - 120	2012-01-05
Benzo(g,h,i)perylene			mg/L	60.0	52.7	88	80 - 120	2012-01-05

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			55.8	mg/L	1	60.0	93	-
2-Fluorobiphenyl			57.5	mg/L	1	60.0	96	-
Terphenyl-d14			55.7	mg/L	1	60.0	93	-

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	T104704219-11-5	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 than 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.
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.

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

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Tel (432) 689-6301
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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:	Nova	Phone #:	(432) 520 - 7720
Address:	(Street, City, Zip) 2057 Commerce Midland TX 79703	Fax #:	
Contact Person:	Pat Rounsaville	E-mail:	
Invoice to:			
(If different from above)			
Project #:		Project Name:	SPS-11
Project Location (including state):	New Mexico	Sampler Signature:	<i>[Signature]</i>

ANALYSIS REQUEST
(Circle or Specify Method No.)

[illegible]

Relinquished by: Ryan Higgins	Company: N/A	Date: 12-19-11	Time: 8:32 am	Received by: <i>[Signature]</i>	Company: TA	Date: 12/19/11	Time: 8:33	INST OBS 10.8 COR	LAB USE ONLY Intact ☒ Y ☐ N Headspace ☐ Y ☒ N ☐ NA ☐ Dry Weight Basis Required ☐ TRRP Report Required ☐ Check If Special Reporting Limits are Needed	REMARKS: All tests Labeled
Relinquished by: <i>[Signature]</i>	Company: TA	Date: 12/19/11	Time: 9:09	Received by:	Company:	Date:	Time:	INST OBS COR		
Relinquished by:	Company:	Date:	Time:	Received by: Brendan Ward	Company: Tracer	Date: 12/20/11	Time: 9:20	INST OBS 3.1 COR 32		

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

Carrier # Carry on LS ZN174141

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