1R - 124

Annual GW Mon. Report

Year: 2011

2011
ANNUAL MONITORING REPORT

MONUMENT 18

NW ¼ NW ¼ SECTION 7, TOWNSHIP 20 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO
PLAINS SRS NUMBER: TNM MONUMENT 18-KNOWN
NMOCD Reference 1R-0124

Prepared For:

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

NOVA
safety and environmental

Prepared By:

NOVA Safety and Environmental
2057 Commerce Street
Midland, Texas 79703

March 2012

Ronald K. Rounsaville
Senior Project Manager

Brittan K. Byerly, P.G.
President

PLAINS
ALL AMERICAN

March 22, 2012

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

RECEIVED
MAR 26 2012
Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: Plains All American – 2011 Annual Monitoring Reports
15 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
HDO-90-23	AP-009	Section 06, Township 20 South, Range 37 East, Lea County
LF-59	1R-0103	Section 32, Township 19 South, Range 37 East, Lea County
Monument 2	1R-0110	Section 06, Township 20 South, Range 37 East, Lea County Section 07, Township 20 South, Range 37 East, Lea, County
Monument 10	1R-0119	Section 30, Township 19 South, Range 37 East, Lea County
Monument 17	1R-123	Section 29, Township 19 South, Range 37 East, Lea County
Monument 18	1R-0124	Section 07, Township 20 South, Range 37 East, Lea County
SPS-11	GW-0140	Section 18, Township 18 South, Range 36 East, Lea County
Texaco Skelly F	1R-0420	Section 11, Township 21 South, Range 37 East, Lea County
TNM 97-04	GW-0294	Section 11, Township 16 South, Range 35 East, Lea County
TNM 97-17	AP-017	Section 21, Township 20 South, Range 37 East, Lea County
TNM 97-18	AP-0013	Section 28, Township 20 South, Range 37 East, Lea County
TNM 98-05A	AP-12	Section 26, Township 21 South, Range 37 East, Lea County

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

PLAINS
ALL AMERICAN

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

Sincerely,

Jason Henry
Remediation Coordinator
Plains All American

CC: Geoff Leking, NMOCD, Hobbs, NM

Enclosures

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ENCLOSED ON DATA DISK

2011 Annual Monitoring Report
2011 Tables 1, 2 and 3 – Groundwater Elevation and BTEX Concentration Data
2011 Figures 1, 2A-2D, and 3A-3D
Electronic Copies of Laboratory Reports
Historic Table 1, 2 and 3 – Groundwater Elevation, BTEX and PAH Concentration Tables

INTRODUCTION

On behalf of Plains Marketing, L.P., (Plains), NOVA Safety and Environmental (NOVA) is pleased to submit this Annual Monitoring Report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 1 of each year. Beginning on May 29, 2004, project management responsibilities were assumed by NOVA. The Monument 18 Site (the site), formally the responsibility of Enron Oil Trading and Transportation (EOTT), is now the responsibility of Plains. This report is intended to be viewed as a complete document with figures, attachments, tables and text. The report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2011 only. For reference, the Site Location Map is provided as Figure 1. Cumulative tables and laboratory data are provided on the enclosed data disk.

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

SITE DESCRIPTION AND BACKGROUND INFORMATION

The legal description of the site location is NW ¼ NW ¼, Section 7, Township 20 South, Range 37 East, Lea County, New Mexico. No information with respect to the release date or volume of crude oil released and recovered is available as the release occurred while the pipeline was operated by Texas New Mexico Pipe Line Company (TNM). The Release Notification and Corrective Action Form (C-141) is provided as Appendix A.

Currently, there are nine monitor wells (MW-1 and MW-3 through MW-10) on site. Manual recovery of PSH is performed on a weekly schedule.

FIELD ACTIVITIES

Product Recovery Efforts

A measurable thickness of PSH was present in monitor wells MW-3 and MW-4 during all four quarters of the reporting period. The average PSH thickness in monitor well MW-3 was 0.32 feet. The average PSH thickness in monitor well MW-4 was 1.25 feet. The maximum measured PSH thickness of 1.99 feet was observed in monitor well MW-4 on May 2, 2011. PSH data for the 2011 gauging events can be found in Table 1. Approximately 171.25 gallons (approximately 4.1 barrels) of PSH was recovered from the site during the 2011 reporting period. Approximately 526 gallons (12.52 barrels) of PSH have been recovered since project inception. Recovery of PSH at the site is by manual recovery methods and is performed on a weekly schedule.

During the reporting period, Plains contracted a third party to conduct Mobile Dual Phase Extraction (MDPE) events at the Monument 18 site to assist in PSH recovery efforts. On May 6 and September 12, 2011, two, 12-hour MDPE events were conducted on monitor wells MW-3 and MW-4. During the two MDPE events, approximately 64 gallons of liquid PSH and 5.93 equivalent off-gas vapor gallons were recovered.

Groundwater Monitoring

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

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

The site monitor wells were gauged and sampled on February 8, May 10, August 9, and October 31, 2011. During each sampling event the monitor wells were purged of a minimum of three well volumes of water or until the wells were dry using a disposable polyethylene bailer or electrical Grundfos pump. Groundwater was allowed to recharge and samples were obtained using disposable Teflon samplers. Water samples were collected 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 the four quarterly monitoring events, are depicted on Figures 2A through 2D, the Inferred Groundwater Gradient Map(s). Groundwater elevation data for 2011 is provided as Table 1. Historic groundwater elevation data beginning at project inception is provided on the enclosed data disk.

The most recent Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.0014 feet/foot to the south. This is consistent with data presented on Figures 2A through 2C from earlier in the year. The corrected groundwater elevations ranged between 3,525.91 to 3,527.14 feet above mean sea level, in monitor well MW-8 on February 8, 2011 and in monitor well MW-9 on October 31, 2011, respectively.

LABORATORY RESULTS

Groundwater samples obtained during the quarterly sampling events of 2011 were delivered to Trace Analysis, Inc. in Midland, Texas for determination of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) constituent concentrations by EPA Method 8021B. Polynuclear Aromatic Hydrocarbons (PAH) analysis was conducted only on monitor wells MW-1, MW-3, MW-4 and MW-7 during 2011. Based upon historic PAH analytical data, only those wells exhibiting elevated constituent concentrations above WQCC standards are sampled, with the exclusion of those wells containing measurable PSH thicknesses. A listing of BTEX constituent concentrations for 2011 are summarized in Table 2 and the historic PAH constituent concentrations are summarized in Table 3. Copies of the laboratory reports generated for 2011 are provided on the enclosed data disk. The quarterly groundwater sample results for BTEX constituent concentrations are depicted on Figures 3A through 3D

Monitor well MW-1 is sampled on a quarterly schedule. Analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 3rd quarter to 0.0139 mg/L during the 2nd quarter of 2011. Benzene concentrations were above NMOCD regulatory standards of 0.01 mg/L, during 1st and 2nd quarters of the reporting period. Toluene concentrations were below the MDL of <0.001 mg/L and the NMOCD regulatory standard of 0.75 mg/L during all four quarters of the reporting period. Ethyl-benzene concentrations ranged from <0.001 mg/L during the 3rd quarter to 0.0105 mg/L during the 2nd quarter of 2011. Ethyl-benzene concentrations were below NMOCD regulatory standard of 0.75 mg/L, during all four quarters of the reporting period. Xylene concentrations ranged from 0.0102 mg/L during the 4th quarter to 0.0409 mg/L during the 2nd quarter of 2011. Xylene concentrations were below NMOCD regulatory standard of 0.62 mg/L, during all four quarters of the reporting period. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above WQCC Drinking Water Standards of 1-methylnaphthalene (0.0326 mg/L) and phenanthrene (0.0095 mg/L). Additional PAH constituents detected above MDLs include dibenzofuran (0.0104 mg/L), which is below the WQCC Drinking Water Standards. The PAH constituents detected in MW-1 during 2011 have decreased in respect to the number of analytes detected in 2008 and 2009.

Monitor well MW-3 is sampled on a quarterly schedule. Monitor well MW-3 was not sampled during the four quarters of the reporting period, due to the reported presence of PSH in the monitor well. PSH thicknesses of 0.37 feet, 0.05 feet, 0.50 feet and 0.41 feet were reported during the 1st, 2nd, 3rd and 4th quarters of 2011, respectively. PAH analysis was not conducted during the 4th quarter sampling event due to the presence of PSH.

Monitor well MW-4 is sampled on a quarterly schedule. Monitor well MW-4 was not sampled during the four quarters of the reporting period, due to the reported presence of PSH in the monitor well. PSH thicknesses of 1.56 feet, 1.78 feet, 1.90 feet and 0.86 feet were reported during the 1st, 2nd, 3rd and 4th quarters of 2011, respectively. PAH analysis was not conducted during the 4th quarter sampling event due to the presence of PSH.

Monitor well MW-5 is sampled on a semi-annual schedule and analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during the 2nd and 4th quarter sampling events. Monitor well MW-5 has exhibited thirty-six consecutive monitoring events below NMOCD regulatory limits. PAH analysis was not required by the NMOCD.

Monitor well MW-6 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. Monitor well MW-6 has exhibited thirty consecutive monitoring events below NMOCD regulatory limits. PAH analysis was not required by the NMOCD.

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. Monitor well MW-7 has exhibited thirty consecutive monitoring events below NMOCD regulatory limits. PAH analysis during the 4th quarter sampling event indicated elevated concentrations above MDLs for dibenzofuran (0.004443 mg/L), which is below WQCC standards.

Monitor well MW-8 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. Monitor well MW-8 has exhibited twenty-six consecutive monitoring events below NMOCD regulatory limits. PAH analysis was not required by the NMOCD.

Monitor well MW-9 is sampled on a quarterly schedule. During the 2011 monitoring period, no BTEX constituent concentrations exceeded the NMOCD regulatory standards. Analytical results indicate benzene and toluene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. Ethyl-benzene concentrations ranged from <0.001 mg/L during the 2nd, 3rd and 4th quarters to 0.0078 mg/L during the 1st quarter of 2011. Ethyl-benzene concentrations were below NMOCD regulatory standard during all four quarters of the reporting period. Xylene concentrations ranged from <0.001 during the 2nd, 3rd and 4th quarters to 0.0218 mg/L during the 1st quarter of 2011. Xylene concentrations were below NMOCD regulatory standard during all four quarters of the reporting period. PAH analysis was not required by the NMOCD.

Monitor well MW-10 is sampled on a quarterly schedule. During the 2011 monitoring period, no BTEX constituent concentrations exceeded the NMOCD regulatory standards. Analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 1st, 2nd and 3rd quarters to 0.0012 mg/L during the 4th quarter of 2011. Benzene concentrations were below NMOCD regulatory standards during all four quarters of the reporting period. Toluene, ethyl-benzene and xylene concentrations were below the MDL and the NMOCD regulatory standard during all four quarters of the reporting period. PAH analysis was not required by the NMOCD.

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 2011 annual monitoring period. Currently, there are nine groundwater monitor wells (MW-1 and MW-3 through MW-10) on site. Recovery of PSH at the site is achieved using manual recovery methods and is monitored on a bi-weekly schedule. The most recent Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.0014 feet/foot to the south.

As discussed above, two monitor wells (MW-3 and MW-4) contained measurable PSH thicknesses during each of the four sampling events of the reporting period with an average PSH thickness of 0.32 feet in monitor well MW-3 and 1.25 feet in monitor well MW-4.

Approximately 171.25 gallons (approximately 4.1 barrels) of PSH was recovered from the site during the 2011 reporting period. Approximately 526 gallons (12.52 barrels) of PSH have been recovered since project inception. Recovery of PSH at the site is by manual recovery methods and is monitored on a weekly schedule.

During the reporting period, Plains contracted a third party to conduct Mobile Dual Phase Extraction (MDPE) events at the Monument 18 site to assist in PSH recovery efforts. On May 6

and September 12, 2011, two, 12-hour MDPE events were conducted on monitor wells MW-3 and MW-4. During the two MDPE events, approximately 64 gallons of liquid PSH and 5.93 equivalent off-gas vapor gallons were recovered.

BTEX constituent concentrations were below NMOCD regulatory standards in six of the nine monitor wells during 2011. Dissolved phase and phase separated hydrocarbon impact appears to be limited to monitor wells MW-1, MW-3 and MW-4. Review of PAH analysis indicates an increasing trend in constituent concentrations in monitor well MW-1 and a decreasing trend in MW-7.

ANTICIPATED ACTIONS

Quarterly monitoring, aggressive PSH recovery and groundwater sampling will continue in 2012. Manual product recovery and gauging well be conducted on a bi-weekly schedule and will be adjusted according to site conditions. Additional MDPE events will be scheduled as necessary.

An Annual Monitoring Report will be submitted to the NMOCD before April 1, 2013.

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

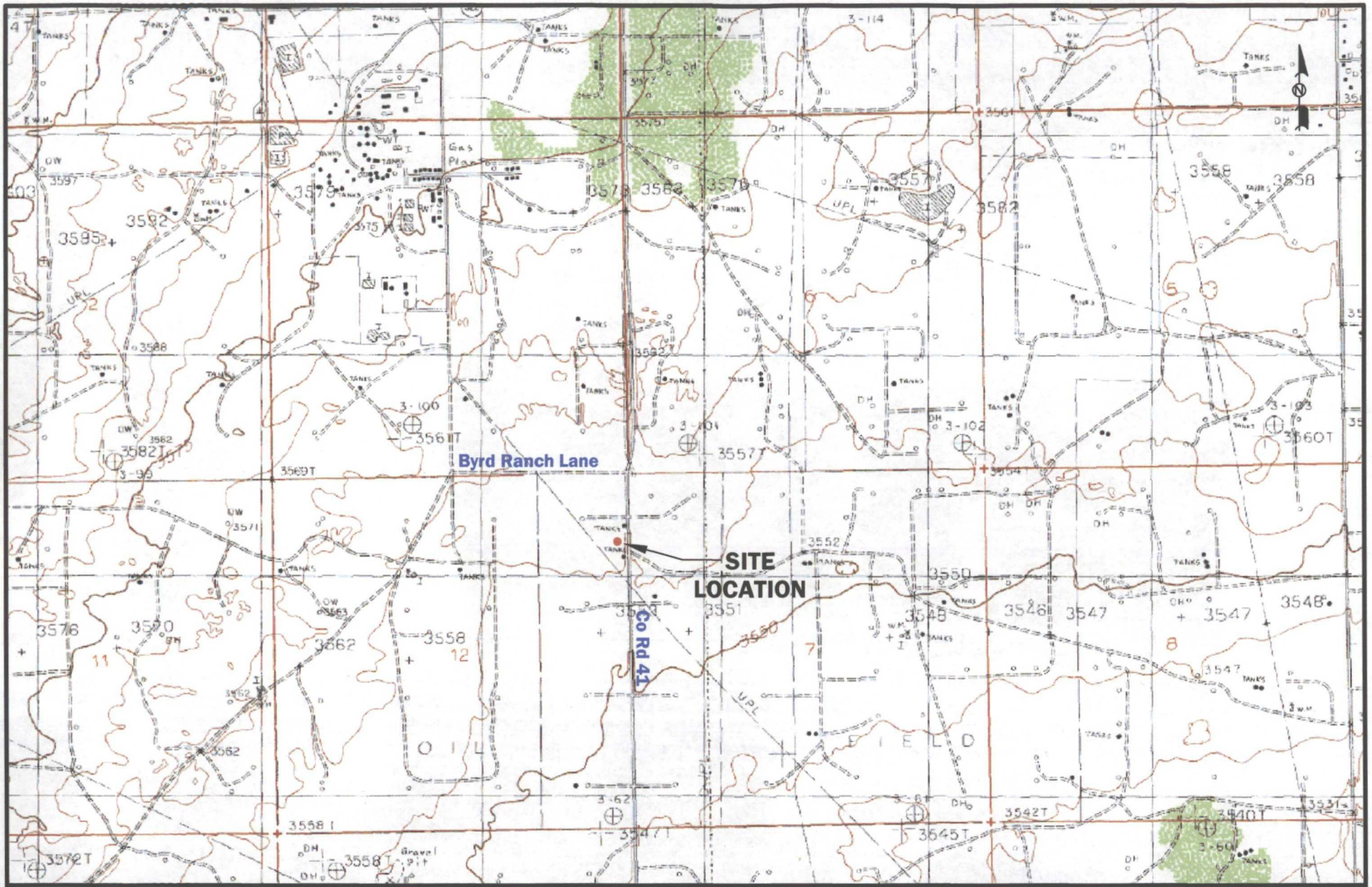
Copy 2:
Geoffrey R. Leking
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 1
1625 French Drive
Hobbs, NM 88240

Copy 3:
Jason Henry
Plains Marketing, L.P.
2530 State Highway 214
Denver City, TX 79323
jhenry@paalp.com

Copy 4:
Jeff Dann
Plains Marketing, L.P.
333 Clay Street
Suite 1600
Houston, TX 77002
jpdann@paalp.com

Copy 5:
NOVA Safety and Environmental
2057 Commerce Street
Midland, TX 79703
rrounsaville@novatraining.cc

Figures



LEGEND:

2000 1000 0 1000 2000

Distance in Feet

NMOCD Reference #1R-0124

Figure 1
Site Location Map
Monument 18
Plains Marketing, L.P.
Lea County, NM

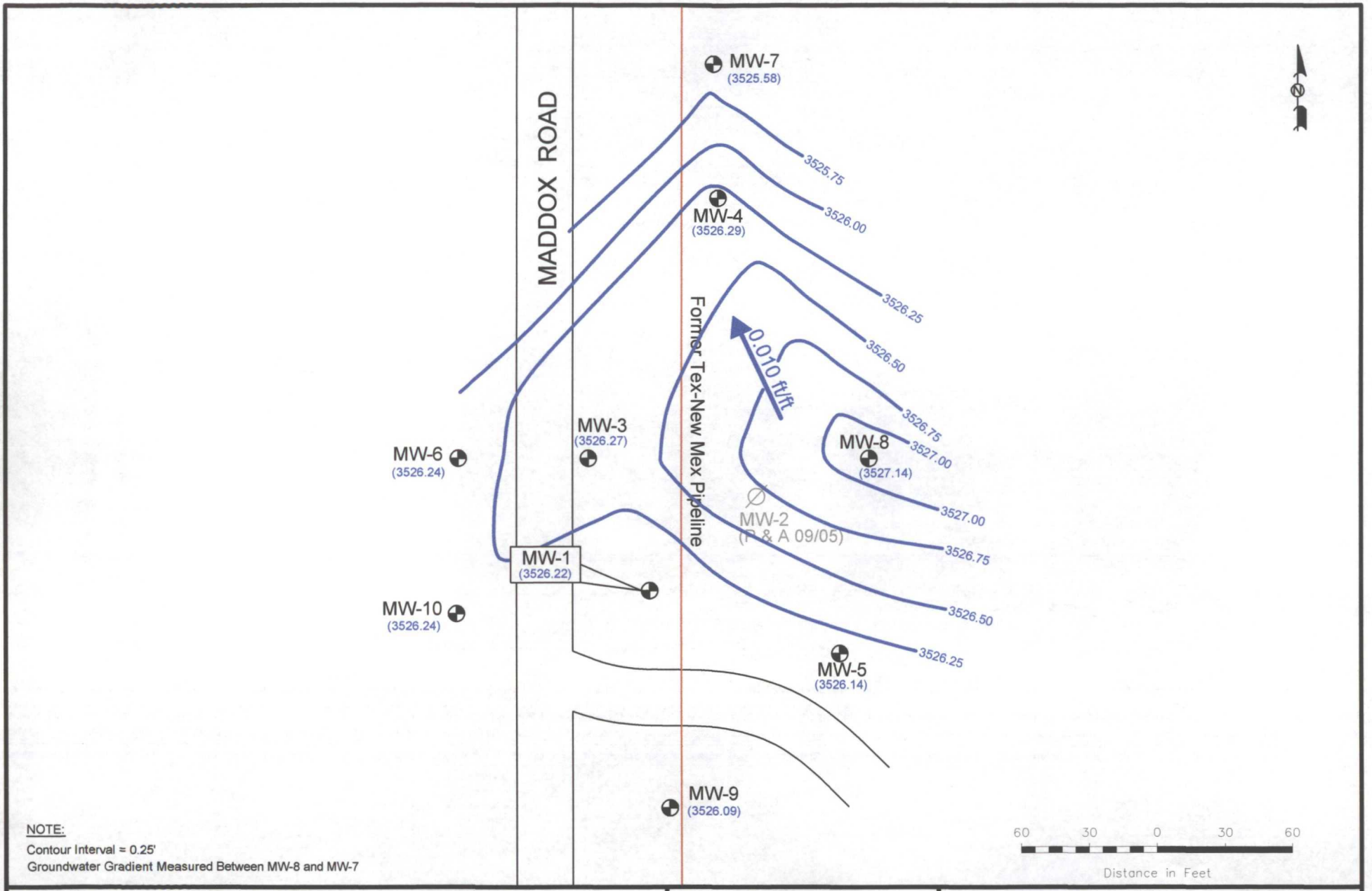
NOVA safety and environmental

2057 Commerce Drive
Midland, Texas 79703
432.520.7720

www.novasafetyandenvironmental.com

March 3, 2011	Scale: 1" = 2000'	CAD By: TA	Checked By: RKR

LATITUDE & LONGITUDE COORDINATES: N 32° 35' 30.37" W 103° 17' 58.68"



NOTE:
Contour Interval = 0.25'
Groundwater Gradient Measured Between MW-8 and MW-7

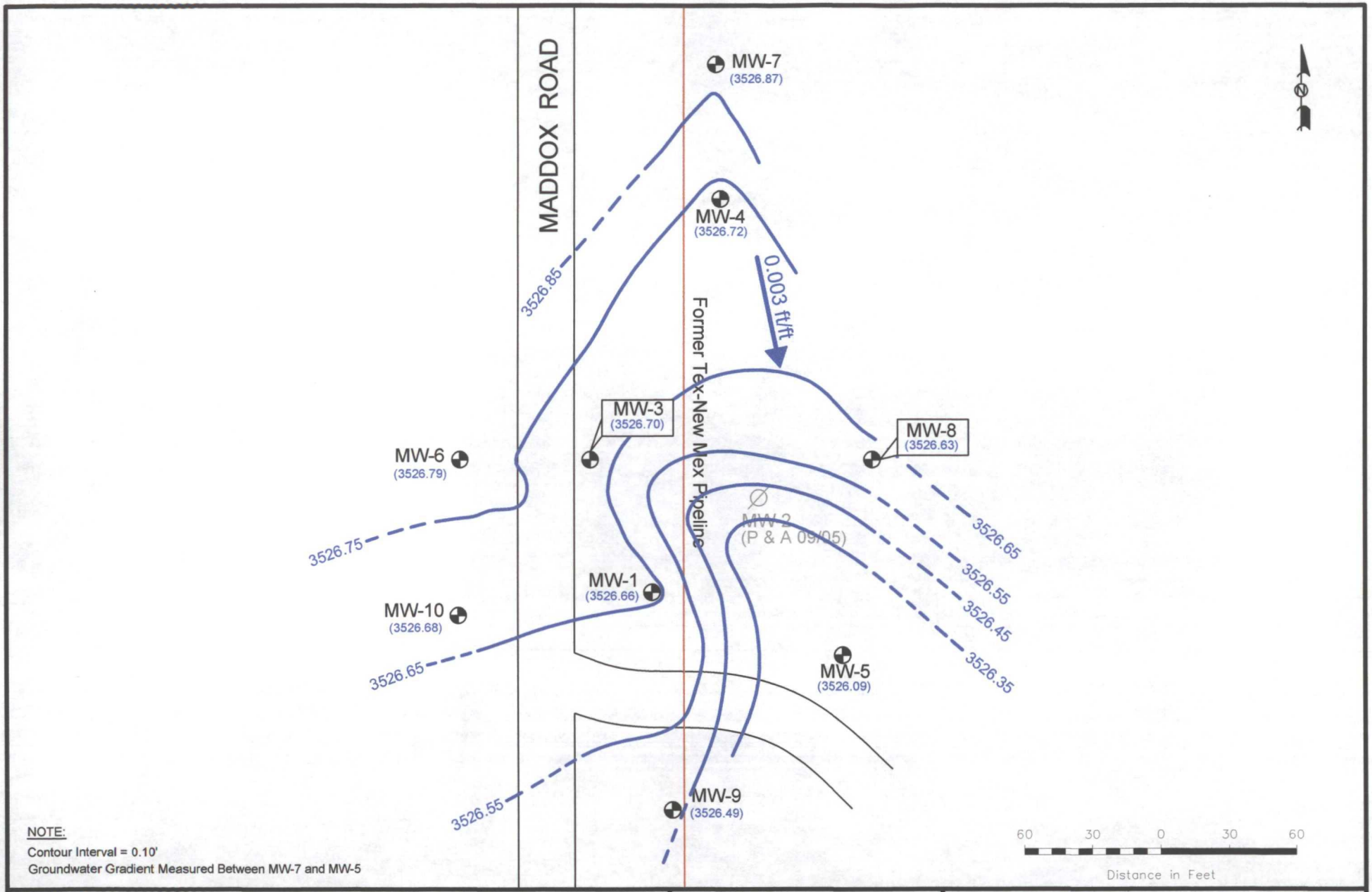
LEGEND:

- Monitor Well Location
- Plugged and Abandoned
- Ground Water Contour Lines
- (3587.54) Groundwater Elevation
- 0.001 ft/ft Groundwater Gradient and Magnitude

Figure 2A
Inferred Groundwater Gradient Map
(2/8/11)
NMOCD Reference # IR-0124
Plains Marketing, L.P.
Monument 18
Lea County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

April 4, 2011	Scale: 1" = 60'	CAD By: TA	Checked By: RKR
Lat. N 32° 35' 30.37" Long. W 103° 17' 58.68"			



NOTE:
Contour Interval = 0.10'
Groundwater Gradient Measured Between MW-7 and MW-5

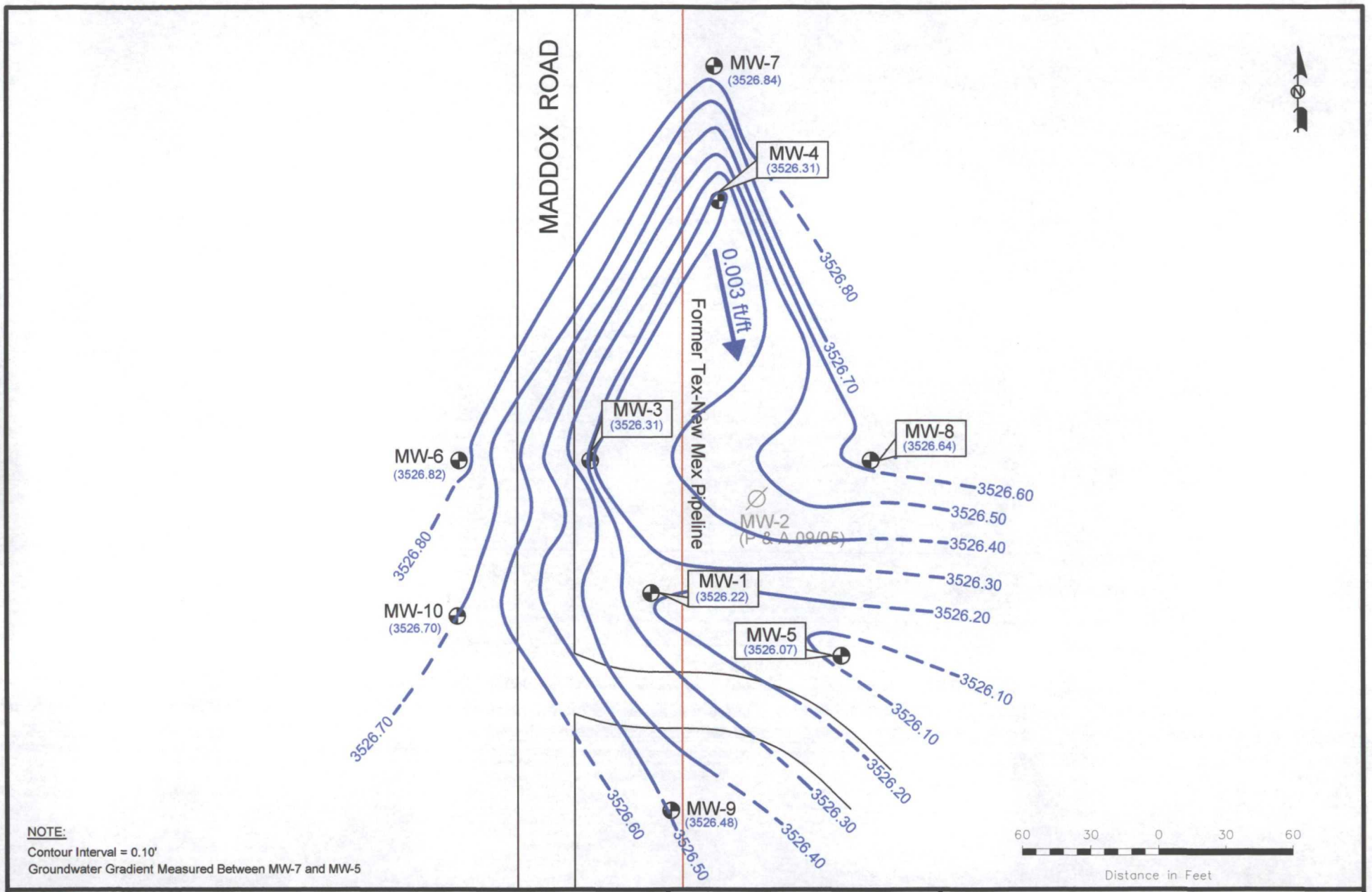
LEGEND:

- Monitor Well Location
- Plugged and Abandoned
- Ground Water Contour Lines
- (3587.54) Groundwater Elevation
- 0.001 ft/ft Groundwater Gradient and Magnitude

Figure 2B
Inferred Groundwater Gradient Map
(5/10/2011)
NMOCD Reference # IR-0124
Plains Marketing, L.P.
Monument 18
Lea County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

June 10, 2011	Scale: 1" = 60'	CAD By: TA	Checked By: RKR
Lat. N 32° 35' 30.37" Long. W 103° 17' 58.68"			



NOTE:
Contour Interval = 0.10'
Groundwater Gradient Measured Between MW-7 and MW-5

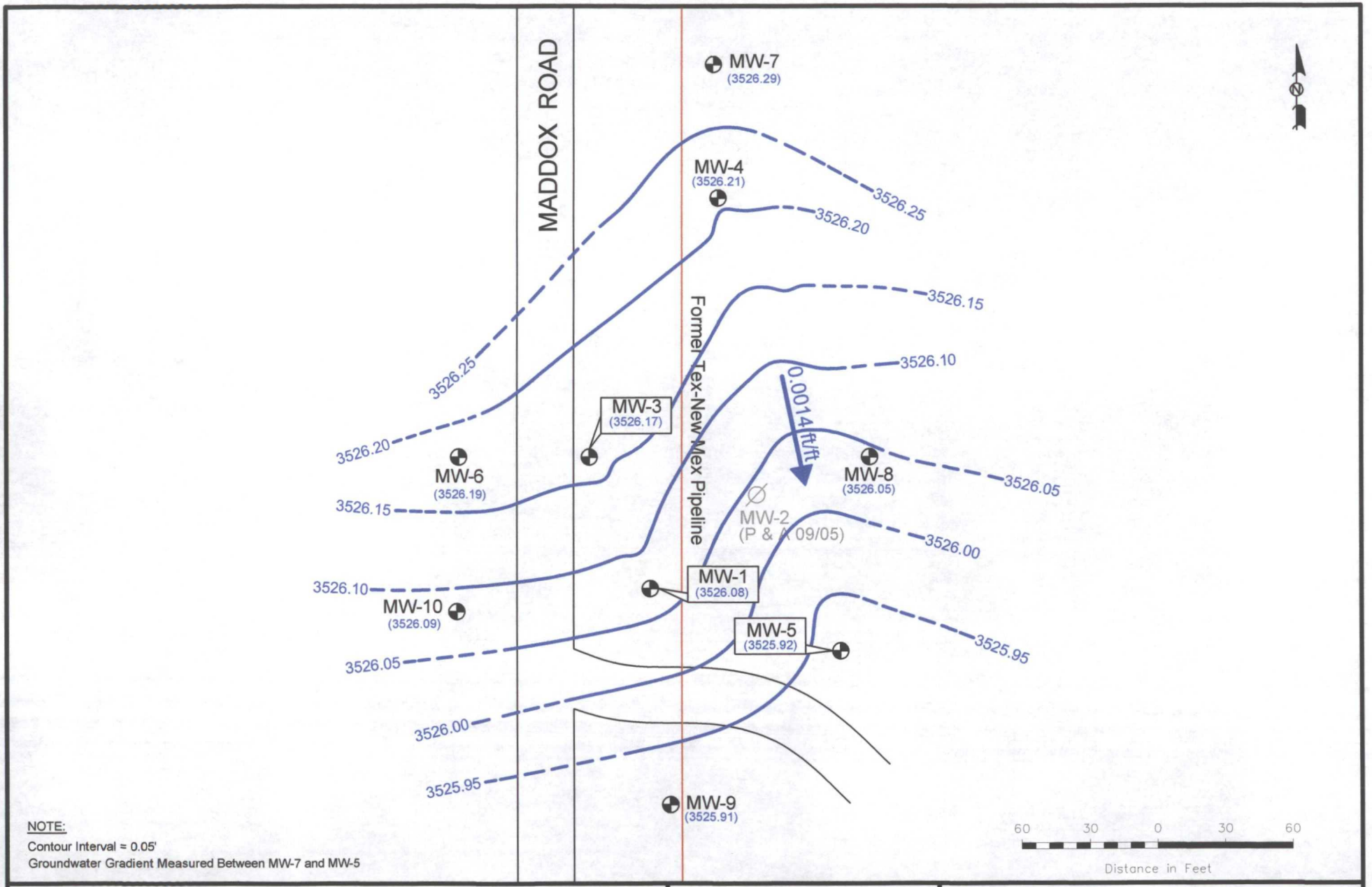
LEGEND:

- Monitor Well Location
- Plugged and Abandoned
- Ground Water Contour Lines
- (3587.54) Groundwater Elevation
- 0.001 ft/ft Groundwater Gradient and Magnitude

Figure 2C
Inferred Groundwater Gradient Map
(8/9/2011)
NMOCD Reference # IR-0124
Plains Marketing, L.P.
Monument 18
Lea County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

September 7, 2011	Scale: 1" = 60'	CAD By: TA	Checked By: RKR
Lat. N 32° 35' 30.37" Long. W 103° 17' 58.68"			



NOTE:
Contour Interval = 0.05'
Groundwater Gradient Measured Between MW-7 and MW-5

LEGEND:

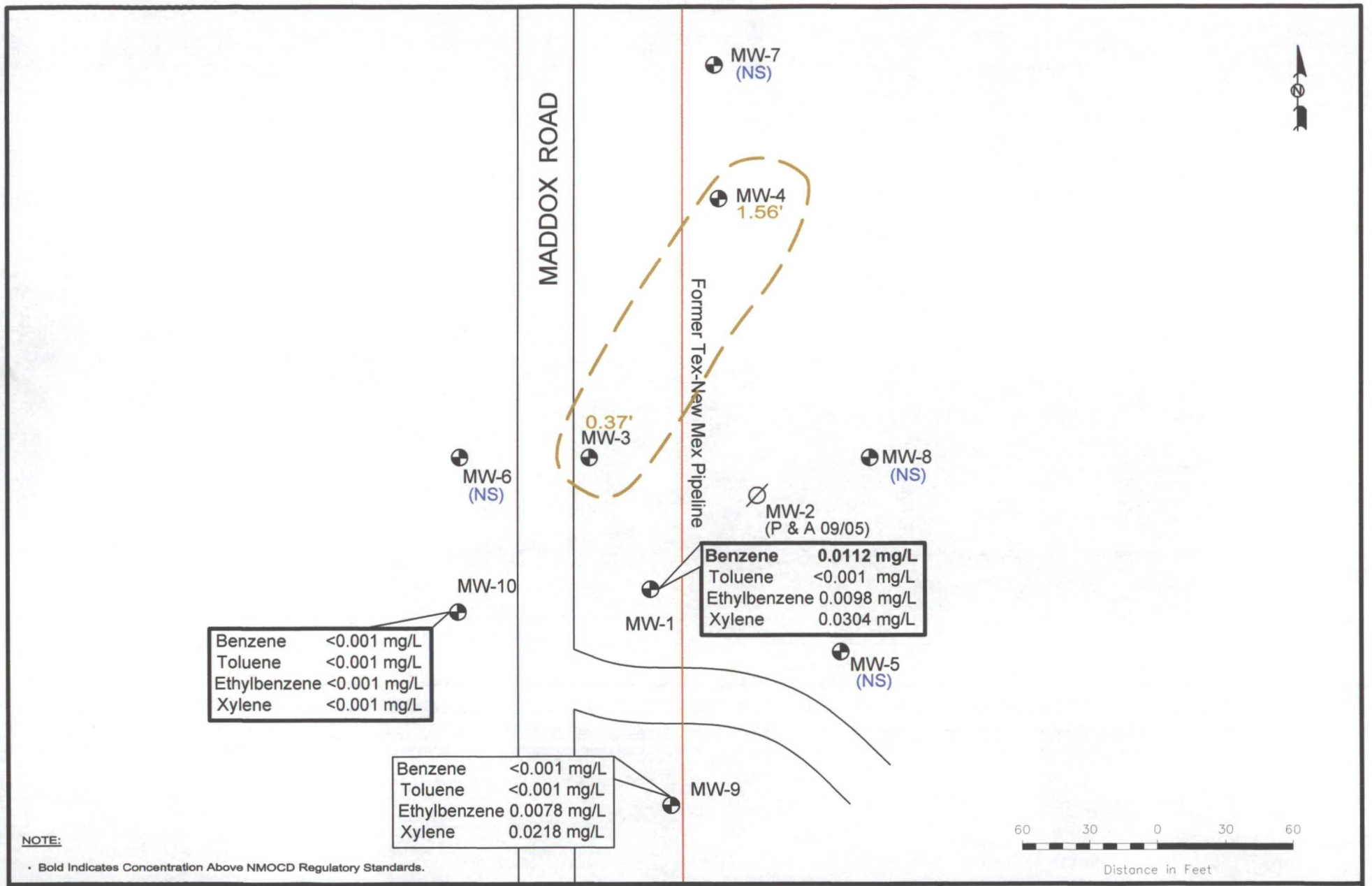
- Monitor Well Location
- Plugged and Abandoned
- Ground Water Contour Lines
- (3587.54) Groundwater Elevation
- 0.001 ft/ft Groundwater Gradient and Magnitude

Figure 2D
Inferred Groundwater Gradient Map
(10/31/2011)
NMOCD Reference # IR-0124
Plains Marketing, L.P.
Monument 18
Lea County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

November 9, 2011	Scale: 1" = 60'	CAD By: TA	Checked By: RKR

Lat. N 32° 35' 30.37" Long. W 103° 17' 58.68"



NOTE:

- Bold Indicates Concentration Above NMOCD Regulatory Standards.

LEGEND:

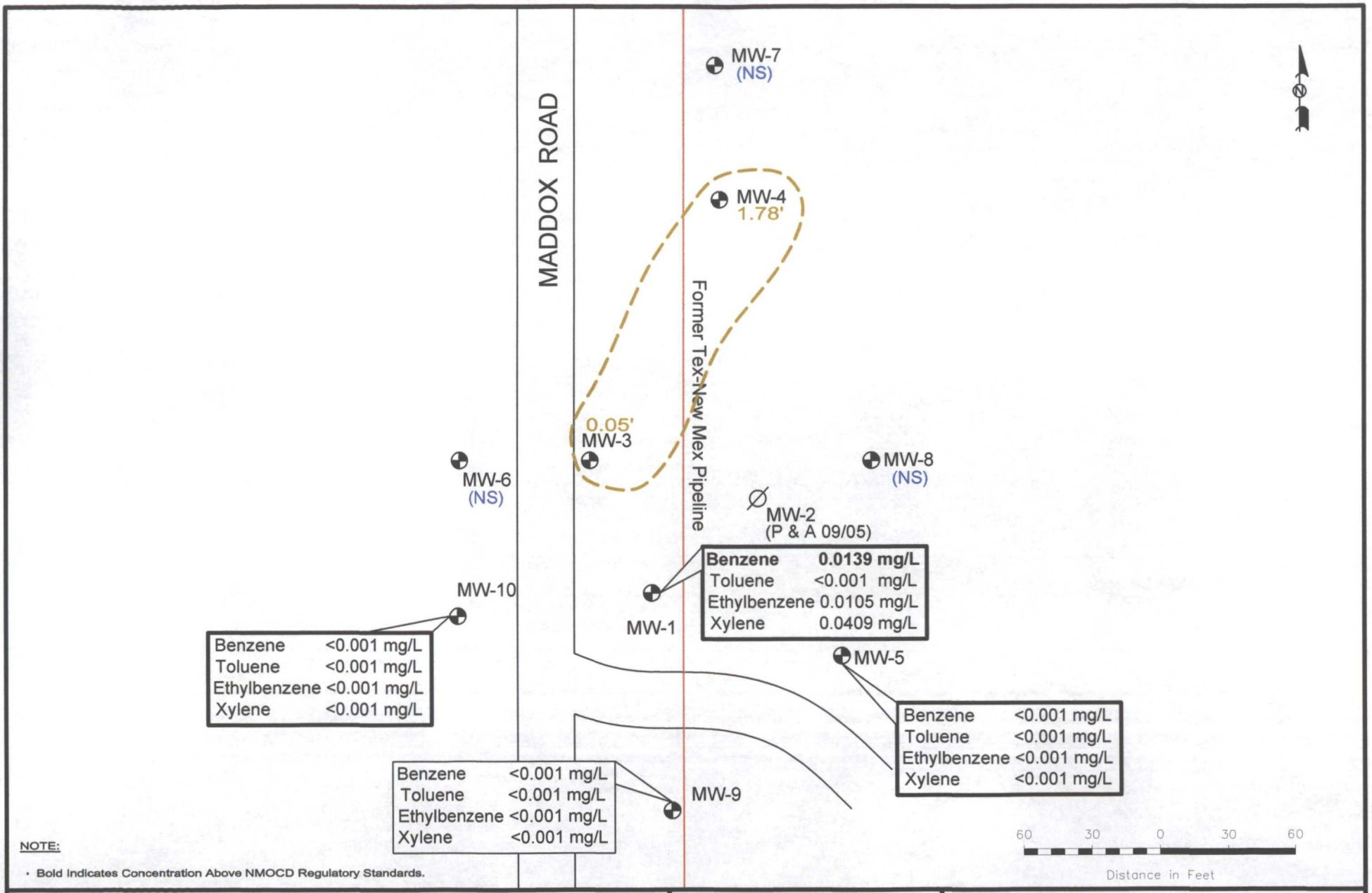
- Monitor Well Location
- Plugged and Abandoned
- Pipeline
- Inferred PSH Extent
- (NS) Not Sampled
- <0.001 Constituent Concentration (mg/L)
- 0.39' Thickness of PSH (feet)

Figure 3A
Groundwater Concentration and Inferred PSH Extent Map
(02/08/10)
NMOCD Reference # IR-0124
Plains Marketing, L.P.
Monument 18
Lea County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

April 4, 2011	Scale: 1" = 60'	CAD By: TA	Checked By: RKR

Lat. N 32° 35' 30.37" Long. W 103° 17' 58.68"



NOTE:

- Bold Indicates Concentration Above NMOCD Regulatory Standards.

LEGEND:

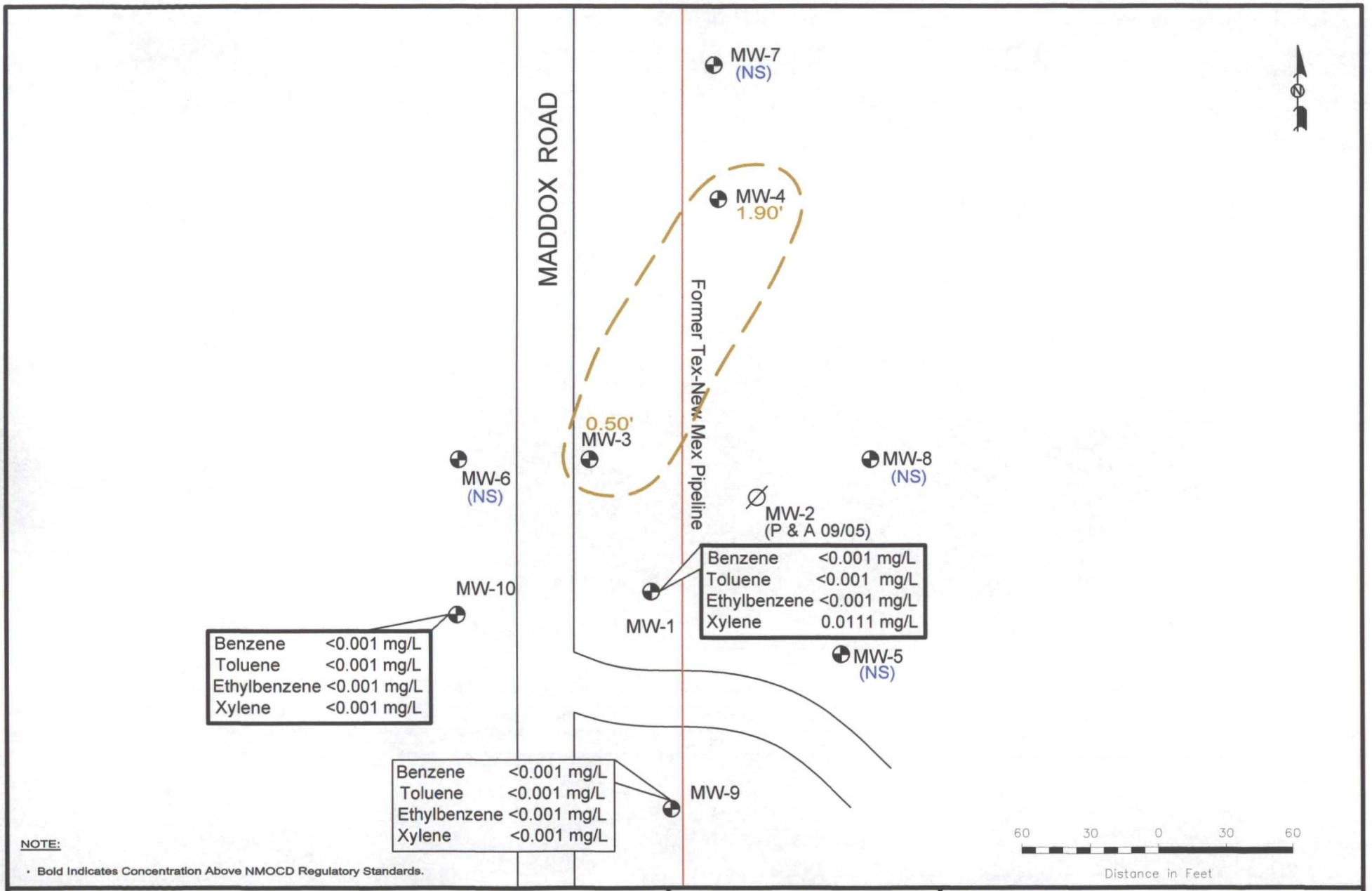
- Monitor Well Location
- Plugged and Abandoned
- Pipeline
- Inferred PSH Extent
- (NS) Not Sampled
- <0.001 Constituent Concentration (mg/L)
- 0.39' Thickness of PSH (feet)

Figure 3B
Groundwater Concentration and Inferred PSH Extent Map
(05/10/10)
NMOCD Reference # IR-0124
Plains Marketing, L.P.
Monument 18
Lea County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

June 10, 2011	Scale: 1" = 60'	CAD By: TA	Checked By: RKR

Lat. N 32° 35' 30.37" Long. W 103° 17' 58.68"



NOTE:

- Bold Indicates Concentration Above NMOCD Regulatory Standards.

LEGEND:

- Monitor Well Location
- Plugged and Abandoned
- Pipeline
- Inferred PSH Extent
- (NS) Not Sampled
- <0.001 Constituent Concentration (mg/L)
- 0.39' Thickness of PSH (feet)

Figure 3C
Groundwater Concentration and Inferred PSH Extent Map
(08/9/10)
NMOCD Reference # IR-0124
Plains Marketing, L.P.
Monument 18
Lea County, NM

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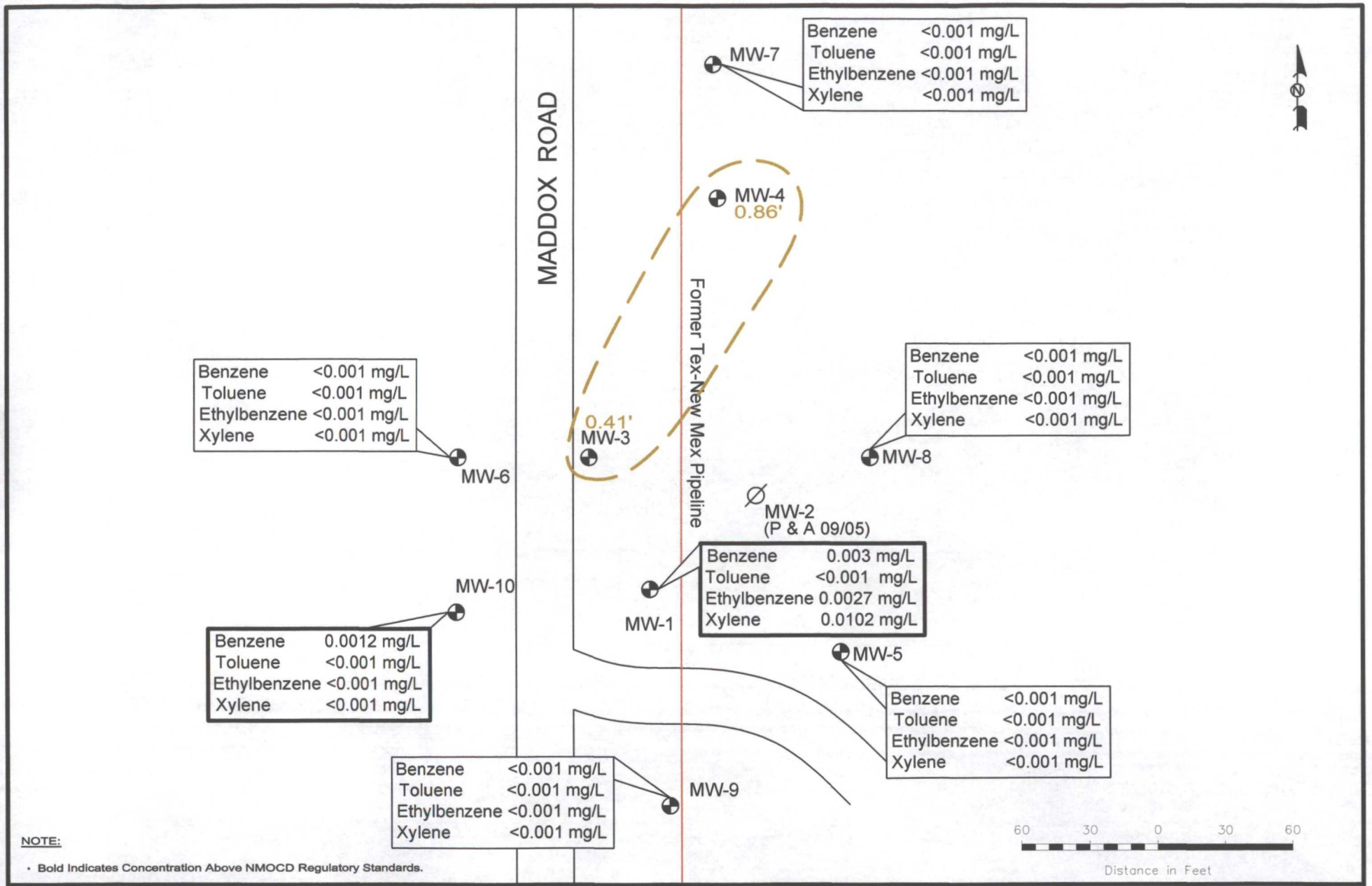
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

September 7, 2011	Scale: 1" = 60'	CAD By: TA	Checked By: RKR
Lat. N 32° 35' 30.37" Long. W 103° 17' 58.68"			



NOTE:

- Bold Indicates Concentration Above NMOCD Regulatory Standards.

LEGEND:

- Monitor Well Location
- Plugged and Abandoned
- Pipeline
- Inferred PSH Extent
- (NS) Not Sampled
- <0.001 Constituent Concentration (mg/L)
- 0.39' Thickness of PSH (feet)

Figure 3D
Groundwater Concentration and Inferred PSH Extent Map
(10/31/10)
NMOCD Reference # IR-0124
Plains Marketing, L.P.
Monument 18
Lea County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

November 10, 2011 | Scale: 1" = 60' | CAD By: TA | Checked By: RKR

Lat. N 32° 35' 30.37" Long. W 103° 17' 58.68"

Tables

TABLE 1

GROUNDWATER ELEVATION DATA - 2011

PLAINS MAREKTING, L.P.
MONUMENT 18
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1R-0124

SAMPLE LOCATION	SAMPLE DATE	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 1	*02/08/11*	3,558.71	-	32.49	0.00	3,526.22
MW - 1	05/02/11	3,558.71	-	32.12	0.00	3,526.59
MW - 1	05/09/11	3,558.71	-	32.05	0.00	3,526.66
MW - 1	*05/10/11*	3,558.71	-	32.05	0.00	3,526.66
MW - 1	05/12/11	3,558.71	-	32.38	0.00	3,526.33
MW - 1	*08/09/11*	3,558.71	-	32.49	0.00	3,526.22
MW - 1	09/14/11	3,558.71	-	32.63	0.00	3,526.08
MW - 1	*10/31/11*	3,558.71	-	32.63	0.00	3,526.08
MW - 3	*02/08/11*	3,558.53	32.20	32.57	0.37	3,526.27
MW - 3	05/02/11	3,558.53	31.77	31.97	0.20	3,526.73
MW - 3	05/09/11	3,558.53	31.82	31.87	0.05	3,526.70
MW - 3	*05/10/11*	3,558.53	31.82	31.87	0.05	3,526.70
MW - 3	05/19/11	3,558.53	-	31.82	0.00	3,526.71
MW - 3	05/27/11	3,558.53	-	31.82	0.00	3,526.71
MW - 3	06/10/11	3,558.53	-	31.86	0.00	3,526.67
MW - 3	06/24/11	3,558.53	-	31.86	0.00	3,526.67
MW - 3	07/01/11	3,558.53	-	31.90	0.00	3,526.63
MW - 3	07/12/11	3,558.53	-	31.94	0.00	3,526.59
MW - 3	*08/09/11*	3,558.53	32.15	32.65	0.50	3,526.31
MW - 3	09/07/11	3,558.53	32.23	33.06	0.83	3,526.18
MW - 3	09/14/11	3,558.53	32.34	32.49	0.15	3,526.17
MW - 3	*10/31/11*	3,558.53	32.30	32.71	0.41	3,526.17
MW - 4	*02/08/11*	3,558.14	31.62	33.18	1.56	3,526.29
MW - 4	05/02/11	3,558.14	31.13	33.12	1.99	3,526.71
MW - 4	05/09/11	3,558.14	31.15	32.93	1.78	3,526.72
MW - 4	*05/10/11*	3,558.14	31.15	32.93	1.78	3,526.72
MW - 4	05/19/11	3,558.14	31.28	32.01	0.73	3,526.75
MW - 4	05/27/11	3,558.14	31.31	31.91	0.60	3,526.74
MW - 4	06/10/11	3,558.14	31.35	32.26	0.91	3,526.65
MW - 4	06/24/11	3,558.14	31.37	32.11	0.74	3,526.66
MW - 4	07/01/11	3,558.14	31.45	32.39	0.94	3,526.55
MW - 4	07/12/11	3,558.14	31.51	32.53	1.02	3,526.48
MW - 4	*08/09/11*	3,558.14	31.55	33.45	1.90	3,526.31
MW - 4	09/07/11	3,558.14	31.67	33.63	1.96	3,526.18
MW - 4	09/14/11	3,558.14	31.83	32.57	0.74	3,526.20
MW - 4	*10/31/11*	3,558.14	31.80	32.66	0.86	3,526.21
MW - 5	*02/08/11*	3,560.07	-	33.93	0.00	3,526.14
MW - 5	05/02/11	3,560.07	-	33.60	0.00	3,526.47
MW - 5	05/09/11	3,560.07	-	33.98	0.00	3,526.09
MW - 5	*05/10/11*	3,560.07	-	33.98	0.00	3,526.09
MW - 5	*08/09/11*	3,560.07	-	34.00	0.00	3,526.07
MW - 5	09/14/11	3,560.07	-	34.13	0.00	3,525.94
MW - 5	*10/31/11*	3,560.07	-	34.15	0.00	3,525.92

TABLE 1

GROUNDWATER ELEVATION DATA - 2011

PLAINS MAREKTING, L.P.
MONUMENT 18
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1R-0124

SAMPLE LOCATION	SAMPLE DATE	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 6	*02/08/11*	3,557.64	-	31.40	0.00	3,526.24
MW - 6	05/02/11	3,557.64	-	30.89	0.00	3,526.75
MW - 6	05/09/11	3,557.64	-	30.85	0.00	3,526.79
MW - 6	*05/10/11*	3,557.64	-	30.85	0.00	3,526.79
MW - 6	*08/09/11*	3,557.64	-	30.82	0.00	3,526.82
MW - 6	09/14/11	3,557.64	-	31.40	0.00	3,526.24
MW - 6	*10/31/11*	3,557.64	-	31.45	0.00	3,526.19
MW - 7	*02/08/11*	3,558.65	-	33.07	0.00	3,525.58
MW - 7	05/02/11	3,558.65	-	31.79	0.00	3,526.86
MW - 7	05/09/11	3,558.65	-	31.78	0.00	3,526.87
MW - 7	*05/10/11*	3,558.65	-	31.78	0.00	3,526.87
MW - 7	*08/09/11*	3,558.65	-	31.81	0.00	3,526.84
MW - 7	09/14/11	3,558.65	-	32.34	0.00	3,526.31
MW - 7	*10/31/11*	3,558.65	-	32.36	0.00	3,526.29
MW - 8	*02/08/11*	3,559.30	-	32.16	0.00	3,527.14
MW - 8	05/02/11	3,559.30	-	32.70	0.00	3,526.60
MW - 8	05/09/11	3,559.30	-	32.67	0.00	3,526.63
MW - 8	*05/10/11*	3,559.30	-	32.67	0.00	3,526.63
MW - 8	*08/09/11*	3,559.30	-	32.66	0.00	3,526.64
MW - 8	09/14/11	3,559.30	-	33.24	0.00	3,526.06
MW - 8	*10/31/11*	3,559.30	-	33.25	0.00	3,526.05
MW - 9	*02/08/11*	3,559.94	-	33.85	0.00	3,526.09
MW - 9	05/02/11	3,559.94	-	33.45	0.00	3,526.49
MW - 9	05/09/11	3,559.94	-	33.45	0.00	3,526.49
MW - 9	*05/10/11*	3,559.94	-	33.45	0.00	3,526.49
MW - 9	*08/09/11*	3,559.94	-	33.46	0.00	3,526.48
MW - 9	09/14/11	3,559.94	-	33.99	0.00	3,525.95
MW - 9	*10/31/11*	3,559.94	-	34.03	0.00	3,525.91
MW - 10	*02/08/11*	3558.06	-	31.82	0.00	3526.24
MW - 10	05/02/11	3558.06	-	31.41	0.00	3526.65
MW - 10	05/09/11	3558.06	-	31.38	0.00	3526.68
MW - 10	*05/10/11*	3558.06	-	31.38	0.00	3526.68
MW - 10	*08/09/11*	3558.06	-	31.36	0.00	3526.70
MW - 10	09/14/11	3558.06	-	31.95	0.00	3526.11
MW - 10	*10/31/11*	3558.06	-	31.97	0.00	3526.09

** Complete Historical Tables are provided on the attached CD.*

TABLE 2

CONCENTRATIONS OF BTEX IN GROUNDWATER - 2011

PLAINS MARKETING, L.P.

MONUMENT 18

LEA COUNTY, NEW MEXICO

NMOCD REFERENCE NUMBER 1R-0124

All concentrations are reported in mg/L.

SAMPLE LOCATION	SAMPLE DATE	SW 846-8012B, 5030				
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE
NMOCD REGULATORY LIMIT		**0.01**	**0.750**	**0.750**	**0.620**	
MW - 1	02/08/11	**0.0112**	<0.001	0.0098	0.0304	
MW - 1	05/10/11	**0.0139**	<0.001	0.0105	0.0409	
MW - 1	08/09/11	<0.001	<0.001	<0.001	0.0111	
MW - 1	10/31/11	0.0030	<0.001	0.0027	0.0102	
MW - 3	02/08/11	Not Sampled due to PSH in Well				
MW - 3	05/10/11	Not Sampled due to PSH in Well				
MW - 3	08/09/11	Not Sampled due to PSH in Well				
MW - 3	10/31/11	Not Sampled due to PSH in Well				
MW - 4	02/08/11	Not Sampled due to PSH in Well				
MW - 4	05/10/11	Not Sampled due to PSH in Well				
MW - 4	08/09/11	Not Sampled due to PSH in Well				
MW - 4	10/31/11	Not Sampled due to PSH in Well				
MW - 5	02/08/11	Not sampled due to sample reduction				
MW - 5	05/10/11	<0.001	<0.001	<0.001	<0.001	
MW - 5	08/09/11	Not sampled due to sample reduction				
MW - 5	10/31/11	<0.001	<0.001	<0.001	<0.001	
MW - 6	02/08/11	Not sampled due to sample reduction				
MW - 6	05/10/11	Not sampled due to sample reduction				
MW - 6	08/09/11	Not sampled due to sample reduction				
MW - 6	10/31/11	<0.001	<0.001	<0.001	<0.001	
MW - 7	02/08/11	Not sampled due to sample reduction				
MW - 7	05/10/11	Not sampled due to sample reduction				
MW - 7	08/09/11	Not sampled due to sample reduction				
MW - 7	10/31/11	<0.001	<0.001	<0.001	<0.001	
MW - 8	02/08/11	Not sampled due to sample reduction				
MW - 8	05/10/11	Not sampled due to sample reduction				
MW - 8	08/09/11	Not sampled due to sample reduction				
MW - 8	10/31/11	<0.001	<0.001	<0.001	<0.001	
MW - 9	02/08/11	<0.001	<0.001	0.0078	0.0218	
MW - 9	05/10/11	<0.001	<0.001	<0.001	<0.001	
MW - 9	08/09/11	<0.001	<0.001	<0.001	<0.001	
MW - 9	10/31/11	<0.001	<0.001	<0.001	<0.001	
MW - 10	02/08/11	<0.001	<0.001	<0.001	<0.001	
MW - 10	05/10/11	<0.001	<0.001	<0.001	<0.001	
MW - 10	08/09/11	<0.001	<0.001	<0.001	<0.001	
MW - 10	10/31/11	0.0012	<0.001	<0.001	<0.001	

** Complete Historical Tables are provided on the attached CD.*

TABLE 3

POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

PLAINS MARKETING, L.P.
MONUMENT 18
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1R-0124

All water concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	EPA SW846-8270C, 3510																	
		Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Phenanthrene	Pyrene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Dibenzofuran
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		-	-	0.001 mg/L	0.0001 mg/L	0.0007 mg/L	0.001 mg/L	-	0.001 mg/L	0.0002 mg/L	0.0003 mg/L	0.001 mg/L	0.001 mg/L	0.0004 mg/L	0.001 mg/L	0.001 mg/L	0.03 mg/L			-
MW-1	11/05/08	<0.000917	<0.000917	**0.00362**	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	<0.000917	**0.0169**	<0.000917	**0.01654**	<0.000917	**0.00796**	**0.0678**	**0.0197**	0.0134
	11/04/09	<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	**0.0019**	<0.000184	0.000736	0.00928	0.00135	0.00276
	11/03/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/15/11	<0.00186	<0.00186	<0.00186	<0.00186	<0.00186	<0.00186	<0.00186	<0.00186	<0.00186	<0.00186	<0.00186	<0.00186	<0.00186	**0.0095**	<0.00186	<0.00186	**0.0326**	<0.00186	0.0104
MW-3	11/05/08	<0.000930	<0.000930	**0.0018**	<0.000930	<0.000930	<0.000930	<0.000930	<0.000930	<0.000930	<0.000930	<0.000930	**0.0131**	<0.000930	**0.0187**	<0.000930	**0.0076**	**0.0563**	**0.0259**	0.0122
	11/04/09	<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	**0.0078**	<0.000184	**0.00188**	**0.0290**	**0.00342**	0.00481
	11/03/10	Not Sampled due to presence of PSH.																		
	12/15/11	Not Sampled due to presence of PSH.																		
MW-4	11/05/08	<0.000930	<0.000930	<0.000930	<0.000930	<0.000930	<0.000930	<0.000930	<0.000930	<0.000930	<0.000930	<0.000930	**0.00648**	<0.000930	**0.0084**	<0.000930	0.00378	0.0163	0.00778	0.00584
	11/04/09	<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	**0.00174**	<0.000184	0.00141	0.00559	0.00389	0.00118
	11/03/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/15/11	Not Sampled due to presence of PSH.																		
MW-5	11/05/08	<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	0.001	<0.000184	<0.000184	0.000825
	11/04/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.000555
	11/03/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/15/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-6	11/05/08	<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	0.000429
	11/04/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	11/03/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/15/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-7	11/05/08	<0.000186	<0.000186	0.000538	**0.000403**	<0.000186	<0.000186	<0.000186	<0.000186	**0.000371**	<0.000186	0.000407	<0.000186	<0.000186	0.000577	0.000443	<0.000186	<0.000186	<0.000186	0.000774
	11/04/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.000305
	11/03/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/15/11	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	<0.000186	0.000443

TABLE 3

POLYNUCLEAR AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

PLAINS MARKETING, L.P.
MONUMENT 18
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER 1R-0124

All water concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	EPA SW846-8270C, 3510																		
		Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Phenanthrene	Pyrene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Dibenzofuran
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		—	—	0.001 mg/L	0.0001 mg/L	0.0007 mg/L	0.001 mg/L	—	0.001 mg/L	0.0002 mg/L	0.0003 mg/L	0.001 mg/L	0.001 mg/L	0.0004 mg/L	0.001 mg/L	0.001 mg/L	0.03 mg/L			—
MW-8	11/05/08	<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	0.00067
	11/04/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184
	11/03/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/15/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-9	11/05/08	<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
	11/04/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
	11/03/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/15/11	Not Sampled as part of Quarterly Monitoring Event.																		
MW-10	11/05/08	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185	<0.000185
	11/04/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.000511
	11/03/10	Not Sampled as part of Quarterly Monitoring Event.																		
	12/15/11	Not Sampled as part of Quarterly Monitoring Event.																		

Appendices

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

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

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

x Initial Report ☐ Final Report

Name of Company	Plains Pipeline, LP	Contact:	Camille Reynolds
Address:	3705 E. Hwy 158, Midland, TX 79706	Telephone No.	505-441-0965
Facility Name	Monument # 18	Facility Type:	Pipeline

Surface Owner:	Mineral Owner	Lease No.
Jim B Cooper		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	7	20S	37E					Lea

Latitude 32 degrees 35' 30.0" **Longitude** 103 degrees 17' 55.9"

NATURE OF RELEASE

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

Describe Area Affected and Cleanup Action Taken.*
NOTE: Texas-New Mexico Pipeline was the owner/operator of the pipeline system at the time of the release, initial response information is unavailable.

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

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

* Attach Additional Sheets If Necessary

Laboratory Analytical Reports

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 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 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

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 10, 2011

Work Order: 11020910

Project Location: Monument, Lea Co., NM
Project Name: TNM Monument #18
Project Number: TNM Monument #18
SRS#: Monument #18

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
256925	MW-9	water	2011-02-08	11:00	2011-02-09
256926	MW-10	water	2011-02-08	11:45	2011-02-09
256927	MW-1	water	2011-02-08	12:30	2011-02-09

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

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

Standard Flags

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

Samples for project TNM Monument #18 were received by TraceAnalysis, Inc. on 2011-02-09 and assigned to work order 11020910. Samples for work order 11020910 were received intact without headspace and at a temperature of 5.2 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	66485	2011-02-09 at 10:50	77507	2011-02-09 at 10:50

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 11020910 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: 256925 - MW-9

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77507	Date Analyzed:	2011-02-09	Analyzed By:	ME
Prep Batch:	66485	Sample Preparation:	2011-02-09	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		**0.00780**	mg/L	1	0.00100
Xylene		**0.0218**	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.104	mg/L	1	0.100	104	75.4 - 119.4
4-Bromofluorobenzene (4-BFB)	[1]	0.0746	mg/L	1	0.100	75	78.6 - 122.8

Sample: 256926 - MW-10

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77507	Date Analyzed:	2011-02-09	Analyzed By:	ME
Prep Batch:	66485	Sample Preparation:	2011-02-09	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)		0.106	mg/L	1	0.100	106	75.4 - 119.4
4-Bromofluorobenzene (4-BFB)		0.0815	mg/L	1	0.100	82	78.6 - 122.8

Sample: 256927 - MW-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	77507	Date Analyzed:	2011-02-09	Analyzed By:	ME
Prep Batch:	66485	Sample Preparation:	2011-02-09	Prepared By:	ME

[1] Surrogate out due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**0.0112**	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		**0.00980**	mg/L	1	0.00100
Xylene		**0.0304**	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.109	mg/L	1	0.100	109	75.4 - 119.4
4-Bromofluorobenzene (4-BFB)		0.0905	mg/L	1	0.100	90	78.6 - 122.8

Method Blank (1) QC Batch: 77507

QC Batch: 77507 | Date Analyzed: 2011-02-09 | Analyzed By: ME
Prep Batch: 66485 | QC Preparation: 2011-02-09 | Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0978	mg/L	1	0.100	98	70.8 - 117.4
4-Bromofluorobenzene (4-BFB)		0.0921	mg/L	1	0.100	92	79 - 113.4

Laboratory Control Spike (LCS-1)

QC Batch: 77507 | Date Analyzed: 2011-02-09 | Analyzed By: ME
Prep Batch: 66485 | QC Preparation: 2011-02-09 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.104	mg/L	1	0.100	<0.000400	104	76.8 - 110.3
Toluene	0.104	mg/L	1	0.100	<0.000300	104	81 - 108.2
Ethylbenzene	0.103	mg/L	1	0.100	<0.000300	103	78.8 - 111
Xylene	0.309	mg/L	1	0.300	<0.000333	103	80.3 - 111.4

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	<0.000400	103	76.8 - 110.3	1	20
Toluene	0.104	mg/L	1	0.100	<0.000300	104	81 - 108.2	0	20
Ethylbenzene	0.104	mg/L	1	0.100	<0.000300	104	78.8 - 111	1	20
Xylene	0.310	mg/L	1	0.300	<0.000333	103	80.3 - 111.4	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)	0.108	0.101	mg/L	1	0.100	108	101	66.6 - 114.5
4-Bromofluorobenzene (4-BFB)	0.104	0.0964	mg/L	1	0.100	104	96	77.1 - 114.4

Standard (CCV-2)

QC Batch: 77507 Date Analyzed: 2011-02-09 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	0.0958	96	80 - 120	2011-02-09
Toluene		mg/L	0.100	0.0942	94	80 - 120	2011-02-09
Ethylbenzene		mg/L	0.100	0.0934	93	80 - 120	2011-02-09
Xylene		mg/L	0.300	0.270	90	80 - 120	2011-02-09

Standard (CCV-3)

QC Batch: 77507 Date Analyzed: 2011-02-09 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	0.0968	97	80 - 120	2011-02-09
Toluene		mg/L	0.100	0.0954	95	80 - 120	2011-02-09
Ethylbenzene		mg/L	0.100	0.0961	96	80 - 120	2011-02-09
Xylene		mg/L	0.300	0.279	93	80 - 120	2011-02-09

LAB Order ID # 1020910

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

Company Name: Vova — **Phone #:** 432-520-7720

Address: (Street, City, Zip) 2157 Commerce Midland TX 79703 — **Fax #:** 432-520-7701

Contact Person: Ron R. — **E-mail:**

Invoice to:
(If different from above)

Project #: TWM-Monument #18 — **Project Name:** Monument #18

Project Location (including state): New Mexico — **Sampler Signature:**

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
29925	MW-9	3	40ml	X				X				X		2-8	11:00
926	MW-10	3													11:45
927	MW-1	3													12:30

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, Fl, S04, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
	X																			

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	Vova	2-9-11	8:00		Trace	2-9-11	8:10	INST ___ OBS 5.2 °C COR ___ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ___ OBS ___ °C COR ___ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ___ OBS ___ °C COR ___ °C

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

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 #

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TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 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

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: May 13, 2011

Work Order: 11051105

Project Location: Monument, Lea Co., NM
Project Name: TNM Monument #18
Project Number: TNM Monument #18
SRS#: Monument #18

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
266108	MW-5	water	2011-05-10	00:00	2011-05-11
266109	MW-9	water	2011-05-10	00:00	2011-05-11
266110	MW-10	water	2011-05-10	00:00	2011-05-11
266111	MW-1	water	2011-05-10	00:00	2011-05-11

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.

Michael Abel

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

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Case Narrative

Samples for project TNM Monument #18 were received by TraceAnalysis, Inc. on 2011-05-11 and assigned to work order 11051105. Samples for work order 11051105 were received intact without headspace and at a temperature of 8.8 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	68937	2011-05-12 at 08:30	81212	2011-05-12 at 08:30

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 11051105 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: 266108 - MW-5

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	81212	Date Analyzed:	2011-05-12	Analyzed By:	ME
Prep Batch:	68937	Sample Preparation:	2011-05-12	Prepared By:	ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0861	mg/L	1	0.100	86	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0796	mg/L	1	0.100	80	51.1 - 128

Sample: 266109 - MW-9

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	81212	Date Analyzed:	2011-05-12	Analyzed By:	ME
Prep Batch:	68937	Sample Preparation:	2011-05-12	Prepared By:	ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0854	mg/L	1	0.100	85	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0790	mg/L	1	0.100	79	51.1 - 128

Sample: 266110 - MW-10

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	81212	Date Analyzed:	2011-05-12	Analyzed By:	ME
Prep Batch:	68937	Sample Preparation:	2011-05-12	Prepared By:	ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0878	mg/L	1	0.100	88	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.0784	mg/L	1	0.100	78	51.1 - 128

Sample: 266111 - MW-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	81212	Date Analyzed:	2011-05-12	Analyzed By:	ME
Prep Batch:	68937	Sample Preparation:	2011-05-12	Prepared By:	ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	**0.0139**	mg/L	1	0.00100
Toluene		1	<0.00100	mg/L	1	0.00100
Ethylbenzene		1	**0.0105**	mg/L	1	0.00100
Xylene		1	**0.0409**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0924	mg/L	1	0.100	92	67.8 - 129
4-Bromofluorobenzene (4-BFB)			0.102	mg/L	1	0.100	102	51.1 - 128

Method Blanks

Method Blank (1) QC Batch: 81212

QC Batch:	81212	Date Analyzed:	2011-05-12	Analyzed By:	ME
Prep Batch:	68937	QC Preparation:	2011-05-12	Prepared By:	ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0824	mg/L	1	0.100	82	70.2 - 118
4-Bromofluorobenzene (4-BFB)			0.0747	mg/L	1	0.100	75	47.3 - 116

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 81212 | Date Analyzed: 2011-05-12 | Analyzed By: ME
Prep Batch: 68937 | QC Preparation: 2011-05-12 | Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0976	mg/L	1	0.100	<0.000400	98	76.8 - 110
Toluene		1	0.105	mg/L	1	0.100	<0.000300	105	81 - 108
Ethylbenzene		1	0.0928	mg/L	1	0.100	<0.000300	93	78.8 - 118
Xylene		1	0.276	mg/L	1	0.300	<0.000333	92	80.3 - 119

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.104	mg/L	1	0.100	<0.000400	104	76.8 - 110	6	20
Toluene		1	0.108	mg/L	1	0.100	<0.000300	108	81 - 108	3	20
Ethylbenzene		1	0.0987	mg/L	1	0.100	<0.000300	99	78.8 - 118	6	20
Xylene		1	0.295	mg/L	1	0.300	<0.000333	98	80.3 - 119	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)	0.0823	0.0868	mg/L	1	0.100	82	87	66.6 - 114
4-Bromofluorobenzene (4-BFB)	0.0815	0.0862	mg/L	1	0.100	82	86	68.2 - 124

Matrix Spike (MS-1) Spiked Sample: 266004

QC Batch: 81212 | Date Analyzed: 2011-05-12 | Analyzed By: ME
Prep Batch: 68937 | QC Preparation: 2011-05-12 | Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	14.4	mg/L	50	5.00	9.7315	93	77.9 - 114
Toluene		1	5.25	mg/L	50	5.00	<0.0150	105	78.3 - 111
Ethylbenzene		1	5.95	mg/L	50	5.00	1.59	87	75.3 - 110
Xylene		1	13.8	mg/L	50	15.0	0.9838	85	75.7 - 109

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	14.3	mg/L	50	5.00	9.7315	91	77.9 - 114	1	20
Toluene		1	5.53	mg/L	50	5.00	<0.0150	111	78.3 - 111	5	20
Ethylbenzene		1	6.13	mg/L	50	5.00	1.59	91	75.3 - 110	3	20
Xylene		1	14.5	mg/L	50	15.0	0.9838	90	75.7 - 109	5	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	4.41	4.32	mg/L	50	5	88	86	68.3 - 107
4-Bromofluorobenzene (4-BFB)	4.35	4.32	mg/L	50	5	87	86	60.1 - 135

Calibration Standards

Standard (CCV-1)

QC Batch: 81212 Date Analyzed: 2011-05-12 Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.107	107	80 - 120	2011-05-12
Toluene		1	mg/L	0.100	0.115	115	80 - 120	2011-05-12
Ethylbenzene		1	mg/L	0.100	0.100	100	80 - 120	2011-05-12
Xylene		1	mg/L	0.300	0.300	100	80 - 120	2011-05-12

Standard (CCV-2)

QC Batch: 81212 Date Analyzed: 2011-05-12 Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0999	100	80 - 120	2011-05-12
Toluene		1	mg/L	0.100	0.105	105	80 - 120	2011-05-12
Ethylbenzene		1	mg/L	0.100	0.0919	92	80 - 120	2011-05-12
Xylene		1	mg/L	0.300	0.274	91	80 - 120	2011-05-12

Appendix

Laboratory Certifications

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

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

LAB Order ID # 1105105

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

Company Name: Nova

Phone #: 432-520-7720

Address: (Street, City, Zip) 2057 Commerce

Fax #: 432-520-7701

Contact Person: Ron R.

E-mail:

Invoice to: (If different from above)

Project #: TWM-Monument #18

Project Name: Monument #18

Project Location (including state): New Mexico

Sampler Signature: R. R.

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, Fl, S04, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
266108	mw-5	3	VOA	X				X				X		5-10			X																						
109	mw-9																																						
110	mw-10																																						
111	mw-1																																						

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	Nova	5-11	8:20		Trace	5-11-11	8:20	INST ___ OBS 8.4 °C COR 8.8 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ___ OBS ___ °C COR ___ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ___ OBS ___ °C COR ___ °C

LAB USE ONLY

Intact Y N

Headspace Y N / NA

Log-In-Review

REMARKS:

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

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

Carrier # ___

ORIGINAL COPY

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 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

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: August 17, 2011

Work Order: 11081024

Project Location: Monument, Lea Co., NM
Project Name: TNM Monument #18
Project Number: TNM Monument #18
SRS#: Monument #18

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
274206	MW-9	water	2011-08-09	10:00	2011-08-10
274207	MW-10	water	2011-08-09	10:45	2011-08-10
274208	MW-1	water	2011-08-09	11:30	2011-08-10

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

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

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Case Narrative

Samples for project TNM Monument #18 were received by TraceAnalysis, Inc. on 2011-08-10 and assigned to work order 11081024. Samples for work order 11081024 were received intact without headspace and at a temperature of 3.6 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	71215	2011-08-16 at 09:24	83858	2011-08-16 at 09:24

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 11081024 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: 274206 - MW-9

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83858	Date Analyzed:	2011-08-16	Analyzed By:	ME
Prep Batch:	71215	Sample Preparation:	2011-08-16	Prepared By:	ME

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

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

Sample: 274207 - MW-10

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83858	Date Analyzed:	2011-08-16	Analyzed By:	ME
Prep Batch:	71215	Sample Preparation:	2011-08-16	Prepared By:	ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.108	mg/L	1	0.100	108	79.1 - 127.2
4-Bromofluorobenzene (4-BFB)			0.106	mg/L	1	0.100	106	67.5 - 140.8

Sample: 274208 - MW-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	83858	Date Analyzed:	2011-08-16	Analyzed By:	ME
Prep Batch:	71215	Sample Preparation:	2011-08-16	Prepared By:	ME

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene		1	**0.0111**	mg/L	1	0.00100

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

Method Blanks

Method Blank (1) QC Batch: 83858

QC Batch: 83858 | Date Analyzed: 2011-08-16 | Analyzed By: ME
Prep Batch: 71215 | QC Preparation: 2011-08-16 | Prepared By: ME

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0931	mg/L	1	0.100	93	61.1 - 118.4
4-Bromofluorobenzene (4-BFB)			0.0869	mg/L	1	0.100	87	45.9 - 126.4

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 83858
Prep Batch: 71215

Date Analyzed: 2011-08-16
QC Preparation: 2011-08-16

Analyzed By: ME
Prepared By: ME

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0984	mg/L	1	0.100	<0.000400	98	88 - 116.8
Toluene		1	0.103	mg/L	1	0.100	<0.000300	103	90.9 - 122.2
Ethylbenzene		1	0.105	mg/L	1	0.100	<0.000300	105	72.7 - 120.2
Xylene		1	0.317	mg/L	1	0.300	<0.000333	106	72.1 - 121.5

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0979	mg/L	1	0.100	<0.000400	98	88 - 116.8	0	20
Toluene		1	0.103	mg/L	1	0.100	<0.000300	103	90.9 - 122.2	0	20
Ethylbenzene		1	0.105	mg/L	1	0.100	<0.000300	105	72.7 - 120.2	0	20
Xylene		1	0.317	mg/L	1	0.300	<0.000333	106	72.1 - 121.5	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0996	0.0987	mg/L	1	0.100	100	99	61.9 - 119.2
4-Bromofluorobenzene (4-BFB)	0.0998	0.0988	mg/L	1	0.100	100	99	56.4 - 127.9

Matrix Spike (MS-1) Spiked Sample: 274394

QC Batch: 83858
Prep Batch: 71215

Date Analyzed: 2011-08-16
QC Preparation: 2011-08-16

Analyzed By: ME
Prepared By: ME

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	2.17	mg/L	20	2.00	0.3037	93	66.9 - 128.2
Toluene		1	1.94	mg/L	20	2.00	<0.00600	97	81.6 - 122.9
Ethylbenzene		1	2.03	mg/L	20	2.00	<0.00600	102	62.7 - 117.9
Xylene		1	5.98	mg/L	20	6.00	<0.00666	100	62.9 - 118.2

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	2.06	mg/L	20	2.00	0.3037	88	66.9 - 128.2	5	20
Toluene		1	1.89	mg/L	20	2.00	<0.00600	94	81.6 - 122.9	3	20
Ethylbenzene		1	1.96	mg/L	20	2.00	<0.00600	98	62.7 - 117.9	4	20
Xylene		1	5.80	mg/L	20	6.00	<0.00666	97	62.9 - 118.2	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)	2.02	1.81	mg/L	20	2	101	90	58.6 - 119.7
4-Bromofluorobenzene (4-BFB)	2.05	1.87	mg/L	20	2	102	94	52.2 - 135.8

Calibration Standards

Standard (CCV-1)

QC Batch: 83858 Date Analyzed: 2011-08-16 Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0968	97	80 - 120	2011-08-16
Toluene		1	mg/L	0.100	0.0994	99	80 - 120	2011-08-16
Ethylbenzene		1	mg/L	0.100	0.101	101	80 - 120	2011-08-16
Xylene		1	mg/L	0.300	0.308	103	80 - 120	2011-08-16

Standard (CCV-2)

QC Batch: 83858 Date Analyzed: 2011-08-16 Analyzed By: ME

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.101	101	80 - 120	2011-08-16
Toluene		1	mg/L	0.100	0.105	105	80 - 120	2011-08-16
Ethylbenzene		1	mg/L	0.100	0.107	107	80 - 120	2011-08-16
Xylene		1	mg/L	0.300	0.321	107	80 - 120	2011-08-16

Appendix

Laboratory Certifications

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

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 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

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: November 7, 2011

Work Order: 11110306

Project Location: Monument, Lea Co., NM
Project Name: TNM Monument #18
Project Number: TNM Monument #18
SRS#: Monument #18

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
281396	MW-1	water	2011-10-31	13:10	2011-11-02
281397	MW-5	water	2011-10-31	12:45	2011-11-02
281398	MW-6	water	2011-10-31	12:25	2011-11-02
281399	MW-7	water	2011-10-31	12:35	2011-11-02
281400	MW-8	water	2011-10-31	12:40	2011-11-02
281401	MW-9	water	2011-10-31	12:55	2011-11-02
281402	MW-10	water	2011-10-31	13:05	2011-11-02

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

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

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Case Narrative

Samples for project TNM Monument #18 were received by TraceAnalysis, Inc. on 2011-11-02 and assigned to work order 11110306. Samples for work order 11110306 were received intact without headspace and at a temperature of 6.7 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	73081	2011-11-03 at 14:10	86073	2011-11-03 at 14:10
BTEX	S 8021B	73126	2011-11-04 at 12:58	86112	2011-11-04 at 12:58

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 11110306 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: 281396 - MW-1

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86112	Date Analyzed:	2011-11-04	Analyzed By:	MT
Prep Batch:	73126	Sample Preparation:	2011-11-04	Prepared By:	MT

Parameter		Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,Qs	Qr,Qs	1	**0.00300**	mg/L	1	0.00100
Toluene	Qr,Qs,U	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,Qs	Qr,Qs	1	**0.00270**	mg/L	1	0.00100
Xylene	Qr,Qs	Qr,Qs	1	**0.0102**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.107	mg/L	1	0.100	107	70 - 130
4-Bromofluorobenzene (4-BFB)			0.124	mg/L	1	0.100	124	70 - 130

Sample: 281397 - MW-5

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86073	Date Analyzed:	2011-11-03	Analyzed By:	MT
Prep Batch:	73081	Sample Preparation:	2011-11-03	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.110	mg/L	1	0.100	110	70 - 130
4-Bromofluorobenzene (4-BFB)			0.114	mg/L	1	0.100	114	70 - 130

Sample: 281398 - MW-6

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86073	Date Analyzed:	2011-11-03	Analyzed By:	MT
Prep Batch:	73081	Sample Preparation:	2011-11-03	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.109	mg/L	1	0.100	109	70 - 130
4-Bromofluorobenzene (4-BFB)			0.112	mg/L	1	0.100	112	70 - 130

Sample: 281399 - MW-7

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86073	Date Analyzed:	2011-11-03	Analyzed By:	MT
Prep Batch:	73081	Sample Preparation:	2011-11-03	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.111	mg/L	1	0.100	111	70 - 130
4-Bromofluorobenzene (4-BFB)			0.114	mg/L	1	0.100	114	70 - 130

Sample: 281400 - MW-8

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86073	Date Analyzed:	2011-11-03	Analyzed By:	MT
Prep Batch:	73081	Sample Preparation:	2011-11-03	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.108	mg/L	1	0.100	108	70 - 130
4-Bromofluorobenzene (4-BFB)			0.112	mg/L	1	0.100	112	70 - 130

Sample: 281401 - MW-9

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86073	Date Analyzed:	2011-11-03	Analyzed By:	MT
Prep Batch:	73081	Sample Preparation:	2011-11-03	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.108	mg/L	1	0.100	108	70 - 130
4-Bromofluorobenzene (4-BFB)			0.110	mg/L	1	0.100	110	70 - 130

Sample: 281402 - MW-10

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86112	Date Analyzed:	2011-11-04	Analyzed By:	MT
Prep Batch:	73126	Sample Preparation:	2011-11-04	Prepared By:	MT

Parameter		Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,Qs	Qr,Qs	1	**0.00120**	mg/L	1	0.00100
Toluene	Qr,Qs,U	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,Qs,U	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Xylene	Qr,Qs,U	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.109	mg/L	1	0.100	109	70 - 130
4-Bromofluorobenzene (4-BFB)			0.108	mg/L	1	0.100	108	70 - 130

Method Blanks

Method Blank (1) QC Batch: 86073

QC Batch: 86073 Date Analyzed: 2011-11-03 Analyzed By: MT
Prep Batch: 73081 QC Preparation: 2011-11-03 Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000765	mg/L	0.001
Toluene		1	<0.000719	mg/L	0.001
Ethylbenzene		1	<0.000860	mg/L	0.001
Xylene		1	<0.000942	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0968	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.100	mg/L	1	0.100	100	70 - 130

Method Blank (1) QC Batch: 86112

QC Batch: 86112 Date Analyzed: 2011-11-04 Analyzed By: MT
Prep Batch: 73126 QC Preparation: 2011-11-04 Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000765	mg/L	0.001
Toluene		1	<0.000719	mg/L	0.001
Ethylbenzene		1	<0.000860	mg/L	0.001
Xylene		1	<0.000942	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.107	mg/L	1	0.100	107	70 - 130
4-Bromofluorobenzene (4-BFB)			0.108	mg/L	1	0.100	108	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 86073 | Date Analyzed: 2011-11-03 | Analyzed By: MT
Prep Batch: 73081 | QC Preparation: 2011-11-03 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.108	mg/L	1	0.100	<0.000765	108	70 - 130
Toluene		1	0.104	mg/L	1	0.100	<0.000719	104	70 - 130
Ethylbenzene		1	0.106	mg/L	1	0.100	<0.000860	106	70 - 130
Xylene		1	0.310	mg/L	1	0.300	<0.000942	103	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.105	mg/L	1	0.100	<0.000765	105	70 - 130	3	20
Toluene		1	0.102	mg/L	1	0.100	<0.000719	102	70 - 130	2	20
Ethylbenzene		1	0.101	mg/L	1	0.100	<0.000860	101	70 - 130	5	20
Xylene		1	0.301	mg/L	1	0.300	<0.000942	100	70 - 130	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.101	0.0941	mg/L	1	0.100	101	94	70 - 130
4-Bromofluorobenzene (4-BFB)	0.100	0.0939	mg/L	1	0.100	100	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 86112 | Date Analyzed: 2011-11-04 | Analyzed By: MT
Prep Batch: 73126 | QC Preparation: 2011-11-04 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.105	mg/L	1	0.100	<0.000765	105	70 - 130
Toluene		1	0.101	mg/L	1	0.100	<0.000719	101	70 - 130
Ethylbenzene		1	0.100	mg/L	1	0.100	<0.000860	100	70 - 130
Xylene		1	0.293	mg/L	1	0.300	<0.000942	98	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.108	mg/L	1	0.100	<0.000765	108	70 - 130	3	20
Toluene		1	0.101	mg/L	1	0.100	<0.000719	101	70 - 130	0	20
Ethylbenzene		1	0.0990	mg/L	1	0.100	<0.000860	99	70 - 130	1	20
Xylene		1	0.294	mg/L	1	0.300	<0.000942	98	70 - 130	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.103	0.102	mg/L	1	0.100	103	102	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0952	0.0962	mg/L	1	0.100	95	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 281205

QC Batch: 86073 | Date Analyzed: 2011-11-03 | Analyzed By: MT
Prep Batch: 73081 | QC Preparation: 2011-11-03 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.521	mg/L	5	0.500	<0.00382	104	70 - 130
Toluene		1	0.501	mg/L	5	0.500	<0.00360	100	70 - 130
Ethylbenzene		1	0.504	mg/L	5	0.500	<0.00430	101	70 - 130
Xylene		1	1.48	mg/L	5	1.50	<0.00471	99	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.526	mg/L	5	0.500	<0.00382	105	70 - 130	1	20
Toluene		1	0.508	mg/L	5	0.500	<0.00360	102	70 - 130	1	20
Ethylbenzene		1	0.509	mg/L	5	0.500	<0.00430	102	70 - 130	1	20
Xylene		1	1.50	mg/L	5	1.50	<0.00471	100	70 - 130	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.534	0.524	mg/L	5	0.5	107	105	70 - 130
4-Bromofluorobenzene (4-BFB)	0.528	0.525	mg/L	5	0.5	106	105	70 - 130

Matrix Spike (MS-1) Spiked Sample: 281561

QC Batch: 86112 | Date Analyzed: 2011-11-04 | Analyzed By: MT
Prep Batch: 73126 | QC Preparation: 2011-11-04 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.111	mg/L	1	0.100	<0.000765	111	70 - 130
Toluene		1	0.106	mg/L	1	0.100	<0.000719	106	70 - 130
Ethylbenzene		1	0.106	mg/L	1	0.100	<0.000860	106	70 - 130
Xylene		1	0.312	mg/L	1	0.300	<0.000942	104	70 - 130

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

Param		F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qr,Qs	Qr,Qs	1	0.0623	mg/L	1	0.100	<0.000765	62	70 - 130	56	20
Toluene	Qr,Qs	Qr,Qs	1	0.0595	mg/L	1	0.100	<0.000719	60	70 - 130	56	20
Ethylbenzene	Qr,Qs	Qr,Qs	1	0.0606	mg/L	1	0.100	<0.000860	61	70 - 130	54	20
Xylene	Qr,Qs	Qr,Qs	1	0.178	mg/L	1	0.300	<0.000942	59	70 - 130	55	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)	0.103	0.0940	mg/L	1	0.1	103	94	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0988	0.0914	mg/L	1	0.1	99	91	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 86073 Date Analyzed: 2011-11-03 Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.107	107	80 - 120	2011-11-03
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-03
Ethylbenzene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-03
Xylene		1	mg/L	0.300	0.307	102	80 - 120	2011-11-03

Standard (CCV-2)

QC Batch: 86073 Date Analyzed: 2011-11-03 Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.108	108	80 - 120	2011-11-03
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-03
Ethylbenzene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-03
Xylene		1	mg/L	0.300	0.307	102	80 - 120	2011-11-03

Standard (CCV-3)

QC Batch: 86073 Date Analyzed: 2011-11-03 Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.108	108	80 - 120	2011-11-03
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-03
Ethylbenzene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-03
Xylene		1	mg/L	0.300	0.304	101	80 - 120	2011-11-03

Standard (CCV-1)

QC Batch: 86112 | Date Analyzed: 2011-11-04 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.108	108	80 - 120	2011-11-04
Toluene		1	mg/L	0.100	0.102	102	80 - 120	2011-11-04
Ethylbenzene		1	mg/L	0.100	0.102	102	80 - 120	2011-11-04
Xylene		1	mg/L	0.300	0.297	99	80 - 120	2011-11-04

Standard (CCV-2)

QC Batch: 86112 | Date Analyzed: 2011-11-04 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.106	106	80 - 120	2011-11-04
Toluene		1	mg/L	0.100	0.100	100	80 - 120	2011-11-04
Ethylbenzene		1	mg/L	0.100	0.0999	100	80 - 120	2011-11-04
Xylene		1	mg/L	0.300	0.292	97	80 - 120	2011-11-04

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-11-4	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

LAB Order ID # 11110306

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

Company Name: NOVA Safety & Environmental
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 #: TNM-Monument #18
Project Name: TNM- Monument #18
Project Location (including state): Monument, NM
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
281396	MW1	3		✓				✓				✓		10/31	1310
397	MW5	|		|				|			|			1245
398	MW6	|		|				|			|			1225
399	MW7	|		|				|			|			1235
400	MW8	|		|				|			|			1240
401	MW9	|		|				|			|			1255
402	MW10	|		|				|			|			1305

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, Fl, SO4, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC				Turn Around Time if different from standard	Hold
	✓																						

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Blythe Lee	NOVA	10/2/11	0800		T/A	11/2/11	8:55	INST 6.7 °C OBS °C COR °C
	T/A	11/2/11	17:00					INST °C OBS °C COR °C
					Trace Lubbock	11/3/11	9:00	INST IR OBS 3.2 °C COR 3.4 °C

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

REMARKS:
All tests Lubbock

- [ ] 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 # LS ZN13961

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TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
5015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: November 7, 2011

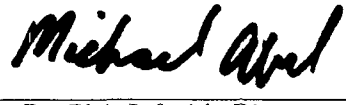
Work Order: 11110306

Project Location: Monument, Lea Co., NM
Project Name: TNM Monument #18
Project Number: TNM Monument #18
SRS#: Monument #18

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
281396	MW-1	water	2011-10-31	13:10	2011-11-02
281397	MW-5	water	2011-10-31	12:45	2011-11-02
281398	MW-6	water	2011-10-31	12:25	2011-11-02
281399	MW-7	water	2011-10-31	12:35	2011-11-02
281400	MW-8	water	2011-10-31	12:40	2011-11-02
281401	MW-9	water	2011-10-31	12:55	2011-11-02
281402	MW-10	water	2011-10-31	13:05	2011-11-02

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



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

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Case Narrative

Samples for project TNM Monument #18 were received by TraceAnalysis, Inc. on 2011-11-02 and assigned to work order 11110306. Samples for work order 11110306 were received intact without headspace and at a temperature of 6.7 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	73081	2011-11-03 at 14:10	86073	2011-11-03 at 14:10
BTEX	S 8021B	73126	2011-11-04 at 12:58	86112	2011-11-04 at 12:58

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 11110306 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: 281396 - MW-1

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86112	Date Analyzed:	2011-11-04	Analyzed By:	MT
Prep Batch:	73126	Sample Preparation:	2011-11-04	Prepared By:	MT

Parameter		Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,Qs	Qr,Qs	1	**0.00300**	mg/L	1	0.00100
Toluene	Qr,Qs,U	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,Qs	Qr,Qs	1	**0.00270**	mg/L	1	0.00100
Xylene	Qr,Qs	Qr,Qs	1	**0.0102**	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.107	mg/L	1	0.100	107	70 - 130
4-Bromofluorobenzene (4-BFB)			0.124	mg/L	1	0.100	124	70 - 130

Sample: 281397 - MW-5

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86073	Date Analyzed:	2011-11-03	Analyzed By:	MT
Prep Batch:	73081	Sample Preparation:	2011-11-03	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.110	mg/L	1	0.100	110	70 - 130
4-Bromofluorobenzene (4-BFB)			0.114	mg/L	1	0.100	114	70 - 130

Sample: 281398 - MW-6

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86073	Date Analyzed:	2011-11-03	Analyzed By:	MT
Prep Batch:	73081	Sample Preparation:	2011-11-03	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.109	mg/L	1	0.100	109	70 - 130
4-Bromofluorobenzene (4-BFB)			0.112	mg/L	1	0.100	112	70 - 130

Sample: 281399 - MW-7

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86073	Date Analyzed:	2011-11-03	Analyzed By:	MT
Prep Batch:	73081	Sample Preparation:	2011-11-03	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.111	mg/L	1	0.100	111	70 - 130
4-Bromofluorobenzene (4-BFB)			0.114	mg/L	1	0.100	114	70 - 130

Sample: 281400 - MW-8

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86073	Date Analyzed:	2011-11-03	Analyzed By:	MT
Prep Batch:	73081	Sample Preparation:	2011-11-03	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.108	mg/L	1	0.100	108	70 - 130
4-Bromofluorobenzene (4-BFB)			0.112	mg/L	1	0.100	112	70 - 130

Sample: 281401 - MW-9

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86073	Date Analyzed:	2011-11-03	Analyzed By:	MT
Prep Batch:	73081	Sample Preparation:	2011-11-03	Prepared By:	MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.108	mg/L	1	0.100	108	70 - 130
4-Bromofluorobenzene (4-BFB)			0.110	mg/L	1	0.100	110	70 - 130

Sample: 281402 - MW-10

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	86112	Date Analyzed:	2011-11-04	Analyzed By:	MT
Prep Batch:	73126	Sample Preparation:	2011-11-04	Prepared By:	MT

Parameter		Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr,Qs	Qr,Qs	1	**0.00120**	mg/L	1	0.00100
Toluene	Qr,Qs,U	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Qr,Qs,U	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100
Xylene	Qr,Qs,U	Qr,Qs,U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.109	mg/L	1	0.100	109	70 - 130
4-Bromofluorobenzene (4-BFB)			0.108	mg/L	1	0.100	108	70 - 130

Method Blanks

Method Blank (1) QC Batch: 86073

QC Batch: 86073 | Date Analyzed: 2011-11-03 | Analyzed By: MT
Prep Batch: 73081 | QC Preparation: 2011-11-03 | Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000765	mg/L	0.001
Toluene		1	<0.000719	mg/L	0.001
Ethylbenzene		1	<0.000860	mg/L	0.001
Xylene		1	<0.000942	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0968	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.100	mg/L	1	0.100	100	70 - 130

Method Blank (1) QC Batch: 86112

QC Batch: 86112 | Date Analyzed: 2011-11-04 | Analyzed By: MT
Prep Batch: 73126 | QC Preparation: 2011-11-04 | Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000765	mg/L	0.001
Toluene		1	<0.000719	mg/L	0.001
Ethylbenzene		1	<0.000860	mg/L	0.001
Xylene		1	<0.000942	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.107	mg/L	1	0.100	107	70 - 130
4-Bromofluorobenzene (4-BFB)			0.108	mg/L	1	0.100	108	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 86073 | Date Analyzed: 2011-11-03 | Analyzed By: MT
Prep Batch: 73081 | QC Preparation: 2011-11-03 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.108	mg/L	1	0.100	<0.000765	108	70 - 130
Toluene		1	0.104	mg/L	1	0.100	<0.000719	104	70 - 130
Ethylbenzene		1	0.106	mg/L	1	0.100	<0.000860	106	70 - 130
Xylene		1	0.310	mg/L	1	0.300	<0.000942	103	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.105	mg/L	1	0.100	<0.000765	105	70 - 130	3	20
Toluene		1	0.102	mg/L	1	0.100	<0.000719	102	70 - 130	2	20
Ethylbenzene		1	0.101	mg/L	1	0.100	<0.000860	101	70 - 130	5	20
Xylene		1	0.301	mg/L	1	0.300	<0.000942	100	70 - 130	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.101	0.0941	mg/L	1	0.100	101	94	70 - 130
4-Bromofluorobenzene (4-BFB)	0.100	0.0939	mg/L	1	0.100	100	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 86112 | Date Analyzed: 2011-11-04 | Analyzed By: MT
Prep Batch: 73126 | QC Preparation: 2011-11-04 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.105	mg/L	1	0.100	<0.000765	105	70 - 130
Toluene		1	0.101	mg/L	1	0.100	<0.000719	101	70 - 130
Ethylbenzene		1	0.100	mg/L	1	0.100	<0.000860	100	70 - 130
Xylene		1	0.293	mg/L	1	0.300	<0.000942	98	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.108	mg/L	1	0.100	<0.000765	108	70 - 130	3	20
Toluene		1	0.101	mg/L	1	0.100	<0.000719	101	70 - 130	0	20
Ethylbenzene		1	0.0990	mg/L	1	0.100	<0.000860	99	70 - 130	1	20
Xylene		1	0.294	mg/L	1	0.300	<0.000942	98	70 - 130	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.103	0.102	mg/L	1	0.100	103	102	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0952	0.0962	mg/L	1	0.100	95	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 281205

QC Batch: 86073 | Date Analyzed: 2011-11-03 | Analyzed By: MT
Prep Batch: 73081 | QC Preparation: 2011-11-03 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.521	mg/L	5	0.500	<0.00382	104	70 - 130
Toluene		1	0.501	mg/L	5	0.500	<0.00360	100	70 - 130
Ethylbenzene		1	0.504	mg/L	5	0.500	<0.00430	101	70 - 130
Xylene		1	1.48	mg/L	5	1.50	<0.00471	99	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.526	mg/L	5	0.500	<0.00382	105	70 - 130	1	20
Toluene		1	0.508	mg/L	5	0.500	<0.00360	102	70 - 130	1	20
Ethylbenzene		1	0.509	mg/L	5	0.500	<0.00430	102	70 - 130	1	20
Xylene		1	1.50	mg/L	5	1.50	<0.00471	100	70 - 130	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.534	0.524	mg/L	5	0.5	107	105	70 - 130
4-Bromofluorobenzene (4-BFB)	0.528	0.525	mg/L	5	0.5	106	105	70 - 130

Matrix Spike (MS-1) Spiked Sample: 281561

QC Batch: 86112 | Date Analyzed: 2011-11-04 | Analyzed By: MT
Prep Batch: 73126 | QC Preparation: 2011-11-04 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.111	mg/L	1	0.100	<0.000765	111	70 - 130
Toluene		1	0.106	mg/L	1	0.100	<0.000719	106	70 - 130
Ethylbenzene		1	0.106	mg/L	1	0.100	<0.000860	106	70 - 130
Xylene		1	0.312	mg/L	1	0.300	<0.000942	104	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qr,Qs	Qr,Qs	1 0.0623	mg/L	1	0.100	<0.000765	62	70 - 130	56	20
Toluene	Qr,Qs	Qr,Qs	1 0.0595	mg/L	1	0.100	<0.000719	60	70 - 130	56	20
Ethylbenzene	Qr,Qs	Qr,Qs	1 0.0606	mg/L	1	0.100	<0.000860	61	70 - 130	54	20
Xylene	Qr,Qs	Qr,Qs	1 0.178	mg/L	1	0.300	<0.000942	59	70 - 130	55	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)	0.103	0.0940	mg/L	1	0.1	103	94	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0988	0.0914	mg/L	1	0.1	99	91	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 86073 | Date Analyzed: 2011-11-03 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.107	107	80 - 120	2011-11-03
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-03
Ethylbenzene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-03
Xylene		1	mg/L	0.300	0.307	102	80 - 120	2011-11-03

Standard (CCV-2)

QC Batch: 86073 | Date Analyzed: 2011-11-03 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.108	108	80 - 120	2011-11-03
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-03
Ethylbenzene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-03
Xylene		1	mg/L	0.300	0.307	102	80 - 120	2011-11-03

Standard (CCV-3)

QC Batch: 86073 | Date Analyzed: 2011-11-03 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.108	108	80 - 120	2011-11-03
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-03
Ethylbenzene		1	mg/L	0.100	0.104	104	80 - 120	2011-11-03
Xylene		1	mg/L	0.300	0.304	101	80 - 120	2011-11-03

Standard (CCV-1)

QC Batch: 86112 | Date Analyzed: 2011-11-04 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.108	108	80 - 120	2011-11-04
Toluene		1	mg/L	0.100	0.102	102	80 - 120	2011-11-04
Ethylbenzene		1	mg/L	0.100	0.102	102	80 - 120	2011-11-04
Xylene		1	mg/L	0.300	0.297	99	80 - 120	2011-11-04

Standard (CCV-2)

QC Batch: 86112 | Date Analyzed: 2011-11-04 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.106	106	80 - 120	2011-11-04
Toluene		1	mg/L	0.100	0.100	100	80 - 120	2011-11-04
Ethylbenzene		1	mg/L	0.100	0.0999	100	80 - 120	2011-11-04
Xylene		1	mg/L	0.300	0.292	97	80 - 120	2011-11-04

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-11-4	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

LAB Order ID # 11110306

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

Company Name: NOVA Safety & Environmental
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 #: TNM-Monument #18
Project Name: TNM-Monument #18
Project Location (including state): Monument, NM
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, Fl, SO4, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
281396	MW1	3		✓				✓				✓		10/31	1310		✓																				
397	MW5														1245																						
398	MW6														1225																						
399	MW7														1235																						
400	MW8														1240																						
401	MW9														1255																						
402	MW10														1305																						

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Brittney Lee	NOVA	10/2/11	0800		T/A	10/2/11	8:55	INST 6.7 °C
								OBS °C
								COR °C
	T/A	10/2/11	17:00					INST °C
								OBS °C
								COR °C
				Brandy Ward	Trace Lubbock	10/3/11	9:00	INST IR
								OBS 3.2 °C
								COR 3.4 °C

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

REMARKS:
ALL tests to Lubbock

- [ ] 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 # Lone Star ZN13961

ORIGINAL COPY

LAB Order ID # 1108102-4

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

Company Name: VOVO
Phone #: 432-520-7720
Address: (Street, City, Zip) 2057 Commerce Midland TX 79705
Fax #: 432-520-7701
Contact Person: Ron R.
E-mail:
Invoice to: (If different from above)
Project #: TWU-Monument #18
Project Name: Mon #18
Project Location (including state): New Mexico
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
27420	mw-9	3	VOA	X				X				X		8-9	10:00
27	mw-10	↓	↓	↓				↓				↓		↓	10:45
28	mw-1	↓	↓	↓				↓				↓		↓	11:30

MTBE 8021 / 602 / 8260 / 624
BTEX 8021 / 602 / 8260 / 624
TPH 418.1 / TX1005 / TX1005 Ext(C35)
TPH 8015 GRO / DRO / TVHC
PAH 8270 / 625
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7
TCLP Metals Ag As Ba Cd Cr Pb Se Hg
TCLP Volatiles
TCLP Semi Volatiles
TCLP Pesticides
RCI
GC/MS Vol. 8260 / 624
GC/MS Semi. Vol. 8270 / 625
PCB's 8082 / 608
Pesticides 8081 / 608
BOD, TSS, pH
Moisture Content
Cl, Fl, S04, NO3, NO2, Alkalinity
Na, Ca, Mg, K, TDS, EC
Turn Around Time if different from standard
Hold

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
		8/10/11	1200		TA	8/10/11	12:00	INST ___ OBS 3.6 °C COR 3.6 °C
								INST ___ OBS ___ °C COR ___ °C
								INST ___ OBS ___ °C COR ___ °C

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

REMARKS: 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 #

ORIGINAL COPY

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 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

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: January 4, 2012

Work Order: 11121921

Project Location: Monument, Lea Co., NM
Project Name: TNM Monument #18
Project Number: TNM Monument #18
SRS#: Monument #18

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
284809	MW-1	water	2011-12-15	17:40	2011-12-17
284810	MW-7	water	2011-12-15	17:25	2011-12-17

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

Michael Abel

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

Report Contents

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Case Narrative

Samples for project TNM Monument #18 were received by TraceAnalysis, Inc. on 2011-12-17 and assigned to work order 11121921. Samples for work order 11121921 were received intact at a temperature of 11.3 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
PAH	S 8270D	74334	2012-12-21 at 15:00	87535	2012-01-02 at 11:40

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 11121921 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: 284809 - MW-1

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	87535	Date Analyzed:	2012-01-02	Analyzed By:	MN
Prep Batch:	74334	Sample Preparation:	2012-12-21	Prepared By:	MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene	U	1	<0.00186	mg/L	9.302	0.000200
2-Methylnaphthalene	U	1	<0.00186	mg/L	9.302	0.000200
1-Methylnaphthalene			**0.0326**	mg/L	9.302	0.000200
Acenaphthylene	U	1	<0.00186	mg/L	9.302	0.000200
Acenaphthene	U	1	<0.00186	mg/L	9.302	0.000200
Dibenzofuran		1	**0.0104**	mg/L	9.302	0.000200
Fluorene	U	1	<0.00186	mg/L	9.302	0.000200
Anthracene	U	1	<0.00186	mg/L	9.302	0.000200
Phenanthrene			**0.00950**	mg/L	9.302	0.000200
Fluoranthene	U		<0.00186	mg/L	9.302	0.000200
Pyrene	U	1	<0.00186	mg/L	9.302	0.000200
Benzo(a)anthracene	U		<0.00186	mg/L	9.302	0.000200
Chrysene	U	1	<0.00186	mg/L	9.302	0.000200
Benzo(b)fluoranthene	U		<0.00186	mg/L	9.302	0.000200
Benzo(k)fluoranthene	U	1	<0.00186	mg/L	9.302	0.000200
Benzo(a)pyrene	U	1	<0.00186	mg/L	9.302	0.000200
Indeno(1,2,3-cd)pyrene	U	1	<0.00186	mg/L	9.302	0.000200
Dibenzo(a,h)anthracene	U	1	<0.00186	mg/L	9.302	0.000200
Benzo(g,h,i)perylene	U		<0.00186	mg/L	9.302	0.000200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	Qsr	Qsr		0.112	mg/L	9.302	0.0800	140	10 - 117
2-Fluorobiphenyl	Qsr	Qsr		0.0999	mg/L	9.302	0.0800	125	10 - 99
Terphenyl-d14	Qsr	Qsr		0.127	mg/L	9.302	0.0800	159	22.6 - 115

Sample: 284810 - MW-7

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	87535	Date Analyzed:	2012-01-02	Analyzed By:	MN
Prep Batch:	74334	Sample Preparation:	2012-12-21	Prepared By:	MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene	U	1	<0.000186	mg/L	0.93	0.000200
2-Methylnaphthalene	U	1	<0.000186	mg/L	0.93	0.000200
1-Methylnaphthalene	U		<0.000186	mg/L	0.93	0.000200
Acenaphthylene	U	1	<0.000186	mg/L	0.93	0.000200
Acenaphthene	U	1	<0.000186	mg/L	0.93	0.000200
Dibenzofuran		1	**0.000443**	mg/L	0.93	0.000200
Fluorene	U	1	<0.000186	mg/L	0.93	0.000200
Anthracene	U	1	<0.000186	mg/L	0.93	0.000200
Phenanthrene	U		<0.000186	mg/L	0.93	0.000200
Fluoranthene			<0.000186	mg/L	0.93	0.000200
Pyrene		1	<0.000186	mg/L	0.93	0.000200
Benzo(a)anthracene	U		<0.000186	mg/L	0.93	0.000200
Chrysene	U	1	<0.000186	mg/L	0.93	0.000200
Benzo(b)fluoranthene	U		<0.000186	mg/L	0.93	0.000200
Benzo(k)fluoranthene	U	1	<0.000186	mg/L	0.93	0.000200
Benzo(a)pyrene	U	1	<0.000186	mg/L	0.93	0.000200
Indeno(1,2,3-cd)pyrene	U	1	<0.000186	mg/L	0.93	0.000200
Dibenzo(a,h)anthracene	U	1	<0.000186	mg/L	0.93	0.000200
Benzo(g,h,i)perylene	U		<0.000186	mg/L	0.93	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0449	mg/L	0.93	0.0800	56	10 - 117
2-Fluorobiphenyl			0.0415	mg/L	0.93	0.0800	52	10 - 99
Terphenyl-d14			0.0630	mg/L	0.93	0.0800	79	22.6 - 115

Method Blanks

Method Blank (1) QC Batch: 87535

QC Batch: 87535 | Date Analyzed: 2012-01-02 | Analyzed By: MN
Prep Batch: 74334 | QC Preparation: 2012-12-21 | Prepared By: MN

Parameter	Flag	Cert	MDL Result	Units	RL
Naphthalene		1	<0.0000904	mg/L	0.0002
2-Methylnaphthalene		1	<0.000184	mg/L	0.0002
1-Methylnaphthalene			<0.000120	mg/L	0.0002
Acenaphthylene		1	<0.000101	mg/L	0.0002
Acenaphthene		1	<0.000122	mg/L	0.0002
Dibenzofuran		1	<0.000119	mg/L	0.0002
Fluorene		1	<0.000198	mg/L	0.0002
Anthracene		1	<0.000190	mg/L	0.0002
Phenanthrene			<0.000190	mg/L	0.0002
Fluoranthene			<0.000122	mg/L	0.0002
Pyrene		1	<0.000142	mg/L	0.0002
Benzo(a)anthracene			<0.000138	mg/L	0.0002
Chrysene		1	<0.000155	mg/L	0.0002
Benzo(b)fluoranthene			<0.000179	mg/L	0.0002
Benzo(k)fluoranthene		1	<0.000185	mg/L	0.0002
Benzo(a)pyrene		1	<0.000169	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		1	<0.000139	mg/L	0.0002
Dibenzo(a,h)anthracene		1	<0.000107	mg/L	0.0002
Benzo(g,h,i)perylene			<0.000143	mg/L	0.0002

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0450	mg/L	1	0.0800	56	10 - 117
2-Fluorobiphenyl			0.0360	mg/L	1	0.0800	45	10 - 99
Terphenyl-d14			0.0563	mg/L	1	0.0800	70	22.6 - 115

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 87535 | Date Analyzed: 2012-01-02 | Analyzed By: MN
Prep Batch: 74334 | QC Preparation: 2012-12-21 | Prepared By: MN

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene		1	0.0315	mg/L	1	0.0800	<0.0000904	39	10 - 89.9
2-Methylnaphthalene		1	0.0351	mg/L	1	0.0800	<0.000184	44	13.8 - 98.4
1-Methylnaphthalene			0.0407	mg/L	1	0.0800	<0.000120	51	13.1 - 103
Acenaphthylene		1	0.0410	mg/L	1	0.0800	<0.000101	51	20 - 104
Acenaphthene		1	0.0403	mg/L	1	0.0800	<0.000122	50	21.6 - 94.6
Dibenzofuran		1	0.0479	mg/L	1	0.0800	<0.000119	60	22.9 - 74.9
Fluorene		1	0.0515	mg/L	1	0.0800	<0.000198	64	30.8 - 109
Anthracene		1	0.0594	mg/L	1	0.0800	<0.000190	74	37.6 - 96.4
Phenanthrene			0.0571	mg/L	1	0.0800	<0.000190	71	42.4 - 99.8
Fluoranthene			0.0558	mg/L	1	0.0800	<0.000122	70	48 - 118
Pyrene		1	0.0734	mg/L	1	0.0800	<0.000142	92	45.3 - 109
Benzo(a)anthracene			0.0642	mg/L	1	0.0800	<0.000138	80	48 - 113
Chrysene		1	0.0598	mg/L	1	0.0800	<0.000155	75	35.2 - 175
Benzo(b)fluoranthene			0.0495	mg/L	1	0.0800	<0.000179	62	16.6 - 106
Benzo(k)fluoranthene		1	0.0456	mg/L	1	0.0800	<0.000185	57	36.8 - 99.4
Benzo(a)pyrene		1	0.0458	mg/L	1	0.0800	<0.000169	57	32.3 - 99.7
Indeno(1,2,3-cd)pyrene		1	0.0512	mg/L	1	0.0800	<0.000139	64	34.1 - 106
Dibenzo(a,h)anthracene		1	0.0551	mg/L	1	0.0800	<0.000107	69	47.1 - 103
Benzo(g,h,i)perylene			0.0506	mg/L	1	0.0800	<0.000143	63	21.9 - 112

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Naphthalene		1	0.0352	mg/L	1	0.0800	<0.0000904	44	10 - 89.9	11	20
2-Methylnaphthalene		1	0.0400	mg/L	1	0.0800	<0.000184	50	13.8 - 98.4	13	20
1-Methylnaphthalene			0.0465	mg/L	1	0.0800	<0.000120	58	13.1 - 103	13	20
Acenaphthylene		1	0.0467	mg/L	1	0.0800	<0.000101	58	20 - 104	13	20
Acenaphthene		1	0.0455	mg/L	1	0.0800	<0.000122	57	21.6 - 94.6	12	20
Dibenzofuran		1	0.0551	mg/L	1	0.0800	<0.000119	69	22.9 - 74.9	14	20
Fluorene		1	0.0595	mg/L	1	0.0800	<0.000198	74	30.8 - 109	14	20
Anthracene		1	0.0668	mg/L	1	0.0800	<0.000190	84	37.6 - 96.4	12	20
Phenanthrene			0.0642	mg/L	1	0.0800	<0.000190	80	42.4 - 99.8	12	20
Fluoranthene			0.0619	mg/L	1	0.0800	<0.000122	77	48 - 118	10	20
Pyrene		1	0.0826	mg/L	1	0.0800	<0.000142	103	45.3 - 109	12	20

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzo(a)anthracene			0.0714	mg/L	1	0.0800	<0.000138	89	48 - 113	11	20
Chrysene		1	0.0670	mg/L	1	0.0800	<0.000155	84	35.2 - 175	11	20
Benzo(b)fluoranthene			0.0477	mg/L	1	0.0800	<0.000179	60	16.6 - 106	4	20
Benzo(k)fluoranthene		1	0.0510	mg/L	1	0.0800	<0.000185	64	36.8 - 99.4	11	20
Benzo(a)pyrene		1	0.0516	mg/L	1	0.0800	<0.000169	64	32.3 - 99.7	12	20
Indeno(1,2,3-cd)pyrene		1	0.0580	mg/L	1	0.0800	<0.000139	72	34.1 - 106	12	20
Dibenzo(a,h)anthracene		1	0.0632	mg/L	1	0.0800	<0.000107	79	47.1 - 103	14	20
Benzo(g,h,i)perylene			0.0581	mg/L	1	0.0800	<0.000143	73	21.9 - 112	14	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Nitrobenzene-d5	0.0437	0.0490	mg/L	1	0.0800	55	61	10 - 117
2-Fluorobiphenyl	0.0381	0.0436	mg/L	1	0.0800	48	54	10 - 99
Terphenyl-d14	0.0791	0.0874	mg/L	1	0.0800	99	109	22.6 - 115

Calibration Standards

Standard (CCV-2)

QC Batch: 87535 | Date Analyzed: 2012-01-02 | Analyzed By: MN

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		1	mg/L	60.0	52.7	88	80 - 120	2012-01-02
2-Methylnaphthalene		1	mg/L	60.0	49.0	82	80 - 120	2012-01-02
1-Methylnaphthalene			mg/L	60.0	57.6	96	80 - 120	2012-01-02
Acenaphthylene		1	mg/L	60.0	52.9	88	80 - 120	2012-01-02
Acenaphthene		1	mg/L	60.0	53.7	90	80 - 120	2012-01-02
Dibenzofuran		1	mg/L	60.0	53.0	88	80 - 120	2012-01-02
Fluorene		1	mg/L	60.0	55.6	93	80 - 120	2012-01-02
Anthracene		1	mg/L	60.0	60.8	101	80 - 120	2012-01-02
Phenanthrene			mg/L	60.0	59.4	99	80 - 120	2012-01-02
Fluoranthene			mg/L	60.0	58.9	98	80 - 120	2012-01-02
Pyrene		1	mg/L	60.0	64.4	107	80 - 120	2012-01-02
Benzo(a)anthracene			mg/L	60.0	57.4	96	80 - 120	2012-01-02
Chrysene		1	mg/L	60.0	51.4	86	80 - 120	2012-01-02
Benzo(b)fluoranthene			mg/L	60.0	52.1	87	80 - 120	2012-01-02
Benzo(k)fluoranthene		1	mg/L	60.0	55.1	92	80 - 120	2012-01-02
Benzo(a)pyrene		1	mg/L	60.0	51.5	86	80 - 120	2012-01-02
Indeno(1,2,3-cd)pyrene		1	mg/L	60.0	53.1	88	80 - 120	2012-01-02
Dibenzo(a,h)anthracene		1	mg/L	60.0	55.6	93	80 - 120	2012-01-02
Benzo(g,h,i)perylene			mg/L	60.0	51.8	86	80 - 120	2012-01-02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			60.3	mg/L	1	60.0	100	-
2-Fluorobiphenyl			51.9	mg/L	1	60.0	86	-
Terphenyl-d14			64.5	mg/L	1	60.0	108	-

Standard (CCV-3)

QC Batch: 87535 | Date Analyzed: 2012-01-02 | Analyzed By: MN

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		1	mg/L	60.0	53.0	88	80 - 120	2012-01-02

continued ...

standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
2-Methylnaphthalene		1	mg/L	60.0	50.0	83	80 - 120	2012-01-02
1-Methylnaphthalene			mg/L	60.0	59.2	99	80 - 120	2012-01-02
Acenaphthylene		1	mg/L	60.0	52.7	88	80 - 120	2012-01-02
Acenaphthene		1	mg/L	60.0	53.6	89	80 - 120	2012-01-02
Dibenzofuran		1	mg/L	60.0	52.7	88	80 - 120	2012-01-02
Fluorene		1	mg/L	60.0	55.4	92	80 - 120	2012-01-02
Anthracene		1	mg/L	60.0	59.8	100	80 - 120	2012-01-02
Phenanthrene			mg/L	60.0	58.7	98	80 - 120	2012-01-02
Fluoranthene			mg/L	60.0	57.8	96	80 - 120	2012-01-02
Pyrene		1	mg/L	60.0	64.6	108	80 - 120	2012-01-02
Benzo(a)anthracene			mg/L	60.0	58.6	98	80 - 120	2012-01-02
Chrysene		1	mg/L	60.0	51.7	86	80 - 120	2012-01-02
Benzo(b)fluoranthene			mg/L	60.0	56.1	94	80 - 120	2012-01-02
Benzo(k)fluoranthene		1	mg/L	60.0	52.2	87	80 - 120	2012-01-02
Benzo(a)pyrene		1	mg/L	60.0	50.4	84	80 - 120	2012-01-02
Indeno(1,2,3-cd)pyrene		1	mg/L	60.0	53.0	88	80 - 120	2012-01-02
Dibenzo(a,h)anthracene		1	mg/L	60.0	55.4	92	80 - 120	2012-01-02
Benzo(g,h,i)perylene			mg/L	60.0	51.8	86	80 - 120	2012-01-02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			60.0	mg/L	1	60.0	100	-
2-Fluorobiphenyl			51.5	mg/L	1	60.0	86	-
Terphenyl-d14			64.8	mg/L	1	60.0	108	-

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-11-5	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

LAB Order ID # 11121921

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

Company Name: NOVA

Phone #:

Address: (Street, City, Zip)

Fax #:

Contact Person: Ron Bownsville

E-mail:

Invoice to: (If different from above)

Project #: TNM Monument # 18

Project Name: Monument 18

Project Location (including state):

Sampler Signature: David Fletcher

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
	mw 1	1	1L amber	X									X	12/15/11	1140
	mw 7	↓	↓	↓									↓	↓	1125

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, Fl, S04, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
													X											
													↓											

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
David Fletcher	NOVA	12/16/11	842		TA	12/16/11	842	INST ___ OBS 4.3 °C COR ___ °C
	TA	12/16/11	10:05					INST ___ OBS ___ °C COR ___ °C
					TA	12/17/11	11:00	INST IR OBS 3.3 °C COR 3.4 °C

LAB USE ONLY

Intact Y / N

Headspace Y / N / NA

Log-in-Review ___

REMARKS:

Kirkland

Dry Weight Basis Required

TRRP Report Required

Check If Special Reporting Limits Are Needed

Sat delivery

Carrier # Carrizo LS 28173061

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

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