

GW - 294

MONITORING REPORTS

DATE:

2009



**2009
ANNUAL MONITORING REPORT**

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MAR 25 2010
Environmental Bureau
Oil Conservation Division

TNM 97-04
SE ¼ SE ¼ of SECTION 11, TOWNSHIP 16 SOUTH, RANGE 35 EAST
LEA COUNTY, NEW MEXICO
PLAINS SRS NUMBER: TNM 97-04
NMOCD Reference GW-0294

PREPARED FOR:

PLAINS MARKETING, L.P.
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HOUSTON, TEXAS 77002

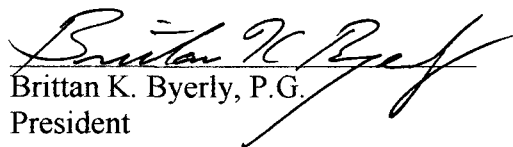


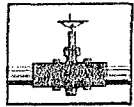
PREPARED BY:

NOVA Safety and Environmental
2057 Commerce
Midland, Texas 79703

March 2010


Ronald K. Rounsaville
Senior Project Manager


Brittan K. Byerly, P.G.
President



PLAINS
ALL AMERICAN

March 22, 2010

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

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Oil Conservation Division

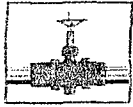
Re: Plains All American – 2009 Annual Monitoring Reports
12 Sites in Lea County, New Mexico

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
Darr Angell #1	AP-007	Section 11, Township 15 South, Range 37 East, Lea County
Darr Angell #2	AP-007	Section 11, Township 15 South, Range 37 East, Lea County Section 14, Township 15 South, Range 37 East, Lea County
Darr Angell #4	AP-007	Section 11, Township 15 South, Range 37 East, Lea County Section 02, Township 15 South, Range 37 East, Lea County
Denton Station	1R-0234	Section 14, Township 15 South, Range 37 East, Lea County
HDO-90-23	AP-009	Section 06, Township 20 South, Range 37 East, Lea County
SPS-11	GW-0140	Section 18, Township 18 South, Range 36 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

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

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MAR 25 2000
Environmental Bureau
Oil Conservation Division

CC: Larry Johnson, NMOCD, Hobbs, NM

Enclosures

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Figure 3A – Groundwater Concentration and Inferred PSH Extent Map – February 19, 2009

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APPENDICES

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

ENCLOSED ON DATA DISK

2009 Annual Monitoring Report

2009 Tables 1, 2 and 3 – Groundwater Elevation, BTEX, TPH and PAH Concentration Data

2009 Figures 1, 2A-2D, and 3A-3D

Electronic Copies of Laboratory Reports

Historic Table 1 and 2 – Groundwater Elevation and BTEX, TPH, 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 97-04 Release Site (the site), which was formerly the responsibility of Texas New Mexico Pipeline Company (TNM), 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 2009 only. However, historic data tables as well as 2009 laboratory analytical reports are provided on the enclosed data disk. A Site Location Map is provided as Figure 1.

Groundwater monitoring was conducted during each quarter of 2009 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. Monitor wells containing a thickness of PSH greater than 0.01 foot were sampled as per a NMOCD directive.

SITE DESCRIPTION AND BACKGROUND INFORMATION

The site is located in the SE 1/4 of the SE 1/4 of Section 11, Township 16 South, Range 35 East in Lea County, New Mexico. Initial site investigation activities were performed for TNM by other environmental consultants. No other specifics concerning the release are currently available. The Release Notification and Corrective Action Form (C-141) is provided as Appendix A.

There are currently fifteen monitor wells (MW-2 through MW-7, and MW-9 through MW-16 and MW-18) and one recovery well (RW-1), on site. In October 2009, an *Enhanced Recovery System Workplan* was submitted and subsequently approved by the NMOCD. The automated system started during the 1st quarter of 2010. Manual PSH recovery is currently being performed on a weekly basis at the site.

FIELD ACTIVITIES

Product Recovery Efforts

A measurable thickness of PSH was present in five of six monitor wells (MW-2, MW-3, MW-5, MW-6, and MW-9) and the recovery well (RW-1) during each quarter of the reporting period. Monitor well MW-4 exhibited measurable PSH during the first three quarters of the reporting period. The average thickness of PSH in monitor wells and recovery wells exhibiting PSH was 0.76 feet. The maximum thickness of PSH in monitor wells and recovery wells was 2.18 feet as recorded in monitor well MW-5 on September 14, 2009. PSH data for the 2009 gauging events can be found in Table 1. Approximately 116 gallons (approximately 2.8 barrels) of PSH was

recovered from the site during the 2009 reporting period. A total of approximately 7,449 gallons (approximately 178 barrels) of PSH have been recovered since project inception.

Groundwater Monitoring

Quarterly monitoring events for the reporting period were performed according to the following reduced sampling schedule, which was approved by the NMOCD in correspondence dated April 28, 2004 and amended in correspondences dated June 22, 2005 and May 5, 2006.

NMOCD Approved Sampling Schedule					
MW-1	Plugged & Abandoned	MW-7	Annual	MW-13	Quarterly
MW-2	Quarterly	MW-8	Plugged & Abandoned	MW-14	Quarterly
MW-3	Quarterly	MW-9	Quarterly	MW-15	Quarterly
MW-4	Quarterly	MW-10	Annual	MW-16	Semi-Annual
MW-5	Quarterly	MW-11	Annual	MW-17	Plugged & Abandoned
MW-6	Quarterly	MW-12	Annual	RW-1	Quarterly

The site monitor wells were gauged and sampled on February 19, May 20, August 12, and November 25, 2009. 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 each quarterly sampling event of 2009, are depicted on the Inferred Groundwater Gradient Maps, Figures 2A-2D. Groundwater elevation data for 2009 is provided as Table 1. Historic groundwater elevation data beginning at project inception is provided on the enclosed data disk.

The most recent Inferred Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.003 feet/foot to the southeast as measured between monitor well MW-10 and MW-13. This is consistent with data presented on Figures 2A through 2C from earlier in the year. The corrected groundwater elevations ranged between 3,921.53 and 3,923.45 feet above mean sea level, in monitor well MW-5 on March 16, 2009 and in recovery well RW-1 on January 14, 2009, respectively.

LABORATORY RESULTS

Monitor wells MW-2 through MW-6, MW-9 and recovery well RW-1 contained PSH and were not sampled during 1st, 2nd and 3rd quarters of the reporting period. Plains, at the request of the NMOCD, collected groundwater samples below PSH levels in all monitor wells containing PSH during the 4th quarter sampling event.

Groundwater samples obtained during the quarterly sampling events of 2009 were delivered to TraceAnalysis, Inc. in Midland, Texas for determination of Benzene, Toluene, Ethylbenzene and

Xylene (BTEX) constituent concentrations by EPA Method 8021B, and Polynuclear Aromatic Hydrocarbons (PAH) concentrations by EPA Method 8270C. Monitoring wells containing measurable amounts of PSH were analyzed for Total Petroleum Hydrocarbons (TPH) concentrations by EPA Method 8015M. A listing of BTEX and TPH constituent concentrations for 2009 are summarized in Table 2 and the PAH constituent concentrations for 2009 are summarized in Table 3. Copies of the laboratory reports generated for 2009 are provided on the enclosed data disk. The quarterly groundwater sample results for BTEX constituent concentrations are depicted on Figures 3A through 3D.

Monitor well MW-2 is monitored on a quarterly schedule. Monitor well MW-2 was not sampled during the 1st, 2nd and 3rd quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 1.21 feet, 1.06 feet and 0.98 feet were reported during the 1st, 2nd and 3rd quarters of 2009, respectively. Benzene concentrations were above the NMOCD regulatory standard during the 4th quarter of the reporting period with a concentration of 12.00 mg/L. Toluene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 6.380 mg/L. Ethylbenzene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 0.834 mg/L. Xylene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 2.940 mg/L. Analytical results indicated a total TPH result of 136.1 mg/L. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above WQCC Drinking Water Standards for naphthalene (0.207 mg/L), 1-methylnaphthalene (0.274 mg/L) and 2-methylnaphthalene (0.337 mg/L). Additional PAH constituents detected above MDLs include fluorene (0.0276 mg/L), phenanthrene (0.0378 mg/L) and dibenzofuran (0.0267 mg/L), which are below WQCC standards.

Monitor well MW-3 is monitored on a quarterly schedule. Monitor well MW-3 was not sampled during the 1st, 2nd and 3rd quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 1.15 feet, 1.09 feet and 1.06 feet were reported during the 1st, 2nd and 3rd quarters of 2009, respectively. Benzene concentrations were above the NMOCD regulatory standard during the 4th quarter of the reporting period with a concentration of 16.80 mg/L. Toluene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 17.20 mg/L. Ethylbenzene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 4.690 mg/L. Xylene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 14.20 mg/L. Analytical results indicated a total TPH result of 2,028 mg/L. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above WQCC Drinking Water Standards for naphthalene (3.87 mg/L), 1-methylnaphthalene (7.02 mg/L) and 2-methylnaphthalene (8.74 mg/L). Additional PAH constituents detected above MDLs include fluorene (0.788 mg/L), phenanthrene (1.06 mg/L) and dibenzofuran (0.626 mg/L), which are below WQCC standards.

Monitor well MW-4 is monitored on a quarterly schedule. Monitor well MW-4 was not sampled during the 1st, 2nd and 3rd quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 0.29 feet, 0.12 feet and 0.14 feet were reported during the 1st, 2nd and 3rd quarters of 2009, respectively. Benzene concentrations were above the NMOCD regulatory standard during the 4th quarter of the reporting period with a concentration of 2.000 mg/L. Toluene

concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 1.060 mg/L. Ethylbenzene concentrations were below NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 0.618 mg/L. Xylene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 1.340 mg/L. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above WQCC Drinking Water Standards for naphthalene (0.103 mg/L), 1-methylnaphthalene (0.118 mg/L) and 2-methylnaphthalene (0.089 mg/L). Additional PAH constituents detected above MDLs include fluorene (0.0143 mg/L), phenanthrene (0.0181 mg/L) and dibenzofuran (0.0123 mg/L), which are below WQCC standards.

Monitor well MW-5 is monitored on a quarterly schedule. Monitor well MW-5 was not sampled during the 1st, 2nd and 3rd quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 0.37 feet, 1.33 feet and 1.36 feet were reported during the 1st, 2nd and 3rd quarters of 2009, respectively. Benzene concentrations were above the NMOCD regulatory standard during the 4th quarter of the reporting period with a concentration of 15.60 mg/L. Toluene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 5.70 mg/L. Ethylbenzene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 1.080 mg/L. Xylene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 2.290 mg/L. Analytical results indicated a total TPH result of 84.3 mg/L. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above WQCC Drinking Water Standards for naphthalene (0.0905 mg/L), 1-methylnaphthalene (0.0931 mg/L) and 2-methylnaphthalene (0.107 mg/L). Additional PAH constituents detected above MDLs include fluorene (0.00909 mg/L), phenanthrene (0.0104 mg/L) and dibenzofuran (0.00848 mg/L), which are below WQCC standards.

Monitor well MW-6 is monitored on a quarterly schedule. Monitor well MW-6 was not sampled during the 1st, 2nd and 3rd quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 0.55 feet, 0.63 feet and 0.38 feet were reported during the 1st, 2nd and 3rd quarters of 2009, respectively. Benzene concentrations were above the NMOCD regulatory standard during the 4th quarter of the reporting period with a concentration of 19.80 mg/L. Toluene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 5.060 mg/L. Ethylbenzene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 1.010 mg/L. Xylene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 2.330 mg/L. Analytical results indicated a total TPH result of 212.2 mg/L. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above WQCC Drinking Water Standards for naphthalene (0.294 mg/L), 1-methylnaphthalene (0.498 mg/L) and 2-methylnaphthalene (0.569 mg/L). Additional PAH constituents detected above MDLs include fluorene (0.0528 mg/L), phenanthrene (0.0648 mg/L) and dibenzofuran (0.0467 mg/L), which are below WQCC standards.

Monitor well MW-7 is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards 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 twenty-five consecutive quarters. PAH analysis during the 4th quarter sampling event indicated no elevated concentrations were detected above the respective MDLs.

Monitor well MW-9 is monitored on a quarterly schedule. Monitor well MW-9 was not sampled during the 1st, 2nd and 3rd quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 0.38 feet, 0.37 feet and 0.29 feet were reported during the 1st, 2nd and 3rd quarters of 2009, respectively. Benzene concentrations were above the NMOCD regulatory standard during the 4th quarter of the reporting period with a concentration of 2.090 mg/L. Toluene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 2.470 mg/L. Ethylbenzene concentrations were below NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 0.503 mg/L. Xylene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 1.600 mg/L. Analytical results indicated a total TPH result of 90.30 mg/L. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above WQCC Drinking Water Standards for naphthalene (0.125 mg/L), 1-methylnaphthalene (0.221 mg/L) and 2-methylnaphthalene (0.253 mg/L). Additional PAH constituents detected above MDLs include fluorene (0.0250 mg/L), phenanthrene (0.0315 mg/L) and dibenzofuran (0.0201 mg/L), which are below WQCC standards.

Monitor well MW-10 is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below MDL and NMOCD regulatory standards for each BTEX constituent during the 4th quarter sampling event. PAH analysis during the 4th quarter sampling event indicated no elevated concentrations were detected above the respective MDLs.

Monitor well MW-11 is sampled on an annual schedule and analytical results indicate BTEX constituent concentrations were below MDL and NMOCD regulatory standards for each BTEX constituent during the 4th quarter sampling event. PAH analysis during the 4th quarter sampling event indicated no elevated concentrations were detected above the respective MDLs.

Monitor well MW-12 is sampled on an annual schedule and was inadvertently also sampled during the 1st quarter of 2009. Analytical results indicate BTEX constituent concentrations were below MDL and NMOCD regulatory standards for each BTEX constituent during the 1st and 4th quarter sampling events. PAH analysis during the 4th quarter sampling event indicated no elevated concentrations were detected above the respective MDLs.

Monitor well MW-13 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.548 mg/L in the 1st quarter to 1.470 mg/L during the 3rd quarter of the reporting period. Benzene concentrations were above the NMOCD regulatory standard during all four quarters of the reporting period. Toluene concentrations were below MDL and NMOCD regulatory standards during all four quarters of the reporting period. Ethylbenzene concentrations ranged from <0.005 mg/L during the 1st and 4th quarters to 0.072 mg/L during the 2nd quarter of the reporting period. Ethylbenzene concentrations were below the NMOCD regulatory standard during all four quarters of the reporting period. Xylene concentrations ranged from <0.005 mg/L during the 4th quarter to 0.1920 mg/L during the 2nd quarter of the reporting period. Xylene concentrations were below the NMOCD regulatory standard during all

four quarters of the reporting period. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above MDLs for dibenzofuran (0.000638 mg/L), which are below WQCC standards.

Monitor well MW-14 is sampled on a quarterly schedule and was inadvertently not sampled during the 1st quarter of 2009. Analytical results indicate benzene concentrations ranged from 0.0181 mg/L during the 4th quarter to 0.0456 mg/L during the 2nd quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during the 2nd, 3rd and 4th quarters of the reporting period. Toluene concentrations ranged from <0.001 mg/L during the 3rd and 4th quarters to 0.0053 mg/L during the 2nd quarter of 2009. Toluene concentrations were below the NMOCD regulatory standard during 2nd, 3rd and 4th quarters of the reporting period. Ethylbenzene concentrations ranged from 0.0102 mg/L during the 4th quarter to 0.1570 mg/L during the 3rd quarter of 2009. Ethylbenzene concentrations were below the NMOCD regulatory standard during 2nd, 3rd and 4th quarters of the reporting period. Xylene concentrations ranged from 0.167 mg/L during the 4th quarter to 0.669 mg/L during the 3rd quarter of 2009. Xylene concentrations were below the NMOCD regulatory standard during 2nd, 3rd and 4th quarters of the reporting period. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above MDLs for naphthalene (0.00605 mg/L), 1-methylnaphthalene (0.00516 mg/L) and 2-methylnaphthalene (0.00321 mg/L), which are below WQCC standards.

Monitor well MW-15 is sampled on a quarterly schedule and analytical results indicate benzene concentrations ranged from 0.510 mg/L during the 3rd quarter to 2.050 mg/L during the 2nd quarter of 2009. Benzene concentrations were above the NMOCD regulatory standard during all four quarters of the reporting period. Toluene concentrations were below MDL and NMOCD regulatory standards during all four quarters of 2009. Ethylbenzene concentrations ranged from 0.0472 mg/L during the 1st quarter to 0.2190 mg/L during the 2nd quarter of 2009. Ethylbenzene concentrations were below the NMOCD regulatory standard during all four quarters of the reporting period. Xylene concentrations ranged from 0.0094 mg/L during the 1st quarter to 0.1430 mg/L during the 2nd quarter of 2009. Xylene concentrations were below the NMOCD regulatory standard during the all four quarters of the reporting period. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above MDLs for naphthalene (0.00209 mg/L) and 1-methylnaphthalene (0.00101 mg/L), which are below WQCC standards.

Monitor well MW-16 is sampled on a semi-annual schedule and analytical results indicate BTEX constituent concentrations were below MDL and NMOCD regulatory standards for each BTEX constituent during the 2nd and 4th quarter sampling events. PAH analysis during the 4th quarter sampling event indicated no elevated concentrations were detected above the respective MDLs.

Monitor well MW-18 was installed in March 2009 and is sampled on a quarterly schedule. Analytical results indicate BTEX constituent concentrations were below MDL and NMOCD regulatory standards for each BTEX constituent during the 3rd and 4th quarter sampling events. PAH analysis during the 4th quarter sampling event indicated no elevated concentrations were detected above the respective MDLs.

Recovery well RW-1 is monitored on a quarterly schedule. Recovery well RW-1 was not sampled during the 1st, 2nd and 3rd quarters of the reporting period, due to the presence of PSH. PSH thicknesses of 1.15 feet, 1.06 feet and 0.85 feet were reported during the 1st, 2nd and 3rd quarters of 2009, respectively. Benzene concentrations were above the NMOCD regulatory standard during the 4th quarter of the reporting period with a concentration of 11.10 mg/L. Toluene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 5.480 mg/L. Ethylbenzene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 0.946 mg/L. Xylene concentrations were above NMOCD regulatory standards during the 4th quarter of the reporting period with a concentration of 2.270 mg/L. Analytical results indicated a total TPH result of 131.70 mg/L. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above WQCC Drinking Water Standards for naphthalene (0.0961 mg/L), 1-methylnaphthalene (0.113 mg/L) and 2-methylnaphthalene (0.126 mg/L). Additional PAH constituents detected above MDLs include fluorene (0.0120 mg/L), phenanthrene (0.0131 mg/L) and dibenzofuran (0.0100 mg/L), which are below WQCC standards.

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 activities for the 2009 annual monitoring period. There are currently fifteen monitor wells (MW-2 through MW-7, and MW-9 through MW-16, and MW-18) and one recovery well (RW-1) on site. Manual PSH recovery is currently being performed on a weekly basis at the site. Groundwater elevation contours generated from water level measurements indicate a general gradient of approximately 0.003 feet/foot to the southeast.

A measurable thickness of PSH was present in five of six monitor wells (MW-2, MW-3, MW-5, MW-6, and MW-9) and the recovery well (RW-1) during each quarter of the reporting period. Monitor well MW-4 exhibited measurable PSH during the first three quarters of the reporting period. Approximately 116 gallons (approximately 2.8 barrels) of PSH was recovered from the site during the 2009 reporting period. A total of approximately 7,449 gallons (approximately 178 barrels) of PSH have been recovered since project inception. The average thickness of PSH in monitor wells and recovery wells displaying PSH was 0.76 feet. Generally, 2009 PSH thickness data indicates declining PSH thicknesses in the affected monitor and recovery wells.

Review of laboratory analytical results of groundwater samples collected during the 2009 reporting period indicates BTEX constituent concentrations are below NMOCD regulatory standards in six of the fifteen on site monitor wells and recovery well. The remaining nine monitor wells either contained measurable thicknesses of PSH and were not sampled during the 1st, 2nd and 3rd quarterly events or exhibited analytical results above the NMOCD regulatory standard during the reporting period of 2009. Groundwater samples from monitor wells MW-2, MW-3, MW-6 and recovery well RW-1 exhibited elevated TPH concentrations for GRO and DRO. Review of PAH analysis indicates an increasing trend in constituent concentrations in five

monitor wells (MW-3, MW-4, MW-6, MW-9, MW-14) and recovery well RW-1 and a decreasing trend in monitor wells MW-2, MW-5, MW-13 and MW-15.

ANTICIPATED ACTIONS

PSH recovery, quarterly groundwater monitoring and sampling will continue in 2010. An Annual Monitoring Report will be submitted to the NMOCD before April 1, 2011. In October 2008, an *Enhanced Recovery System Workplan* was submitted and subsequently approved by the NMOCD. The automated system started up during the 1st quarter of 2010.

Based on the results of the PAH analysis over the past several years, NOVA recommends that further PAH analysis be conducted only on those monitor wells (MW-2, MW-3, MW-4, MW-5, MW-9 and recovery well RW-1) which have 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.

DISTRIBUTION

- Copy 1 Ed Hansen
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Figures

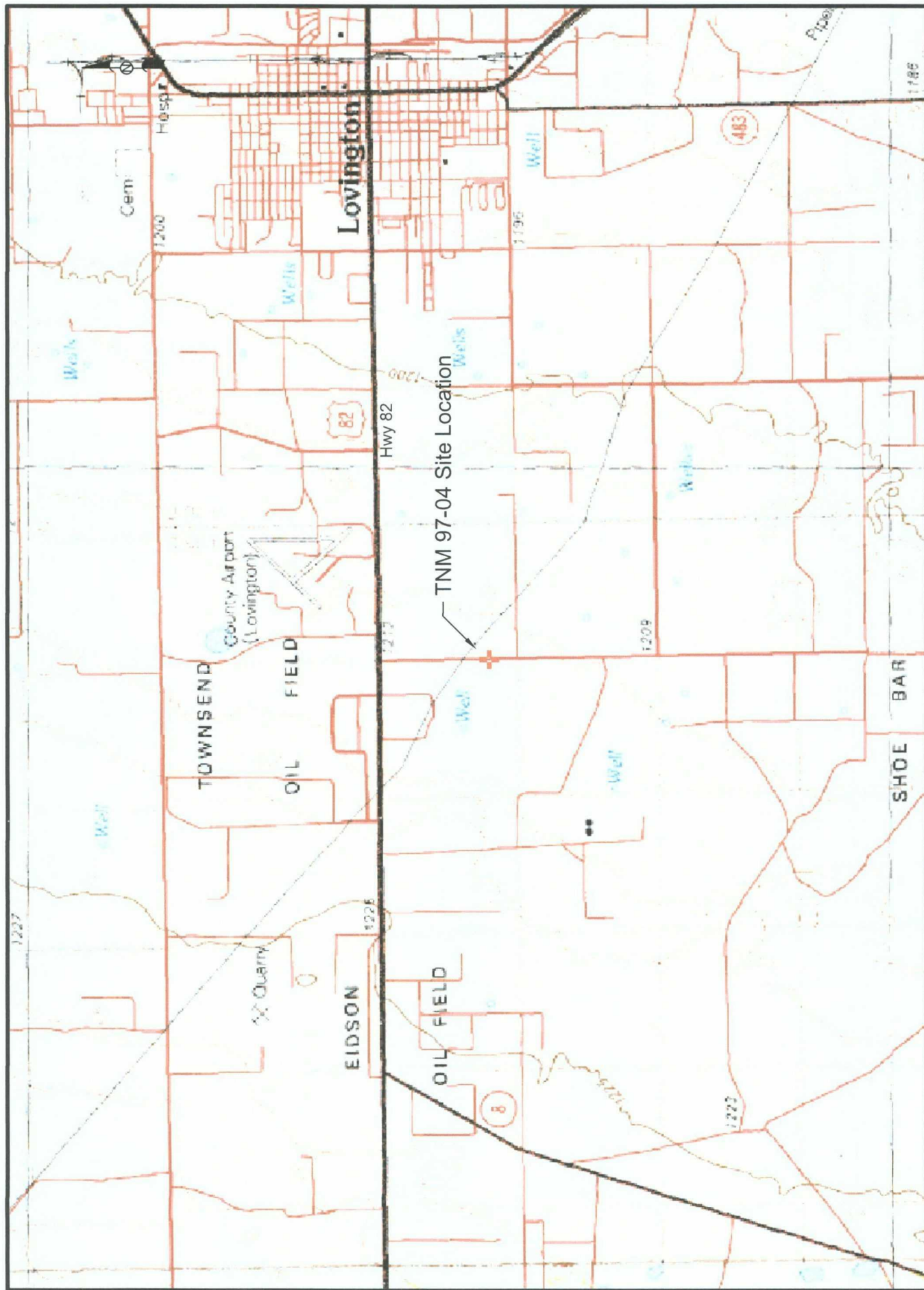


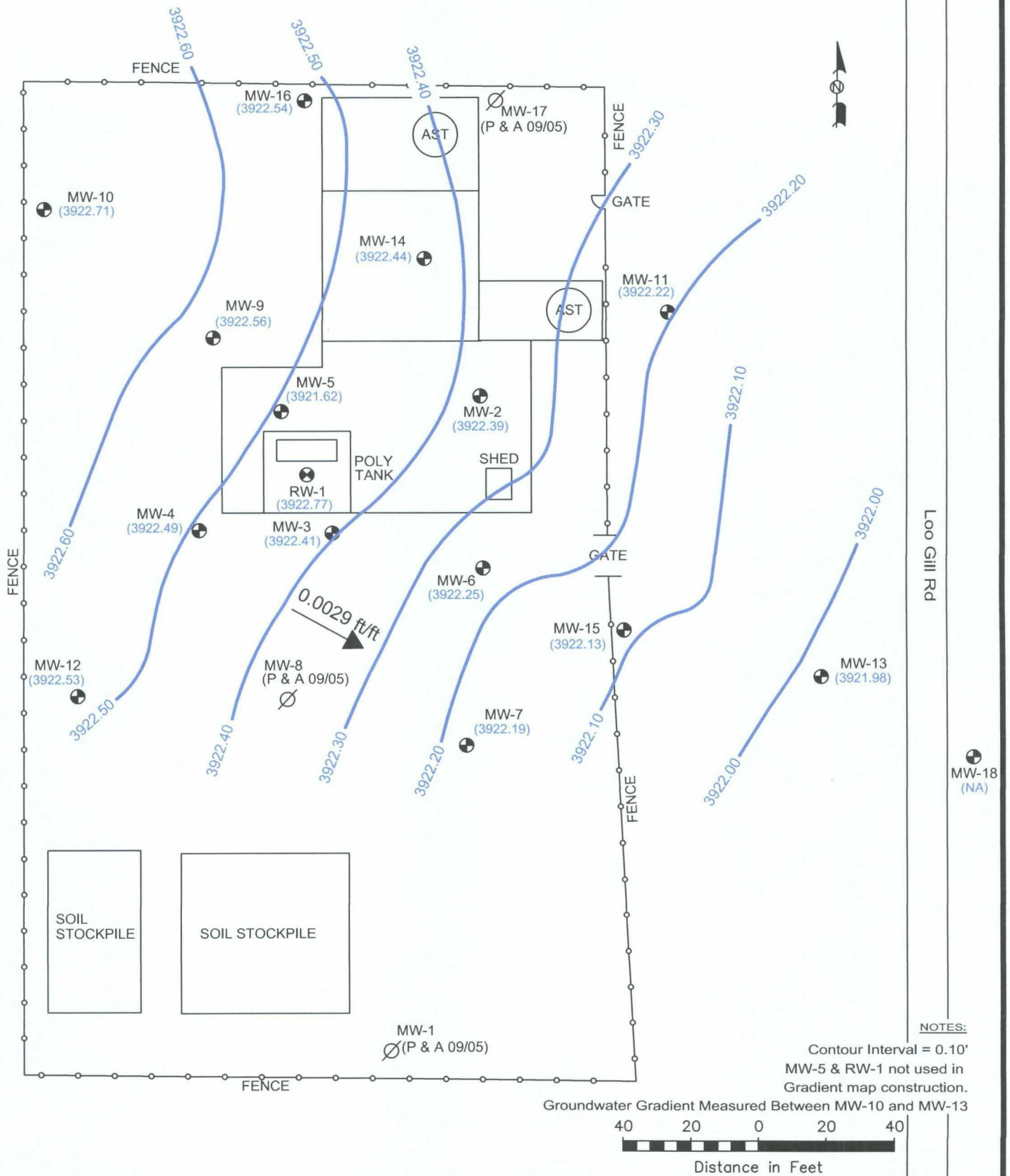
Figure 1
Site Location Map
Plains Marketing, L.P.
TNM 97-04
Lea County, NM

NOVA Safety and Environmental



Scale: 1" = 500'
August 26, 2008
Lat: N32° 57' 57.1" Long: W103° 25' 12.3"

NMOCD Reference # GW-0294



LEGEND:

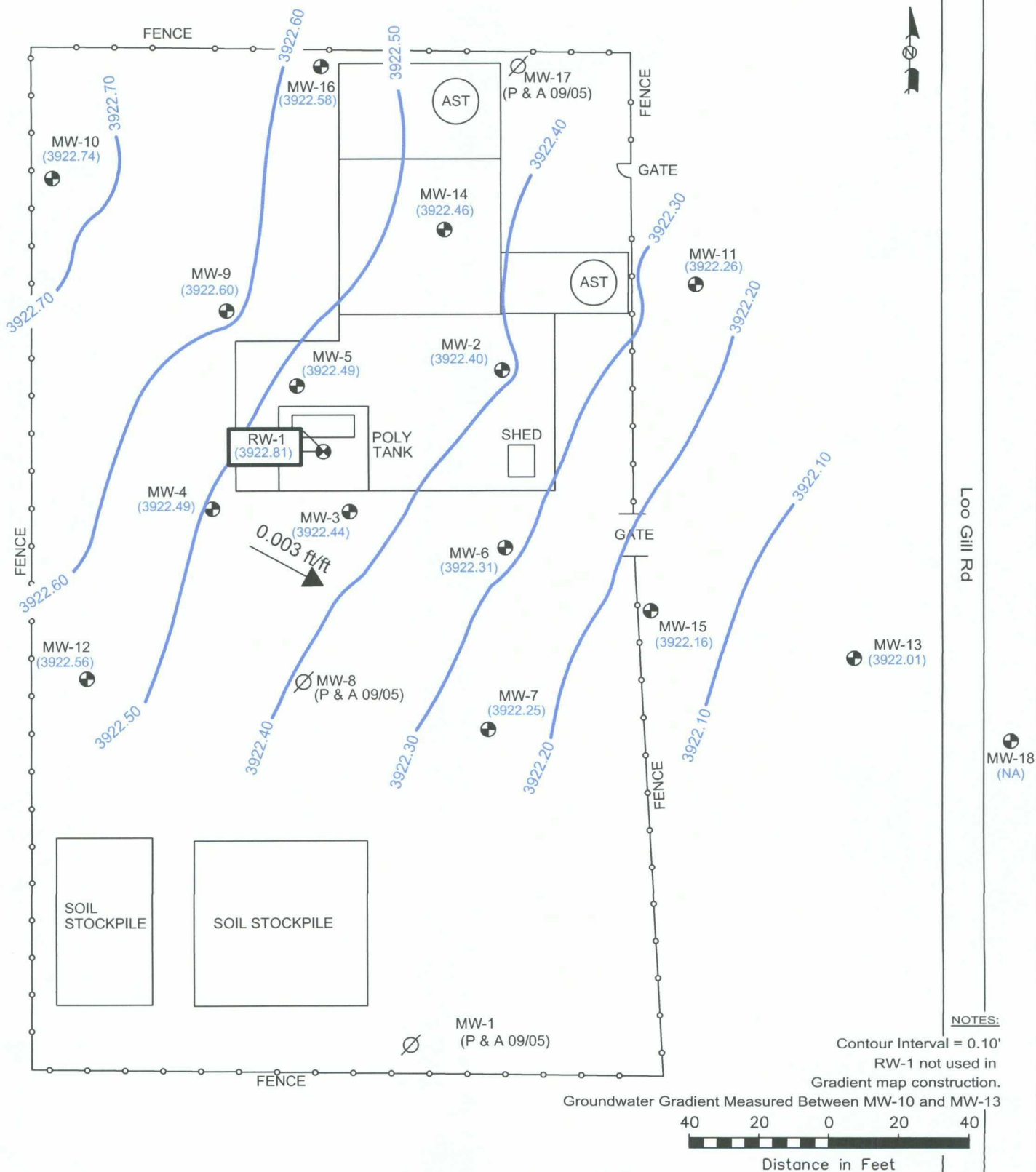
- Monitor Well Location
- Groundwater Contour Lines
- (3921.20) Groundwater Elevation in Feet
- (NA) Not Available

Figure 2A
Inferred Groundwater
Gradient Map
(02/19/09)
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM 97-04
Lea County, NM



2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

March 09, 2010	Scale: 1" = 40'	CAD By: SAT	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	



LEGEND:

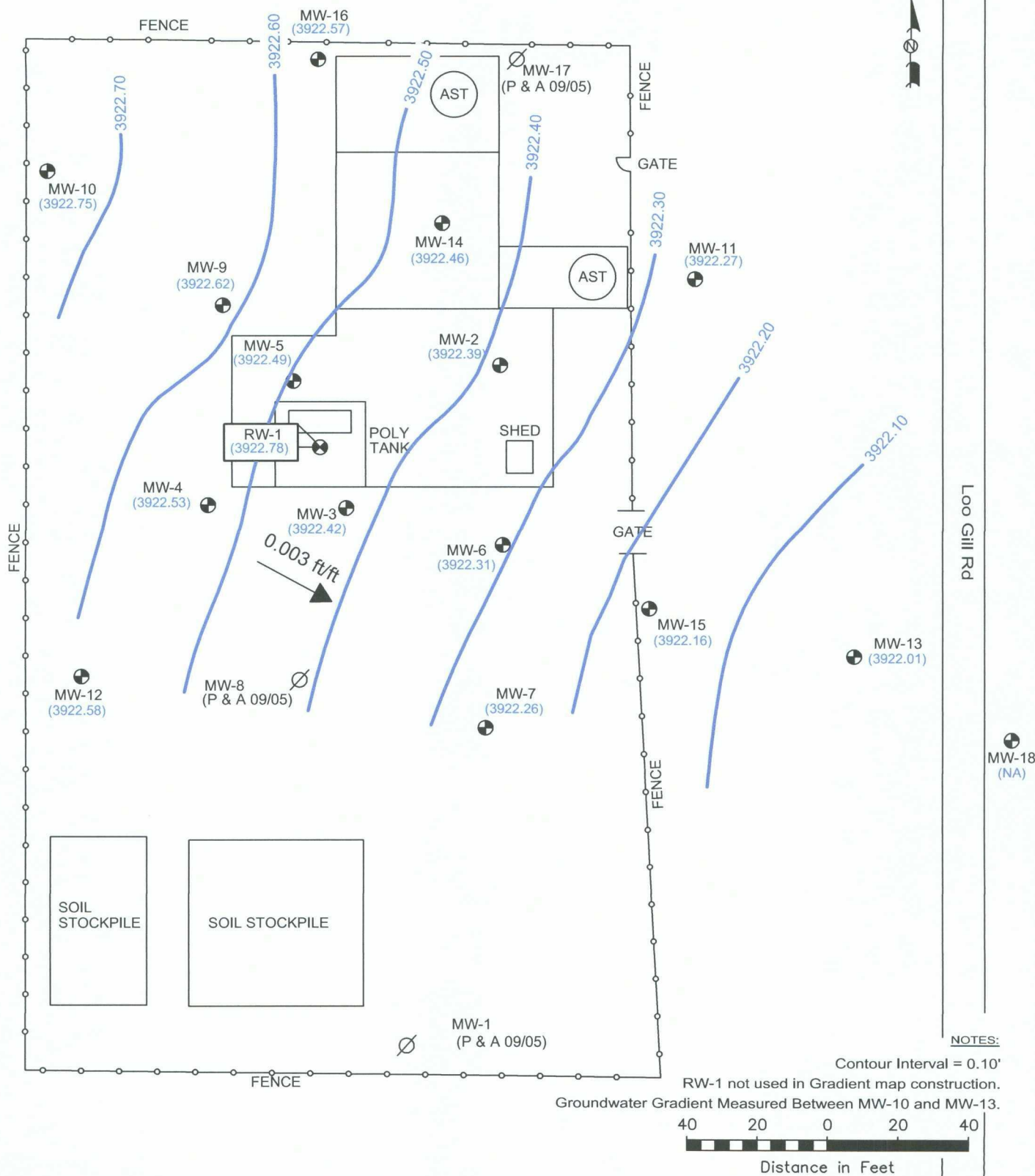
- Monitor Well Location
- Groundwater Contour Lines
- (3921.20) Groundwater Elevation in Feet
- (NA) Not Available

Figure 2B
Inferred Groundwater
Gradient Map
(05/20/09)
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM 97-04
Lea County, NM



2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

October 15, 2009	Scale: 1" = 40'	CAD By: SAT	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"			NW1/4 SE1/4 Sec 18 T18S R36E



LEGEND:

- Monitor Well Location
- Groundwater Contour Lines
- (3921.20) Groundwater Elevation in Feet
- (NA) Not Available

Figure 2C
Inferred Groundwater
Gradient Map
(08/12/09)
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM 97-04
Lea County, NM



2057 Commerce Drive
Midland, Texas 79703
432.520.7720
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March 09, 2010	Scale: 1" = 40'	CAD By: SAT	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	

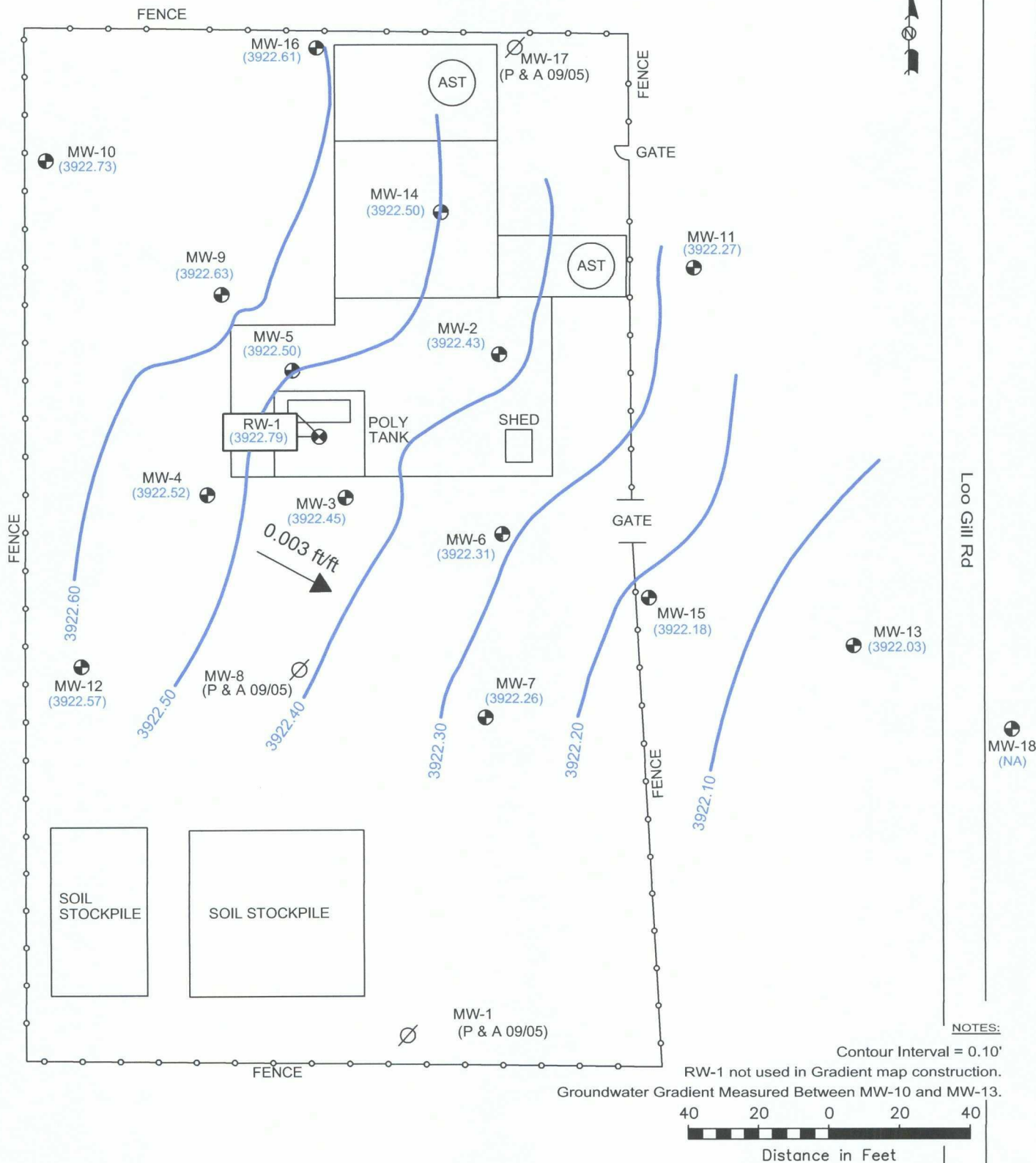
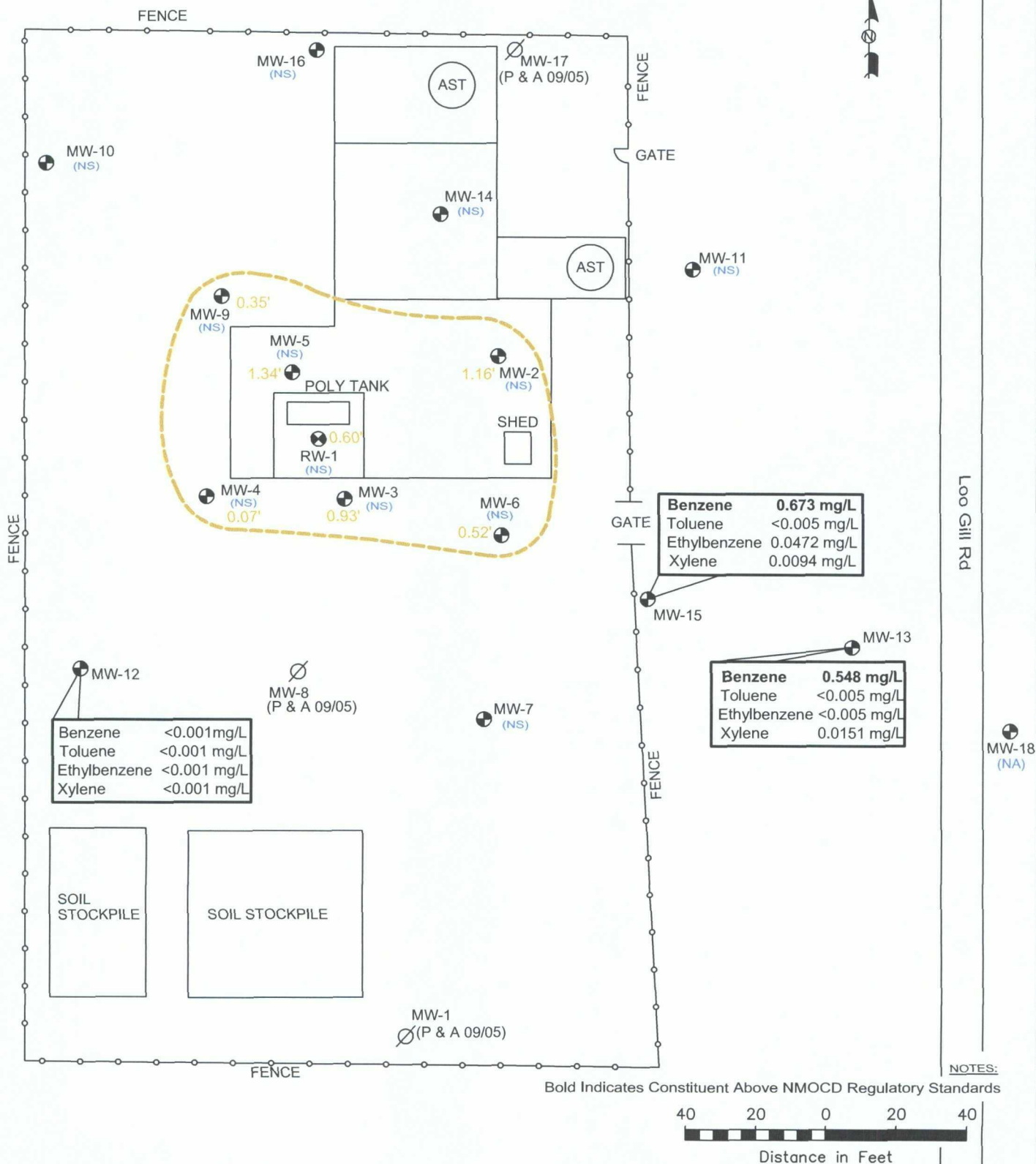


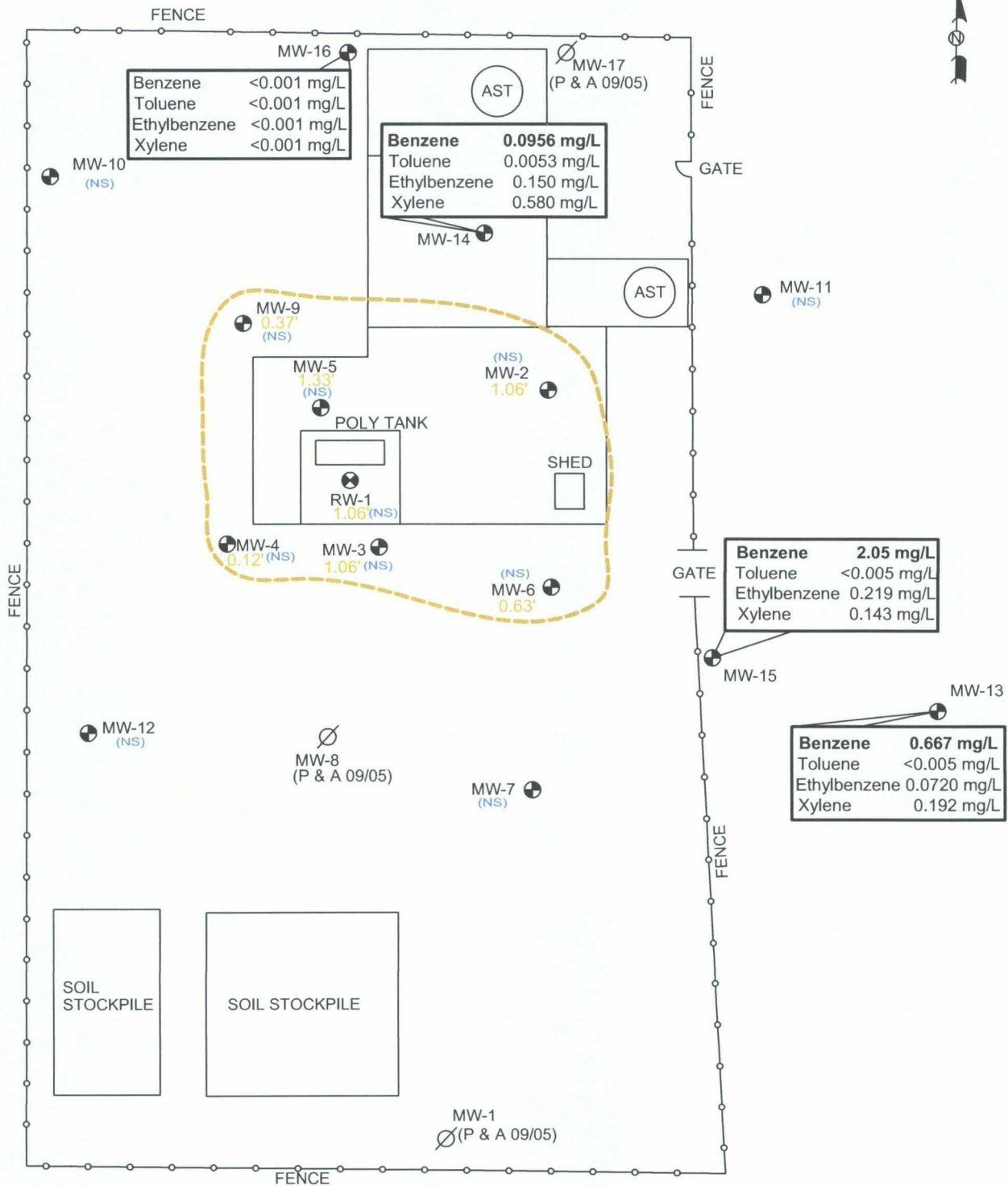
Figure 2D
Inferred Groundwater
Gradient Map
(11/25/09)
NMOCD Reference # GW-0294
Plains Marketing, L.P.
TNM 97-04
Lea County, NM



2057 Commerce Drive
Midland, Texas 79703
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March 09, 2010	Scale: 1" = 40'	CAD By: SAT	Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5"		NW1/4 SE1/4 Sec 18 T18S R36E	





NOTES:

BOLD Indicates Constituent Above NMOC Regulatory Standards

LEGEND:

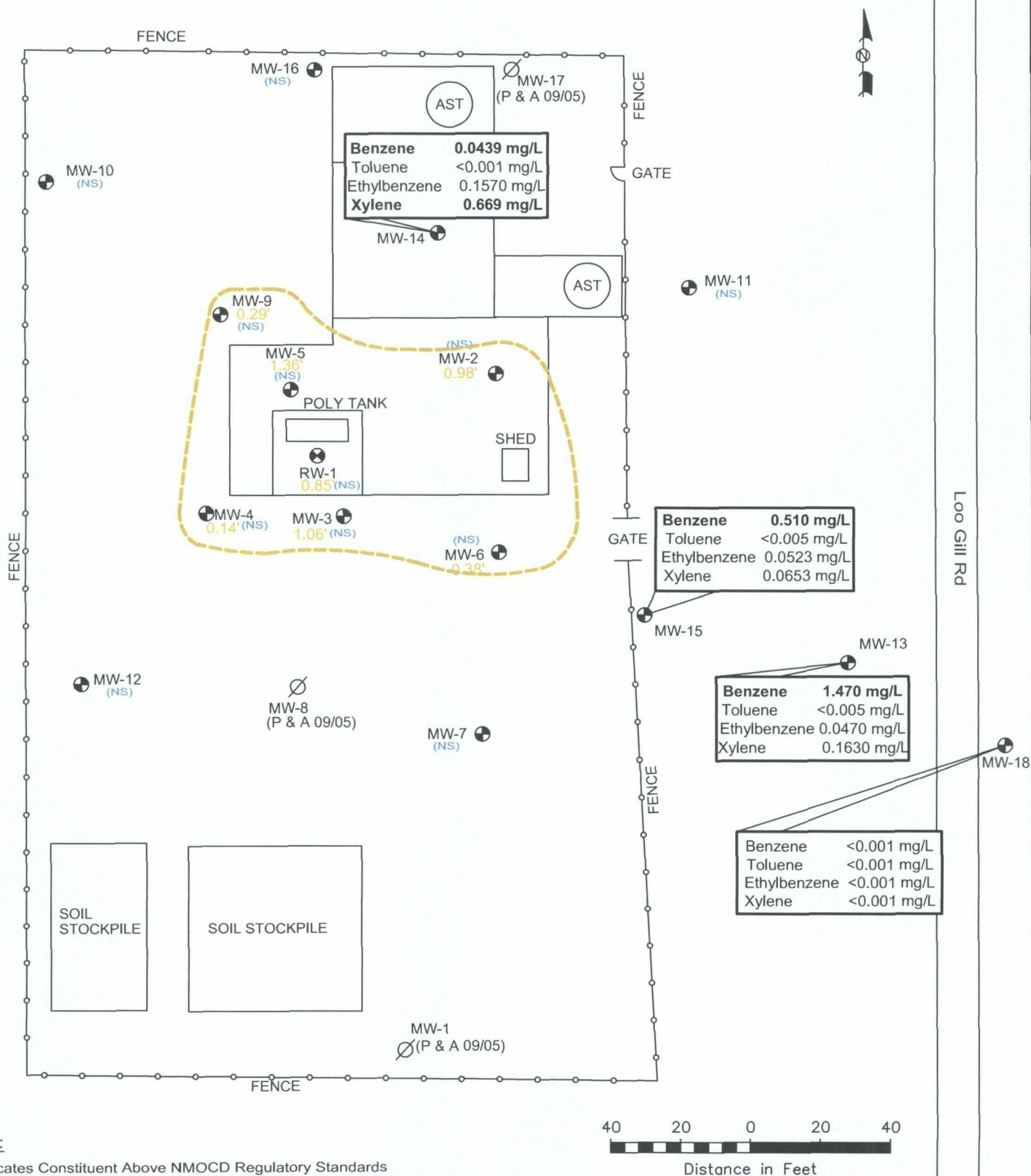
- Monitor Well Location
- Inferred PSH Extent
- <0.001
- 2.42'
- (NS)

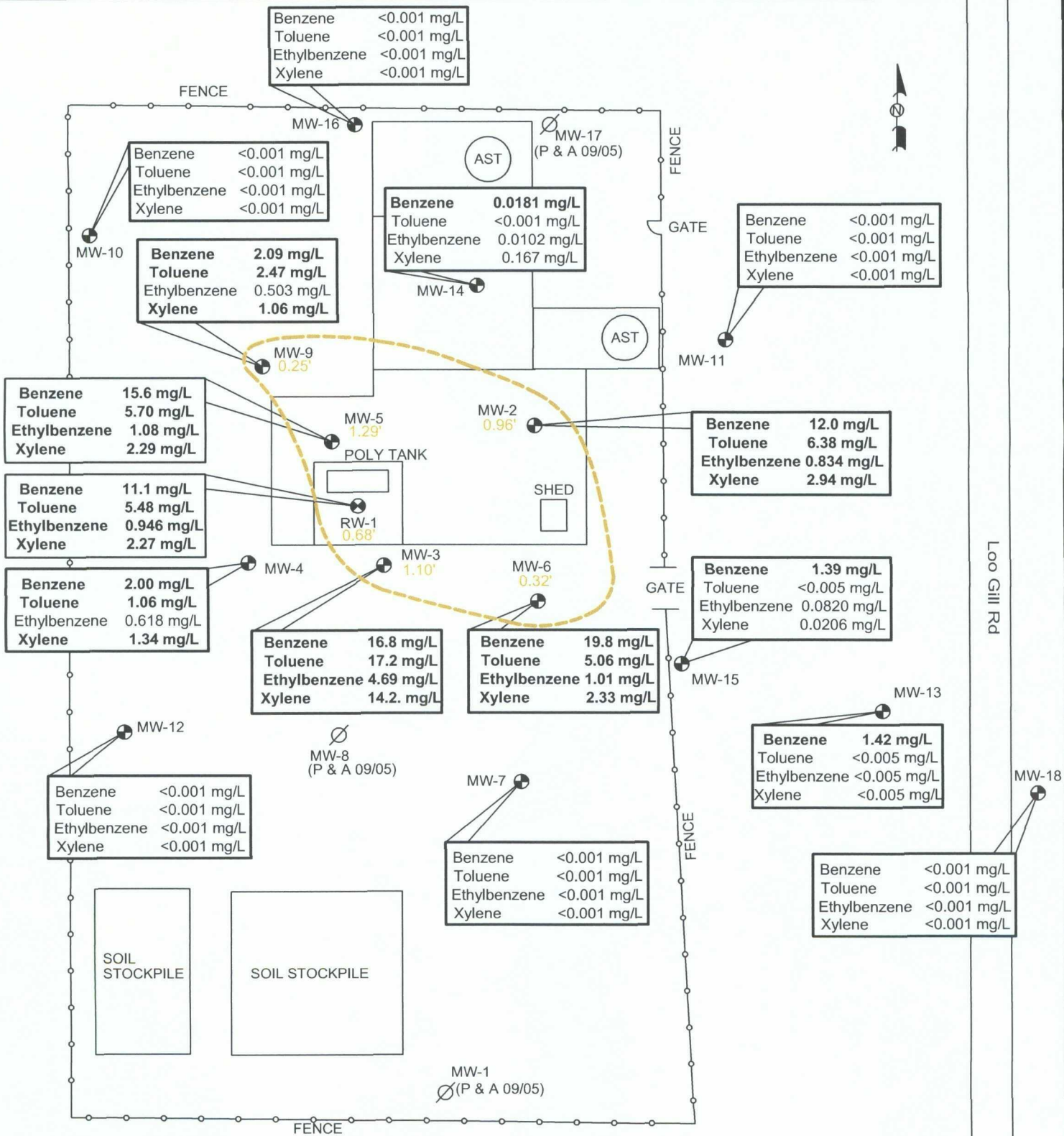
Figure 3B
Groundwater Concentration
and Inferred PSH Extent Map
(05/20/09)
NMOC Reference # GW-0294
Plains Marketing, L.P.
TNM 97-04
Lea County, NM



2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

October 15, 2009 Scale: 1" = 40' CAD By: SAT Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5" NW1/4 SE1/4 Sec 18 T18S R36E





NOTES:

BOLD Indicates Constituent Above NMOC Regulatory Standards

LEGEND:

- Monitor Well Location
- Inferred PSH Extent
- <0.001 Constituent Concentration (mg/L)
- 2.42' Thickness of PSH (feet)
- (NS) Not Sampled

Figure 3D
Groundwater Concentration
and Inferred PSH Extent Map
(11/25/09)
NMOC Reference # GW-0294
Plains Marketing, L.P.
TNM 97-04
Lea County, NM



2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

December 29, 2009 Scale: 1" = 40' CAD By: SAT Checked By: RKR
Lat. N32° 44' 50.3" Long. W103° 23' 38.5" NW1/4 SE1/4 Sec 18 T18S R36E



Tables

TABLE 1

2009 - GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
 TNM 97-04 (TOWNSEND)
 LEA COUNTY, NEW MEXICO
 NMOCD REFERENCE NUMBER GW-0294

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 2	01/06/09	3974.62	52.05	53.39	1.34	3922.37
MW - 2	01/14/09	3974.62	52.19	53.35	1.16	3922.26
MW - 2	01/21/09	3974.62	52.25	53.11	0.86	3922.24
MW - 2	01/22/09	3974.62	52.03	53.33	1.30	3922.40
MW - 2	01/30/09	3974.62	52.05	53.30	1.25	3922.38
MW - 2	02/03/09	3974.62	52.06	53.27	1.21	3922.38
MW - 2	02/12/09	3974.62	52.06	53.28	1.22	3922.38
MW - 2	02/19/09	3974.62	52.05	53.26	1.21	3922.39
MW - 2	03/04/09	3974.62	52.10	53.23	1.13	3922.35
MW - 2	03/06/09	3974.62	52.05	53.26	1.21	3922.39
MW - 2	03/11/09	3974.62	52.08	53.24	1.16	3922.37
MW - 2	03/16/09	3974.62	52.13	53.25	1.12	3922.32
MW - 2	03/19/09	3974.62	52.06	53.25	1.19	3922.38
MW - 2	03/24/09	3974.62	52.03	53.19	1.16	3922.42
MW - 2	04/03/09	3974.62	52.05	53.11	1.06	3922.41
MW - 2	04/15/09	3974.62	52.06	53.12	1.06	3922.40
MW - 2	04/17/09	3974.62	52.09	52.94	0.85	3922.40
MW - 2	04/22/09	3974.62	52.07	53.10	1.03	3922.40
MW - 2	04/29/09	3974.62	52.03	53.15	1.12	3922.42
MW - 2	05/20/09	3974.62	52.05	53.11	1.06	3922.41
MW - 2	06/09/09	3974.62	52.05	53.11	1.06	3922.41
MW - 2	06/17/09	3974.62	52.06	53.14	1.08	3922.40
MW - 2	06/23/09	3974.62	52.07	53.08	1.01	3922.40
MW - 2	07/01/09	3974.62	52.05	53.10	1.05	3922.41
MW - 2	07/08/09	3974.62	52.05	53.07	1.02	3922.42
MW - 2	07/15/09	3974.62	52.06	53.06	1.00	3922.41
MW - 2	07/17/09	3974.62	52.10	53.00	0.90	3922.39
MW - 2	07/23/09	3974.62	52.06	53.09	1.03	3922.41
MW - 2	07/24/09	3974.62	52.09	52.89	0.80	3922.41
MW - 2	07/30/09	3974.62	52.06	53.05	0.99	3922.41
MW - 2	08/04/09	3974.62	52.06	53.02	0.96	3922.42
MW - 2	08/12/09	3974.62	52.08	53.06	0.98	3922.39
MW - 2	08/20/09	3974.62	52.06	53.08	1.02	3922.41
MW - 2	08/26/09	3974.62	52.55	53.08	0.53	3921.99
MW - 2	09/02/09	3974.62	52.05	53.07	1.02	3922.42
MW - 2	09/09/09	3974.62	52.06	53.06	1.00	3922.41
MW - 2	09/14/09	3974.62	52.05	53.08	1.03	3922.42
MW - 2	09/21/09	3974.62	52.06	52.08	0.02	3922.56
MW - 2	10/01/09	3974.62	52.08	53.08	1.00	3922.39
MW - 2	10/08/09	3974.62	52.08	53.09	1.01	3922.39
MW - 2	10/14/09	3974.62	52.08	53.06	0.98	3922.39
MW - 2	10/21/09	3974.62	52.04	53.07	1.03	3922.43
MW - 2	10/28/09	3974.62	52.03	53.08	1.05	3922.43
MW - 2	11/04/09	3974.62	52.05	53.00	0.95	3922.43

TABLE 1

2009 - GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
 TNM 97-04 (TOWNSEND)
 LEA COUNTY, NEW MEXICO
 NMOCD REFERENCE NUMBER GW-0294

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 2	11/11/09	3974.62	52.05	52.98	0.93	3922.43
MW - 2	11/18/09	3974.62	52.05	53.02	0.97	3922.42
MW - 2	11/25/09	3974.62	52.05	53.01	0.96	3922.43
MW - 3	01/06/09	3974.60	52.00	53.29	1.29	3922.41
MW - 3	01/14/09	3974.60	52.03	53.31	1.28	3922.38
MW - 3	01/21/09	3974.60	52.03	53.25	1.22	3922.39
MW - 3	01/22/09	3974.60	52.02	53.02	1.00	3922.43
MW - 3	01/30/09	3974.60	52.04	53.27	1.23	3922.38
MW - 3	02/03/09	3974.60	52.03	53.20	1.17	3922.39
MW - 3	02/12/09	3974.60	52.02	53.20	1.18	3922.40
MW - 3	02/19/09	3974.60	52.02	53.17	1.15	3922.41
MW - 3	03/04/09	3974.60	52.05	53.03	0.98	3922.40
MW - 3	03/06/09	3974.60	52.01	53.05	1.04	3922.43
MW - 3	03/11/09	3974.60	52.04	53.19	1.15	3922.39
MW - 3	03/16/09	3974.60	52.08	53.06	0.98	3922.37
MW - 3	03/19/09	3974.60	52.03	53.19	1.16	3922.40
MW - 3	03/24/09	3974.60	51.99	52.92	0.93	3922.47
MW - 3	04/03/09	3974.60	51.58	52.70	1.12	3922.85
MW - 3	04/15/09	3974.60	52.01	53.10	1.09	3922.43
MW - 3	04/17/09	3974.60	52.07	53.04	0.97	3922.38
MW - 3	04/22/09	3974.60	51.97	53.06	1.09	3922.47
MW - 3	04/29/09	3974.60	52.06	53.14	1.08	3922.38
MW - 3	05/20/09	3974.60	52.00	53.09	1.09	3922.44
MW - 3	06/09/09	3974.60	51.99	53.14	1.15	3922.44
MW - 3	06/17/09	3974.60	52.00	53.12	1.12	3922.43
MW - 3	06/23/09	3974.60	51.95	53.08	1.13	3922.48
MW - 3	07/01/09	3974.60	52.00	53.16	1.16	3922.43
MW - 3	07/08/09	3974.60	52.02	53.14	1.12	3922.41
MW - 3	07/15/09	3974.60	52.00	53.08	1.08	3922.44
MW - 3	07/17/09	3974.60	52.04	53.05	1.01	3922.41
MW - 3	07/23/09	3974.60	52.02	53.12	1.10	3922.42
MW - 3	07/24/09	3974.60	52.05	52.87	0.82	3922.43
MW - 3	07/30/09	3974.60	52.08	53.19	1.11	3922.35
MW - 3	08/04/09	3974.60	52.00	53.02	1.02	3922.45
MW - 3	08/12/09	3974.60	52.02	53.08	1.06	3922.42
MW - 3	08/20/09	3974.60	52.00	53.08	1.08	3922.44
MW - 3	08/26/09	3974.60	51.98	52.73	0.75	3922.51
MW - 3	09/02/09	3974.60	51.99	53.11	1.12	3922.44
MW - 3	09/09/09	3974.60	52.02	53.11	1.09	3922.42
MW - 3	09/14/09	3974.60	52.01	53.06	1.05	3922.43
MW - 3	09/21/09	3974.60	52.01	53.10	1.09	3922.43
MW - 3	10/01/09	3974.60	52.02	53.09	1.07	3922.42
MW - 3	10/08/09	3974.60	52.02	53.12	1.10	3922.42

TABLE 1

2009 - GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
 TNM 97-04 (TOWNSEND)
 LEA COUNTY, NEW MEXICO
 NMOCD REFERENCE NUMBER GW-0294

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 3	10/08/09	3974.60	52.02	53.12	1.10	3922.42
MW - 3	10/14/09	3974.60	52.02	53.09	1.07	3922.42
MW - 3	10/21/09	3974.60	52.02	53.15	1.13	3922.41
MW - 3	10/28/09	3974.60	52.97	53.09	0.12	3921.61
MW - 3	11/04/09	3974.60	51.99	53.02	1.03	3922.46
MW - 3	11/11/09	3974.60	51.99	53.00	1.01	3922.46
MW - 3	11/18/09	3974.60	52.03	53.10	1.07	3922.41
MW - 3	11/25/09	3974.60	51.99	53.09	1.10	3922.45
MW - 4	01/06/09	3974.53	52.03	52.35	0.32	3922.45
MW - 4	01/14/09	3974.53	52.09	52.29	0.20	3922.41
MW - 4	01/21/09	3974.53	52.08	52.25	0.17	3922.42
MW - 4	01/22/09	3974.53	52.03	53.33	1.30	3922.31
MW - 4	01/30/09	3974.53	52.01	52.25	0.24	3922.48
MW - 4	02/03/09	3974.53	52.00	52.25	0.25	3922.49
MW - 4	02/12/09	3974.53	51.99	52.30	0.31	3922.49
MW - 4	02/19/09	3974.53	52.00	52.29	0.29	3922.49
MW - 4	03/04/09	3974.53	52.07	52.33	0.26	3922.42
MW - 4	03/06/09	3974.53	52.01	52.28	0.27	3922.48
MW - 4	03/11/09	3974.53	52.02	52.28	0.26	3922.47
MW - 4	03/16/09	3974.53	52.11	52.35	0.24	3922.38
MW - 4	03/19/09	3974.53	52.01	52.26	0.25	3922.48
MW - 4	03/24/09	3974.53	51.98	52.05	0.07	3922.54
MW - 4	04/03/09	3974.53	51.99	52.20	0.21	3922.51
MW - 4	04/15/09	3974.53	52.02	52.12	0.10	3922.50
MW - 4	04/17/09	3974.53	52.03	52.11	0.08	3922.49
MW - 4	04/21/09	3974.53	51.96	52.19	0.23	3922.54
MW - 4	04/29/09	3974.53	52.01	52.12	0.11	3922.50
MW - 4	05/20/09	3974.53	51.99	52.11	0.12	3922.52
MW - 4	06/09/09	3974.53	51.98	52.11	0.13	3922.53
MW - 4	06/17/09	3974.53	51.98	52.12	0.14	3922.53
MW - 4	06/23/09	3974.53	51.95	52.17	0.22	3922.55
MW - 4	07/01/09	3974.53	51.98	52.11	0.13	3922.53
MW - 4	07/08/09	3974.53	sheen	52.12	0.00	3922.41
MW - 4	07/15/09	3974.53	sheen	52.02	0.00	3922.51
MW - 4	07/17/09	3974.53	sheen	52.05	0.00	3922.48
MW - 4	07/23/09	3974.53	52.00	52.11	0.11	3922.51
MW - 4	07/24/09	3974.53	52.00	52.10	0.10	3922.52
MW - 4	07/30/09	3974.53	52.00	52.14	0.14	3922.51
MW - 4	08/04/09	3974.53	51.98	52.10	0.12	3922.53
MW - 4	08/12/09	3974.53	51.98	52.12	0.14	3922.53
MW - 4	08/20/09	3974.53	51.99	52.10	0.11	3922.52
MW - 4	08/26/09	3974.53	sheen	52.13	0.00	3922.40
MW - 4	09/02/09	3974.53	sheen	52.01	0.00	3922.52

TABLE 1

2009 - GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
 TNM 97-04 (TOWNSEND)
 LEA COUNTY, NEW MEXICO
 NMOC D REFERENCE NUMBER GW-0294

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 4	09/09/09	3974.53	sheen	52.02	0.00	3922.51
MW - 4	09/14/09	3974.53	sheen	52.02	0.00	3922.51
MW - 4	09/21/09	3974.53	sheen	52.03	0.00	3922.50
MW - 4	10/01/09	3974.53	sheen	52.04	0.00	3922.49
MW - 4	10/08/09	3974.53	sheen	52.04	0.00	3922.49
MW - 4	10/14/09	3974.53	sheen	52.03	0.00	3922.50
MW - 4	10/21/09	3974.53	sheen	52.05	0.00	3922.48
MW - 4	10/28/09	3974.53	sheen	52.02	0.00	3922.51
MW - 4	11/04/09	3974.53	sheen	52.01	0.00	3922.52
MW - 4	11/11/09	3974.53	sheen	52.00	0.00	3922.53
MW - 4	11/18/09	3974.53	sheen	52.00	0.00	3922.53
MW - 4	11/25/09	3974.53	sheen	52.01	0.00	3922.52
MW - 5	01/07/09	3974.27	51.62	53.16	1.54	3922.42
MW - 5	01/14/09	3974.27	51.61	53.15	1.54	3922.43
MW - 5	01/21/09	3974.27	51.98	52.05	0.07	3922.28
MW - 5	01/22/09	3974.27	51.59	53.09	1.50	3922.46
MW - 5	01/30/09	3974.27	51.60	53.05	1.45	3922.45
MW - 5	02/03/09	3974.27	51.60	53.02	1.42	3922.46
MW - 5	02/12/09	3974.27	51.58	52.02	0.44	3922.62
MW - 5	02/19/09	3974.27	52.59	52.96	0.37	3921.62
MW - 5	03/04/09	3974.27	52.65	53.02	0.37	3921.56
MW - 5	03/06/09	3974.27	51.60	53.04	1.44	3922.45
MW - 5	03/11/09	3974.27	51.60	53.02	1.42	3922.46
MW - 5	03/16/09	3974.27	52.68	53.06	0.38	3921.53
MW - 5	03/19/09	3974.27	51.60	53.01	1.41	3922.46
MW - 5	03/24/09	3974.27	51.55	52.89	1.34	3922.52
MW - 5	04/03/09	3974.27	51.58	52.70	1.12	3922.52
MW - 5	04/15/09	3974.27	51.59	52.91	1.32	3922.48
MW - 5	04/17/09	3974.27	51.61	52.83	1.22	3922.48
MW - 5	04/22/09	3974.27	51.60	52.68	1.08	3922.51
MW - 5	04/29/09	3974.27	51.61	52.96	1.35	3922.46
MW - 5	05/20/09	3974.27	51.58	52.91	1.33	3922.49
MW - 5	06/09/09	3974.27	51.58	52.95	1.37	3922.48
MW - 5	06/17/09	3974.27	51.59	52.97	1.38	3922.47
MW - 5	06/23/09	3974.27	51.61	52.66	1.05	3922.50
MW - 5	07/01/09	3974.27	51.58	52.96	1.38	3922.48
MW - 5	07/08/09	3974.27	51.58	52.98	1.40	3922.48
MW - 5	07/15/09	3974.27	51.58	52.92	1.34	3922.49
MW - 5	07/17/09	3974.27	51.61	52.89	1.28	3922.47
MW - 5	07/23/09	3974.27	51.59	52.95	1.36	3922.48
MW - 5	07/24/09	3974.27	51.61	52.82	1.21	3922.48
MW - 5	07/30/09	3974.27	51.59	52.95	1.36	3922.48
MW - 5	08/04/09	3974.27	51.58	52.93	1.35	3922.49

TABLE 1

2009 - GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
 TNM 97-04 (TOWNSEND)
 LEA COUNTY, NEW MEXICO
 NMOCD REFERENCE NUMBER GW-0294

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 5	08/12/09	3974.27	51.58	52.94	1.36	3922.49
MW - 5	08/20/09	3974.27	51.58	52.93	1.35	3922.49
MW - 5	08/26/09	3974.27	51.55	51.92	0.37	3922.66
MW - 5	09/02/09	3974.27	51.56	52.92	1.36	3922.51
MW - 5	09/09/09	3974.27	51.72	52.92	1.20	3922.37
MW - 5	09/14/09	3974.27	51.74	53.92	2.18	3922.20
MW - 5	09/21/09	3974.27	51.92	52.98	1.06	3922.19
MW - 5	10/01/09	3974.27	51.60	52.95	1.35	3922.47
MW - 5	10/08/09	3974.27	51.60	52.94	1.34	3922.47
MW - 5	10/14/09	3974.27	51.92	52.96	1.04	3922.19
MW - 5	10/21/09	3974.27	51.57	52.89	1.32	3922.50
MW - 5	10/28/09	3974.27	51.83	52.90	1.07	3922.28
MW - 5	11/04/09	3974.27	51.56	52.86	1.30	3922.52
MW - 5	11/11/09	3974.27	51.56	52.85	1.29	3922.52
MW - 5	11/18/09	3974.27	51.55	52.86	1.31	3922.52
MW - 5	11/25/09	3974.27	51.58	52.87	1.29	3922.50
MW - 6	01/06/09	3974.72	52.32	53.17	0.85	3922.27
MW - 6	01/14/09	3974.72	52.41	52.97	0.56	3922.23
MW - 6	01/21/09	3974.72	52.41	52.79	0.38	3922.25
MW - 6	01/22/09	3974.72	52.38	52.73	0.35	3922.29
MW - 6	01/30/09	3974.72	52.38	52.82	0.44	3922.27
MW - 6	02/03/09	3974.72	52.40	52.71	0.31	3922.27
MW - 6	02/12/09	3974.72	52.39	52.90	0.51	3922.25
MW - 6	02/19/09	3974.72	52.39	52.94	0.55	3922.25
MW - 6	03/04/09	3974.72	52.42	52.96	0.54	3922.22
MW - 6	03/06/09	3974.72	52.31	53.03	0.72	3922.30
MW - 6	03/11/09	3974.72	52.37	52.82	0.45	3922.28
MW - 6	03/16/09	3974.72	52.45	53.00	0.55	3922.19
MW - 6	03/19/09	3974.72	52.37	52.79	0.42	3922.29
MW - 6	03/24/09	3974.72	52.29	52.81	0.52	3922.35
MW - 6	04/03/09	3974.72	52.31	53.01	0.70	3922.31
MW - 6	04/15/09	3974.72	52.28	53.12	0.84	3922.31
MW - 6	04/17/09	3974.72	52.39	52.63	0.24	3922.29
MW - 6	04/22/09	3974.72	52.31	53.00	0.69	3922.31
MW - 6	04/29/09	3974.72	52.34	52.82	0.48	3922.31
MW - 6	05/20/09	3974.72	52.32	52.95	0.63	3922.31
MW - 6	06/09/09	3974.72	52.29	52.95	0.66	3922.33
MW - 6	06/17/09	3974.72	52.35	52.80	0.45	3922.30
MW - 6	06/23/09	3974.72	52.32	53.00	0.68	3922.30
MW - 6	07/01/09	3974.72	52.33	52.82	0.49	3922.32
MW - 6	07/08/09	3974.72	52.38	52.67	0.29	3922.30
MW - 6	07/15/09	3974.72	52.35	52.68	0.33	3922.32
MW - 6	07/17/09	3974.72	52.39	52.65	0.26	3922.29

TABLE 1

2009 - GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
 TNM 97-04 (TOWNSEND)
 LEA COUNTY, NEW MEXICO
 NMOC D REFERENCE NUMBER GW-0294

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 6	07/23/09	3974.72	52.38	52.65	0.27	3922.30
MW - 6	07/24/09	3974.72	52.40	52.50	0.10	3922.31
MW - 6	07/30/09	3974.72	52.36	52.61	0.25	3922.32
MW - 6	08/04/09	3974.72	52.38	52.62	0.24	3922.30
MW - 6	08/12/09	3974.72	52.35	52.73	0.38	3922.31
MW - 6	08/20/09	3974.72	52.30	52.83	0.53	3922.34
MW - 6	08/26/09	3974.72	52.31	52.96	0.65	3922.31
MW - 6	09/02/09	3974.72	52.35	52.72	0.37	3922.31
MW - 6	09/09/09	3974.72	52.36	52.64	0.28	3922.32
MW - 6	09/14/09	3974.72	52.37	52.63	0.26	3922.31
MW - 6	09/21/09	3974.72	52.36	52.69	0.33	3922.31
MW - 6	10/01/09	3974.72	52.38	52.75	0.37	3922.28
MW - 6	10/08/09	3974.72	52.38	52.75	0.37	3922.28
MW - 6	10/14/09	3974.72	52.38	52.67	0.29	3922.30
MW - 6	10/21/09	3974.72	52.31	52.88	0.57	3922.32
MW - 6	10/28/09	3974.72	52.34	52.67	0.33	3922.33
MW - 6	11/04/09	3974.72	52.36	52.62	0.26	3922.32
MW - 6	11/11/09	3974.72	52.32	52.60	0.28	3922.36
MW - 6	11/18/09	3974.72	52.35	52.65	0.30	3922.33
MW - 6	11/25/09	3974.72	52.36	52.68	0.32	3922.31
MW - 7	02/19/09	3974.60	-	52.41	0.00	3922.19
MW - 7	05/20/09	3974.60	-	52.35	0.00	3922.25
MW - 7	08/12/09	3974.60	-	52.34	0.00	3922.26
MW - 7	11/25/09	3974.60	-	52.34	0.00	3922.26
MW - 9	01/06/09	3975.06	52.43	52.89	0.46	3922.56
MW - 9	01/14/09	3975.06	52.45	52.89	0.44	3922.54
MW - 9	01/21/09	3975.06	47.11	47.60	0.49	3927.88
MW - 9	01/22/09	3975.06	52.42	52.75	0.33	3922.59
MW - 9	01/30/09	3975.06	52.43	52.76	0.33	3922.58
MW - 9	02/03/09	3975.06	52.44	52.69	0.25	3922.58
MW - 9	02/12/09	3975.06	52.43	52.79	0.36	3922.58
MW - 9	02/19/09	3975.06	52.44	52.82	0.38	3922.56
MW - 9	03/04/09	3975.06	52.49	52.89	0.40	3922.51
MW - 9	03/06/09	3975.06	52.40	52.84	0.44	3922.59
MW - 9	03/11/09	3975.06	52.44	52.78	0.34	3922.57
MW - 9	03/16/09	3975.06	52.53	52.92	0.39	3922.47
MW - 9	03/19/09	3975.06	52.43	52.74	0.31	3922.58
MW - 9	03/24/09	3975.06	52.39	52.74	0.35	3922.62
MW - 9	04/03/09	3975.06	52.73	52.82	0.09	3922.32
MW - 9	04/15/09	3975.06	52.40	52.75	0.35	3922.61
MW - 9	04/17/09	3975.06	52.43	52.61	0.18	3922.60
MW - 9	04/22/09	3975.06	52.38	52.81	0.43	3922.62

TABLE 1

2009 - GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
 TNM 97-04 (TOWNSEND)
 LEA COUNTY, NEW MEXICO
 NMOCD REFERENCE NUMBER GW-0294

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 9	04/29/09	3975.06	52.39	52.74	0.35	3922.62
MW - 9	05/20/09	3975.06	52.39	52.76	0.37	3922.61
MW - 9	06/09/09	3975.06	52.38	52.78	0.40	3922.62
MW - 9	06/17/09	3975.06	52.40	52.72	0.32	3922.61
MW - 9	06/23/09	3975.06	52.36	52.83	0.47	3922.63
MW - 9	07/01/09	3975.06	52.39	52.75	0.36	3922.62
MW - 9	07/08/09	3975.06	52.40	52.68	0.28	3922.62
MW - 9	07/15/09	3975.06	52.38	52.66	0.28	3922.64
MW - 9	07/17/09	3975.06	52.41	52.63	0.22	3922.62
MW - 9	07/23/09	3975.06	52.41	52.66	0.25	3922.61
MW - 9	07/24/09	3975.06	52.46	52.56	0.10	3922.59
MW - 9	07/30/09	3975.06	52.41	52.65	0.24	3922.61
MW - 9	08/04/09	3975.06	52.04	52.62	0.58	3922.93
MW - 9	08/12/09	3975.06	52.40	52.69	0.29	3922.62
MW - 9	08/20/09	3975.06	52.38	52.74	0.36	3922.63
MW - 9	08/26/09	3975.06	52.31	52.83	0.52	3922.67
MW - 9	09/02/09	3975.06	52.40	52.69	0.29	3922.62
MW - 9	09/09/09	3975.06	52.39	52.72	0.33	3922.62
MW - 9	09/14/09	3975.06	52.40	52.65	0.25	3922.62
MW - 9	09/21/09	3975.06	52.39	52.69	0.30	3922.63
MW - 9	10/01/09	3975.06	52.41	52.72	0.31	3922.60
MW - 9	10/08/09	3975.06	52.43	52.76	0.33	3922.58
MW - 9	10/14/09	3975.06	52.39	52.68	0.29	3922.63
MW - 9	10/21/09	3975.06	52.37	52.73	0.36	3922.64
MW - 9	10/28/09	3975.06	52.38	52.67	0.29	3922.64
MW - 9	11/04/09	3975.06	52.39	52.64	0.25	3922.63
MW - 9	11/11/09	3975.06	52.38	52.63	0.25	3922.64
MW - 9	11/18/09	3975.06	52.38	52.65	0.27	3922.64
MW - 9	11/25/09	3975.06	52.39	52.64	0.25	3922.63
MW - 10	02/19/09	3975.02	-	52.31	0.00	3922.71
MW - 10	05/20/09	3975.02	-	52.28	0.00	3922.74
MW - 10	08/12/09	3975.02	-	52.27	0.00	3922.75
MW - 10	11/25/09	3975.02	-	52.29	0.00	3922.73
MW - 11	02/19/09	3975.30	-	53.08	0.00	3922.22
MW - 11	05/20/09	3975.30	-	53.04	0.00	3922.26
MW - 11	08/12/09	3975.30	-	53.03	0.00	3922.27
MW - 11	11/25/09	3975.30	-	53.03	0.00	3922.27
MW - 12	02/19/09	3974.55	-	52.02	0.00	3922.53
MW - 12	05/20/09	3974.55	-	51.99	0.00	3922.56
MW - 12	08/12/09	3974.55	-	51.97	0.00	3922.58
MW - 12	11/25/09	3974.55	-	51.98	0.00	3922.57

TABLE 1

2009 - GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
 TNM 97-04 (TOWNSEND)
 LEA COUNTY, NEW MEXICO
 NMOCD REFERENCE NUMBER GW-0294

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 13	02/19/09	3975.00	-	53.02	0.00	3921.98
MW - 13	05/20/09	3975.00	-	52.99	0.00	3922.01
MW - 13	08/12/09	3975.00	-	52.99	0.00	3922.01
MW - 13	11/04/09	3975.00	-	52.94	0.00	3922.06
MW - 13	11/11/09	3975.00	-	52.94	0.00	3922.06
MW - 13	11/18/09	3975.00	-	52.95	0.00	3922.05
MW - 13	11/25/09	3975.00	-	52.97	0.00	3922.03
MW - 14	02/19/09	3976.15	-	53.71	0.00	3922.44
MW - 14	05/20/09	3976.15	-	53.69	0.00	3922.46
MW - 14	08/12/09	3976.15	-	53.69	0.00	3922.46
MW - 14	11/04/09	3976.15	-	53.66	0.00	3922.49
MW - 14	11/11/09	3976.15	-	53.66	0.00	3922.49
MW - 14	11/18/09	3976.15	-	53.65	0.00	3922.50
MW - 14	11/25/09	3976.15	-	53.65	0.00	3922.50
MW - 15	02/19/09	3974.69	-	52.56	0.00	3922.13
MW - 15	05/20/09	3974.69	-	52.53	0.00	3922.16
MW - 15	08/12/09	3974.69	-	52.53	0.00	3922.16
MW - 15	11/04/09	3974.69	-	52.47	0.00	3922.22
MW - 15	11/11/09	3974.69	-	52.46	0.00	3922.23
MW - 15	11/18/09	3974.69	-	52.50	0.00	3922.19
MW - 15	11/25/09	3974.69	-	52.51	0.00	3922.18
MW - 16	02/19/09	3975.12	-	52.58	0.00	3922.54
MW - 16	05/20/09	3975.12	-	52.54	0.00	3922.58
MW - 16	08/12/09	3975.12	-	52.55	0.00	3922.57
MW - 16	11/25/09	3975.12	-	52.51	0.00	3922.61
MW - 18	05/20/09		-	53.72	0.00	-53.72
MW - 18	08/12/09		-	53.72	0.00	-53.72
MW - 18	11/25/09		-	53.70	0.00	-53.70
RW - 1	01/06/09	3970.79	47.84	49.07	1.23	3922.77
RW - 1	01/14/09	3970.79	47.09	48.75	1.66	3923.45
RW - 1	01/21/09	3970.79	47.91	48.84	0.93	3922.74
RW - 1	01/22/09	3970.79	48.00	48.21	0.21	3922.76
RW - 1	01/30/09	3970.79	47.91	48.74	0.83	3922.76
RW - 1	02/03/09	3970.79	47.99	48.57	0.58	3922.71
RW - 1	02/12/09	3970.79	47.89	48.91	1.02	3922.75
RW - 1	02/19/09	3970.79	47.85	49.00	1.15	3922.77
RW - 1	03/04/09	3970.79	47.92	48.97	1.05	3922.71
RW - 1	03/06/09	3970.79	47.82	49.00	1.18	3922.79

TABLE 1

2009 - GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
 TNM 97-04 (TOWNSEND)
 LEA COUNTY, NEW MEXICO
 NMOCD REFERENCE NUMBER GW-0294

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
RW - 1	03/11/09	3970.79	47.94	48.60	0.66	3922.75
RW - 1	03/16/09	3970.79	47.95	49.00	1.05	3922.68
RW - 1	03/19/09	3970.79	47.90	48.72	0.82	3922.77
RW - 1	03/24/09	3970.79	47.89	48.49	0.60	3922.81
RW - 1	04/03/09	3970.79	47.85	48.90	1.05	3922.78
RW - 1	04/15/09	3970.79	47.86	48.80	0.94	3922.79
RW - 1	04/17/09	3970.79	47.98	48.25	0.27	3922.77
RW - 1	04/22/09	3970.79	47.83	48.88	1.05	3922.80
RW - 1	04/29/09	3970.79	47.84	48.79	0.95	3922.81
RW - 1	05/20/09	3970.79	47.82	48.88	1.06	3922.81
RW - 1	06/09/09	3970.79	47.82	48.95	1.13	3922.80
RW - 1	06/17/09	3970.79	47.88	48.81	0.93	3922.77
RW - 1	06/23/09	3970.79	47.83	48.87	1.04	3922.80
RW - 1	07/01/09	3970.79	47.82	48.88	1.06	3922.81
RW - 1	07/08/09	3970.79	47.89	48.61	0.72	3922.79
RW - 1	07/15/09	3970.79	47.86	48.64	0.78	3922.81
RW - 1	07/17/09	3970.79	47.91	48.60	0.69	3922.78
RW - 1	07/23/09	3970.79	47.83	48.88	1.05	3922.80
RW - 1	07/24/09	3970.79	47.96	48.17	0.21	3922.80
RW - 1	07/30/09	3970.79	47.91	48.60	0.69	3922.78
RW - 1	08/04/09	3970.79	47.91	48.48	0.57	3922.79
RW - 1	08/12/09	3970.79	47.88	48.73	0.85	3922.78
RW - 1	08/20/09	3970.79	47.92	48.75	0.83	3922.75
RW - 1	08/26/09	3970.79	47.83	48.80	0.97	3922.81
RW - 1	09/02/09	3970.79	47.87	48.75	0.88	3922.79
RW - 1	09/09/09	3970.79	47.90	48.61	0.71	3922.78
RW - 1	09/14/09	3970.79	47.92	48.45	0.53	3922.79
RW - 1	09/21/09	3970.79	47.86	48.71	0.85	3922.80
RW - 1	10/01/09	3970.79	47.88	48.84	0.96	3922.77
RW - 1	10/08/09	3970.79	47.90	48.76	0.86	3922.76
RW - 1	10/14/09	3970.79	47.87	48.70	0.83	3922.80
RW - 1	10/21/09	3970.79	47.82	48.59	0.77	3922.85
RW - 1	10/28/09	3970.79	47.85	48.69	0.84	3922.81
RW - 1	11/04/09	3970.79	47.90	48.63	0.73	3922.78
RW - 1	11/11/09	3970.79	47.87	48.60	0.73	3922.81
RW - 1	11/25/09	3970.79	47.90	48.58	0.68	3922.79

* Complete Historical Data Tables are presented on the attached CD.

TABLE 2

2009 - CONCENTRATIONS OF BTEX IN GROUNDWATER

PLAINS PIPELINE, L.P.
TNM 97-04
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER GW-0294

All Concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	EPA SW 846-8015M		EPA SW 846-8021B, 5030				
		GRO C6-C12 mg/L	DRO C12-C35 mg/L	BENZENE	TOLUENE	ETHYL- BENZENE	m, p - XYLENES	o - XYLENES
NMOCD REGULATORY LIMIT				0.01	0.75	0.75	0.62	
MW - 2	02/19/09			Not Sampled Due to PSH in Well				
MW - 2	05/20/09			Not Sampled Due to PSH in Well				
MW - 2	08/12/09			Not Sampled Due to PSH in Well				
MW - 2	11/25/09	51.00	85.10	12.00	6.380	0.834	2.940	
MW - 3	02/19/09			Not Sampled Due to PSH in Well				
MW - 3	05/20/09			Not Sampled Due to PSH in Well				
MW - 3	08/12/09			Not Sampled Due to PSH in Well				
MW - 3	11/25/09	178.0	1850.0	16.80	17.20	4.690	14.20	
MW - 4	02/19/09			Not Sampled Due to PSH in Well				
MW - 4	05/20/09			Not Sampled Due to PSH in Well				
MW - 4	08/12/09			Not Sampled Due to PSH in Well				
MW - 4	11/25/09			2.000	1.060	0.618	1.340	
MW - 5	02/19/09			Not Sampled Due to PSH in Well				
MW - 5	05/20/09			Not Sampled Due to PSH in Well				
MW - 5	08/12/09			Not Sampled Due to PSH in Well				
MW - 5	11/25/09	52.00	32.30	15.60	5.700	1.080	2.290	
MW - 6	02/19/09			Not Sampled Due to PSH in Well				
MW - 6	05/20/09			Not Sampled Due to PSH in Well				
MW - 6	08/12/09			Not Sampled Due to PSH in Well				
MW - 6	11/25/09	53.20	159.0	19.80	5.060	1.010	2.330	
MW - 7	02/19/09			Not Sampled Due to Sample Reduction				
MW - 7	05/20/09			Not Sampled Due to Sample Reduction				
MW - 7	08/12/09			Not Sampled Due to Sample Reduction				
MW - 7	11/25/09			<0.001	<0.001	<0.001	<0.001	
MW - 9	02/19/09			Not Sampled Due to PSH in Well				
MW - 9	05/20/09			Not Sampled Due to PSH in Well				
MW - 9	08/12/09			Not Sampled Due to PSH in Well				
MW - 9	08/12/09	16.00	74.30	2.090	2.470	0.503	1.600	
MW - 10	02/19/09			Not Sampled Due to Sample Reduction				
MW - 10	05/20/09			Not Sampled Due to Sample Reduction				
MW - 10	08/12/09			Not Sampled Due to Sample Reduction				
MW - 10	11/25/09			<0.001	<0.001	<0.001	<0.001	

TABLE 2

2009 - CONCENTRATIONS OF BTEX IN GROUNDWATER

PLAINS PIPELINE, L.P.
TNM 97-04
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER GW-0294

All Concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	EPA SW 846-8015M		EPA SW 846-8021B, 5030				
		GRO C6-C12 mg/L	DRO C12-C35 mg/L	BENZENE	TOLUENE	ETHYL- BENZENE	m, p - XYLENES	o - XYLENES
NMOCD REGULATORY LIMIT				0.01	0.75	0.75	0.62	
MW - 11	02/19/09			Not Sampled Due to Sample Reduction				
MW - 11	05/20/09			Not Sampled Due to Sample Reduction				
MW - 11	08/12/09			Not Sampled Due to Sample Reduction				
MW - 11	11/25/09			<0.001	<0.001	<0.001	<0.001	
MW - 12	02/19/09			<0.001	<0.001	<0.001	<0.001	
MW - 12	05/20/09			Not Sampled Due to Sample Reduction				
MW - 12	08/12/09			Not Sampled Due to Sample Reduction				
MW - 12	11/25/09			<0.001	<0.001	<0.001	<0.001	
MW - 13	02/19/09			0.548	<0.005	<0.005	0.0151	
MW - 13	05/20/09			0.667	<0.005	0.072	0.1920	
MW - 13	08/12/09			1.470	<0.005	0.047	0.1630	
MW - 13	11/25/09			1.420	<0.005	<0.005	<0.005	
MW - 14	02/19/09			Not Sampled				
MW - 14	05/20/09			0.0456	0.0053	0.1500	0.580	
MW - 14	08/12/09			0.0439	<0.001	0.1570	0.669	
MW - 14	11/25/09			0.0181	<0.001	0.0102	0.167	
MW - 15	02/19/09			0.673	<0.005	0.0472	0.0094	
MW - 15	05/20/09			2.050	<0.005	0.2190	0.1430	
MW - 15	08/12/09			0.510	<0.005	0.0523	0.0653	
MW - 15	11/25/09			1.390	<0.005	0.0820	0.0206	
MW - 16	02/19/09			Not Sampled Due to Sample Reduction				
MW - 16	05/20/09			<0.001	<0.001	<0.001	<0.001	
MW - 16	08/12/09			Not Sampled Due to Sample Reduction				
MW - 16	11/25/09			<0.001	<0.001	<0.001	<0.001	
MW - 18	08/12/09			<0.001	<0.001	<0.001	<0.001	
MW - 18	11/25/09			<0.001	<0.001	<0.001	<0.001	
RW - 1	02/19/09			Not Sampled Due to PSH in Well				
RW - 1	05/20/09			Not Sampled Due to PSH in Well				
RW - 1	08/12/09			Not Sampled Due to PSH in Well				
RW - 1	11/25/09	42.70	89.00	11.10	5.480	0.946	2.270	

* Complete Historical Data Tables are presented on the attached CD.

TABLE 3

POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

PLAINS MARKETING, L.P.
 TNM 97-04 TOWNSEND
 LEA COUNTY, NEW MEXICO
 NMOCD REFERENCE NUMBER GW-0294

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	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Dibenzofuran	
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.				—	—	—	0.0002 mg/L	—	0.0002 mg/L	0.0002 mg/L	0.0003 mg/L	—	0.0004 mg/L	0.03 mg/L	0.03 mg/L	—	—	0.03 mg/L		—
MW-2	12/10/08	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	0.0109	<0.000922	0.0429	<0.000922	0.232	0.0587	<0.000922	0.354	0.417	0.0377	
	11/25/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	0.0276	<0.000922	0.207	0.0378	<0.000922	0.274	0.337	0.0267	
MW-3	12/10/08	<0.000184	0.00934	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	0.00578	<0.000184	0.024	<0.000184	0.192	0.0368	<0.000184	0.348	0.409	0.0228	
	11/25/09	<0.0370	<0.0370	<0.0370	<0.0370	<0.0370	<0.0370	<0.0370	<0.0370	<0.0370	<0.0370	0.788	<0.0370	3.87	1.06	<0.0370	7.02	8.74	0.626	
MW-4	12/10/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	0.0039	<0.000184	0.0668	0.00376	<0.000184	0.0435	0.0423	0.00414	
	11/25/09	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	0.0143	<0.000917	0.103	0.0181	<0.000917	0.118	0.089	0.0123	
MW-5	12/10/08	<0.000935	<0.000935	<0.000935	<0.000935	<0.000935	<0.000935	<0.000935	<0.000935	<0.000935	<0.000935	<0.000935	<0.000935	0.192	0.0424	<0.000935	0.301	0.346	0.0316	
	11/25/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	0.00909	<0.000184	0.0905	0.0104	<0.000184	0.0931	0.107	0.00848	
MW-6	12/10/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	0.0921	0.00706	<0.000184	0.0687	0.0744	0.00635	
	11/25/09	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	<0.000922	0.0528	<0.000922	0.294	0.0648	<0.000922	0.498	0.569	0.0467	
MW-7	12/08/08	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	0.0002	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	
	11/25/09	<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	
MW-9	12/10/08	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	<0.000926	0.0134	<0.000926	0.102	0.016	<0.000926	0.122	0.138	0.0127	
	11/25/09	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	0.0250	<0.000917	0.125	0.0315	<0.000917	0.221	0.253	0.0201	
MW-10	12/08/08	<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	
	11/25/09	<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	
MW-11	12/08/08	<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	
	11/25/09	<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	

TABLE 3

POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

PLAINS MARKETING, L.P.
TNM 97-04 TOWNSEND
LEA COUNTY, NEW MEXICO
NMOC REFERENCE NUMBER GW-0294

All water concentrations are reported in mg/L

ESA 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	Naphthalene	Phenanthrene	Pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Dibenzofuran
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.					0.0001 mg/L	0.0007 mg/L	0.0002 mg/L		0.0002 mg/L	0.0002 mg/L	0.0003 mg/L			0.0004 mg/L	0.03 mg/L				0.03 mg/L	
MW-12	12/08/08	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	11/25/09	<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
MW-13	12/08/08	<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	0.00116
	11/25/09	<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	0.000638
MW-14	12/08/08	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	0.000355
	11/25/09	<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
MW-15	12/08/08	<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	0.000687
	11/25/09	<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
MW-16	12/08/08	<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
	11/25/09	<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
MW-18	11/25/09	<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
RW-1	12/10/08	<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	0.00817
	11/25/09	<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	0.0912	0.0100



Appendices

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

03/02/2005 09:05
District I (505) 393-6751
P.O. Box 1500
Hobbs, NM 88241-1980
District II (505) 748-1283
811 South First
Artesia, NM 88210
District III (505) 354-6178
1000 Rio Boscon Road
Aztec, NM 87410
District IV (505) 827-7131

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-141
Originated 2/13/97

Submit 2 copies to
Appropriate District
Office in accordance
with Rule 116 on
back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name Texas-New Mexico Pipe Line Company	Contact Edwin H. Gripp	
Address Box 60028, San Angelo, TX 76906	Telephone No. (915) 947-9000	
Facility Name 4" gathering line	Facility Type pipeline	
Surface Owner Larry Megert	Mineral Owner	Lease No.

LOCATION OF RELEASE								
Unit/Center	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	11	16S	35E					Lea

NATURE OF RELEASE

Type of Release Sweet Crude	Volume of Release (revised) 488 barrels	Volume Recovered 5 barrels
Source of Release 4" gathering line	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 4/16/97 4:00 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Wayne Price	
By Whom? Billy D. Chapman	Date and Hour 4/25/97 9:00 a.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.

Describe Cause of Problem and Remedial Action Taken.

External Corrosion. Leak successfully clamped off.

Describe Area Affected and Cleanup Action Taken.

Approximately 1500 sq.ft. pasture land. Will remediate on site.

Describe General Conditions Prevailing (Temperature, Precipitation, etc.).

75 degrees; clear

I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Edwin H. Gripp*

Printed Name: Edwin H. Gripp

Title: District Manager

Date: August 12, 1997

Phone: 915-947-9001

OIL CONSERVATION DIVISION

Approved by
District Supervisor:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐

* Attach Additional Sheets If Necessary

State Corp. Commission
Pipe Line Division

Hazardous Waste Section
NM Environmental Improvement Div.

TNM-97-04

BDC JAS



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1296
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
6015 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

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

Report Date: February 25, 2009

Work Order: 9022003



Project Location: Lovington, NM
Project Name: TNM 97-04 Townsend
Project Number: TNM 97-04

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
188034	MW-12	water	2009-02-19	12:30	2009-02-20
188035	MW-13	water	2009-02-19	13:45	2009-02-20
188036	MW-15	water	2009-02-19	15:30	2009-02-20

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

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style and is positioned above a horizontal line.

Dr. Blair Leftwich, Director

Standard Flags

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

Case Narrative

Samples for project TNM 97-04 Townsend were received by TraceAnalysis, Inc. on 2009-02-20 and assigned to work order 9022003. Samples for work order 9022003 were received intact without headspace and at a temperature of 1.6 deg. 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	48736	2009-02-20 at 15:14	57046	2009-02-20 at 15:14
BTEX	S 8021B	48756	2009-02-23 at 09:48	57108	2009-02-23 at 13:30

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 9022003 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: February 25, 2009
TNM 97-04

Work Order: 9022003
TNM 97-04 Townsend

Page Number: 4 of 9
Lovington, NM

Analytical Report

Sample: 188034 - MW-12

Laboratory: Midland
Analysis: BTEX
QC Batch: 57046
Prep Batch: 48736

Analytical Method: S 8021B
Date Analyzed: 2009-02-20
Sample Preparation: 2009-02-20

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)		0.0962	mg/L	1	0.100	96	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.0756	mg/L	1	0.100	76	40.1 - 136

Sample: 188035 - MW-13

Laboratory: Midland
Analysis: BTEX
QC Batch: 57108
Prep Batch: 48756

Analytical Method: S 8021B
Date Analyzed: 2009-02-23
Sample Preparation: 2009-02-23

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.548	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		0.0151	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.485	mg/L	5	0.500	97	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.541	mg/L	5	0.500	108	40.1 - 136

Sample: 188036 - MW-15

Laboratory: Midland
Analysis: BTEX
QC Batch: 57108
Prep Batch: 48756

Analytical Method: S 8021B
Date Analyzed: 2009-02-23
Sample Preparation: 2009-02-23

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

Report Date: February 25, 2009
TNM 97-04

Work Order: 9022003
TNM 97-04 Townsend

Page Number: 5 of 9
Lovington, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.673	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		0.0472	mg/L	5	0.00100
Xylene		0.00940	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.504	mg/L	5	0.500	101	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.539	mg/L	5	0.500	108	40.1 - 136

Method Blank (1) QC Batch: 57046

QC Batch: 57046
Prep Batch: 48736

Date Analyzed: 2009-02-20
QC Preparation: 2009-02-20

Analyzed By: ME
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000500	mg/L	0.001
Xylene		<0.000400	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0976	mg/L	1	0.100	98	77.2 - 129.1
4-Bromofluorobenzene (4-BFB)		0.0888	mg/L	1	0.100	89	69.1 - 132.3

Method Blank (1) QC Batch: 57108

QC Batch: 57108
Prep Batch: 48756

Date Analyzed: 2009-02-23
QC Preparation: 2009-02-23

Analyzed By: ME
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000500	mg/L	0.001
Xylene		<0.000400	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0942	mg/L	1	0.100	94	77.2 - 129.1
4-Bromofluorobenzene (4-BFB)		0.0889	mg/L	1	0.100	89	69.1 - 132.3

Report Date: February 25, 2009
TNM 97-04

Work Order: 9022003
TNM 97-04 Townsend

Page Number: 6 of 9
Lovington, NM

Laboratory Control Spike (LCS-1)

QC Batch: 57046
Prep Batch: 48736

Date Analyzed: 2009-02-20
QC Preparation: 2009-02-20

Analyzed By: ME
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0937	mg/L	1	0.100	<0.00110	94	84 - 119.7
Toluene	0.0938	mg/L	1	0.100	<0.00100	94	84.9 - 118.2
Ethylbenzene	0.0931	mg/L	1	0.100	<0.00100	93	84.4 - 118.6
Xylene	0.275	mg/L	1	0.300	<0.00290	92	84.8 - 117.8

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0982	mg/L	1	0.100	<0.00110	98	84 - 119.7	5	20
Toluene	0.0986	mg/L	1	0.100	<0.00100	99	84.9 - 118.2	5	20
Ethylbenzene	0.100	mg/L	1	0.100	<0.00100	100	84.4 - 118.6	7	20
Xylene	0.296	mg/L	1	0.300	<0.00290	99	84.8 - 117.8	7	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)	0.0982	0.0985	mg/L	1	0.100	98	98	80 - 128.3
4-Bromofluorobenzene (4-BFB)	0.0907	0.0911	mg/L	1	0.100	91	91	59.7 - 136.3

Laboratory Control Spike (LCS-1)

QC Batch: 57108
Prep Batch: 48756

Date Analyzed: 2009-02-23
QC Preparation: 2009-02-23

Analyzed By: ME
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0948	mg/L	1	0.100	<0.00110	95	84 - 119.7
Toluene	0.0944	mg/L	1	0.100	<0.00100	94	84.9 - 118.2
Ethylbenzene	0.0943	mg/L	1	0.100	<0.00100	94	84.4 - 118.6
Xylene	0.280	mg/L	1	0.300	<0.00290	93	84.8 - 117.8

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0980	mg/L	1	0.100	<0.00110	98	84 - 119.7	3	20
Toluene	0.0983	mg/L	1	0.100	<0.00100	98	84.9 - 118.2	4	20
Ethylbenzene	0.0984	mg/L	1	0.100	<0.00100	98	84.4 - 118.6	4	20
Xylene	0.292	mg/L	1	0.300	<0.00290	97	84.8 - 117.8	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0984	0.0976	mg/L	1	0.100	98	98	80 - 128.3
4-Bromofluorobenzene (4-BFB)	0.0945	0.0957	mg/L	1	0.100	94	96	59.7 - 136.3

Matrix Spike (MS-1) Spiked Sample: 187831

QC Batch: 57046
Prep Batch: 48736

Date Analyzed: 2009-02-20
QC Preparation: 2009-02-20

Analyzed By: ME
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.81	mg/L	10	1.00	0.9229	89	77.5 - 121.1
Toluene	0.892	mg/L	10	1.00	<0.0100	89	78.8 - 119.6
Ethylbenzene	0.883	mg/L	10	1.00	<0.0100	88	77.9 - 120.5
Xylene	2.64	mg/L	10	3.00	0.0456	86	78 - 119.4

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	1.72	mg/L	10	1.00	0.9229	73	77.5 - 121.1	5	20
Toluene	0.888	mg/L	10	1.00	<0.0100	89	78.8 - 119.6	0	20
Ethylbenzene	0.894	mg/L	10	1.00	<0.0100	89	77.9 - 120.5	1	20
Xylene	2.66	mg/L	10	3.00	0.0456	87	78 - 119.4	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.970	0.969	mg/L	10	1	97	97	86.6 - 118.9
4-Bromofluorobenzene (4-BFB)	0.753	0.751	mg/L	10	1	75	75	59.4 - 127.3

Matrix Spike (MS-1) Spiked Sample: 188129

QC Batch: 57108
Prep Batch: 48756

Date Analyzed: 2009-02-23
QC Preparation: 2009-02-23

Analyzed By: ME
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.447	mg/L	5	0.500	<0.00550	89	77.5 - 121.1
Toluene	0.436	mg/L	5	0.500	<0.00500	87	78.8 - 119.6
Ethylbenzene	0.442	mg/L	5	0.500	<0.00500	88	77.9 - 120.5

continued ...

¹Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Xylene	1.28	mg/L	5	1.50	<0.0145	85	78 - 119.4

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	0.469	mg/L	5	0.500	<0.00550	94	77.5 - 121.1	5	20
Toluene	0.464	mg/L	5	0.500	<0.00500	93	78.8 - 119.6	6	20
Ethylbenzene	0.474	mg/L	5	0.500	<0.00500	95	77.9 - 120.5	7	20
Xylene	1.38	mg/L	5	1.50	<0.0145	92	78 - 119.4	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)	0.478	0.482	mg/L	5	0.5	96	96	86.6 - 118.9
4-Bromofluorobenzene (4-BFB)	0.401	0.402	mg/L	5	0.5	80	80	59.4 - 127.3

Standard (CCV-1)

QC Batch: 57046

Date Analyzed: 2009-02-20

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	0.0906	91	85 - 115	2009-02-20
Toluene		mg/L	0.100	0.0905	90	85 - 115	2009-02-20
Ethylbenzene		mg/L	0.100	0.0903	90	85 - 115	2009-02-20
Xylene		mg/L	0.300	0.260	87	85 - 115	2009-02-20

Standard (CCV-2)

QC Batch: 57046

Date Analyzed: 2009-02-20

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	0.0874	87	85 - 115	2009-02-20
Toluene		mg/L	0.100	0.0875	88	85 - 115	2009-02-20
Ethylbenzene		mg/L	0.100	0.0887	89	85 - 115	2009-02-20
Xylene		mg/L	0.300	0.257	86	85 - 115	2009-02-20

Standard (ICV-1)

QC Batch: 57108

Date Analyzed: 2009-02-23

Analyzed By: ME

Report Date: February 25, 2009
TNM 97-04

Work Order: 9022003
TNM 97-04 Townsend

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Lovington, NM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0997	100	85 - 115	2009-02-23
Toluene		mg/L	0.100	0.100	100	85 - 115	2009-02-23
Ethylbenzene		mg/L	0.100	0.101	101	85 - 115	2009-02-23
Xylene		mg/L	0.300	0.294	98	85 - 115	2009-02-23

Standard (CCV-1)

QC Batch: 57108

Date Analyzed: 2009-02-23

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	0.0901	90	85 - 115	2009-02-23
Toluene		mg/L	0.100	0.0904	90	85 - 115	2009-02-23
Ethylbenzene		mg/L	0.100	0.0908	91	85 - 115	2009-02-23
Xylene		mg/L	0.300	0.266	89	85 - 115	2009-02-23

LAB Order ID # 9022003

Page 1 of 1

TraceAnalysis, Inc.

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email: lab@traceanalysis.com

Company Name: **NOVA** Phone #: **432 520 7720**

Address: (Street, City, Zip) **2057 Commerce** Fax #:

Contact Person: **Ron Rounsaville** E-mail:

Invoice to: (If different from above) **Plains**

Project #: **NM**

Project Location (including state): **NM**

Project Name: **Townsend 9704**

Sampler Signature: *[Signature]*

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B / 602 / 8260B / 624	
STEX 8021B / 602 / 8260B / 624	
TPH 418.1 / TX1005 / TX1005 EX(C35)	
TPH 8015 GRO / DRO / TVHC	
PAH 8270C / 625	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B / 624	
GC/MS Semi. Vol. 8270C / 625	
PCBs 8082 / 608	
Pesticides 8081A / 608	
BOD, TSS, pH	
Moisture Content	
Turn Around Time if different from standard	

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD					SAMPLING		TIME
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	
188034	NW-12	3	var	X				X						219	1230
035	NW-13	1	1											1	1345
036	NW-15	1	1											1	150
												</			

Relinquished by: *[Signature]* Company: **Nova** Date: **2-20-09 8:04** Time: **8:04** Temp: **1.6**

Relinquished by: *[Signature]* Company: **Nova** Date: **2-20-09 8:04** Time: **8:04** Temp: **1.6**

Relinquished by: *[Signature]* Company: **Nova** Date: **2-20-09 8:04** Time: **8:04** Temp: **1.6**

REMARKS: **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.

Carrier # **CAR-1A**

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6015 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

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

Report Date: May 22, 2009

Work Order: 9052109



Project Location: Lovington, NM
Project Name: TNM 97-04 Townsend
Project Number: TNM 97-04

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
196536	MW-16	water	2009-05-20	13:00	2009-05-21
196537	MW-14	water	2009-05-20	13:45	2009-05-21
196538	MW-13	water	2009-05-20	14:30	2009-05-21
196539	MW-15	water	2009-05-20	15:15	2009-05-21

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 7 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Standard Flags

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

Case Narrative

Samples for project TNM 97-04 Townsend were received by TraceAnalysis, Inc. on 2009-05-21 and assigned to work order 9052109. Samples for work order 9052109 were received intact without headspace and at a temperature of 1.3 deg. 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	50982	2009-05-21 at 09:42	59722	2009-05-21 at 09:42

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 9052109 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: May 22, 2009
TNM 97-04

Work Order: 9052109
TNM 97-04 Townsend

Page Number: 4 of 7
Lovington, NM

Analytical Report

Sample: 196536 - MW-16

Laboratory: Midland
Analysis: BTEX
QC Batch: 59722
Prep Batch: 50982

Analytical Method: S 8021B
Date Analyzed: 2009-05-21
Sample Preparation: 2009-05-21

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)		0.0964	mg/L	1	0.100	96	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.0851	mg/L	1	0.100	85	40.1 - 136

Sample: 196537 - MW-14

Laboratory: Midland
Analysis: BTEX
QC Batch: 59722
Prep Batch: 50982

Analytical Method: S 8021B
Date Analyzed: 2009-05-21
Sample Preparation: 2009-05-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.0456	mg/L	1	0.00100
Toluene		0.00530	mg/L	1	0.00100
Ethylbenzene		0.150	mg/L	1	0.00100
Xylene		0.580	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	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.112	mg/L	1	0.100	112	40.1 - 136

Sample: 196538 - MW-13

Laboratory: Midland
Analysis: BTEX
QC Batch: 59722
Prep Batch: 50982

Analytical Method: S 8021B
Date Analyzed: 2009-05-21
Sample Preparation: 2009-05-21

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

Report Date: May 22, 2009
TNM 97-04

Work Order: 9052109
TNM 97-04 Townsend

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Lovington, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.667	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		0.0720	mg/L	5	0.00100
Xylene		0.192	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.500	mg/L	5	0.500	100	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.478	mg/L	5	0.500	96	40.1 - 136

Sample: 196539 - MW-15

Laboratory: Midland
Analysis: BTEX
QC Batch: 59722
Prep Batch: 50982

Analytical Method: S 8021B
Date Analyzed: 2009-05-21
Sample Preparation: 2009-05-21

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		2.05	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		0.219	mg/L	5	0.00100
Xylene		0.143	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.535	mg/L	5	0.500	107	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.465	mg/L	5	0.500	93	40.1 - 136

Method Blank (1) QC Batch: 59722

QC Batch: 59722
Prep Batch: 50982

Date Analyzed: 2009-05-21
QC Preparation: 2009-05-21

Analyzed By: ME
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000500	mg/L	0.001
Xylene		<0.000400	mg/L	0.001

Report Date: May 22, 2009
TNM 97-04

Work Order: 9052109
TNM 97-04 Townsend

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Lovington, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0947	mg/L	1	0.100	95	77.2 - 129.1
4-Bromofluorobenzene (4-BFB)		0.0747	mg/L	1	0.100	75	69.1 - 132.3

Laboratory Control Spike (LCS-1)

QC Batch: 59722
Prep Batch: 50982

Date Analyzed: 2009-05-21
QC Preparation: 2009-05-21

Analyzed By: ME
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0894	mg/L	1	0.100	<0.00110	89	84 - 119.7
Toluene	0.0893	mg/L	1	0.100	<0.00100	89	84.9 - 118.2
Ethylbenzene	0.0848	mg/L	1	0.100	<0.00100	85	84.4 - 118.6
Xylene	0.255	mg/L	1	0.300	<0.00290	85	84.8 - 117.8

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0949	mg/L	1	0.100	<0.00110	95	84 - 119.7	6	20
Toluene	0.0935	mg/L	1	0.100	<0.00100	94	84.9 - 118.2	5	20
Ethylbenzene	0.0930	mg/L	1	0.100	<0.00100	93	84.4 - 118.6	9	20
Xylene	0.275	mg/L	1	0.300	<0.00290	92	84.8 - 117.8	8	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.101	0.0989	mg/L	1	0.100	101	99	80 - 128.3
4-Bromofluorobenzene (4-BFB)	0.0769	0.0817	mg/L	1	0.100	77	82	59.7 - 136.3

Matrix Spike (MS-1) Spiked Sample: 196539

QC Batch: 59722
Prep Batch: 50982

Date Analyzed: 2009-05-21
QC Preparation: 2009-05-21

Analyzed By: ME
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	¹ 2.41	mg/L	5	0.500	2.0542	71	77.5 - 121.1
Toluene	0.464	mg/L	5	0.500	<0.00500	93	78.8 - 119.6
Ethylbenzene	0.621	mg/L	5	0.500	0.2193	80	77.9 - 120.5
Xylene	1.43	mg/L	5	1.50	0.143	86	78 - 119.4

¹Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

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	2.46	mg/L	5	0.500	2.0542	81	77.5 - 121.1	2	20
Toluene	0.525	mg/L	5	0.500	<0.00500	105	78.8 - 119.6	12	20
Ethylbenzene	0.655	mg/L	5	0.500	0.2193	87	77.9 - 120.5	5	20
Xylene	1.52	mg/L	5	1.50	0.143	92	78 - 119.4	6	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)	0.521	0.484	mg/L	5	0.5	104	97	86.6 - 118.9
4-Bromofluorobenzene (4-BFB)	0.456	0.461	mg/L	5	0.5	91	92	59.4 - 127.3

Standard (CCV-1)

QC Batch: 59722

Date Analyzed: 2009-05-21

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	0.0949	95	80 - 120	2009-05-21
Toluene		mg/L	0.100	0.0908	91	80 - 120	2009-05-21
Ethylbenzene		mg/L	0.100	0.0900	90	80 - 120	2009-05-21
Xylene		mg/L	0.300	0.270	90	80 - 120	2009-05-21

Standard (CCV-2)

QC Batch: 59722

Date Analyzed: 2009-05-21

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	0.0998	100	80 - 120	2009-05-21
Toluene		mg/L	0.100	0.0993	99	80 - 120	2009-05-21
Ethylbenzene		mg/L	0.100	0.0998	100	80 - 120	2009-05-21
Xylene		mg/L	0.300	0.290	97	80 - 120	2009-05-21



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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

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

Report Date: August 17, 2009

Work Order: 9081338



Project Location: Lovington, NM
Project Name: TNM 97-04 Townsend
Project Number: TNM 97-04

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
205862	MW-18	water	2009-08-12	15:15	2009-08-13
205863	MW-14	water	2009-08-12	16:00	2009-08-13
205864	MW-13	water	2009-08-12	16:45	2009-08-13
205865	MW-15	water	2009-08-12	17:30	2009-08-13

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 7 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 TNM 97-04 Townsend were received by TraceAnalysis, Inc. on 2009-08-13 and assigned to work order 9081338. Samples for work order 9081338 were received intact without headspace and at a temperature of 6.0 deg. 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	53323	2009-08-14 at 10:51	62503	2009-08-15 at 04:37

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 9081338 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: 205862 - MW-18

Laboratory: Midland

Analysis: BTEX

QC Batch: 62503

Prep Batch: 53323

Analytical Method: S 8021B

Date Analyzed: 2009-08-15

Sample Preparation: 2009-08-14

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)		0.0977	mg/L	1	0.100	98	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0916	mg/L	1	0.100	92	49.8 - 130.8

Sample: 205863 - MW-14

Laboratory: Midland

Analysis: BTEX

QC Batch: 62503

Prep Batch: 53323

Analytical Method: S 8021B

Date Analyzed: 2009-08-15

Sample Preparation: 2009-08-14

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.0439	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		0.157	mg/L	1	0.00100
Xylene		0.669	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0994	mg/L	1	0.100	99	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.128	mg/L	1	0.100	128	49.8 - 130.8

Sample: 205864 - MW-13

Laboratory: Midland

Analysis: BTEX

QC Batch: 62503

Prep Batch: 53323

Analytical Method: S 8021B

Date Analyzed: 2009-08-15

Sample Preparation: 2009-08-14

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		1.47	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		0.0474	mg/L	5	0.00100
Xylene		0.163	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.496	mg/L	5	0.500	99	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.526	mg/L	5	0.500	105	49.8 - 130.8

Sample: 205865 - MW-15

Laboratory: Midland
Analysis: BTEX
QC Batch: 62503
Prep Batch: 53323

Analytical Method: S 8021B
Date Analyzed: 2009-08-15
Sample Preparation: 2009-08-14

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.510	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		0.0523	mg/L	5	0.00100
Xylene		0.0653	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.493	mg/L	5	0.500	99	87 - 105.2
4-Bromofluorobenzene (4-BFB)		0.502	mg/L	5	0.500	100	49.8 - 130.8

Method Blank (1) QC Batch: 62503

QC Batch: 62503
Prep Batch: 53323

Date Analyzed: 2009-08-15
QC Preparation: 2009-08-14

Analyzed By: ME
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000500	mg/L	0.001
Xylene		<0.000400	mg/L	0.001

Report Date: August 17, 2009
TNM 97-04

Work Order: 9081338
TNM 97-04 Townsend

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0981	mg/L	1	0.100	98	85.4 - 105.2
4-Bromofluorobenzene (4-BFB)		0.0980	mg/L	1	0.100	98	52.8 - 124.2

Laboratory Control Spike (LCS-1)

QC Batch: 62503
Prep Batch: 53323

Date Analyzed: 2009-08-15
QC Preparation: 2009-08-14

Analyzed By: ME
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.106	mg/L	1	0.100	<0.00110	106	74.3 - 123.4
Toluene	0.105	mg/L	1	0.100	<0.00100	105	70.1 - 126.2
Ethylbenzene	0.105	mg/L	1	0.100	<0.00100	105	68.6 - 124.7
Xylene	0.316	mg/L	1	0.300	<0.00290	105	64.8 - 127.2

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.109	mg/L	1	0.100	<0.00110	109	74.3 - 123.4	3	20
Toluene	0.110	mg/L	1	0.100	<0.00100	110	70.1 - 126.2	5	20
Ethylbenzene	0.112	mg/L	1	0.100	<0.00100	112	68.6 - 124.7	6	20
Xylene	0.338	mg/L	1	0.300	<0.00290	113	64.8 - 127.2	7	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)	0.0969	0.100	mg/L	1	0.100	97	100	84.8 - 110.8
4-Bromofluorobenzene (4-BFB)	0.103	0.102	mg/L	1	0.100	103	102	51.7 - 134.7

Standard (CCV-1)

QC Batch: 62503

Date Analyzed: 2009-08-15

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	0.104	104	80 - 120	2009-08-15
Toluene		mg/L	0.100	0.105	105	80 - 120	2009-08-15
Ethylbenzene		mg/L	0.100	0.107	107	80 - 120	2009-08-15
Xylene		mg/L	0.300	0.323	108	80 - 120	2009-08-15

¹SPECIAL - MS/MSD was run but not reported due to sample out of range •

Report Date: August 17, 2009
TNM 97-04

Work Order: 9081338
TNM 97-04 Townsend

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Lovington, NM

Standard (CCV-2)

QC Batch: 62503

Date Analyzed: 2009-08-15

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	0.107	107	80 - 120	2009-08-15
Toluene		mg/L	0.100	0.107	107	80 - 120	2009-08-15
Ethylbenzene		mg/L	0.100	0.106	106	80 - 120	2009-08-15
Xylene		mg/L	0.300	0.321	107	80 - 120	2009-08-15



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6015 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

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

Report Date: December 14, 2009

Work Order: 9113009



Project Location: Lovington, NM
Project Name: TNM 97-04 Townsend
Project Number: TNM 97-04

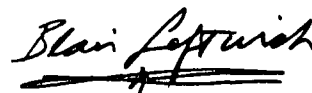
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
216002	MW-10	water	2009-11-25	08:00	2009-11-30
216003	MW-11	water	2009-11-25	08:30	2009-11-30
216004	MW-12	water	2009-11-25	09:00	2009-11-30
216005	MW-7	water	2009-11-25	09:30	2009-11-30
216006	MW-16	water	2009-11-25	10:00	2009-11-30
216007	MW-18	water	2009-11-25	10:30	2009-11-30
216008	MW-14	water	2009-11-25	11:00	2009-11-30
216009	MW-15	water	2009-11-25	11:30	2009-11-30
216010	MW-13	water	2009-11-25	12:00	2009-11-30
216011	MW-4	water	2009-11-25	12:30	2009-11-30

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
216012	MW-2	water	2009-11-25	13:15	2009-11-30
216013	MW-3	water	2009-11-25	14:00	2009-11-30
216014	MW-5	water	2009-11-25	14:45	2009-11-30
216015	MW-6	water	2009-11-25	15:30	2009-11-30
216016	MW-9	water	2009-11-25	16:15	2009-11-30
216017	RW-1	water	2009-11-25	17:00	2009-11-30
216018	Field Blank	water	2009-11-25	17:15	2009-11-30

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

This report consists of a total of 43 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 TNM 97-04 Townsend were received by TraceAnalysis, Inc. on 2009-11-30 and assigned to work order 9113009. Samples for work order 9113009 were received intact without headspace and at a temperature of 4.0 deg. 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	56178	2009-12-02 at 10:28	65725	2009-12-02 at 10:28
BTEX	S 8021B	56228	2009-12-03 at 12:00	65786	2009-12-04 at 18:51
BTEX	S 8021B	56230	2009-12-04 at 11:00	65789	2009-12-05 at 20:41
PAH	S 8270C	56184	2009-12-02 at 15:00	65731	2009-12-03 at 10:47
TPH DRO - NEW	Mod. 8015B	56111	2009-11-30 at 12:02	65659	2009-11-30 at 12:02
TPH GRO	S 8015B	56228	2009-12-03 at 12:00	65787	2009-12-04 at 19:18

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 9113009 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: December 14, 2009
TNM 97-04

Work Order: 9113009
TNM 97-04 Townsend

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Lovington, NM

Analytical Report

Sample: 216002 - MW-10

Laboratory: Midland
Analysis: BTEX
QC Batch: 65725
Prep Batch: 56178

Analytical Method: S 8021B
Date Analyzed: 2009-12-02
Sample Preparation: 2009-12-02

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

Parameter	Flag	RL		Units	Dilution	RL
		Result				
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	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		0.0900	mg/L	1	0.100	90	68.1 - 118.8

Sample: 216002 - MW-10

Laboratory: Lubbock
Analysis: PAH
QC Batch: 65731
Prep Batch: 56184

Analytical Method: S 8270C
Date Analyzed: 2009-12-03
Sample Preparation: 2009-12-02

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	Flag	RL		Units	Dilution	RL
		Result				
Naphthalene		<0.000183		mg/L	0.917	0.000200
2-Methylnaphthalene		<0.000183		mg/L	0.917	0.000200
1-Methylnaphthalene		<0.000183		mg/L	0.917	0.000200
Acenaphthylene		<0.000183		mg/L	0.917	0.000200
Acenaphthene		<0.000183		mg/L	0.917	0.000200
Dibenzofuran		<0.000183		mg/L	0.917	0.000200
Fluorene		<0.000183		mg/L	0.917	0.000200
Anthracene		<0.000183		mg/L	0.917	0.000200
Phenanthrene		<0.000183		mg/L	0.917	0.000200
Fluoranthene		<0.000183		mg/L	0.917	0.000200
Pyrene		<0.000183		mg/L	0.917	0.000200
Benzo(a)anthracene		<0.000183		mg/L	0.917	0.000200
Chrysene		<0.000183		mg/L	0.917	0.000200
Benzo(b)fluoranthene		<0.000183		mg/L	0.917	0.000200
Benzo(k)fluoranthene		<0.000183		mg/L	0.917	0.000200
Benzo(a)pyrene		<0.000183		mg/L	0.917	0.000200

continued ...

Report Date: December 14, 2009
TNM 97-04

Work Order: 9113009
TNM 97-04 Townsend

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Lovington, NM

sample 216002 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Indeno(1,2,3-cd)pyrene		<0.000183	mg/L	0.917	0.000200
Dibenzo(a,h)anthracene		<0.000183	mg/L	0.917	0.000200
Benzo(g,h,i)perylene		<0.000183	mg/L	0.917	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0512	mg/L	0.917	0.0800	64	25.9 - 97.5
2-Fluorobiphenyl		0.0478	mg/L	0.917	0.0800	60	13.9 - 100
Terphenyl-d14		0.0646	mg/L	0.917	0.0800	81	37.7 - 114

Sample: 216003 - MW-11

Laboratory: Midland
Analysis: BTEX
QC Batch: 65725
Prep Batch: 56178

Analytical Method: S 8021B
Date Analyzed: 2009-12-02
Sample Preparation: 2009-12-02

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

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	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		0.0887	mg/L	1	0.100	89	68.1 - 118.8

Sample: 216003 - MW-11

Laboratory: Lubbock
Analysis: PAH
QC Batch: 65731
Prep Batch: 56184

Analytical Method: S 8270C
Date Analyzed: 2009-12-03
Sample Preparation: 2009-12-02

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000183	mg/L	0.917	0.000200
2-Methylnaphthalene		<0.000183	mg/L	0.917	0.000200
1-Methylnaphthalene		<0.000183	mg/L	0.917	0.000200

continued ...

sample 216003 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Acenaphthylene		<0.000183	mg/L	0.917	0.000200
Acenaphthene		<0.000183	mg/L	0.917	0.000200
Dibenzofuran		<0.000183	mg/L	0.917	0.000200
Fluorene		<0.000183	mg/L	0.917	0.000200
Anthracene		<0.000183	mg/L	0.917	0.000200
Phenanthrene		<0.000183	mg/L	0.917	0.000200
Fluoranthene		<0.000183	mg/L	0.917	0.000200
Pyrene		<0.000183	mg/L	0.917	0.000200
Benzo(a)anthracene		<0.000183	mg/L	0.917	0.000200
Chrysene		<0.000183	mg/L	0.917	0.000200
Benzo(b)fluoranthene		<0.000183	mg/L	0.917	0.000200
Benzo(k)fluoranthene		<0.000183	mg/L	0.917	0.000200
Benzo(a)pyrene		<0.000183	mg/L	0.917	0.000200
Indeno(1,2,3-cd)pyrene		<0.000183	mg/L	0.917	0.000200
Dibenzo(a,h)anthracene		<0.000183	mg/L	0.917	0.000200
Benzo(g,h,i)perylene		<0.000183	mg/L	0.917	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0537	mg/L	0.917	0.0800	67	25.9 - 97.5
2-Fluorobiphenyl		0.0507	mg/L	0.917	0.0800	63	13.9 - 100
Terphenyl-d14		0.0609	mg/L	0.917	0.0800	76	37.7 - 114

Sample: 216004 - MW-12

Laboratory: Midland
Analysis: BTEX
QC Batch: 65725
Prep Batch: 56178

Analytical Method: S 8021B
Date Analyzed: 2009-12-02
Sample Preparation: 2009-12-02

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

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	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		0.0857	mg/L	1	0.100	86	68.1 - 118.8

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Sample: 216004 - MW-12

Laboratory: Lubbock
Analysis: PAH
QC Batch: 65731
Prep Batch: 56184

Analytical Method: S 8270C
Date Analyzed: 2009-12-03
Sample Preparation: 2009-12-02

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000184	mg/L	0.922	0.000200
2-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
1-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200
Dibenzofuran		<0.000184	mg/L	0.922	0.000200
Fluorene		<0.000184	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		<0.000184	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0545	mg/L	0.922	0.0800	68	25.9 - 97.5
2-Fluorobiphenyl		0.0539	mg/L	0.922	0.0800	67	13.9 - 100
Terphenyl-d14		0.0611	mg/L	0.922	0.0800	76	37.7 - 114

Sample: 216005 - MW-7

Laboratory: Midland
Analysis: BTEX
QC Batch: 65725
Prep Batch: 56178

Analytical Method: S 8021B
Date Analyzed: 2009-12-02
Sample Preparation: 2009-12-02

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

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

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sample 216005 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
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	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		0.0883	mg/L	1	0.100	88	68.1 - 118.8

Sample: 216005 - MW-7

Laboratory: Lubbock
Analysis: PAH
QC Batch: 65731
Prep Batch: 56184

Analytical Method: S 8270C
Date Analyzed: 2009-12-03
Sample Preparation: 2009-12-02

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000183	mg/L	0.917	0.000200
2-Methylnaphthalene		<0.000183	mg/L	0.917	0.000200
1-Methylnaphthalene		<0.000183	mg/L	0.917	0.000200
Acenaphthylene		<0.000183	mg/L	0.917	0.000200
Acenaphthene		<0.000183	mg/L	0.917	0.000200
Dibenzofuran		<0.000183	mg/L	0.917	0.000200
Fluorene		<0.000183	mg/L	0.917	0.000200
Anthracene		<0.000183	mg/L	0.917	0.000200
Phenanthrene		<0.000183	mg/L	0.917	0.000200
Fluoranthene		<0.000183	mg/L	0.917	0.000200
Pyrene		<0.000183	mg/L	0.917	0.000200
Benzo(a)anthracene		<0.000183	mg/L	0.917	0.000200
Chrysene		<0.000183	mg/L	0.917	0.000200
Benzo(b)fluoranthene		<0.000183	mg/L	0.917	0.000200
Benzo(k)fluoranthene		<0.000183	mg/L	0.917	0.000200
Benzo(a)pyrene		<0.000183	mg/L	0.917	0.000200
Indeno(1,2,3-cd)pyrene		<0.000183	mg/L	0.917	0.000200
Dibenzo(a,h)anthracene		<0.000183	mg/L	0.917	0.000200
Benzo(g,h,i)perylene		<0.000183	mg/L	0.917	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0552	mg/L	0.917	0.0800	69	25.9 - 97.5
2-Fluorobiphenyl		0.0490	mg/L	0.917	0.0800	61	13.9 - 100
Terphenyl-d14		0.0580	mg/L	0.917	0.0800	72	37.7 - 114

Sample: 216006 - MW-16

Laboratory: Midland	Analytical Method: S 8021B	Prep Method: S 5030B
Analysis: BTEX	Date Analyzed: 2009-12-02	Analyzed By: tn
QC Batch: 65725	Sample Preparation: 2009-12-02	Prepared By: tn
Prep Batch: 56178		

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)		0.106	mg/L	1	0.100	106	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		0.0907	mg/L	1	0.100	91	68.1 - 118.8

Sample: 216006 - MW-16

Laboratory: Lubbock	Analytical Method: S 8270C	Prep Method: S 3510C
Analysis: PAH	Date Analyzed: 2009-12-03	Analyzed By: MN
QC Batch: 65731	Sample Preparation: 2009-12-02	Prepared By: MN
Prep Batch: 56184		

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000184	mg/L	0.922	0.000200
2-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
1-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200
Dibenzofuran		<0.000184	mg/L	0.922	0.000200
Fluorene		<0.000184	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		<0.000184	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200

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sample 216006 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0603	mg/L	0.922	0.0800	75	25.9 - 97.5
2-Fluorobiphenyl		0.0544	mg/L	0.922	0.0800	68	13.9 - 100
Terphenyl-d14		0.0615	mg/L	0.922	0.0800	77	37.7 - 114

Sample: 216007 - MW-18

Laboratory: Midland
Analysis: BTEX
QC Batch: 65725
Prep Batch: 56178

Analytical Method: S 8021B
Date Analyzed: 2009-12-02
Sample Preparation: 2009-12-02

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

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	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		0.0874	mg/L	1	0.100	87	68.1 - 118.8

Sample: 216007 - MW-18

Laboratory: Lubbock
Analysis: PAH
QC Batch: 65731
Prep Batch: 56184

Analytical Method: S 8270C
Date Analyzed: 2009-12-03
Sample Preparation: 2009-12-02

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000184	mg/L	0.922	0.000200
2-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
1-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200

continued ...

sample 216007 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Dibenzofuran		<0.000184	mg/L	0.922	0.000200
Fluorene		<0.000184	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		<0.000184	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0519	mg/L	0.922	0.0800	65	25.9 - 97.5
2-Fluorobiphenyl		0.0482	mg/L	0.922	0.0800	60	13.9 - 100
Terphenyl-d14		0.0614	mg/L	0.922	0.0800	77	37.7 - 114

Sample: 216008 - MW-14

Laboratory: Midland

Analysis: BTEX

QC Batch: 65789

Prep Batch: 56230

Analytical Method: S 8021B

Date Analyzed: 2009-12-05

Sample Preparation: 2009-12-04

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.0181	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		0.0102	mg/L	1	0.00100
Xylene		0.167	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	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		0.0928	mg/L	1	0.100	93	68.1 - 118.8

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Sample: 216008 - MW-14

Laboratory: Lubbock
Analysis: PAH
QC Batch: 65731
Prep Batch: 56184

Analytical Method: S 8270C
Date Analyzed: 2009-12-03
Sample Preparation: 2009-12-02

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.00605	mg/L	0.922	0.000200
2-Methylnaphthalene		0.00321	mg/L	0.922	0.000200
1-Methylnaphthalene		0.00516	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200
Dibenzofuran		<0.000184	mg/L	0.922	0.000200
Fluorene		<0.000184	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		<0.000184	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0448	mg/L	0.922	0.0800	56	25.9 - 97.5
2-Fluorobiphenyl		0.0442	mg/L	0.922	0.0800	55	13.9 - 100
Terphenyl-d14		0.0556	mg/L	0.922	0.0800	70	37.7 - 114

Sample: 216009 - MW-15

Laboratory: Midland
Analysis: BTEX
QC Batch: 65789
Prep Batch: 56230

Analytical Method: S 8021B
Date Analyzed: 2009-12-05
Sample Preparation: 2009-12-04

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		1.39	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100

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sample 216009 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Ethylbenzene		0.0820	mg/L	5	0.00100
Xylene		0.0206	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.506	mg/L	5	0.500	101	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		0.448	mg/L	5	0.500	90	68.1 - 118.8

Sample: 216009 - MW-15

Laboratory: Lubbock
Analysis: PAH
QC Batch: 65731
Prep Batch: 56184

Analytical Method: S 8270C
Date Analyzed: 2009-12-03
Sample Preparation: 2009-12-02

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.00209	mg/L	0.922	0.000200
2-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
1-Methylnaphthalene		0.00101	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200
Dibenzofuran		<0.000184	mg/L	0.922	0.000200
Fluorene		<0.000184	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		<0.000184	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0513	mg/L	0.922	0.0800	64	25.9 - 97.5
2-Fluorobiphenyl		0.0500	mg/L	0.922	0.0800	62	13.9 - 100
Terphenyl-d14		0.0647	mg/L	0.922	0.0800	81	37.7 - 114

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Sample: 216010 - MW-13

Laboratory: Midland
Analysis: BTEX
QC Batch: 65789
Prep Batch: 56230

Analytical Method: S 8021B
Date Analyzed: 2009-12-05
Sample Preparation: 2009-12-04

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		1.42	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.489	mg/L	5	0.500	98	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		0.432	mg/L	5	0.500	86	68.1 - 118.8

Sample: 216010 - MW-13

Laboratory: Lubbock
Analysis: PAH
QC Batch: 65731
Prep Batch: 56184

Analytical Method: S 8270C
Date Analyzed: 2009-12-03
Sample Preparation: 2009-12-02

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000184	mg/L	0.922	0.000200
2-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
1-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200
Dibenzofuran		0.000638	mg/L	0.922	0.000200
Fluorene		<0.000184	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		<0.000184	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200

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sample 216010 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0544	mg/L	0.922	0.0800	68	25.9 - 97.5
2-Fluorobiphenyl		0.0508	mg/L	0.922	0.0800	64	13.9 - 100
Terphenyl-d14		0.0567	mg/L	0.922	0.0800	71	37.7 - 114

Sample: 216011 - MW-4

Laboratory: Midland
Analysis: BTEX
QC Batch: 65789
Prep Batch: 56230

Analytical Method: S 8021B
Date Analyzed: 2009-12-05
Sample Preparation: 2009-12-04

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		2.00	mg/L	10	0.00100
Toluene		1.06	mg/L	10	0.00100
Ethylbenzene		0.618	mg/L	10	0.00100
Xylene		1.34	mg/L	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.01	mg/L	10	1.00	101	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		0.977	mg/L	10	1.00	98	68.1 - 118.8

Sample: 216011 - MW-4

Laboratory: Lubbock
Analysis: PAH
QC Batch: 65731
Prep Batch: 56184

Analytical Method: S 8270C
Date Analyzed: 2009-12-03
Sample Preparation: 2009-12-02

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.103	mg/L	4.587	0.000200
2-Methylnaphthalene		0.0890	mg/L	4.587	0.000200
1-Methylnaphthalene		0.118	mg/L	4.587	0.000200
Acenaphthylene		<0.000917	mg/L	4.587	0.000200
Acenaphthene		<0.000917	mg/L	4.587	0.000200

continued ...

sample 216011 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Dibenzofuran		0.0123	mg/L	4.587	0.000200
Fluorene		0.0143	mg/L	4.587	0.000200
Anthracene		<0.000917	mg/L	4.587	0.000200
Phenanthrene		0.0181	mg/L	4.587	0.000200
Fluoranthene		<0.000917	mg/L	4.587	0.000200
Pyrene		<0.000917	mg/L	4.587	0.000200
Benzo(a)anthracene		<0.000917	mg/L	4.587	0.000200
Chrysene		<0.000917	mg/L	4.587	0.000200
Benzo(b)fluoranthene		<0.000917	mg/L	4.587	0.000200
Benzo(k)fluoranthene		<0.000917	mg/L	4.587	0.000200
Benzo(a)pyrene		<0.000917	mg/L	4.587	0.000200
Indeno(1,2,3-cd)pyrene		<0.000917	mg/L	4.587	0.000200
Dibenzo(a,h)anthracene		<0.000917	mg/L	4.587	0.000200
Benzo(g,h,i)perylene		<0.000917	mg/L	4.587	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0528	mg/L	4.587	0.0800	66	25.9 - 97.5
2-Fluorobiphenyl		0.0632	mg/L	4.587	0.0800	79	13.9 - 100
Terphenyl-d14		0.0646	mg/L	4.587	0.0800	81	37.7 - 114

Sample: 216012 - MW-2

Laboratory: Midland

Analysis: BTEX

QC Batch: 65786

Prep Batch: 56228

Analytical Method: S 8021B

Date Analyzed: 2009-12-04

Sample Preparation: 2009-12-03

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		12.0	mg/L	50	0.00100
Toluene		6.38	mg/L	50	0.00100
Ethylbenzene		0.834	mg/L	50	0.00100
Xylene		2.94	mg/L	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.98	mg/L	50	5.00	100	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		4.46	mg/L	50	5.00	89	68.1 - 118.8

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Sample: 216012 - MW-2

Laboratory: Lubbock
Analysis: PAH
QC Batch: 65731
Prep Batch: 56184

Analytical Method: S 8270C
Date Analyzed: 2009-12-03
Sample Preparation: 2009-12-02

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.207	mg/L	4.608	0.000200
2-Methylnaphthalene		0.337	mg/L	4.608	0.000200
1-Methylnaphthalene		0.274	mg/L	4.608	0.000200
Acenaphthylene		<0.000922	mg/L	4.608	0.000200
Acenaphthene		<0.000922	mg/L	4.608	0.000200
Dibenzofuran		0.0267	mg/L	4.608	0.000200
Fluorene		0.0276	mg/L	4.608	0.000200
Anthracene		<0.000922	mg/L	4.608	0.000200
Phenanthrene		0.0378	mg/L	4.608	0.000200
Fluoranthene		<0.000922	mg/L	4.608	0.000200
Pyrene		<0.000922	mg/L	4.608	0.000200
Benzo(a)anthracene		<0.000922	mg/L	4.608	0.000200
Chrysene		<0.000922	mg/L	4.608	0.000200
Benzo(b)fluoranthene		<0.000922	mg/L	4.608	0.000200
Benzo(k)fluoranthene		<0.000922	mg/L	4.608	0.000200
Benzo(a)pyrene		<0.000922	mg/L	4.608	0.000200
Indeno(1,2,3-cd)pyrene		<0.000922	mg/L	4.608	0.000200
Dibenzo(a,h)anthracene		<0.000922	mg/L	4.608	0.000200
Benzo(g,h,i)perylene		<0.000922	mg/L	4.608	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0701	mg/L	4.608	0.0800	88	25.9 - 97.5
2-Fluorobiphenyl		0.0715	mg/L	4.608	0.0800	89	13.9 - 100
Terphenyl-d14		0.0701	mg/L	4.608	0.0800	88	37.7 - 114

Sample: 216012 - MW-2

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 65659
Prep Batch: 56111

Analytical Method: Mod. 8015B
Date Analyzed: 2009-11-30
Sample Preparation: 2009-11-30

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		85.1	mg/L	1	5.00

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	¹	13.5	mg/L	1	10.0	135	70 - 130

Sample: 216012 - MW-2

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 65787
Prep Batch: 56228

Analytical Method: S 8015B
Date Analyzed: 2009-12-04
Sample Preparation: 2009-12-03

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		51.0	mg/L	50	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.23	mg/L	50	5.00	105	69.8 - 110.2
4-Bromofluorobenzene (4-BFB)		4.61	mg/L	50	5.00	92	65.4 - 118.8

Sample: 216013 - MW-3

Laboratory: Midland
Analysis: BTEX
QC Batch: 65786
Prep Batch: 56228

Analytical Method: S 8021B
Date Analyzed: 2009-12-04
Sample Preparation: 2009-12-03

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		16.8	mg/L	50	0.00100
Toluene		17.2	mg/L	50	0.00100
Ethylbenzene		4.69	mg/L	50	0.00100
Xylene		14.2	mg/L	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.11	mg/L	50	5.00	102	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		5.21	mg/L	50	5.00	104	68.1 - 118.8

Sample: 216013 - MW-3

Laboratory: Lubbock
Analysis: PAH
QC Batch: 65731
Prep Batch: 56184

Analytical Method: S 8270C
Date Analyzed: 2009-12-03
Sample Preparation: 2009-12-02

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

¹High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		3.87	mg/L	185.185	0.000200
2-Methylnaphthalene		8.74	mg/L	185.185	0.000200
1-Methylnaphthalene		7.02	mg/L	185.185	0.000200
Acenaphthylene		<0.0370	mg/L	185.185	0.000200
Acenaphthene		<0.0370	mg/L	185.185	0.000200
Dibenzofuran		0.626	mg/L	185.185	0.000200
Fluorene		0.788	mg/L	185.185	0.000200
Anthracene		<0.0370	mg/L	185.185	0.000200
Phenanthrene		1.06	mg/L	185.185	0.000200
Fluoranthene		<0.0370	mg/L	185.185	0.000200
Pyrene		<0.0370	mg/L	185.185	0.000200
Benzo(a)anthracene		<0.0370	mg/L	185.185	0.000200
Chrysene		<0.0370	mg/L	185.185	0.000200
Benzo(b)fluoranthene		<0.0370	mg/L	185.185	0.000200
Benzo(k)fluoranthene		<0.0370	mg/L	185.185	0.000200
Benzo(a)pyrene		<0.0370	mg/L	185.185	0.000200
Indeno(1,2,3-cd)pyrene		<0.0370	mg/L	185.185	0.000200
Dibenzo(a,h)anthracene		<0.0370	mg/L	185.185	0.000200
Benzo(g,h,i)perylene		<0.0370	mg/L	185.185	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	²	0.772	mg/L	185.185	0.0800	965	25.9 - 97.5
2-Fluorobiphenyl		0.0609	mg/L	185.185	0.0800	76	13.9 - 100
Terphenyl-d14	³	0.0942	mg/L	185.185	0.0800	118	37.7 - 114

Sample: 216013 - MW-3

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 65659

Prep Batch: 56111

Analytical Method: Mod. 8015B

Date Analyzed: 2009-11-30

Sample Preparation: 2009-11-30

Prep Method: N/A

Analyzed By: kg

Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		1850	mg/L	5	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	⁴	50.8	mg/L	5	10.0	508	70 - 130

²High surrogate recovery due to peak interference.

³High surrogate recovery due to peak interference.

⁴High surrogate recovery due to peak interference.

Sample: 216013 - MW-3

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 65787 Date Analyzed: 2009-12-04 Analyzed By: AG
Prep Batch: 56228 Sample Preparation: 2009-12-03 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		178	mg/L	50	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.34	mg/L	50	5.00	107	69.8 - 110.2
4-Bromofluorobenzene (4-BFB)	⁵	6.40	mg/L	50	5.00	128	65.4 - 118.8

Sample: 216014 - MW-5

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B
QC Batch: 65786 Date Analyzed: 2009-12-04 Analyzed By: AG
Prep Batch: 56228 Sample Preparation: 2009-12-03 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		15.6	mg/L	100	0.00100
Toluene		5.70	mg/L	100	0.00100
Ethylbenzene		1.08	mg/L	100	0.00100
Xylene		2.29	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		10.3	mg/L	100	10.0	103	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		9.17	mg/L	100	10.0	92	68.1 - 118.8

Sample: 216014 - MW-5

Laboratory: Lubbock
Analysis: PAH Analytical Method: S 8270C Prep Method: S 3510C
QC Batch: 65731 Date Analyzed: 2009-12-03 Analyzed By: MN
Prep Batch: 56184 Sample Preparation: 2009-12-02 Prepared By: MN

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.0905	mg/L	0.922	0.000200

continued ...

⁵High surrogate recovery due to peak interference.

sample 216014 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
2-Methylnaphthalene	⁶	0.107	mg/L	0.922	0.000200
1-Methylnaphthalene	⁷	0.0931	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200
Dibenzofuran		0.00848	mg/L	0.922	0.000200
Fluorene		0.00909	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		0.0104	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0594	mg/L	0.922	0.0800	74	25.9 - 97.5
2-Fluorobiphenyl		0.0622	mg/L	0.922	0.0800	78	13.9 - 100
Terphenyl-d14		0.0640	mg/L	0.922	0.0800	80	37.7 - 114

Sample: 216014 - MW-5

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 65659

Prep Batch: 56111

Analytical Method: Mod. 8015B

Date Analyzed: 2009-11-30

Sample Preparation: 2009-11-30

Prep Method: N/A

Analyzed By: kg

Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		32.3	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		11.5	mg/L	1	10.0	115	70 - 130

⁶Estimated concentration value greater than standard range.

⁷Estimated concentration value greater than standard range.

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Sample: 216014 - MW-5

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5030B
Analysis:	TPH GRO	Date Analyzed:	2009-12-04	Analyzed By:	AG
QC Batch:	65787	Sample Preparation:	2009-12-03	Prepared By:	AG
Prep Batch:	56228				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		52.0	mg/L	100	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		10.9	mg/L	100	10.0	109	69.8 - 110.2
4-Bromofluorobenzene (4-BFB)		9.42	mg/L	100	10.0	94	65.4 - 118.8

Sample: 216015 - MW-6

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2009-12-04	Analyzed By:	AG
QC Batch:	65786	Sample Preparation:	2009-12-03	Prepared By:	AG
Prep Batch:	56228				

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		19.8	mg/L	100	0.00100
Toluene		5.06	mg/L	100	0.00100
Ethylbenzene		1.01	mg/L	100	0.00100
Xylene		2.33	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		9.95	mg/L	100	10.0	100	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		8.61	mg/L	100	10.0	86	68.1 - 118.8

Sample: 216015 - MW-6

Laboratory:	Lubbock	Analytical Method:	S 8270C	Prep Method:	S 3510C
Analysis:	PAH	Date Analyzed:	2009-12-03	Analyzed By:	MN
QC Batch:	65731	Sample Preparation:	2009-12-02	Prepared By:	MN
Prep Batch:	56184				

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.294	mg/L	4.608	0.000200

continued . . .

sample 216015 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
2-Methylnaphthalene		0.569	mg/L	4.608	0.000200
1-Methylnaphthalene		0.498	mg/L	4.608	0.000200
Acenaphthylene		<0.000922	mg/L	4.608	0.000200
Acenaphthene		<0.000922	mg/L	4.608	0.000200
Dibenzofuran		0.0467	mg/L	4.608	0.000200
Fluorene		0.0528	mg/L	4.608	0.000200
Anthracene		<0.000922	mg/L	4.608	0.000200
Phenanthrene		0.0648	mg/L	4.608	0.000200
Fluoranthene		<0.000922	mg/L	4.608	0.000200
Pyrene		<0.000922	mg/L	4.608	0.000200
Benzo(a)anthracene		<0.000922	mg/L	4.608	0.000200
Chrysene		<0.000922	mg/L	4.608	0.000200
Benzo(b)fluoranthene		<0.000922	mg/L	4.608	0.000200
Benzo(k)fluoranthene		<0.000922	mg/L	4.608	0.000200
Benzo(a)pyrene		<0.000922	mg/L	4.608	0.000200
Indeno(1,2,3-cd)pyrene		<0.000922	mg/L	4.608	0.000200
Dibenzo(a,h)anthracene		<0.000922	mg/L	4.608	0.000200
Benzo(g,h,i)perylene		<0.000922	mg/L	4.608	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0647	mg/L	4.608	0.0800	81	25.9 - 97.5
2-Fluorobiphenyl		0.0696	mg/L	4.608	0.0800	87	13.9 - 100
Terphenyl-d14		0.0657	mg/L	4.608	0.0800	82	37.7 - 114

Sample: 216015 - MW-6

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO - NEW	Date Analyzed: 2009-11-30	Analyzed By: kg
QC Batch: 65659	Sample Preparation: 2009-11-30	Prepared By: kg
Prep Batch: 56111		

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		159	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	⁸	14.9	mg/L	1	10.0	149	70 - 130

⁸High surrogate recovery due to peak interference.

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Sample: 216015 - MW-6

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5030B
QC Batch: 65787 Date Analyzed: 2009-12-04 Analyzed By: AG
Prep Batch: 56228 Sample Preparation: 2009-12-03 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		53.2	mg/L	100	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		10.5	mg/L	100	10.0	105	69.8 - 110.2
4-Bromofluorobenzene (4-BFB)		8.86	mg/L	100	10.0	89	65.4 - 118.8

Sample: 216016 - MW-9

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B
QC Batch: 65786 Date Analyzed: 2009-12-04 Analyzed By: AG
Prep Batch: 56228 Sample Preparation: 2009-12-03 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		2.09	mg/L	20	0.00100
Toluene		2.47	mg/L	20	0.00100
Ethylbenzene		0.503	mg/L	20	0.00100
Xylene		1.60	mg/L	20	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.99	mg/L	20	2.00	100	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		1.78	mg/L	20	2.00	89	68.1 - 118.8

Sample: 216016 - MW-9

Laboratory: Lubbock
Analysis: PAH Analytical Method: S 8270C Prep Method: S 3510C
QC Batch: 65731 Date Analyzed: 2009-12-03 Analyzed By: MN
Prep Batch: 56184 Sample Preparation: 2009-12-02 Prepared By: MN

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.125	mg/L	4.587	0.000200

continued ...

sample 216016 continued . . .

Parameter	Flag	RL Result	Units	Dilution	RL
2-Methylnaphthalene		0.253	mg/L	4.587	0.000200
1-Methylnaphthalene		0.221	mg/L	4.587	0.000200
Acenaphthylene		<0.000917	mg/L	4.587	0.000200
Acenaphthene		<0.000917	mg/L	4.587	0.000200
Dibenzofuran		0.0201	mg/L	4.587	0.000200
Fluorene		0.0250	mg/L	4.587	0.000200
Anthracene		<0.000917	mg/L	4.587	0.000200
Phenanthrene		0.0315	mg/L	4.587	0.000200
Fluoranthene		<0.000917	mg/L	4.587	0.000200
Pyrene		<0.000917	mg/L	4.587	0.000200
Benzo(a)anthracene		<0.000917	mg/L	4.587	0.000200
Chrysene		<0.000917	mg/L	4.587	0.000200
Benzo(b)fluoranthene		<0.000917	mg/L	4.587	0.000200
Benzo(k)fluoranthene		<0.000917	mg/L	4.587	0.000200
Benzo(a)pyrene		<0.000917	mg/L	4.587	0.000200
Indeno(1,2,3-cd)pyrene		<0.000917	mg/L	4.587	0.000200
Dibenzo(a,h)anthracene		<0.000917	mg/L	4.587	0.000200
Benzo(g,h,i)perylene		<0.000917	mg/L	4.587	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0616	mg/L	4.587	0.0800	77	25.9 - 97.5
2-Fluorobiphenyl		0.0621	mg/L	4.587	0.0800	78	13.9 - 100
Terphenyl-d14		0.0621	mg/L	4.587	0.0800	78	37.7 - 114

Sample: 216016 - MW-9

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 65659

Prep Batch: 56111

Analytical Method: Mod. 8015B

Date Analyzed: 2009-11-30

Sample Preparation: 2009-11-30

Prep Method: N/A

Analyzed By: kg

Prepared By: kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		74.3	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	⁹	13.7	mg/L	1	10.0	137	70 - 130

⁹High surrogate recovery due to peak interference.

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Sample: 216016 - MW-9

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5030B
Analysis:	TPH GRO	Date Analyzed:	2009-12-04	Analyzed By:	AG
QC Batch:	65787	Sample Preparation:	2009-12-03	Prepared By:	AG
Prep Batch:	56228				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		16.0	mg/L	20	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.10	mg/L	20	2.00	105	69.8 - 110.2
4-Bromofluorobenzene (4-BFB)		1.87	mg/L	20	2.00	94	65.4 - 118.8

Sample: 216017 - RW-1

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2009-12-04	Analyzed By:	AG
QC Batch:	65786	Sample Preparation:	2009-12-03	Prepared By:	AG
Prep Batch:	56228				

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		11.1	mg/L	50	0.00100
Toluene		5.48	mg/L	50	0.00100
Ethylbenzene		0.946	mg/L	50	0.00100
Xylene		2.27	mg/L	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.98	mg/L	50	5.00	100	70.9 - 119.8
4-Bromofluorobenzene (4-BFB)		4.37	mg/L	50	5.00	87	68.1 - 118.8

Sample: 216017 - RW-1

Laboratory:	Lubbock	Analytical Method:	S 8270C	Prep Method:	S 3510C
Analysis:	PAH	Date Analyzed:	2009-12-03	Analyzed By:	MN
QC Batch:	65731	Sample Preparation:	2009-12-02	Prepared By:	MN
Prep Batch:	56184				

continued ...

sample 216017 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	¹⁰	0.0961	mg/L	0.922	0.000200
2-Methylnaphthalene	¹¹	0.126	mg/L	0.922	0.000200
1-Methylnaphthalene	¹²	0.113	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200
Dibenzofuran		0.0100	mg/L	0.922	0.000200
Fluorene		0.0120	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		0.0131	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0633	mg/L	0.922	0.0800	79	25.9 - 97.5
2-Fluorobiphenyl		0.0643	mg/L	0.922	0.0800	80	13.9 - 100
Terphenyl-d14		0.0627	mg/L	0.922	0.0800	78	37.7 - 114

Sample: 216017 - RW-1

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO - NEW	Date Analyzed: 2009-11-30	Analyzed By: kg
QC Batch: 65659	Sample Preparation: 2009-11-30	Prepared By: kg
Prep Batch: 56111		

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		89.0	mg/L	1	5.00

¹⁰Estimated concentration value greater than standard range.

¹¹Estimated concentration value greater than standard range.

¹²Estimated concentration value greater than standard range.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	¹³	13.5	mg/L	1	10.0	135	70 - 130

Sample: 216017 - RW-1

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 65787
Prep Batch: 56228

Analytical Method: S 8015B
Date Analyzed: 2009-12-04
Sample Preparation: 2009-12-03

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		42.7	mg/L	50	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.23	mg/L	50	5.00	105	69.8 - 110.2
4-Bromofluorobenzene (4-BFB)		4.51	mg/L	50	5.00	90	65.4 - 118.8

Sample: 216018 - Field Blank

Laboratory: Lubbock
Analysis: PAH
QC Batch: 65731
Prep Batch: 56184

Analytical Method: S 8270C
Date Analyzed: 2009-12-03
Sample Preparation: 2009-12-02

Prep Method: S 3510C
Analyzed By: MN
Prepared By: MN

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000184	mg/L	0.922	0.000200
2-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
1-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200
Dibenzofuran		<0.000184	mg/L	0.922	0.000200
Fluorene		<0.000184	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		<0.000184	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200

¹³High surrogate recovery due to peak interference.

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sample 216018 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0598	mg/L	0.922	0.0800	75	25.9 - 97.5
2-Fluorobiphenyl		0.0536	mg/L	0.922	0.0800	67	13.9 - 100
Terphenyl-d14		0.0588	mg/L	0.922	0.0800	74	37.7 - 114

Method Blank (1) QC Batch: 65659

QC Batch: 65659
Prep Batch: 56111

Date Analyzed: 2009-11-30
QC Preparation: 2009-11-30

Analyzed By: kg
Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<0.801	mg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		12.4	mg/L	1	10.0	124	70 - 130

Method Blank (1) QC Batch: 65725

QC Batch: 65725
Prep Batch: 56178

Date Analyzed: 2009-12-02
QC Preparation: 2009-12-02

Analyzed By: tn
Prepared By: tn

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000200	mg/L	0.001
Xylene		<0.000900	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.108	mg/L	1	0.100	108	73.6 - 116.6
4-Bromofluorobenzene (4-BFB)		0.0928	mg/L	1	0.100	93	70.6 - 107.5

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Method Blank (1) QC Batch: 65731

QC Batch: 65731
Prep Batch: 56184

Date Analyzed: 2009-12-03
QC Preparation: 2009-12-02

Analyzed By: MN
Prepared By: MN

Parameter	Flag	MDL Result	Units	RL
Naphthalene		<0.0000784	mg/L	0.0002
2-Methylnaphthalene		<0.0000747	mg/L	0.0002
1-Methylnaphthalene		<0.0000575	mg/L	0.0002
Acenaphthylene		<0.0000963	mg/L	0.0002
Acenaphthene		<0.0000617	mg/L	0.0002
Dibenzofuran		<0.0000952	mg/L	0.0002
Fluorene		<0.000134	mg/L	0.0002
Anthracene		0.000512	mg/L	0.0002
Phenanthrene		0.000530	mg/L	0.0002
Fluoranthene		0.000521	mg/L	0.0002
Pyrene		<0.000590	mg/L	0.0002
Benzo(a)anthracene		<0.000118	mg/L	0.0002
Chrysene		<0.0000766	mg/L	0.0002
Benzo(b)fluoranthene		<0.000146	mg/L	0.0002
Benzo(k)fluoranthene		<0.000141	mg/L	0.0002
Benzo(a)pyrene		<0.000132	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.0000702	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.0000534	mg/L	0.0002
Benzo(g,h,i)perylene		<0.0000473	mg/L	0.0002

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0418	mg/L	1	0.0800	52	25.9 - 97.5
2-Fluorobiphenyl		0.0417	mg/L	1	0.0800	52	13.9 - 100
Terphenyl-d14		0.0654	mg/L	1	0.0800	82	37.7 - 114

Method Blank (1) QC Batch: 65786

QC Batch: 65786
Prep Batch: 56228

Date Analyzed: 2009-12-04
QC Preparation: 2009-12-03

Analyzed By: AG
Prepared By: tn

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000200	mg/L	0.001
Xylene		<0.000900	mg/L	0.001

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.102	mg/L	1	0.100	102	73.6 - 116.6
4-Bromofluorobenzene (4-BFB)		0.0868	mg/L	1	0.100	87	70.6 - 107.5

Method Blank (1) QC Batch: 65787

QC Batch: 65787
Prep Batch: 56228

Date Analyzed: 2009-12-04
QC Preparation: 2009-12-03

Analyzed By: AG
Prepared By: tn

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0462	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.106	mg/L	1	0.100	106	58.6 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0870	mg/L	1	0.100	87	43 - 130.8

Method Blank (1) QC Batch: 65789

QC Batch: 65789
Prep Batch: 56230

Date Analyzed: 2009-12-05
QC Preparation: 2009-12-04

Analyzed By: AG
Prepared By: tn

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000200	mg/L	0.001
Xylene		<0.000900	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.100	mg/L	1	0.100	100	73.6 - 116.6
4-Bromofluorobenzene (4-BFB)		0.0856	mg/L	1	0.100	86	70.6 - 107.5

Laboratory Control Spike (LCS-1)

QC Batch: 65659
Prep Batch: 56111

Date Analyzed: 2009-11-30
QC Preparation: 2009-11-30

Analyzed By: kg
Prepared By: kg

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	22.2	mg/L	1	25.0	<0.801	89	70 - 130

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	21.4	mg/L	1	25.0	<0.801	86	70 - 130	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	10.8	11.1	mg/L	1	10.0	108	111	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 65725
Prep Batch: 56178

Date Analyzed: 2009-12-02
QC Preparation: 2009-12-02

Analyzed By: tn
Prepared By: tn

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0980	mg/L	1	0.100	<0.000300	98	79.4 - 111.8
Toluene	0.0973	mg/L	1	0.100	<0.000200	97	79.3 - 110
Ethylbenzene	0.0977	mg/L	1	0.100	<0.000200	98	73.8 - 113.1
Xylene	0.290	mg/L	1	0.300	<0.000900	97	73.9 - 113.6

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.100	mg/L	1	0.100	<0.000300	100	79.4 - 111.8	2	20
Toluene	0.100	mg/L	1	0.100	<0.000200	100	79.3 - 110	3	20
Ethylbenzene	0.0994	mg/L	1	0.100	<0.000200	99	73.8 - 113.1	2	20
Xylene	0.296	mg/L	1	0.300	<0.000900	99	73.9 - 113.6	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.104	0.102	mg/L	1	0.100	104	102	76.2 - 119.6
4-Bromofluorobenzene (4-BFB)	0.0938	0.0926	mg/L	1	0.100	94	93	77.9 - 109.8

Laboratory Control Spike (LCS-1)

QC Batch: 65731
Prep Batch: 56184

Date Analyzed: 2009-12-03
QC Preparation: 2009-12-02

Analyzed By: MN
Prepared By: MN

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene	0.0397	mg/L	1	0.0800	<0.0000784	50	22.2 - 87.9
2-Methylnaphthalene	0.0457	mg/L	1	0.0800	<0.0000747	57	23.3 - 86.1
1-Methylnaphthalene	0.0477	mg/L	1	0.0800	<0.0000575	60	24.6 - 87.8
Acenaphthylene	0.0511	mg/L	1	0.0800	<0.0000963	64	27.4 - 114
Acenaphthene	0.0502	mg/L	1	0.0800	<0.0000617	63	27.2 - 111
Dibenzofuran	0.0470	mg/L	1	0.0800	<0.0000952	59	27.3 - 100
Fluorene	0.0568	mg/L	1	0.0800	<0.000134	71	31.5 - 122
Anthracene	0.0538	mg/L	1	0.0800	0.000512	67	32.4 - 115
Phenanthrene	0.0540	mg/L	1	0.0800	0.00053	67	34.2 - 111
Fluoranthene	0.0628	mg/L	1	0.0800	0.000521	78	40.1 - 114
Pyrene	0.0518	mg/L	1	0.0800	<0.000590	65	39.2 - 124
Benzo(a)anthracene	0.0534	mg/L	1	0.0800	<0.000118	67	39.4 - 114
Chrysene	0.0639	mg/L	1	0.0800	<0.0000766	80	38.2 - 116
Benzo(b)fluoranthene	0.0573	mg/L	1	0.0800	<0.000146	72	34.5 - 118
Benzo(k)fluoranthene	0.0779	mg/L	1	0.0800	<0.000141	97	38.7 - 133
Benzo(a)pyrene	0.0819	mg/L	1	0.0800	<0.000132	102	38 - 134
Indeno(1,2,3-cd)pyrene	0.0637	mg/L	1	0.0800	<0.0000702	80	34.6 - 124
Dibenzo(a,h)anthracene	0.0665	mg/L	1	0.0800	<0.0000534	83	33.9 - 120
Benzo(g,h,i)perylene	0.0636	mg/L	1	0.0800	<0.0000473	80	33.8 - 138

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Naphthalene	0.0414	mg/L	1	0.0800	<0.0000784	52	22.2 - 87.9	4	20
2-Methylnaphthalene	0.0470	mg/L	1	0.0800	<0.0000747	59	23.3 - 86.1	3	20
1-Methylnaphthalene	0.0489	mg/L	1	0.0800	<0.0000575	61	24.6 - 87.8	2	20
Acenaphthylene	0.0504	mg/L	1	0.0800	<0.0000963	63	27.4 - 114	1	20
Acenaphthene	0.0497	mg/L	1	0.0800	<0.0000617	62	27.2 - 111	1	20
Dibenzofuran	0.0461	mg/L	1	0.0800	<0.0000952	58	27.3 - 100	2	20
Fluorene	0.0552	mg/L	1	0.0800	<0.000134	69	31.5 - 122	3	20
Anthracene	0.0548	mg/L	1	0.0800	0.000512	68	32.4 - 115	2	20
Phenanthrene	0.0563	mg/L	1	0.0800	0.00053	70	34.2 - 111	4	20
Fluoranthene	0.0654	mg/L	1	0.0800	0.000521	81	40.1 - 114	4	20
Pyrene	0.0504	mg/L	1	0.0800	<0.000590	63	39.2 - 124	3	20
Benzo(a)anthracene	0.0518	mg/L	1	0.0800	<0.000118	65	39.4 - 114	3	20
Chrysene	0.0620	mg/L	1	0.0800	<0.0000766	78	38.2 - 116	3	20
Benzo(b)fluoranthene	0.0551	mg/L	1	0.0800	<0.000146	69	34.5 - 118	4	20
Benzo(k)fluoranthene	0.0761	mg/L	1	0.0800	<0.000141	95	38.7 - 133	2	20
Benzo(a)pyrene	0.0780	mg/L	1	0.0800	<0.000132	98	38 - 134	5	20
Indeno(1,2,3-cd)pyrene	0.0639	mg/L	1	0.0800	<0.0000702	80	34.6 - 124	0	20
Dibenzo(a,h)anthracene	0.0653	mg/L	1	0.0800	<0.0000534	82	33.9 - 120	2	20
Benzo(g,h,i)perylene	0.0622	mg/L	1	0.0800	<0.0000473	78	33.8 - 138	2	20

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

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Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Nitrobenzene-d5	0.0439	0.0448	mg/L	1	0.0800	55	56	25.9 - 97.5
2-Fluorobiphenyl	0.0450	0.0441	mg/L	1	0.0800	56	55	13.9 - 100
Terphenyl-d14	0.0523	0.0510	mg/L	1	0.0800	65	64	37.7 - 114

Laboratory Control Spike (LCS-1)

QC Batch: 65786
Prep Batch: 56228

Date Analyzed: 2009-12-04
QC Preparation: 2009-12-03

Analyzed By: AG
Prepared By: tn

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.104	mg/L	1	0.100	<0.000300	104	79.4 - 111.8
Toluene	0.102	mg/L	1	0.100	<0.000200	102	79.3 - 110
Ethylbenzene	0.101	mg/L	1	0.100	<0.000200	101	73.8 - 113.1
Xylene	0.300	mg/L	1	0.300	<0.000900	100	73.9 - 113.6

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.103	mg/L	1	0.100	<0.000300	103	79.4 - 111.8	1	20
Toluene	0.102	mg/L	1	0.100	<0.000200	102	79.3 - 110	0	20
Ethylbenzene	0.100	mg/L	1	0.100	<0.000200	100	73.8 - 113.1	1	20
Xylene	0.299	mg/L	1	0.300	<0.000900	100	73.9 - 113.6	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)	0.101	0.104	mg/L	1	0.100	101	104	76.2 - 119.6
4-Bromofluorobenzene (4-BFB)	0.0925	0.0944	mg/L	1	0.100	92	94	77.9 - 109.8

Laboratory Control Spike (LCS-1)

QC Batch: 65787
Prep Batch: 56228

Date Analyzed: 2009-12-04
QC Preparation: 2009-12-03

Analyzed By: AG
Prepared By: tn

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.699	mg/L	1	1.00	<0.0462	70	60.5 - 102.6

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

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Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.727	mg/L	1	1.00	<0.0462	73	60.5 - 102.6	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.111	0.106	mg/L	1	0.100	111	106	54.3 - 132.4
4-Bromofluorobenzene (4-BFB)	0.0942	0.0913	mg/L	1	0.100	94	91	71.8 - 111.2

Laboratory Control Spike (LCS-1)

QC Batch: 65789
Prep Batch: 56230

Date Analyzed: 2009-12-05
QC Preparation: 2009-12-04

Analyzed By: AG
Prepared By: tn

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0895	mg/L	1	0.100	<0.000300	90	79.4 - 111.8
Toluene	0.0888	mg/L	1	0.100	<0.000200	89	79.3 - 110
Ethylbenzene	0.0872	mg/L	1	0.100	<0.000200	87	73.8 - 113.1
Xylene	0.261	mg/L	1	0.300	<0.000900	87	73.9 - 113.6

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0943	mg/L	1	0.100	<0.000300	94	79.4 - 111.8	5	20
Toluene	0.0932	mg/L	1	0.100	<0.000200	93	79.3 - 110	5	20
Ethylbenzene	0.0921	mg/L	1	0.100	<0.000200	92	73.8 - 113.1	6	20
Xylene	0.274	mg/L	1	0.300	<0.000900	91	73.9 - 113.6	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0988	0.0987	mg/L	1	0.100	99	99	76.2 - 119.6
4-Bromofluorobenzene (4-BFB)	0.0910	0.0911	mg/L	1	0.100	91	91	77.9 - 109.8

Matrix Spike (MS-1) Spiked Sample: 215921

QC Batch: 65659
Prep Batch: 56111

Date Analyzed: 2009-11-30
QC Preparation: 2009-11-30

Analyzed By: kg
Prepared By: kg

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	¹⁴ 149	mg/L	1	25.0	149	0	70 - 130

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
DRO	¹⁵ 90.9	mg/L	1	25.0	149	0	70 - 130	48	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	12.5	9.40	mg/L	1	10	125	94	70 - 130

Matrix Spike (MS-1) Spiked Sample: 215919

QC Batch: 65725
Prep Batch: 56178

Date Analyzed: 2009-12-02
QC Preparation: 2009-12-02

Analyzed By: tn
Prepared By: tn

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	13.9	mg/L	50	5.00	8.779	102	77.3 - 117.4
Toluene	4.88	mg/L	50	5.00	<0.0100	98	75 - 111.8
Ethylbenzene	5.23	mg/L	50	5.00	0.2906	99	78.8 - 106.6
Xylene	14.5	mg/L	50	15.0	<0.0450	97	68.9 - 114

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	13.6	mg/L	50	5.00	8.779	96	77.3 - 117.4	2	20
Toluene	4.72	mg/L	50	5.00	<0.0100	94	75 - 111.8	3	20
Ethylbenzene	5.08	mg/L	50	5.00	0.2906	96	78.8 - 106.6	3	20
Xylene	14.1	mg/L	50	15.0	<0.0450	94	68.9 - 114	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)	5.43	5.26	mg/L	50	5	109	105	76.3 - 109.8
4-Bromofluorobenzene (4-BFB)	4.74	4.63	mg/L	50	5	95	93	75.2 - 112.8

¹⁴Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

¹⁵Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

Matrix Spike (MS-1) Spiked Sample: 216014

QC Batch: 65786
Prep Batch: 56228

Date Analyzed: 2009-12-04
QC Preparation: 2009-12-03

Analyzed By: AG
Prepared By: tn

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	22.7	mg/L	100	10.0	15.6177	71	77.3 - 117.4
Toluene	14.5	mg/L	100	10.0	5.6974	88	75 - 111.8
Ethylbenzene	10.5	mg/L	100	10.0	1.0831	94	78.8 - 106.6
Xylene	30.4	mg/L	100	30.0	2.2891	94	68.9 - 114

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	26.2	mg/L	100	10.0	15.6177	106	77.3 - 117.4	14	20
Toluene	15.7	mg/L	100	10.0	5.6974	100	75 - 111.8	8	20
Ethylbenzene	10.9	mg/L	100	10.0	1.0831	98	78.8 - 106.6	4	20
Xylene	31.5	mg/L	100	30.0	2.2891	97	68.9 - 114	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)	10.3	10.3	mg/L	100	10	103	103	76.3 - 109.8
4-Bromofluorobenzene (4-BFB)	9.36	9.39	mg/L	100	10	94	94	75.2 - 112.8

Matrix Spike (MS-1) Spiked Sample: 216055

QC Batch: 65787
Prep Batch: 56228

Date Analyzed: 2009-12-04
QC Preparation: 2009-12-03

Analyzed By: AG
Prepared By: tn

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	71.8	mg/L	50	50.0	25.6	92	10 - 159.8

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
GRO	70.6	mg/L	50	50.0	25.6	90	10 - 159.8	2	20

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

continued ...

¹⁶Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

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matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5.44	5.34	mg/L	50	5	109	107	69.7 - 116.1
4-Bromofluorobenzene (4-BFB)	4.82	4.72	mg/L	50	5	96	94	71.3 - 118.9

Matrix Spike (MS-1) Spiked Sample: 216011

QC Batch: 65789
Prep Batch: 56230

Date Analyzed: 2009-12-05
QC Preparation: 2009-12-04

Analyzed By: AG
Prepared By: tn

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.96	mg/L	10	1.00	2.0055	95	77.3 - 117.4
Toluene	1.99	mg/L	10	1.00	1.0629	93	75 - 111.8
Ethylbenzene	1.50	mg/L	10	1.00	0.6175	88	78.8 - 106.6
Xylene	4.00	mg/L	10	3.00	1.3439	88	68.9 - 114

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	2.88	mg/L	10	1.00	2.0055	87	77.3 - 117.4	3	20
Toluene	1.97	mg/L	10	1.00	1.0629	91	75 - 111.8	1	20
Ethylbenzene	1.50	mg/L	10	1.00	0.6175	88	78.8 - 106.6	0	20
Xylene	4.04	mg/L	10	3.00	1.3439	90	68.9 - 114	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.991	0.991	mg/L	10	1	99	99	76.3 - 109.8
4-Bromofluorobenzene (4-BFB)	0.955	0.951	mg/L	10	1	96	95	75.2 - 112.8

Standard (CCV-2)

QC Batch: 65659

Date Analyzed: 2009-11-30

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	262	105	80 - 120	2009-11-30

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Standard (CCV-3)

QC Batch: 65659

Date Analyzed: 2009-11-30

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	277	111	80 - 120	2009-11-30

Standard (CCV-1)

QC Batch: 65725

Date Analyzed: 2009-12-02

Analyzed By: tn

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0970	97	80 - 120	2009-12-02
Toluene		mg/L	0.100	0.0966	97	80 - 120	2009-12-02
Ethylbenzene		mg/L	0.100	0.0962	96	80 - 120	2009-12-02
Xylene		mg/L	0.300	0.288	96	80 - 120	2009-12-02

Standard (CCV-2)

QC Batch: 65725

Date Analyzed: 2009-12-02

Analyzed By: tn

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0896	90	80 - 120	2009-12-02
Toluene		mg/L	0.100	0.0895	90	80 - 120	2009-12-02
Ethylbenzene		mg/L	0.100	0.0883	88	80 - 120	2009-12-02
Xylene		mg/L	0.300	0.263	88	80 - 120	2009-12-02

Standard (CCV-3)

QC Batch: 65725

Date Analyzed: 2009-12-02

Analyzed By: tn

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0977	98	80 - 120	2009-12-02
Toluene		mg/L	0.100	0.0975	98	80 - 120	2009-12-02
Ethylbenzene		mg/L	0.100	0.0962	96	80 - 120	2009-12-02
Xylene		mg/L	0.300	0.286	95	80 - 120	2009-12-02

Standard (CCV-1)

QC Batch: 65731

Date Analyzed: 2009-12-03

Analyzed By: MN

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	53.5	89	80 - 120	2009-12-03
2-Methylnaphthalene		mg/L	60.0	61.4	102	80 - 120	2009-12-03
1-Methylnaphthalene		mg/L	60.0	61.5	102	80 - 120	2009-12-03
Acenaphthylene		mg/L	60.0	51.0	85	80 - 120	2009-12-03
Acenaphthene		mg/L	60.0	51.4	86	80 - 120	2009-12-03
Dibenzofuran		mg/L	60.0	53.2	89	80 - 120	2009-12-03
Fluorene		mg/L	60.0	55.6	93	80 - 120	2009-12-03
Anthracene		mg/L	60.0	55.4	92	80 - 120	2009-12-03
Phenanthrene		mg/L	60.0	53.8	90	80 - 120	2009-12-03
Fluoranthene		mg/L	60.0	54.2	90	80 - 120	2009-12-03
Pyrene		mg/L	60.0	49.6	83	80 - 120	2009-12-03
Benzo(a)anthracene		mg/L	60.0	50.5	84	80 - 120	2009-12-03
Chrysene		mg/L	60.0	51.6	86	80 - 120	2009-12-03
Benzo(b)fluoranthene		mg/L	60.0	55.1	92	80 - 120	2009-12-03
Benzo(k)fluoranthene		mg/L	60.0	63.2	105	80 - 120	2009-12-03
Benzo(a)pyrene		mg/L	60.0	65.1	108	80 - 120	2009-12-03
Indeno(1,2,3-cd)pyrene		mg/L	60.0	53.3	89	80 - 120	2009-12-03
Dibenzo(a,h)anthracene		mg/L	60.0	55.8	93	80 - 120	2009-12-03
Benzo(g,h,i)perylene		mg/L	60.0	53.5	89	80 - 120	2009-12-03

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		56.8	mg/L	1	60.0	95	80 - 120
2-Fluorobiphenyl		49.6	mg/L	1	60.0	83	80 - 120
Terphenyl-d14		47.8	mg/L	1	60.0	80	80 - 120

Standard (CCV-2)

QC Batch: 65731

Date Analyzed: 2009-12-03

Analyzed By: MN

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	52.2	87	80 - 120	2009-12-03
2-Methylnaphthalene		mg/L	60.0	58.8	98	80 - 120	2009-12-03
1-Methylnaphthalene		mg/L	60.0	58.8	98	80 - 120	2009-12-03
Acenaphthylene		mg/L	60.0	51.2	85	80 - 120	2009-12-03
Acenaphthene		mg/L	60.0	51.5	86	80 - 120	2009-12-03
Dibenzofuran		mg/L	60.0	53.0	88	80 - 120	2009-12-03
Fluorene		mg/L	60.0	55.0	92	80 - 120	2009-12-03

continued ...

standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Anthracene		mg/L	60.0	54.8	91	80 - 120	2009-12-03
Phenanthrene		mg/L	60.0	53.4	89	80 - 120	2009-12-03
Fluoranthene		mg/L	60.0	56.7	94	80 - 120	2009-12-03
Pyrene		mg/L	60.0	49.6	83	80 - 120	2009-12-03
Benzo(a)anthracene		mg/L	60.0	53.6	89	80 - 120	2009-12-03
Chrysene		mg/L	60.0	56.4	94	80 - 120	2009-12-03
Benzo(b)fluoranthene		mg/L	60.0	55.8	93	80 - 120	2009-12-03
Benzo(k)fluoranthene		mg/L	60.0	65.6	109	80 - 120	2009-12-03
Benzo(a)pyrene		mg/L	60.0	65.6	109	80 - 120	2009-12-03
Indeno(1,2,3-cd)pyrene		mg/L	60.0	53.2	89	80 - 120	2009-12-03
Dibenzo(a,h)anthracene		mg/L	60.0	55.4	92	80 - 120	2009-12-03
Benzo(g,h,i)perylene		mg/L	60.0	53.4	89	80 - 120	2009-12-03

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		57.5	mg/L	1	60.0	96	80 - 120
2-Fluorobiphenyl		49.4	mg/L	1	60.0	82	80 - 120
Terphenyl-d14		47.9	mg/L	1	60.0	80	80 - 120

Standard (CCV-1)

QC Batch: 65786

Date Analyzed: 2009-12-04

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.105	105	80 - 120	2009-12-04
Toluene		mg/L	0.100	0.103	103	80 - 120	2009-12-04
Ethylbenzene		mg/L	0.100	0.102	102	80 - 120	2009-12-04
Xylene		mg/L	0.300	0.303	101	80 - 120	2009-12-04

Standard (CCV-2)

QC Batch: 65786

Date Analyzed: 2009-12-04

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.103	103	80 - 120	2009-12-04
Toluene		mg/L	0.100	0.101	101	80 - 120	2009-12-04
Ethylbenzene		mg/L	0.100	0.0990	99	80 - 120	2009-12-04
Xylene		mg/L	0.300	0.295	98	80 - 120	2009-12-04

Standard (CCV-3)

QC Batch: 65786

Date Analyzed: 2009-12-04

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0992	99	80 - 120	2009-12-04
Toluene		mg/L	0.100	0.0976	98	80 - 120	2009-12-04
Ethylbenzene		mg/L	0.100	0.0955	96	80 - 120	2009-12-04
Xylene		mg/L	0.300	0.285	95	80 - 120	2009-12-04

Standard (CCV-1)

QC Batch: 65787

Date Analyzed: 2009-12-04

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.906	91	80 - 120	2009-12-04

Standard (CCV-2)

QC Batch: 65787

Date Analyzed: 2009-12-04

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.822	82	80 - 120	2009-12-04

Standard (CCV-3)

QC Batch: 65787

Date Analyzed: 2009-12-04

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.803	80	80 - 120	2009-12-04

Standard (CCV-2)

QC Batch: 65789

Date Analyzed: 2009-12-05

Analyzed By: AG

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TNM 97-04

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TNM 97-04 Townsend

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Lovington, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0997	100	80 - 120	2009-12-05
Toluene		mg/L	0.100	0.0983	98	80 - 120	2009-12-05
Ethylbenzene		mg/L	0.100	0.0967	97	80 - 120	2009-12-05
Xylene		mg/L	0.300	0.288	96	80 - 120	2009-12-05

Standard (CCV-3)

QC Batch: 65789

Date Analyzed: 2009-12-05

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0868	87	80 - 120	2009-12-05
Toluene		mg/L	0.100	0.0859	86	80 - 120	2009-12-05
Ethylbenzene		mg/L	0.100	0.0847	85	80 - 120	2009-12-05
Xylene		mg/L	0.300	0.254	85	80 - 120	2009-12-05

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

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

Carrier # LS 25332341 Carroll IR