

AP - 92

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# ANNUAL MONITORING REPORT

YEAR(S):  
2011

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## 2011 ANNUAL GROUNDWATER MONITORING REPORT

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### 8" MOORE TO JAL #2

### LEA COUNTY, NEW MEXICO

SRS #2002 - 10273

NMOCD REF. # AP-92

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APR - 5 2012

#### Prepared for:

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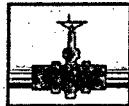
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February, 2012



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ALL AMERICAN

RECEIVED

March 29, 2012

APR - 5 2012

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

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

Re: Plains All American – 2011 Annual Monitoring Reports  
6 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:

8-inch Moore to Jal #1	AP-91 (1R-0380)	Section 16, T17S, R37E, Lea County
8-inch Moore to Jal #2	AP-92 (1R-0381)	Section 16, T17S, R37E, Lea County
C.S. Cayler	AP-052	Section 06, T17S, R37E, Lea County
Hobbs Junction Mainline	AP-054	Section 26, T18S, R37E, Lea County
Kimbrough Sweet 8-inch	AP-0029	Section 03, T18S, R37E, Lea County
Lovington Deep 6-inch	AP-037	Section 06, T17S, R36E, Lea County

Talon/LPE (Talon) 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 Talon personnel in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Reports for the above facilities.

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

Sincerely,

Jason Henry  
Remediation Coordinator  
Plains All American

CC: Geoff Leking, NMOCD, Hobbs, NM

Enclosures

2530 State Hwy. 214 • Denver City, TX 79323 • (575)441-1099

# **2011 ANNUAL GROUNDWATER MONITORING REPORT**

**8" MOORE TO JAL #2  
LEA COUNTY, NEW MEXICO  
SRS #2002 - 10273  
NMOCD REF. # AP-92**

**PLAINS PIPELINE, L.P.  
333 CLAY STREET, SUITE 1600  
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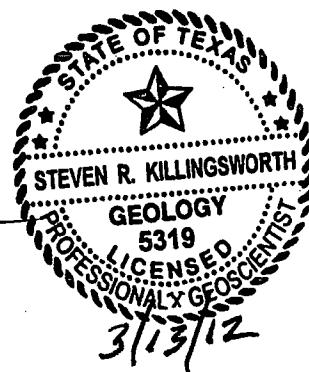
**TALON/LPE PROJECT NO. 700376.045.01**

**Prepared by:**

Steven R. Killingsworth

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**February 2012**

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NMOCD - New Mexico Oil Conservation Division  
NMSLO – New Mexico State Land Office

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## **1.0 INTRODUCTION AND OBJECTIVES**

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### **1.1 Objectives and Site Background**

The 8" Moore to Jal #2 (site) is located approximately 9.2 miles southeast of Lovington, Lea County, New Mexico, on property owned by the State of New Mexico. The site is located within the West Lovington Oil Field at 32° 49' 56.61" N, 103° 15' 08.47" W. There are no residences, groundwater wells, or surface water bodies within a 1,000-foot radius of the site. The initial release occurred from an EOTT Energy Pipeline (EOTT) steel pipeline on October 22, 2002. Subsequently, EOTT changed its name to Link Energy in October 2003, and Plains Marketing, L.P. (Plains) purchased the assets of Link Energy on April 1, 2004. Initial reports estimated that 25 barrels (bbls) of crude oil were released. Approximately 5,794 square feet of surface area was impacted by the release.

On February 5, 2007, Talon/LPE (Talon) was retained by Plains to assume remediation activities at the site. Remediation activities at the site were previously conducted by Environmental Plus, Inc. (EPI).

### **1.2 Site Geology**

The surface deposits in Lea County are composed of Blackwater Draw (Illinoian) sediments, Ogallala sediments and undivided Quaternary alluvium, which is also termed 'cover sands'. The soil in the upper two (2) feet at the site is composed of gravelly loam that consists of 43% sand, 18% clay and 40% silt and also contains abundant eroded gravel to cobble size caliche fragments. Below the top soil is predominately unconsolidated sand to weakly cemented sandstone which has undergone calichification of varying extent.

Below the Blackwater Draw Formation is the Ogallala Formation of Miocene to Pliocene age. The Ogallala Formation was deposited from sediments eroded from the Southern Rockies and consists mostly of eolian sediments, silty to very fine sand or loess. During the middle to late Miocene, the Ogallala was deposited by fluvial mechanism as paleovalley fill composed of gravelly to sandy braided stream deposits that trended west to east across the Southern High Plains. During the late Miocene the west to east drainage was diverted (captured) by the Pecos River. Subsequently, the Pecos River basin has experienced deflation, which facilitated eolian deposition on the Southern High Plains during the Pliocene.

### **1.3 Previous Environmental Investigations**

Currently, there are a total of twenty-one (21) groundwater monitor wells that have been installed in the vicinity of the release (see Figure 1). With New Mexico Oil Conservation Division (NMOCD) approval and landowner concurrence, groundwater monitor well MW-1 was installed in July 2004. Subsequently, groundwater monitor wells MW-2, MW-3, and MW-4 were installed in October 2004, monitor wells MW-6 through MW-13 were installed in November 2007, MW-14 through MW-16 were installed in March of 2010 and MW-17 through MW-21 were installed in August of 2010.

Phase-separated hydrocarbon (PSH) recovery operations have been performed at the site since 2004. Currently, there are four (4) skimmer pumps and two (2) total fluid pumps in operation at the site used to recover phase-separated hydrocarbon (PSH). Table 1, which summarizes historical groundwater and PSH gauging, is provided in Appendix B. In addition, cumulative historical tables are on the attached CD that is an adjunct to this report.

A transfer system was installed during the year 2011 that is designed to pump recovered groundwater from the site to the Rocky Smith SWD Systems, State 'E' #23 salt water disposal (SWD) (NMOCD # 307219) facility, thereby, eliminating the need to haul water to a disposal facility with a vacuum truck. The system is composed of a three (3) inch HDPE line that was installed (slip-lined) into the out of service Moore to Jal eight (8) inch pipeline from the site through the Moore to Jal #1 site to the C.S. Cayler site, where it is connected to the HDPE line that runs from the Cayler site to the afore referenced SWD. A five (5) HP transfer pump is used to impel the water down the HDPE line.

#### 1.4 Regulatory Framework

Groundwater analytical data collected from this site is evaluated to the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards outlined in the table below.

New Mexico Water Quality Control Commission (NMWQCC) groundwater standards	
Compound	mg/L
Benzene	0.010
Toluene	0.750
Ethylbenzene	0.750
Total Xylenes	0.620
PAH (Naphthalene)	0.030
PAH (Benzo[a]-pyrene)	0.007

## **2.0 SITE ACTIVITIES**

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The sections that follow summarize groundwater monitoring and PSH recovery activities conducted at the subject site during the year 2011. The primary function of groundwater monitoring activities is to collect depth to fluid measurements and to collect groundwater samples from monitor wells for laboratory analysis. The objective of groundwater monitoring is to evaluate the status of the dissolved-phase and PSH plumes in order to verify the effectiveness of the remediation system as to inhibiting plume migration, reducing the volume of PSH impacting the groundwater and determining if modifications to the remediation system would improve its overall performance and efficiency.

A synopsis of analytical results for the four (4) groundwater monitoring events is located in Table 2, in Appendix B, and annotated in map form on Figures 3a through 3d in Appendix A. Laboratory analytical data reports and chain of custody documentation are included in Appendix C. In addition, the entire annual groundwater monitoring report, including cumulative historical analytical data, are located on the attached CD, which is an adjunct to this report.

### **2.1 Groundwater Monitoring Activities**

A total of four (4) groundwater monitoring events were conducted by Talon during the year 2011. The events occurred on: March 23, June 14, September 13-14, and December 14-16. Details of the gauging, purging, and sampling activities are presented below in Section 2.2.

### **2.2 Groundwater Gauging, Purging, and Sampling Procedures**

During each groundwater monitoring event, all monitor wells were measured with an oil/water interface probe to determine static water levels and to determine the thickness of PSH accumulations if present. The data collected from measurements was used to construct groundwater gradient maps and PSH thickness maps. The results of the measured depths to fluids collected during the four (4) events are incorporated in Table 1 – Summary of Historical Fluid Level Measurements. In addition, cumulative historical gauging data is located in the tables section on the CD, which is an adjunct to this report.

Subsequent to gauging, all monitor wells were purged using a down-hole pump equipped with vinyl tubing. The pump and tubing were decontaminated with Alconox® detergent and rinsed with distilled water after each use. Recovered purge water and water used in the decontamination process was contained in 55-gallon drums. After the groundwater monitoring event, all retained water was removed with a vacuum truck and properly disposed. Approximately 2,083 gallons of purged groundwater and water used for decontamination was generated during the monitoring events of 2011.

Groundwater samples were collected from all monitor wells not impacted with PSH using dedicated disposable polyethylene bailers. Groundwater samples were not collected from wells impacted with PSH. All groundwater samples were contained in laboratory supplied sample vials infused with the appropriate preservative required for the requested analysis.

The groundwater samples were maintained on ice, in the custody of Talon personnel, until they were delivered to TraceAnalysis, Inc. in Midland, Texas for testing. The groundwater samples collected during the all four events were quantified for benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA Method SW-846 8021B. In addition, selected groundwater samples were collected for quantification of poly-nuclear aromatic hydrocarbons by EPA Method SW-846 8270C.

### **2.3 Phase Separated Hydrocarbon Recovery**

Prior to October 2008, a mobile recovery trailer with total fluids pumps was mobilized to the site on a weekly basis to recover PSH from monitor wells MW-1, MW-2, MW-3, MW-5, MW-6, MW-7, and MW-9.

On October 7, 2008, a permanent system was installed utilizing two (2) AP-4 pneumatic total fluid pumps in monitor wells MW-1 and MW-7 and four (4) skimmers in monitor wells MW-3, MW-5, MW-6, and MW-9 to recover PSH and to inhibit migration of the PSH plume. The skimmer assembly consists of bladder pumps combined with 24-inch traveling float specific gravity skimmer attachments. The skimmer system and total fluids pumps are powered by a single-phase 230 volt, 7.5 HP two stage reciprocating air compressor. Fluid, recovered by the pumps, is retained in a 6,500-gallon poly tank. The poly tank is equipped with a high level shut off switch to prevent overflow and it is located within a secondary containment compound that is outfitted with a poly-liner. Both recovered groundwater and PSH are periodically removed from the recovery tank with a vacuum truck. Recovered groundwater is transported to an approved NMOCD disposal facility and removed PSH is re-introduced to the Plains' pipeline system at the Plains operated Lea Station.

Talon personnel performed a minimum of weekly maintenance to the remediation system to ensure efficient operation, to optimize PSH recovery and to minimize down time. The poly tank is gauged weekly to monitor PSH recovery volume. The system has been effective at recovering PSH from the groundwater.

During 2011 the quarterly PSH and groundwater recovery totals are as follows:

- 1<sup>st</sup> Quarter - 33.0 bbls crude oil and 810 bbls of groundwater
- 2<sup>nd</sup> Quarter – 11.0 bbls crude oil and 681 bbls of groundwater
- 3<sup>rd</sup> Quarter – 6.0 bbls crude oil and 869 bbls of groundwater
- 4<sup>th</sup> Quarter – 3.0 bbls of crude oil and 511 bbls of groundwater

During 2011 a total of 53 bbls of crude oil and a total of 2,871 bbls of groundwater were recovered by the PSH recovery system. Approximately 167 bbls of crude oil has been recovered at the subject site since PSH recovery activities were initiated.

### **2.4 Groundwater Monitoring Results**

The sections that follow present the results from the four (4) groundwater monitoring events conducted at the subject site.

#### 2.4.1 Physical Characteristics of the First Water-Bearing Zone

The primary groundwater resource under the Southern High Plains, including the site, is referred to as the Ogallala Aquifer or High Plains Aquifer. The Southern portion of the Ogallala aquifer underlies an area of about 29,000 square miles ( $\text{mi}^2$ ) in western Texas and eastern New Mexico, encompassing all or part of 31 counties in Texas and 6 counties in New Mexico.

The Ogallala Aquifer is generally unconfined and the potentiometric surface generally mirrors the land surface elevation with the regional flow direction is from the northwest to the southeast. The mean regional gradient is 15 feet per mile and the typical groundwater velocity averages seven inches per day. The regional hydraulic conductivity averages 17 gallons per day per square-foot and specific yield averages 16%.

The Ogallala Aquifer has experienced acute depletion from extensive irrigation and urban demand, which have exceeded the average annual recharge rate. Recharge of the Ogallala Aquifer on the Southern High Plains occurs predominately from rainfall runoff that accumulates in ephemeral streams and playa lakes as well as direct recharge in areas that contain permeable soils such as sand hills. Recharge rates vary depending on mechanism, but averages from 0 to 1.6 inches per year.

The composition of Ogallala groundwater is defined as mixed-cation-HCO<sub>3</sub>, therefore, Ogallala groundwater is considered hard. Problems with scale have occurred with residential and commercial water systems that use Ogallala groundwater and often treatment strategies are employed to reduce the effects of scale. The typical total dissolved solids of Ogallala groundwater in the Hobbs-Lovington area is generally less than 1,000 mg/L (ppm) in areas not impacted by oil-field brines. The pH of Ogallala water averages 7.3.

#### 2.4.2 Groundwater Gradient and Flow Direction

The depth to fluid measurements was collected during each of the four (4) groundwater monitoring events during the year 2011. The results of the fluid level measurements are summarized in Table 1 - Summary of Historical Fluid Level Measurements in Appendix B.

The collected data was used to construct potentiometric surface maps in order to interpret the groundwater gradient and flow direction. The maps, designated Figures 2a through 2d are presented in Appendix A.

The potentiometric surface maps constructed for each of the four (4) groundwater monitoring events indicate consistently that the groundwater flow direction is to southeast at an approximate gradient of 0.0040 feet/foot or approximately 21 feet per mile. Groundwater levels at the subject site have exhibited a steady decline of an average of 1.29 feet for the year. The declines in groundwater levels appear to be associated with a regional trend of declining groundwater levels for the Ogallala Aquifer.

#### 2.4.3 Phase Separated Hydrocarbon (PSH)

An oil/water interface probe was used to determine the thicknesses of PSH during the four (4) groundwater monitoring events. The following summarizes the status of the PSH thicknesses observed during the four groundwater monitoring events:

- In March 2011, PSH was observed in six (6) monitor wells MW-1, MW-3, MW-5, MW-6, MW-7, and MW-9. PSH thickness ranged from 0.28 feet to 4.89 feet.
- In June 2011, PSH was observed in six (6) monitor wells MW-1, MW-3, MW-5, MW-6, MW-7, and MW-9. PSH thickness ranged from 0.23 feet to 3.09 feet.
- In September 2011, PSH was observed in six (6) monitor wells MW-1, MW-3, MW-5, MW-6, MW-7, and MW-9. PSH thickness ranged from 0.12 feet to 2.79 feet.
- In January 2012, PSH was observed in seven (7) monitor wells MW-1, MW-3 through MW-7, and MW-9. PSH thickness ranged from 0.01 feet to 4.58 feet.

In addition to potentiometric surface maps, isopleth maps were prepared depicting the measured PSH thicknesses and PSH plume geometry. PSH plume delineation and thickness maps are presented in Appendix A as Figures 3a through 3d. Currently, the PSH plume is delineated. PSH recovery operations have been performed at the site since 2004. Currently there are a total of two (2) total fluid pumps and four (4) skimmer pumps in operation at the site. A summary of the historical groundwater and PSH gauging results is provided in Table 1 in Appendix B.

#### 2.4.4 Groundwater Analytical Results

During the first quarter, March 2011, sampling event, groundwater samples were collected from monitor wells MW-2, MW-4, MW-8, and MW-10 through MW-21. Monitor wells MW-1, MW-3, MW-5, MW-6, MW-7, and MW-9 were not sampled due to the presence of PSH.

The following analytical results were observed from laboratory analyses:

- Benzene concentrations ranged from <0.00100 mg/L to 15.1 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-2, MW-4, MW-8, and MW-13, MW-17, MW-18, and MW-19.
- Toluene concentrations ranged from <0.00100 mg/L to 1.41 mg/L. The toluene concentration exceeded the NMWQCC groundwater standard of 0.750 mg/L in the groundwater sample collected from monitor wells MW-8.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 1.40 mg/L. Ethylbenzene concentrations exceed the NMWQCC groundwater standard of 0.750 mg/L in the groundwater samples collected from monitor wells MW-4, MW-8, and MW-13.
- Xylene concentrations ranged from <0.00100 mg/L to 2.37 mg/L. Xylene concentrations exceeded the NMWQCC groundwater standard of 0.620 mg/L in the

groundwater samples collected from monitor wells MW-8 and MW-13.

During the June 2011 sampling event, groundwater samples were collected from monitor wells MW-2, MW-4, MW-8, and MW-10 through MW-21. Monitor wells MW-1, MW-3, MW-5, MW-6, MW-7, and MW-9 were not sampled due to the presence of PSH. In addition, a sample was collected from monitor well MW-4 for quantification of PAHs.

Laboratory analytical results of the groundwater samples exhibited the following findings:

- Benzene concentrations ranged from <0.00100 mg/L to 16.1 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-2, MW-4, MW-8, MW-12, MW-13, MW-16, MW-17, MW-18, and MW-19.
- Toluene concentrations ranged from <0.00100 mg/L to 1.92 mg/L. The toluene concentration exceeded the NMWQCC groundwater standard of 0.750 mg/L in the groundwater samples collected from monitor wells MW-4 and MW-8.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.875 mg/L. The ethylbenzene concentration exceeded the NMWQCC groundwater standard of 0.750 mg/L in the groundwater sample collected from monitor well MW-8..
- Xylene concentrations ranged from <0.00100 mg/L to 0.0281 mg/L. The xylene concentration did not exceed the NMWQCC groundwater standard of 0.620 mg/L in any of the collected the groundwater samples.
- Total naphthalenes in the MW-4 sample were 0.0144 mg/L, which did not exceed the NMWQCC groundwater standard of 0.030 mg/L.

During the September 2011 sampling event, groundwater samples were collected from monitor wells MW-2, MW-4, MW-8, and MW-10 through MW-21. Monitor wells MW-1, MW-3, MW-5, MW-6, MW-7, and MW-9 were not sampled due to the presence of PSH.

Laboratory analytical results of the groundwater samples exhibited the following findings:

- Benzene concentrations ranged from <0.00100 mg/L to 23.1 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-4, MW-8, MW-13, MW-16, MW-17, MW-18, and MW-19.
- Toluene concentrations ranged from <0.00100 mg/L to 0.542 mg/L. The toluene concentration did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the groundwater samples collected.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.537 mg/L. Ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the collected groundwater samples.
- Xylene concentrations ranged from <0.00100 mg/L to 0.445 mg/L. The xylene concentration did not exceed the NMWQCC groundwater standard of 0.620 mg/L in

any of the groundwater samples collected.

During the December 2011 sampling event, groundwater samples were collected from monitor wells MW-2, MW-8, and MW-10 through MW-21. Monitor wells MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-9 were not sampled due to the presence of PSH. In addition, a sample was collected from monitor wells MW-2, MW-17, MW-18, and MW-19 for quantification of PAHs.

Laboratory analytical results of the groundwater samples collected exhibited the following findings:

- Benzene concentrations ranged from <0.00100 mg/L to 36.6 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-8, MW-13, MW-15, MW-18, and MW-19.
- Toluene concentrations ranged from <0.00100 mg/L to 0.199 mg/L. The toluene concentration did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the groundwater samples collected.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.703 mg/L. Ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any collected groundwater sample.
- Xylene concentrations ranged from <0.00100 mg/L to 0.116 mg/L. The xylene concentration did not exceed the NMWQCC groundwater standard of 0.620 mg/L in any of the groundwater samples collected.
- Total naphthalenes concentrations ranged from <0.000183 mg/L to 0.00576 mg/L. The total naphthalenes concentration did not exceed the NMWQCC groundwater standard of 0.030 mg/L in any of the groundwater samples collected.

Generally, dissolved-phase concentrations have declined during the year 2011 with the most significant declines in down-gradient monitor wells MW-4, MW-8, and MW-13 indicating that the dissolved-phase plume may be contracting. Dissolved-phase concentrations have increased slightly in cross-gradient monitor wells MW-17, MW-18 and MW-19. Currently, the dissolved-phase groundwater plume is delineated.

### **3 CONCLUSIONS AND RECOMMENDATIONS**

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The following section presents a summary of the four groundwater monitoring events conducted at the 8" Moore to Jal #2 site and provides recommendations for future corrective actions.

#### **3.1 Summary of Findings**

- The groundwater flow direction is to the southeast at an average gradient of 0.0040 feet per foot or 21.25 feet per mile.
- Groundwater levels at the subject site have exhibited a steady decline that appears to be associated with a regional trend of declining groundwater levels for the Ogallala Aquifer.
- PSH has been observed in monitor wells MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-9.
- Generally, PSH thicknesses have fluctuated from quarter to quarter during the year 2011 exhibiting no specific increasing or declining trend.
- In general, monitor wells have exhibited stable or declining concentrations of dissolved-phase contaminants except for down-gradient monitor well MW-13, which exhibited increasing dissolved-phase concentrations over the year 2011. Currently, the dissolved-phase plume is delineated.
- Approximately 53 bbls of crude oil was recovered during the year 2011 indicating that the PSH recovery system is performing its function.

#### **3.2 Recommendations**

Based upon the results of the quarterly groundwater monitoring and PSH recovery efforts, Talon proposes the following actions:

- Continue operation and maintenance of the skimmer/bladder pump and total fluids pumps recovery system. Monitor the system on a weekly basis to optimize PSH recovery efficiency.
- Add or reposition pumps as necessary to optimize PSH recovery and inhibit plume migration.
- Perform quarterly groundwater monitoring events in accordance with NMOCD directives.

## **APPENDIX A**

### **Figures**

**Figure 1 - Site Plan with Proposed Monitor Well Locations Map**

**Figure 2a - Groundwater Gradient Map - 03/23/2011**

**Figure 2b - Groundwater Gradient Map - 06/14/2011**

**Figure 2c - Groundwater Gradient Map – 09/12/2011**

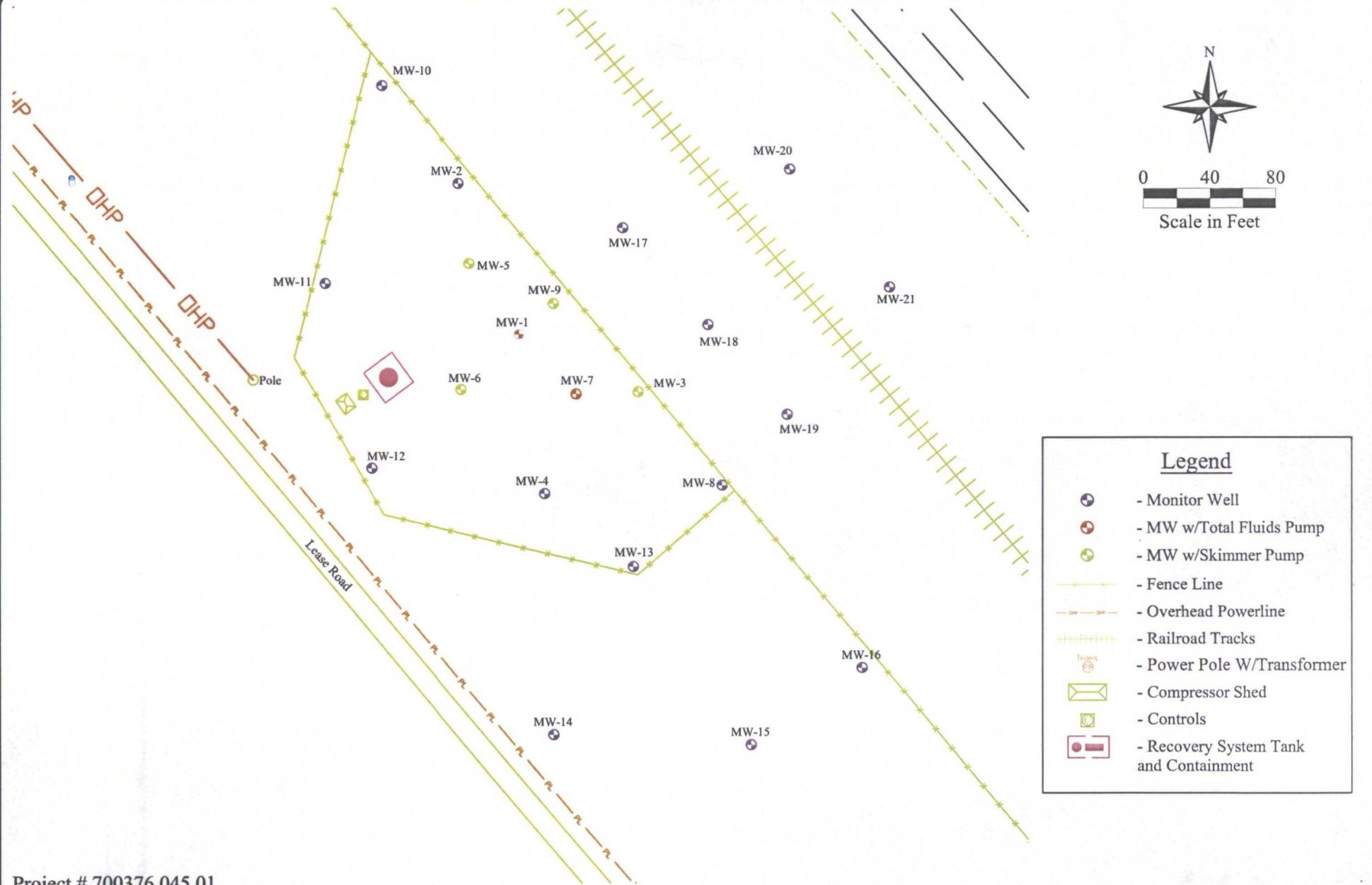
**Figure 2d - Groundwater Gradient Map - 12/14/2011**

**Figure 3a - PSH Thickness & Groundwater Concentration Map - 03/23/2011**

**Figure 3b - PSH Thickness & Groundwater Concentration Map - 06/14/2011**

**Figure 3c - PSH Thickness & Groundwater Concentration Map – 09/13-14/2011**

**Figure 3d - PSH Thickness & Groundwater Concentration Map - 12/14-16/2011**



Project # 700376.045.01

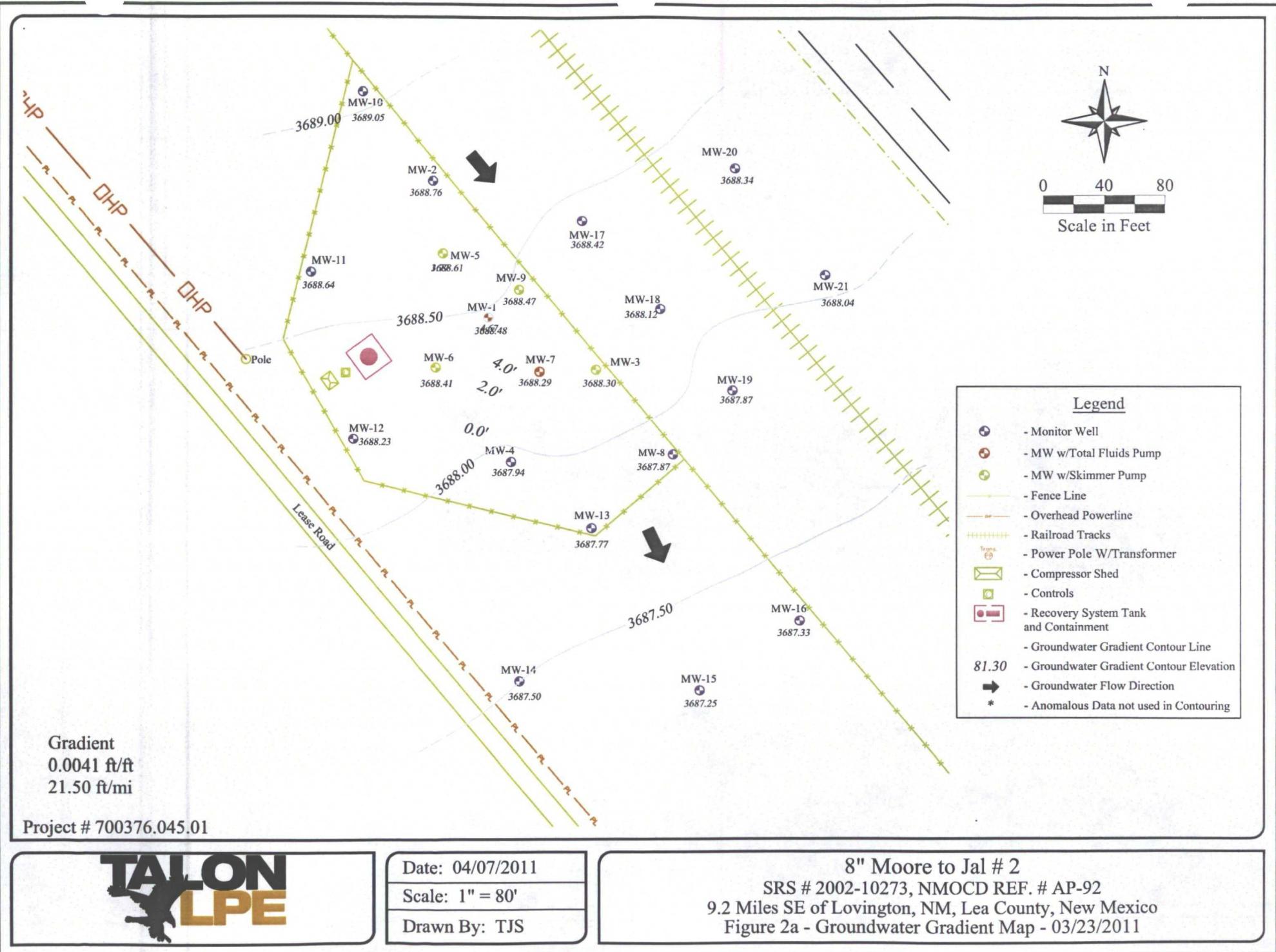


Date: 04/26/2010

Scale: 1" = 80'

Drawn By: TJS

8" Moore to Jal # 2  
SRS # 2002-10273, NMOCD REF. # AP-92  
9.2 Miles SE of Lovington, NM, Lea County, New Mexico  
Figure 1 - Site Plan



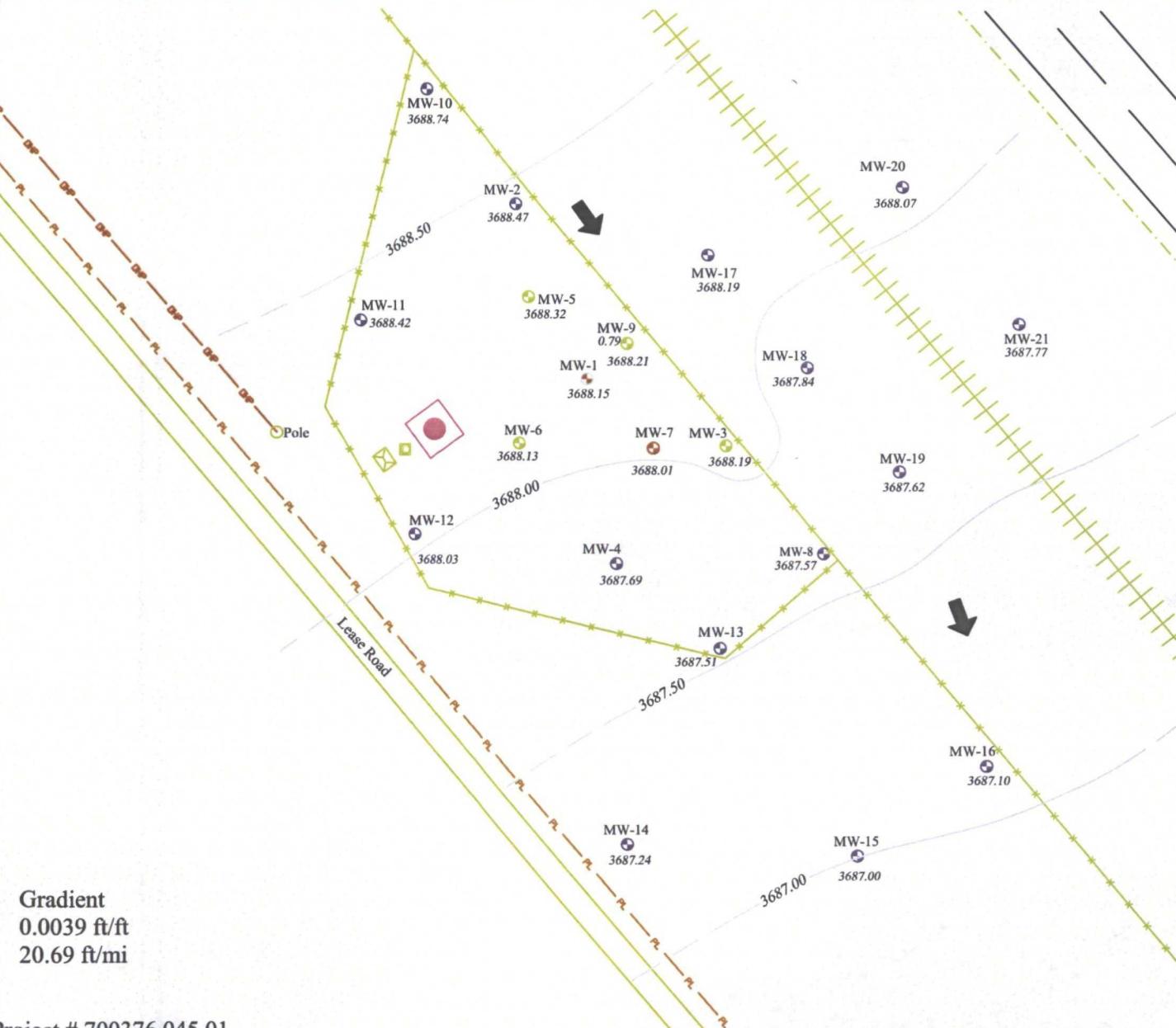
**TALON**  
**LPE**

Date: 04/07/2011

Scale: 1" = 80'

Drawn By: TJS

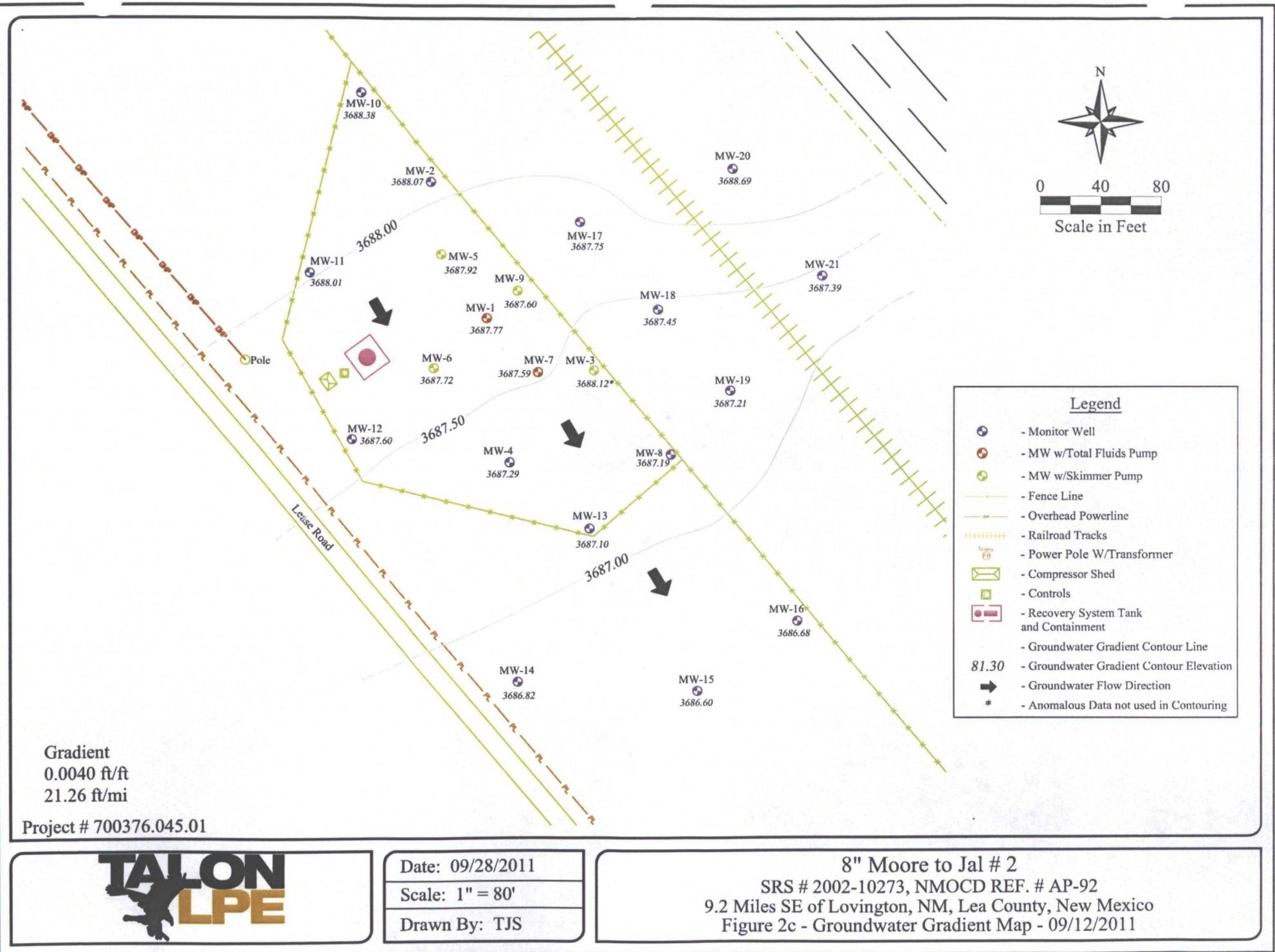
**8" Moore to Jal # 2**  
SRS # 2002-10273, NMOCD REF. # AP-92  
9.2 Miles SE of Lovington, NM, Lea County, New Mexico  
Figure 2a - Groundwater Gradient Map - 03/23/2011

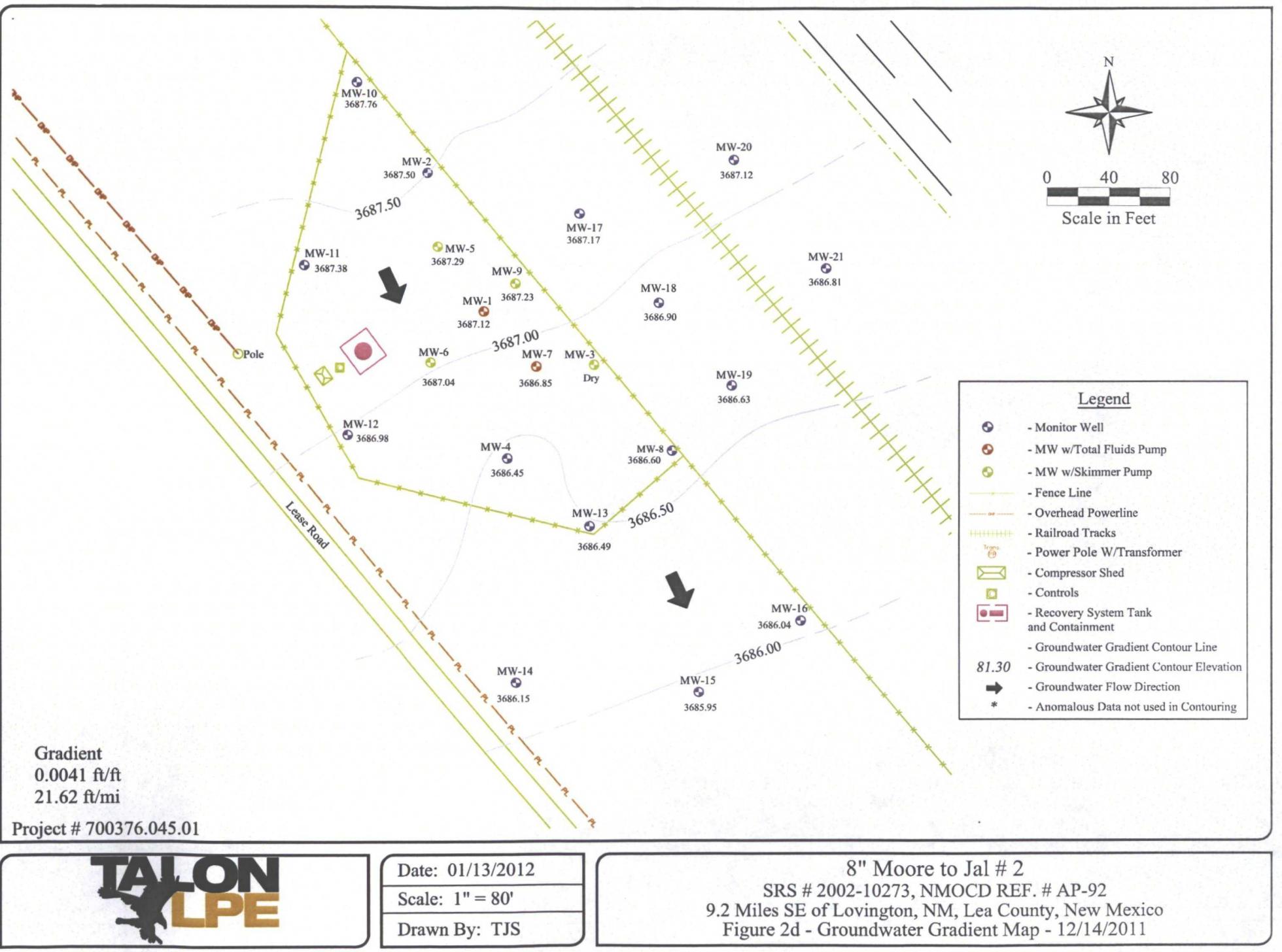


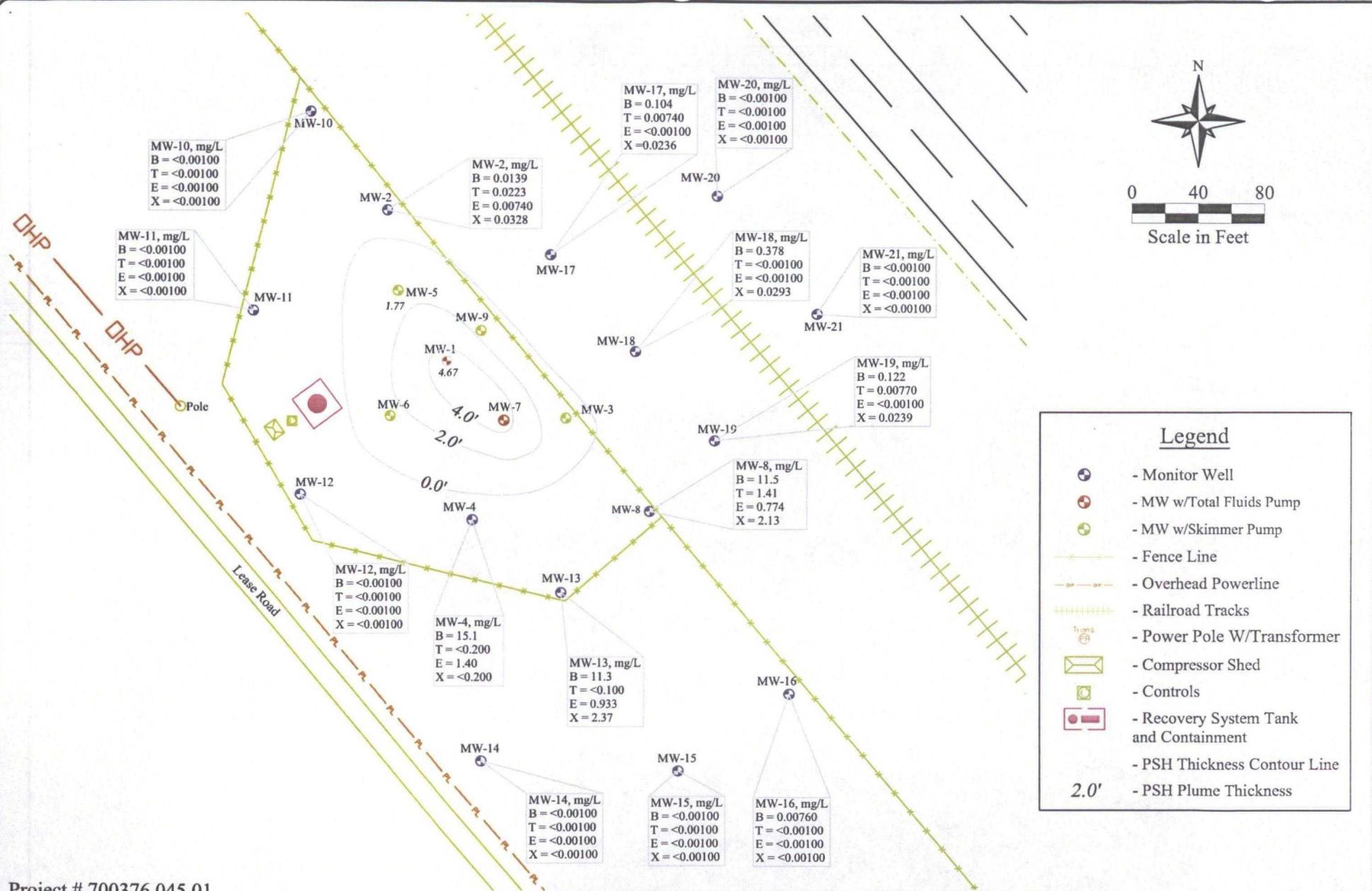
<u>Legend</u>	
- Monitor Well	
- MW w/Total Fluids Pump	
- MW w/Skimmer Pump	
- Fence Line	
- Overhead Powerline	
- Railroad Tracks	
- Power Pole W/Transformer	
- Compressor Shed	
- Controls	
- Recovery System Tank and Containment	
- Groundwater Gradient Contour Line	
- Groundwater Gradient Contour Elevation	
81.30	- Groundwater Flow Direction
→	- Anomalous Data not used in Contouring

**TALON**  
**LPE**

8" Moore to Jal # 2  
SRS # 2002-10273, NMOCD REF. # AP-92  
9.2 Miles SE of Lovington, NM, Lea County, New Mexico  
Figure 2b - Groundwater Gradient Map - 06/14/2011







Project # 700376.045.01



Date: 04/07/2011

Scale: 1" = 80'

Drawn By: TJS

8" Moore to Jal # 2

SRS # 2002-10273, NMOC REF. # AP-92

9.2 Miles SE of Lovington, NM, Lea County, New Mexico

Figure 3a - PSH Thickness and Groundwater Concentration Map, - 03/23/2011



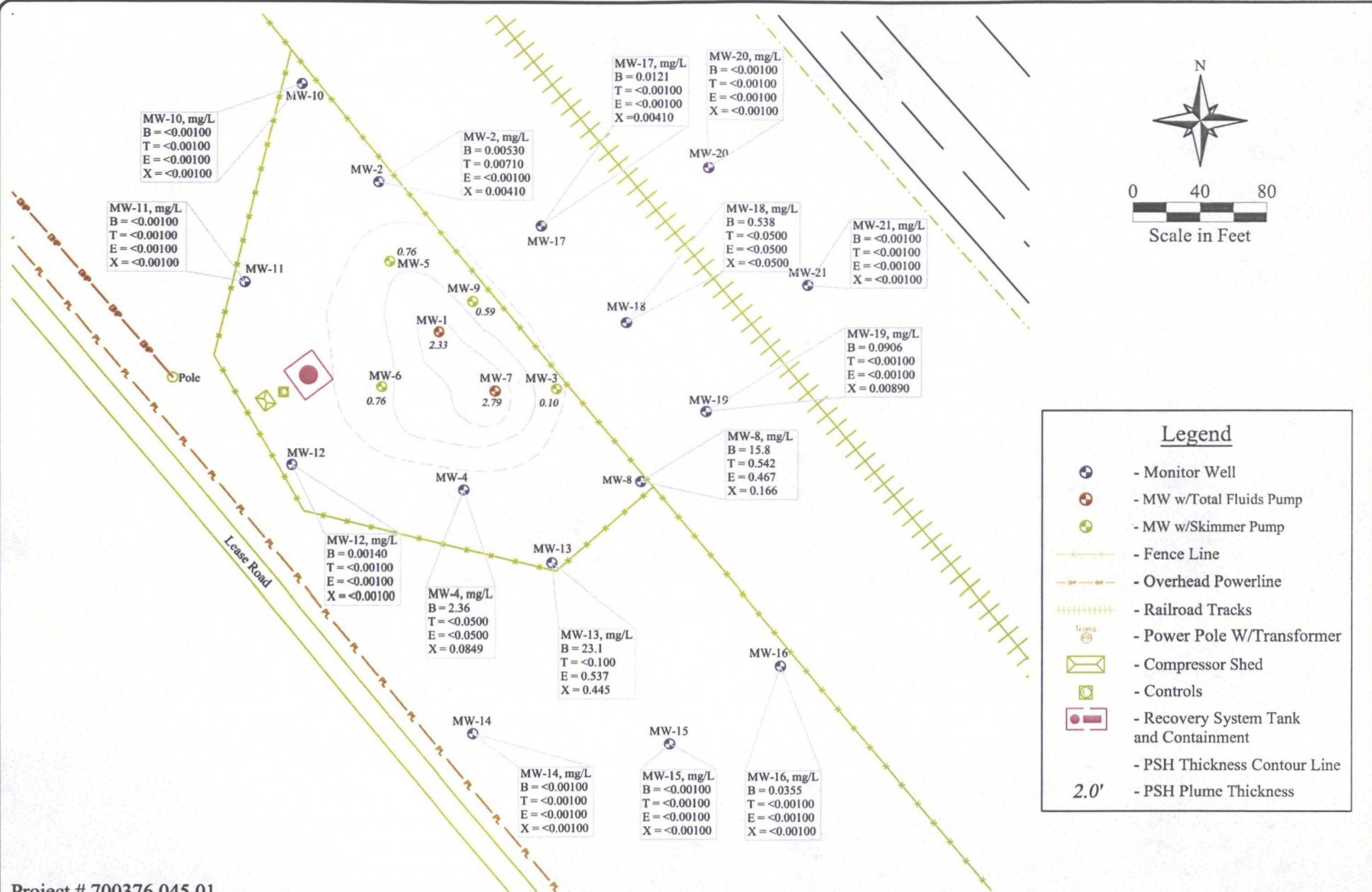
**TALON**  
**LPE**

Date: 07/07/2011

Scale: 1" = 80'

Drawn By: TJS

**8" Moore to Jal # 2**  
SRS # 2002-10273, NMOCD REF. # AP-92  
9.2 Miles SE of Lovington, NM, Lea County, New Mexico  
Figure 3b - PSH Thickness and Groundwater Concentration Map, - 06/14/2011

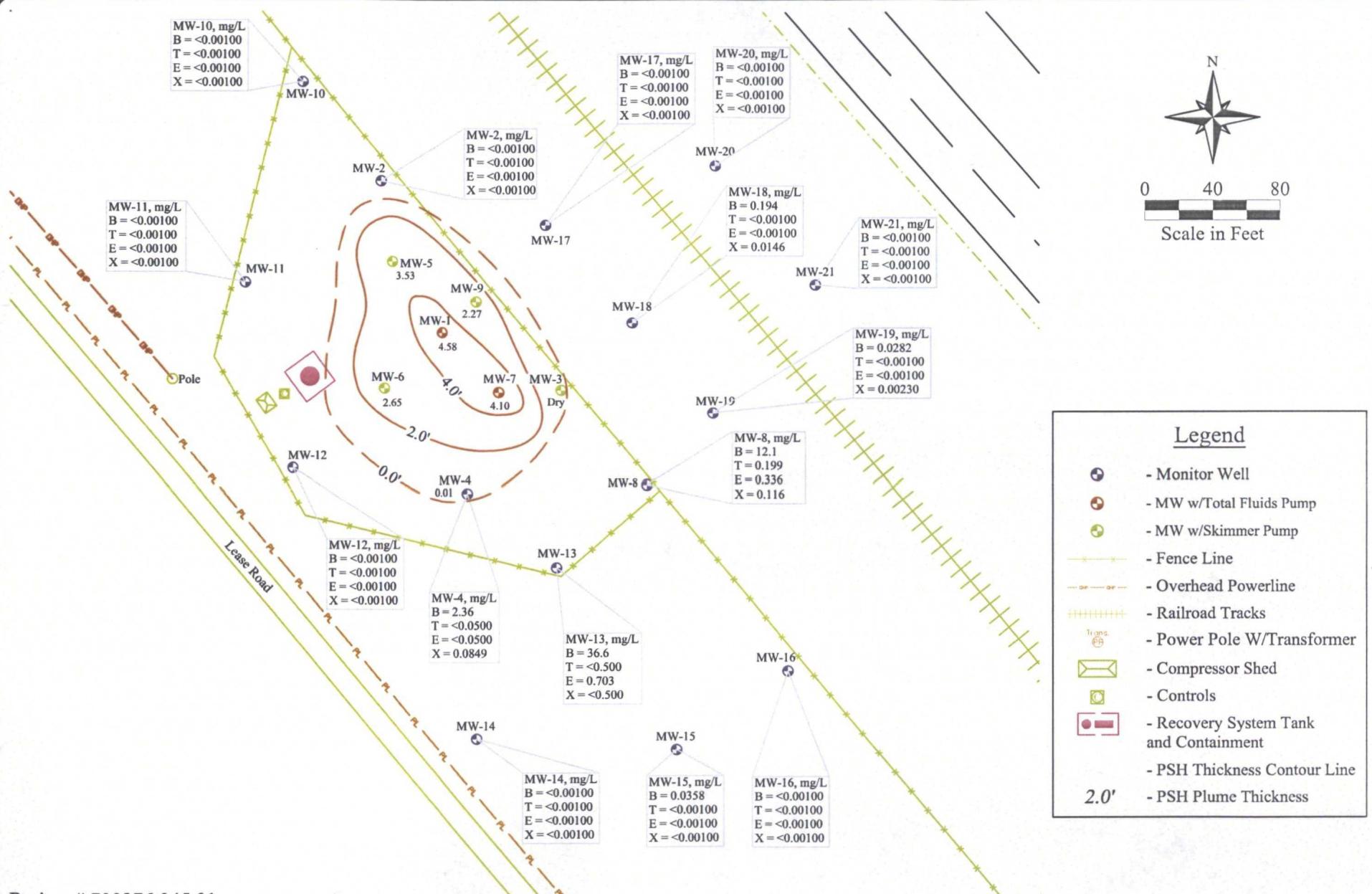


Project # 700376.045.01



Date: 09/28/2011
Scale: 1" = 80'
Drawn By: TJS

8" Moore to Jal # 2  
SRS # 2002-10273, NMOCD REF. # AP-92  
9.2 Miles SE of Lovington, NM, Lea County, New Mexico  
Figure 3c - PSH Thickness and Groundwater Concentration Map, - 09/13-14/2011



Project # 700376.045.01



Date: 01/13/2012
Scale: 1" = 80'
Drawn By: TJS

8" Moore to Jal # 2  
SRS # 2002-10273, NMOCD REF. # AP-92  
9.2 Miles SE of Lovington, NM, Lea County, New Mexico  
Figure 3d - PSH Thickness and Groundwater Concentration Map, - 12/14-16/2011

## **APPENDIX B**

### **Tables**

**Table 1 - Summary of Groundwater Elevations and Phase Separated Hydrocarbon (PSH) Thicknesses**

**Table 2 - Summary of Groundwater Analytical Results - BTEX**

**Table 3 - Summary of Groundwater Analytical Results – PAH**

**Chart 1 – Product Recovery Chart**



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-1	07/28/04	3767.30	59.01	59.08	0.07	3708.28
MW-1	09/23/04		72.37	79.68	7.31	3693.86
MW-1	10/08/04		72.19	75.79	3.60	3694.58
MW-1	10/14/04		71.76	78.56	6.80	3694.54
MW-1	10/20/04		71.80	78.95	7.15	3694.45
MW-1	10/29/04		71.88	79.20	7.32	3694.34
MW-1	11/04/04		72.00	79.26	7.26	3694.23
MW-1	11/10/04		72.08	79.32	7.24	3694.16
MW-1	11/17/04		72.12	79.33	7.21	3694.12
MW-1	11/24/04		72.22	79.41	7.19	3694.02
MW-1	12/02/04		72.18	79.31	7.13	3694.07
MW-1	12/08/04		72.06	79.14	7.08	3694.20
MW-1	12/15/04		72.09	79.15	7.06	3694.17
MW-1	12/27/04		72.26	79.34	7.08	3694.00
MW-1	12/29/04		72.35	78.84	6.49	3694.00
MW-1	01/06/05		72.27	79.32	7.05	3693.99
MW-1	01/13/05		72.31	79.34	7.03	3693.96
MW-1	01/19/05		72.31	79.37	7.06	3693.95
MW-1	01/26/05		72.34	79.43	7.09	3693.92
MW-1	02/02/05		72.32	79.36	7.04	3693.95
MW-1	02/09/05		72.38	79.39	7.01	3693.89
MW-1	02/16/05		72.35	79.34	6.99	3693.92
MW-1	02/24/05		72.37	79.38	7.01	3693.90
MW-1	03/03/05		72.42	79.40	6.98	3693.85
MW-1	03/11/05		72.29	79.25	6.96	3693.99
MW-1	03/18/05		72.41	79.32	6.91	3693.87
MW-1	03/31/05		72.42	79.34	6.92	3693.86
MW-1	04/07/05		72.47	79.38	6.91	3693.81
MW-1	05/18/05		72.49	79.40	6.91	3693.79
MW-1	05/23/05		72.53	79.40	6.87	3693.76
MW-1	05/26/05		72.56	79.34	6.78	3693.74
MW-1	06/01/05		72.55	79.40	6.85	3693.74
MW-1	06/03/05		72.59	79.20	6.61	3693.74
MW-1	06/07/05		72.56	79.39	6.83	3693.74
MW-1	06/10/05		72.55	79.35	6.80	3693.75
MW-1	06/13/05		72.58	79.53	6.95	3693.70
MW-1	06/16/05		72.58	79.31	6.73	3693.73
MW-1	06/20/05		72.60	79.40	6.80	3693.70
MW-1	06/22/05		72.66	79.27	6.61	3693.67
MW-1	06/29/05		72.61	79.42	6.81	3693.69
MW-1	07/01/05		72.62	79.28	6.66	3693.70
MW-1	07/06/05		72.64	79.44	6.80	3693.66
MW-1	07/08/05		71.69	79.33	7.64	3694.49
MW-1	07/12/05		72.68	79.48	6.80	3693.62
MW-1	07/14/05		72.69	79.35	6.66	3693.63
MW-1	07/19/05		72.68	79.49	6.81	3693.62
MW-1	07/21/05		72.73	79.37	6.64	3693.59
MW-1	07/26/05		72.73	79.74	7.01	3693.54
MW-1	07/28/05		72.75	79.42	6.67	3693.57
MW-1	08/02/05		72.75	79.55	6.80	3693.55



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-1	08/04/05		72.79	79.45	6.66	3693.53
MW-1	08/09/05		72.77	79.56	6.79	3693.53
MW-1	08/11/05		72.81	79.46	6.65	3693.51
MW-1	08/16/05		72.79	79.60	6.81	3693.51
MW-1	08/18/05		72.81	79.47	6.66	3693.51
MW-1	08/24/05		72.82	79.64	6.82	3693.48
MW-1	08/26/05		72.85	79.52	6.67	3693.47
MW-1	08/30/05		72.83	79.63	6.80	3693.47
MW-1	09/01/05		72.83	79.43	6.60	3693.50
MW-1	09/06/05		72.78	79.58	6.80	3693.52
MW-1	09/08/05		72.82	79.45	6.63	3693.51
MW-1	09/13/05		72.81	79.62	6.81	3693.49
MW-1	09/16/05		72.84	79.58	6.74	3693.47
MW-1	09/20/05		72.85	79.62	6.77	3693.45
MW-1	09/23/05		72.88	79.62	6.74	3693.43
MW-1	09/27/05		72.88	79.65	6.77	3693.42
MW-1	09/29/05		72.91	79.57	6.66	3693.41
MW-1	10/04/05		72.91	79.70	6.79	3693.39
MW-1	10/06/05		72.94	79.01	6.07	3693.47
MW-1	10/11/05		72.93	79.71	6.78	3693.37
MW-1	10/13/05		72.95	79.65	6.70	3693.37
MW-1	10/18/05		72.94	79.74	6.80	3693.36
MW-1	10/21/05		72.99	79.76	6.77	3693.31
MW-1	10/26/05		72.96	79.77	6.81	3693.34
MW-1	10/28/05		72.99	79.69	6.70	3693.33
MW-1	11/01/05		73.02	79.80	6.78	3693.28
MW-1	11/04/05		73.03	79.81	6.78	3693.27
MW-1	11/09/05		73.06	79.86	6.80	3693.24
MW-1	11/11/05		73.08	79.87	6.79	3693.22
MW-1	11/16/05		73.09	79.87	6.78	3693.21
MW-1	11/18/05		73.01	79.76	6.75	3693.30
MW-1	11/22/05		73.09	79.88	6.79	3693.21
MW-1	11/30/05		73.11	79.11	6.00	3693.31
MW-1	12/02/05		73.14	79.82	6.68	3693.18
MW-1	12/06/05		73.10	79.88	6.78	3693.20
MW-1	12/14/05		73.14	79.91	6.77	3693.16
MW-1	12/16/05		73.19	79.79	6.60	3693.14
MW-1	12/21/05		73.15	79.94	6.79	3693.15
MW-1	12/23/05		73.23	79.77	6.54	3693.11
MW-1	12/27/05		73.30	79.94	6.64	3693.02
MW-1	12/30/05		73.23	79.93	6.70	3693.09
MW-1	01/03/06		73.23	79.97	6.74	3693.08
MW-1	01/05/06		73.22	79.81	6.59	3693.11
MW-1	01/11/06		73.23	79.97	6.74	3693.08
MW-1	01/13/06		73.32	79.87	6.55	3693.02
MW-1	01/18/06		73.23	79.96	6.73	3693.08
MW-1	01/20/06		73.31	79.91	6.60	3693.02
MW-1	01/24/06		73.25	79.99	6.74	3693.06
MW-1	01/26/06		73.21	79.97	6.76	3693.10
MW-1	02/02/06		73.23	79.97	6.74	3693.08



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-1	02/08/06		73.25	79.95	6.70	3693.07
MW-1	02/10/06		73.23	79.94	6.71	3693.08
MW-1	02/14/06		73.27	80.00	6.73	3693.04
MW-1	02/16/06		73.30	80.03	6.73	3693.01
MW-1	02/21/06		73.30	80.00	6.70	3693.02
MW-1	02/24/06		73.32	80.00	6.68	3693.00
MW-1	02/28/06		73.25	79.95	6.70	3693.07
MW-1	03/03/06		73.27	79.99	6.72	3693.04
MW-1	03/06/06		73.25	78.78	5.53	3693.24
MW-1	03/08/06		73.32	79.81	6.49	3693.03
MW-1	03/15/06		73.34	80.03	6.69	3692.98
MW-1	03/17/06		73.25	79.89	6.64	3693.07
MW-1	03/21/06		73.36	79.95	6.59	3692.97
MW-1	03/28/06		73.35	80.00	6.65	3692.97
MW-1	03/30/06		73.41	79.93	6.52	3692.93
MW-1	04/04/06		73.39	79.97	6.58	3692.94
MW-1	04/07/06		73.38	80.00	6.62	3692.95
MW-1	04/12/06		73.38	80.01	6.63	3692.95
MW-1	04/14/06		73.40	80.00	6.60	3692.93
MW-1	04/18/06		73.35	79.95	6.60	3692.98
MW-1	04/21/06		73.44	80.00	6.56	3692.90
MW-1	04/26/06		73.34	79.95	6.61	3692.99
MW-1	04/28/06		73.43	79.90	6.47	3692.92
MW-1	05/04/06		73.40	80.00	6.60	3692.93
MW-1	05/05/06		73.45	80.00	6.55	3692.89
MW-1	05/10/06		73.50	80.07	6.57	3692.83
MW-1	05/12/06		73.47	80.00	6.53	3692.87
MW-1	05/16/06		73.48	80.05	6.57	3692.85
MW-1	05/18/06		73.50	80.01	6.51	3692.84
MW-1	05/23/06		73.47	80.06	6.59	3692.86
MW-1	05/26/06		73.47	80.05	6.58	3692.86
MW-1	05/30/06		73.50	80.07	6.57	3692.83
MW-1	06/01/06		73.52	80.04	6.52	3692.82
MW-1	06/06/06		73.55	80.13	6.58	3692.78
MW-1	06/09/06		73.53	80.10	6.57	3692.80
MW-1	06/13/06		73.53	80.09	6.56	3692.81
MW-1	06/16/06		73.56	80.10	6.54	3692.78
MW-1	06/20/06		73.56	80.10	6.54	3692.78
MW-1	06/23/06		73.53	80.10	6.57	3692.80
MW-1	06/27/06		73.6	80.15	6.55	3692.74
MW-1	06/30/06		73.59	80.11	6.52	3692.75
MW-1	07/05/06		73.6	80.15	6.55	3692.74
MW-1	07/07/06		73.64	80.02	6.38	3692.72
MW-1	07/11/06		73.63	80.17	6.54	3692.71
MW-1	07/13/06		73.69	80.07	6.38	3692.67
MW-1	07/18/06		73.66	80.19	6.53	3692.68
MW-1	07/21/06		73.65	80.14	6.49	3692.70
MW-1	07/25/06		73.68	80.23	6.55	3692.66
MW-1	07/27/06		73.7	80.10	6.40	3692.66
MW-1	08/01/06		73.71	80.23	6.52	3692.63

**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-1	08/03/06		73.75	80.14	6.39	3692.61
MW-1	08/09/06		73.73	80.26	6.53	3692.61
MW-1	08/11/06		73.77	80.17	6.40	3692.59
MW-1	08/15/06		73.77	80.29	6.52	3692.57
MW-1	08/18/06		73.48	80.28	6.80	3692.82
MW-1	08/25/06		73.81	80.32	6.51	3692.53
MW-1	08/30/06		NM	NM	#VALUE!	
MW-1	09/12/06		NM	NM	#VALUE!	
MW-1	09/15/06		NM	NM	#VALUE!	
MW-1	09/20/06		NM	NM	#VALUE!	
MW-1	09/26/06		NM	NM	#VALUE!	
MW-1	09/29/06		NM	NM	#VALUE!	
MW-1	10/04/06		NM	NM	#VALUE!	
MW-1	10/06/06		79.04	85.64	6.60	3687.29
MW-1	10/12/06		79.07	85.64	6.57	3687.26
MW-1	10/17/06		79.1	85.65	6.55	3687.24
MW-1	10/20/06		79.6	85.60	6.00	3686.82
MW-1	10/24/06		79.05	85.60	6.55	3687.29
MW-1	10/26/06		79.6	85.64	6.04	3686.81
MW-1	11/22/06		79.18	85.78	6.60	3687.15
MW-1	11/28/06		79.21	85.83	6.62	3687.12
MW-1	12/06/06		79.3	85.87	6.57	3687.03
MW-1	12/08/06		79.6	85.6	6.00	3686.82
MW-1	12/12/06		80.33	88.8	8.47	3685.72
MW-1	12/15/06		79.28	85.79	6.51	3687.06
MW-1	12/20/06		78.78	78.88	0.10	3688.51
MW-1	12/22/06		79.34	85.87	6.53	3687.00
MW-1	12/27/06		79.35	85.92	6.57	3686.98
MW-1	01/03/07		79.38	85.97	6.59	3686.95
MW-1	01/05/07		79.38	85.91	6.53	3686.96
MW-1	01/12/07		79.46	86.04	6.58	3686.87
MW-1	01/15/07		79.46	85.92	6.46	3686.89
MW-1	01/18/07		79.43	85.96	6.53	3686.91
MW-1	01/31/07		79.4	86	6.60	3686.93
MW-1	02/07/07		79.3	85.85	6.55	3687.04
MW-1	02/09/07		79.5	85.85	6.35	3686.87
MW-1	02/13/07		79.48	85.96	6.48	3686.87
MW-1	02/16/07		79.44	85.91	6.47	3686.91
MW-1	02/19/07		79.41	85.86	6.45	3686.94
MW-1	02/21/07		79.5	85.67	6.17	3686.89
MW-1	02/26/07		79.5	85.97	6.47	3686.85
MW-1	03/01/07		79.47	85.87	6.40	3686.89
MW-1	03/06/07		79.41	85.89	6.48	3686.94
MW-1	03/09/07		79.47	85.94	6.47	3686.88
MW-1	03/13/07		79.46	85.97	6.51	3686.88
MW-1	03/23/07		79.49	85.96	6.47	3686.86
MW-1	03/27/07		79.48	85.98	6.50	3686.86
MW-1	03/29/07		79.38	85.87	6.49	3686.97
MW-1	04/06/07		79.52	86.03	6.51	3686.82
MW-1	04/11/07		79.5	86.01	6.51	3686.84

**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-1	04/17/07		79.51	86.03	6.52	3686.83
MW-1	04/19/07		79.55	85.79	6.24	3686.83
MW-1	04/24/07		79.49	85.95	6.46	3686.86
MW-1	05/01/07		79.51	86.02	6.51	3686.83
MW-1	05/21/07		79.51	86.02	6.51	3686.83
MW-1	05/24/07		79.61	86.11	6.50	3686.73
MW-1	06/19/07		79.65	86.18	6.53	3686.69
MW-1	06/28/07		79.68	86.22	6.54	3686.66
MW-1	08/07/07		79.61	86.16	6.55	3686.73
MW-1	08/17/07		79.67	86.21	6.54	3686.67
MW-1	08/23/07		79.67	86.18	6.51	3686.67
MW-1	08/31/07		79.71	86.22	6.51	3686.63
MW-1	09/20/07		79.76	86.31	6.55	3686.58
MW-1	09/21/07		79.79	86.36	6.57	3686.54
MW-1	10/11/07		79.82	86.39	6.57	3686.51
MW-1	10/18/07		79.86	86.38	6.52	3686.48
MW-1	11/27/07		79.99	86.64	6.65	3686.33
MW-1	12/17/07	3773.35	80.04	86.70	6.66	3692.21
MW-1	12/28/07		80.11	86.79	6.68	3692.14
MW-1	12/31/07		80.14	86.83	6.69	3692.11
MW-1	03/05/08		80.26	86.97	6.71	3691.98
MW-1	03/26/08		80.33	87.04	6.71	3691.91
MW-1	04/24/08		80.45	87.19	6.74	3691.79
MW-1	05/05/08		80.48	87.22	6.74	3691.76
MW-1	05/23/08		80.61	87.38	6.77	3691.62
MW-1	06/30/08		80.88	87.72	6.84	3691.34
MW-1	07/03/08		80.94	87.78	6.84	3691.28
MW-1	07/16/08		81.02	87.81	6.79	3691.21
MW-1	07/23/08		81.09	87.84	6.75	3691.15
MW-1	08/01/08		81.19	87.94	6.75	3691.05
MW-1	08/05/08		81.22	87.84	6.62	3691.04
MW-1	08/28/08		80.72	87.44	6.72	3691.52
MW-1	09/18/08		80.78	87.15	6.37	3691.52
MW-1	10/29/08		81.05	87.14	6.09	3691.30
MW-1	12/17/08		81.16	87.63	6.47	3691.12
MW-1	02/03/09		81.29	87.78	6.49	3690.99
MW-1	06/23/09		81.68	87.34	5.66	3690.74
MW-1	09/02/09		81.97	87.53	5.56	3690.46
MW-1	11/11/09		82.54	87.22	4.68	3690.04
MW-1	02/18/10		83.03	88.30	5.27	3689.45
MW-1	06/16/10		83.25	89.17	5.92	3689.12
MW-1	09/28/10		82.67	89.30	6.63	3689.59
MW-1	12/23/10		83.98	88.32	4.34	3688.68
MW-1	03/23/11		84.12	88.79	4.67	3688.48
MW-1	06/14/11		84.72	87.71	2.99	3688.15
MW-1	09/12/11		85.21	87.54	2.33	3687.77
MW-1	12/14/11		85.50	90.08	4.58	3687.12
MW-2	10/29/04	3771.04		76.67	76.67	3758.39
MW-2	11/04/04			76.79	76.79	3758.37



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-2	11/10/04		76.84	76.84		3758.36
MW-2	11/17/04		76.89	76.89		3758.35
MW-2	11/24/04		76.97	76.97		3758.34
MW-2	12/02/04		76.91	76.91		3758.35
MW-2	12/08/04		76.79	76.79		3758.37
MW-2	12/15/04		76.81	76.81		3758.37
MW-2	12/27/04		77.00	77.00		3758.34
MW-2	12/29/04		77.01	77.01		3758.33
MW-2	01/06/05		77.02	77.02		3758.33
MW-2	01/13/05		77.09	77.09		3758.32
MW-2	01/19/05		77.06	77.06		3758.33
MW-2	01/26/05		77.09	77.09		3758.32
MW-2	02/02/05		78.08	78.08		3758.16
MW-2	02/09/05		77.13	77.13		3758.31
MW-2	02/16/05		77.09	77.09		3758.32
MW-2	02/24/05		77.11	77.11		3758.32
MW-2	03/03/05		77.15	77.15		3758.31
MW-2	03/11/05		77.10	77.10		3758.32
MW-2	03/18/05		77.11	77.11		3758.32
MW-2	03/31/05		77.14	77.14		3758.31
MW-2	04/07/05		77.17	77.17		3758.31
MW-2	05/18/05		79.40	79.40		3757.94
MW-2	05/23/05		79.40	79.40		3757.94
MW-2	06/01/05		77.22	77.22		3758.30
MW-2	06/03/05		77.25	77.25		3758.29
MW-2	06/07/05		77.25	77.25		3758.29
MW-2	06/10/05		77.24	77.24		3758.30
MW-2	06/13/05		77.27	77.27		3758.29
MW-2	06/16/05		77.25	77.25		3758.29
MW-2	06/20/05		77.29	77.29		3758.29
MW-2	06/22/05		77.29	77.29		3758.29
MW-2	06/29/05		77.29	77.29		3758.29
MW-2	07/01/05		77.30	77.30		3758.29
MW-2	07/06/05		77.31	77.31		3758.28
MW-2	07/08/05		77.32	77.32		3758.28
MW-2	07/12/05		77.34	77.34		3758.28
MW-2	07/14/05		77.33	77.33		3758.28
MW-2	07/19/05		77.36	77.36		3758.28
MW-2	07/21/05		77.38	77.38		3758.27
MW-2	07/26/05		77.40	77.40		3758.27
MW-2	07/28/05		77.40	77.40		3758.27
MW-2	08/02/05		77.42	77.42		3758.27
MW-2	08/04/05		77.43	77.43		3758.26
MW-2	08/09/05		77.44	77.44		3758.26
MW-2	08/11/05		77.45	77.45		3758.26
MW-2	08/16/05		77.47	77.47		3758.26
MW-2	08/18/05		77.47	77.47		3758.26
MW-2	08/24/05		77.50	77.50		3758.25
MW-2	08/26/05		77.50	77.50		3758.25
MW-2	08/30/05		77.47	77.47		3758.26

**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-2	09/01/05			77.44	77.44	3758.26
MW-2	09/06/05			77.44	77.44	3758.26
MW-2	09/08/05			77.44	77.44	3758.26
MW-2	09/13/05			77.47	77.47	3758.26
MW-2	09/16/05			77.50	77.50	3758.25
MW-2	09/20/05			77.52	77.52	3758.25
MW-2	09/23/05			77.52	77.52	3758.25
MW-2	09/27/05			77.54	77.54	3758.25
MW-2	09/29/05			77.56	77.56	3758.24
MW-2	10/04/05			77.57	77.57	3758.24
MW-2	10/06/05			77.60	77.60	3758.24
MW-2	10/11/05			77.60	77.60	3758.24
MW-2	10/13/05			77.61	77.61	3758.23
MW-2	10/18/05			77.61	77.61	3758.23
MW-2	10/21/05			77.65	77.65	3758.23
MW-2	10/26/05			77.63	77.63	3758.23
MW-2	10/28/05			77.64	77.64	3758.23
MW-2	11/01/05			77.69	77.69	3758.22
MW-2	11/04/05			77.69	77.69	3758.22
MW-2	11/09/05			77.73	77.73	3758.21
MW-2	11/11/05			77.73	77.73	3758.21
MW-2	11/16/05			77.28	77.28	3758.29
MW-2	11/18/05			77.78	77.78	3758.21
MW-2	11/22/05			77.77	77.77	3758.21
MW-2	11/30/05			77.80	77.80	3758.20
MW-2	12/02/05			77.79	77.79	3758.20
MW-2	12/06/05			77.88	77.88	3758.19
MW-2	12/14/05			77.83	77.83	3758.20
MW-2	12/16/05			77.81	77.81	3758.20
MW-2	12/21/05			77.81	77.81	3758.20
MW-2	12/23/05			77.85	77.85	3758.19
MW-2	12/27/05			77.85	77.85	3758.19
MW-2	12/30/05			77.71	77.71	3758.22
MW-2	01/03/06			77.90	77.90	3758.19
MW-2	01/05/06			77.87	77.87	3758.19
MW-2	01/11/06			77.91	77.91	3758.18
MW-2	01/13/06			77.86	77.86	3758.19
MW-2	01/18/06			77.90	77.90	3758.19
MW-2	01/20/06			77.91	77.91	3758.18
MW-2	01/24/06			78.92	78.92	3758.02
MW-2	01/26/06			78.90	78.90	3758.02
MW-2	02/02/06			77.87	77.87	3758.19
MW-2	02/08/06			77.91	77.91	3758.18
MW-2	02/10/06			77.90	77.90	3758.19
MW-2	02/14/06			77.93	77.93	3758.18
MW-2	02/16/06			77.94	77.94	3758.18
MW-2	02/21/06			77.95	77.95	3758.18
MW-2	02/24/06			77.95	77.95	3758.18
MW-2	02/28/06			77.93	77.93	3758.18
MW-2	03/03/06			77.92	77.92	3758.18



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-2	03/06/06			77.90	77.90	3758.19
MW-2	03/08/06			77.95	77.95	3758.18
MW-2	03/15/06			77.98	77.98	3758.17
MW-2	03/17/06			78.08	78.08	3758.16
MW-2	03/21/06			77.95	77.95	3758.18
MW-2	03/23/06			77.86	77.86	3758.19
MW-2	03/28/06			77.89	77.89	3758.19
MW-2	03/30/06			77.86	77.86	3758.19
MW-2	04/04/06			77.94	77.94	3758.18
MW-2	04/07/06			78.00	78.00	3758.17
MW-2	04/12/06			78.00	78.00	3758.17
MW-2	04/14/06			78.01	78.01	3758.17
MW-2	04/18/06			77.99	77.99	3758.17
MW-2	04/21/06			78.04	78.04	3758.16
MW-2	04/26/06			78.00	78.00	3758.17
MW-2	04/28/06			78.04	78.04	3758.16
MW-2	05/04/06			78.04	78.04	3758.16
MW-2	05/05/06			78.05	78.05	3758.16
MW-2	05/10/06			78.10	78.10	3758.15
MW-2	05/12/06			78.08	78.08	3758.16
MW-2	05/16/06			78.08	78.08	3758.16
MW-2	05/18/06			78.09	78.09	3758.16
MW-2	05/23/06			78.10	78.10	3758.15
MW-2	05/26/06			78.10	78.10	3758.15
MW-2	05/30/06			78.13	78.13	3758.15
MW-2	06/01/06			78.13	78.13	3758.15
MW-2	06/06/06			78.15	78.15	3758.15
MW-2	06/09/06			78.13	78.13	3758.15
MW-2	06/13/06			78.15	78.15	3758.15
MW-2	06/16/06			78.17	78.17	3758.14
MW-2	06/20/06			78.17	78.17	3758.14
MW-2	06/23/06			78.15	78.15	3758.15
MW-2	06/27/06			78.20	78.20	3758.14
MW-2	06/30/06			78.19	78.19	3758.14
MW-2	07/05/06			78.21	78.21	3758.14
MW-2	07/07/06			78.22	78.22	3758.13
MW-2	07/11/06			78.24	78.24	3758.13
MW-2	07/13/06			78.25	78.25	3758.13
MW-2	07/18/06			78.26	78.26	3758.13
MW-2	07/21/06			78.25	78.25	3758.13
MW-2	07/25/06			78.29	78.29	3758.12
MW-2	07/27/06			78.30	78.30	3758.12
MW-2	08/01/06			78.34	78.34	3758.11
MW-2	08/03/06			78.36	78.36	3758.11
MW-2	08/09/06			78.35	78.35	3758.11
MW-2	08/11/06			78.36	78.36	3758.11
MW-2	08/15/06			78.38	78.38	3758.11
MW-2	08/18/06			78.40	78.40	3758.10
MW-2	08/25/06			78.43	78.43	3758.10
MW-2	08/30/06			78.45	78.45	3758.10



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-2	09/12/06		78.47	78.52	0.05	3692.56
MW-2	09/15/06		78.48	78.55	0.07	3692.55
MW-2	09/20/06		78.46	78.58	0.12	3692.56
MW-2	09/26/06		78.49	78.65	0.16	3692.52
MW-2	09/29/06		78.52	78.68	0.16	3692.49
MW-2	10/04/06		N.D.	78.53		3692.51
MW-2	10/06/06		78.54	79.74	1.20	3692.30
MW-2	10/12/06		78.56	78.77	0.21	3692.45
MW-2	10/17/06		78.59	78.79	0.20	3692.42
MW-2	10/20/06		78.57	78.78	0.21	3692.44
MW-2	10/24/06		78.50	78.75	0.25	3692.50
MW-2	10/26/06		78.56	78.78	0.22	3692.44
MW-2	11/22/06		78.71	78.85	0.14	3692.31
MW-2	11/28/06		78.73	78.87	0.14	3692.29
MW-2	12/06/06		78.81	78.91	0.10	3692.21
MW-2	12/08/06		78.57	78.78	0.21	3692.44
MW-2	12/12/06		0.00	78.73	78.73	3758.05
MW-2	12/15/06		78.78	78.98	0.20	3692.23
MW-2	12/20/06		79.28	85.81	6.53	3690.68
MW-2	12/22/06		78.62	79.91	1.09	3692.04
MW-2	12/27/06		78.84	78.96	0.12	3692.18
MW-2	01/03/07		78.88	78.98	0.10	3692.14
MW-2	01/05/07		78.89	78.96	0.07	3692.14
MW-2	01/12/07		78.92	79.02	0.10	3692.10
MW-2	01/15/07		78.92	79.04	0.12	3692.10
MW-2	01/18/07		78.90	79.02	0.12	3692.12
MW-2	01/31/07		78.90	78.98	0.08	3692.13
MW-2	02/07/07		78.81	78.92	0.11	3692.21
MW-2	02/09/07		78.97	79.09	0.12	3692.05
MW-2	02/13/07		78.97	79.08	0.11	3692.05
MW-2	02/16/07		78.91	79.05	0.14	3692.11
MW-2	02/19/07		78.96	79.05	0.09	3692.07
MW-2	02/21/07		78.97	79.09	0.12	3692.05
MW-2	02/26/07		78.98	79.15	0.17	3692.03
MW-2	03/01/07		78.97	79.09	0.12	3692.05
MW-2	03/06/07		78.94	79.04	0.10	3692.08
MW-2	03/09/07		78.97	79.11	0.14	3692.05
MW-2	03/13/07		78.96	85.97	7.01	3690.92
MW-2	03/23/07		78.98	79.15	0.17	3692.03
MW-2	03/27/07		78.97	79.15	0.18	3692.04
MW-2	04/06/07		79.03	79.15	0.12	3691.99
MW-2	04/11/07		79.03	79.17	0.14	3691.99
MW-2	04/17/07		79.03	79.18	0.15	3691.99
MW-2	04/19/07		79.02	79.18	0.16	3691.99
MW-2	04/24/07		79.01	79.12	0.11	3692.01
MW-2	05/01/07		79.07	79.27	0.20	3691.94
MW-2	05/21/07		79.10	79.25	0.15	3691.92
MW-2	05/24/07		79.11	79.13	0.02	3691.93
MW-2	06/19/07		79.18	79.45	0.27	3691.82
MW-2	06/28/07		79.22	79.40	0.18	3691.79

**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-2	08/07/07		79.12	79.36	0.24	3691.88
MW-2	08/17/07		79.24	79.45	0.21	3691.77
MW-2	08/23/07		79.22	79.48	0.26	3691.78
MW-2	08/31/07		79.25	79.52	0.27	3691.75
MW-2	09/20/07		79.32	79.61	0.29	3691.67
MW-2	09/21/07		79.36	79.66	0.30	3691.63
MW-2	10/11/07		79.34	79.60	0.26	3691.66
MW-2	10/18/07		79.40	79.68	0.28	3691.59
MW-2	11/27/07		79.52	79.79	0.27	3691.48
MW-2	12/17/07	3772.07	79.56	79.85	0.29	3692.46
MW-2	12/28/07		79.66	79.96	0.30	3692.36
MW-2	12/31/07		79.69	79.98	0.29	3692.33
MW-2	03/05/08		79.83	79.99	0.16	3692.21
MW-2	03/24/08		79.87	79.98	0.11	3692.18
MW-2	03/26/08		79.91	80.01	0.10	3692.14
MW-2	04/24/08		80.04	80.16	0.12	3692.01
MW-2	05/05/08		80.05	80.16	0.11	3692.00
MW-2	05/23/08		80.18	80.29	0.11	3691.87
MW-2	06/30/08		80.47	80.57	0.10	3691.58
MW-2	07/03/08		80.51	80.86	0.35	3691.50
MW-2	07/16/08		80.61	80.65	0.04	3691.45
MW-2	07/23/08			80.66	0.00	3691.41
MW-2	08/01/08			80.78	0.00	3691.29
MW-2	08/05/08			80.79	0.00	3691.28
MW-2	08/28/08		80.30	80.31	0.01	3691.77
MW-2	09/18/08		80.35	80.36	0.01	3691.72
MW-2	10/29/08			80.48		3691.59
MW-2	12/17/08			80.69		3691.38
MW-2	02/03/09			80.80		3691.27
MW-2	06/23/09			81.06		3691.01
MW-2	09/02/09			81.37		3690.70
MW-2	11/11/09			81.59		3690.48
MW-2	02/18/10			81.97		3690.10
MW-2	06/16/10			82.22		3689.85
MW-2	09/28/10			82.80		3689.27
MW-2	12/23/10			83.05		3689.02
MW-2	03/23/11			83.31		3688.76
MW-2	06/14/11			83.60		3688.47
MW-2	09/12/11			84.00		3688.07
MW-2	12/14/11			84.57		3687.50
MW-3	10/29/04	3771.94		78.18	0.00	3693.76
MW-3	11/04/04			78.26	0.00	3693.68
MW-3	11/10/04			78.30	0.00	3693.64
MW-3	11/17/04			78.33	0.00	3693.61
MW-3	11/24/04			78.41	0.00	3693.53
MW-3	12/02/04			78.37	0.00	3693.57
MW-3	12/08/04			78.30	0.00	3693.64
MW-3	12/15/04			78.26	0.00	3693.68
MW-3	12/27/04			78.42	0.00	3693.52



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-3	12/29/04			78.42	0.00	3693.52
MW-3	01/06/05			78.44	0.00	3693.50
MW-3	01/13/05			78.48	0.00	3693.46
MW-3	01/19/05			78.45	0.00	3693.49
MW-3	01/26/05			78.50	0.00	3693.44
MW-3	02/02/05			78.55	0.00	3693.39
MW-3	02/09/05			78.52	0.00	3693.42
MW-3	02/16/05			78.48	0.00	3693.46
MW-3	02/24/05			78.48	0.00	3693.46
MW-3	03/03/05			78.54	0.00	3693.40
MW-3	03/11/05			78.53	0.00	3693.41
MW-3	03/18/05			78.51	0.00	3693.43
MW-3	03/31/05			78.56	0.00	3693.38
MW-3	04/07/05			78.54	0.00	3693.40
MW-3	05/18/05			79.40	0.00	3692.54
MW-3	05/23/05			79.40	0.00	3692.54
MW-3	06/01/05			78.66	0.00	3693.28
MW-3	06/03/05			78.65	0.00	3693.29
MW-3	06/07/05			78.67	0.00	3693.27
MW-3	06/10/05			78.60	0.00	3693.34
MW-3	06/13/05			78.61	0.00	3693.33
MW-3	06/16/05			78.61	0.00	3693.33
MW-3	06/20/05			78.66	0.00	3693.28
MW-3	06/22/05			78.66	0.00	3693.28
MW-3	06/29/05			78.64	0.00	3693.30
MW-3	07/01/05			78.67	0.00	3693.27
MW-3	07/06/05			78.68	0.00	3693.26
MW-3	07/08/05			78.70	0.00	3693.24
MW-3	07/12/05			78.72	0.00	3693.22
MW-3	07/14/05			78.71	0.00	3693.23
MW-3	07/19/05			78.73	0.00	3693.21
MW-3	07/21/05			78.75	0.00	3693.19
MW-3	07/26/05			78.78	0.00	3693.16
MW-3	07/28/05			78.78	0.00	3693.16
MW-3	08/02/05			78.78	0.00	3693.16
MW-3	08/04/05			78.80	0.00	3693.14
MW-3	08/09/05			78.80	0.00	3693.14
MW-3	08/11/05			78.81	0.00	3693.13
MW-3	08/16/05			78.84	0.00	3693.10
MW-3	08/18/05			78.83	0.00	3693.11
MW-3	08/24/05			78.86	0.00	3693.08
MW-3	08/26/05			78.86	0.00	3693.08
MW-3	08/30/05			78.87	0.00	3693.07
MW-3	09/01/05			78.87	0.00	3693.07
MW-3	09/06/05			78.85	0.00	3693.09
MW-3	09/08/05			78.86	0.00	3693.08
MW-3	09/13/05			78.87	0.00	3693.07
MW-3	09/16/05		78.89	78.91	0.02	3693.05
MW-3	09/20/05		78.90	78.94	0.04	3693.03
MW-3	09/23/05		78.91	78.96	0.05	3693.02



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL_ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-3	09/27/05		78.90	79.00	0.10	3693.02
MW-3	09/29/05		78.92	79.02	0.10	3693.00
MW-3	10/04/05		78.94	79.04	0.10	3692.98
MW-3	10/06/05		78.95	79.09	0.14	3692.97
MW-3	10/11/05		78.96	79.10	0.14	3692.96
MW-3	10/13/05		78.97	79.12	0.15	3692.95
MW-3	10/18/05		78.97	79.13	0.16	3692.94
MW-3	10/21/05		79.01	79.19	0.18	3692.90
MW-3	10/26/05		78.99	79.17	0.18	3692.92
MW-3	10/28/05		79.00	79.19	0.19	3692.91
MW-3	11/01/05		79.03	79.27	0.24	3692.87
MW-3	11/04/05		79.03	79.28	0.25	3692.87
MW-3	11/09/05		79.07	79.35	0.28	3692.82
MW-3	11/11/05		79.07	79.35	0.28	3692.82
MW-3	11/16/05		79.08	79.41	0.33	3692.81
MW-3	11/18/05		79.09	79.42	0.33	3692.80
MW-3	11/22/05		79.08	79.43	0.35	3692.80
MW-3	11/30/05		79.10	79.51	0.41	3692.77
MW-3	12/02/05		79.10	79.50	0.40	3692.77
MW-3	12/06/05		79.08	79.51	0.43	3692.79
MW-3	12/14/05		79.11	79.62	0.51	3692.75
MW-3	12/16/05		79.11	79.62	0.51	3692.75
MW-3	12/21/05		79.11	79.62	0.51	3692.75
MW-3	12/23/05		79.12	79.75	0.63	3692.72
MW-3	12/27/05		79.12	79.75	0.63	3692.72
MW-3	12/30/05		79.15	79.86	0.71	3692.67
MW-3	01/03/06		79.13	79.93	0.80	3692.68
MW-3	01/05/06		79.11	79.91	0.80	3692.70
MW-3	01/11/06		79.10	80.08	0.98	3692.68
MW-3	01/13/06		79.11	79.91	0.80	3692.70
MW-3	01/18/06		79.06	80.27	1.21	3692.68
MW-3	01/20/06		79.08	80.35	1.27	3692.65
MW-3	01/24/06		79.05	80.47	1.42	3692.66
MW-3	01/26/06		79.03	80.46	1.43	3692.67
MW-3	02/02/06		79.00	80.69	1.69	3692.66
MW-3	02/08/06		78.99	80.50	1.51	3692.70
MW-3	02/10/06		78.97	80.48	1.51	3692.72
MW-3	02/14/06		79.26	79.36	0.10	3692.66
MW-3	02/16/06		79.22	79.37	0.15	3692.70
MW-3	02/21/06		79.24	79.71	0.47	3692.62
MW-3	02/24/06		79.25	79.55	0.30	3692.64
MW-3	02/28/06		79.27	79.55	0.28	3692.62
MW-3	03/03/06		79.21	79.55	0.34	3692.67
MW-3	03/06/06		79.25	79.55	0.30	3692.64
MW-3	03/08/06		79.25	79.49	0.24	3692.65
MW-3	03/15/06		79.23	79.92	0.69	3692.60
MW-3	03/17/06		79.21	80.02	0.81	3692.60
MW-3	03/21/06		79.14	81.00	1.86	3692.49
MW-3	03/23/06		79.08	79.88	0.80	3692.73
MW-3	03/28/06		79.15	80.20	1.05	3692.62



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-3	03/30/06		79.20	80.22	1.02	3692.57
MW-3	04/04/06		79.17	80.24	1.07	3692.59
MW-3	04/07/06		79.13	80.48	1.35	3692.59
MW-3	04/12/06		79.07	80.82	1.75	3692.58
MW-3	04/14/06		79.07	80.90	1.83	3692.57
MW-3	04/18/06		79.00	81.13	2.13	3692.59
MW-3	04/21/06		79.02	81.32	2.30	3692.54
MW-3	04/26/06		78.91	81.53	2.62	3692.60
MW-3	04/28/06		78.92	81.65	2.73	3692.57
MW-3	05/04/06		78.88	81.82	2.94	3692.57
MW-3	05/05/06		78.89	82.00	3.11	3692.54
MW-3	05/10/06		78.60	82.31	3.71	3692.73
MW-3	05/12/06		78.60	82.31	3.71	3692.73
MW-3	05/16/06		79.15	80.90	1.75	3692.50
MW-3	05/18/06		79.12	81.07	1.95	3692.50
MW-3	05/23/06		79.07	81.46	2.39	3692.48
MW-3	05/26/06		79.09	81.20	2.11	3692.50
MW-3	05/30/06		79.04	81.59	2.55	3692.48
MW-3	06/01/06		79.03	80.53	1.50	3692.66
MW-3	06/06/06		79.23	80.98	1.75	3692.42
MW-3	06/09/06		79.18	81.10	1.92	3692.44
MW-3	06/13/06		79.12	81.20	2.08	3692.48
MW-3	06/16/06		78.11	81.58	3.47	3693.26
MW-3	06/20/06		79.07	81.78	2.71	3692.42
MW-3	06/23/06		79.03	81.89	2.86	3692.44
MW-3	06/27/06		79.02	82.18	3.16	3692.40
MW-3	06/30/06		79.00	82.23	3.23	3692.41
MW-3	07/05/06		79.98	82.46	2.48	3691.55
MW-3	07/07/06		78.97	82.57	3.60	3692.38
MW-3	07/11/06		78.97	82.72	3.75	3692.35
MW-3	07/13/06		78.86	82.80	3.94	3692.43
MW-3	07/18/06		78.94	82.95	4.01	3692.34
MW-3	07/21/06		78.73	82.99	4.26	3692.51
MW-3	07/25/06		78.93	83.11	4.18	3692.32
MW-3	07/27/06		78.92	83.14	4.22	3692.32
MW-3	08/01/06		78.94	83.27	4.33	3692.29
MW-3	08/03/06		78.95	83.30	4.35	3692.27
MW-3	08/09/06		78.95	83.37	4.42	3692.26
MW-3	08/11/06		78.96	83.37	4.41	3692.25
MW-3	08/15/06		78.98	83.45	4.47	3692.22
MW-3	08/18/06		78.98	83.47	4.49	3692.22
MW-3	08/25/06		79.00	83.55	4.55	3692.19
MW-3	08/30/06		79.02	83.61	4.59	3692.16
MW-3	09/12/06		79.16	83.71	4.55	3692.03
MW-3	09/15/06		79.04	83.72	4.68	3692.13
MW-3	09/20/06		79.05	83.75	4.70	3692.11
MW-3	09/26/06		79.09	83.80	4.71	3692.07
MW-3	09/29/06		79.10	83.81	4.71	3692.06
MW-3	10/04/06		79.13	83.94	4.81	3692.02
MW-3	10/06/06		79.47	82.28	2.81	3692.01

**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-3	10/12/06		79.55	82.04	2.49	3691.98
MW-3	10/17/06		79.54	82.11	2.57	3691.98
MW-3	10/20/06		79.52	82.29	2.77	3691.96
MW-3	10/24/06		79.54	82.10	2.56	3691.98
MW-3	10/26/06		79.58	82.29	2.71	3691.91
MW-3	11/22/06		79.72	82.07	2.35	3691.83
MW-3	11/28/06		79.92	81.27	1.35	3691.80
MW-3	12/06/06		80.08	81.03	0.95	3691.70
MW-3	12/08/06		79.52	82.29	2.77	3691.96
MW-3	12/12/06		80.06	82.45	2.39	3691.49
MW-3	12/15/06		80.04	81.03	0.99	3691.74
MW-3	12/20/06		79.98	81.29	1.31	3691.74
MW-3	12/22/06		79.98	81.46	1.48	3691.72
MW-3	12/27/06		79.94	81.82	1.88	3691.69
MW-3	01/03/07		80.15	80.94	0.79	3691.66
MW-3	01/05/07		80.12	81.02	0.90	3691.67
MW-3	01/12/07		80.08	81.38	1.30	3691.65
MW-3	01/15/07		80.26	80.70	0.44	3691.61
MW-3	01/18/07		80.22	80.80	0.58	3691.62
MW-3	01/31/07		80.24	81.18	0.94	3691.54
MW-3	02/07/07		79.97	81.45	1.48	3691.73
MW-3	02/09/07		80.33	80.60	0.27	3691.57
MW-3	02/13/07		80.29	80.81	0.52	3691.56
MW-3	02/16/07		80.23	80.91	0.68	3691.60
MW-3	02/19/07		80.19	81.09	0.90	3691.60
MW-3	02/21/07		80.19	81.12	0.93	3691.60
MW-3	02/26/07		80.20	81.43	1.23	3691.54
MW-3	03/01/07		80.15	81.56	1.41	3691.56
MW-3	03/06/07		80.02	81.71	1.69	3691.64
MW-3	03/09/07		80.07	81.62	1.55	3691.61
MW-3	03/13/07		80.03	82.07	2.04	3691.57
MW-3	03/23/07		80.04	82.17	2.13	3691.55
MW-3	03/27/07	3772.86	80.01	82.42	2.41	3692.45
MW-3	04/06/07		79.96	82.83	2.87	3692.43
MW-3	04/11/07		79.90	83.01	3.11	3692.45
MW-3	04/17/07		79.90	83.11	3.21	3692.43
MW-3	04/19/07		79.89	83.17	3.28	3692.43
MW-3	04/24/07		79.87	82.25	2.38	3692.60
MW-3	05/01/07		79.81	83.87	4.06	3692.38
MW-3	05/21/07		79.85	83.75	3.90	3692.37
MW-3	05/24/07		79.86	81.57	1.71	3692.72
MW-3	06/19/07		79.80	84.12	4.32	3692.35
MW-3	06/28/07		79.92	84.16	4.24	3692.24
MW-3	08/07/07		79.84	84.04	4.20	3692.33
MW-3	08/17/07		80.13	82.71	2.58	3692.30
MW-3	08/23/07		80.35	82.83	2.48	3692.10
MW-3	08/31/07		80.56	81.57	1.01	3692.13
MW-3	09/20/07		80.37	82.33	1.96	3692.17
MW-3	09/21/07		80.38	82.37	1.99	3692.15
MW-3	10/11/07		80.51	82.10	1.59	3692.09



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-3	10/18/07		80.71	81.29	0.58	3692.05
MW-3	11/27/07		80.51	82.96	2.45	3691.95
MW-3	12/17/07		80.56	83.40	2.84	3691.83
MW-3	12/28/07		80.61	83.87	3.26	3691.71
MW-3	12/31/07		80.67	83.09	2.42	3691.79
MW-3	03/05/08		80.65	84.00	3.35	3691.66
MW-3	03/24/08		80.81	83.28	2.47	3691.64
MW-3	03/26/08		80.89	83.33	2.44	3691.57
MW-3	04/24/08		80.92	83.97	3.05	3691.44
MW-3	05/05/08		80.91	84.04	3.13	3691.43
MW-3	05/23/08		81.01	84.38	3.37	3691.29
MW-3	06/30/08		81.25	NM		
MW-3	07/03/08		80.31	NM		
MW-3	07/16/08		81.67	83.62	1.95	3690.87
MW-3	07/23/08		81.88	83.10	1.22	3690.78
MW-3	08/01/08		82.09	82.45	0.36	3690.71
MW-3	08/28/08		81.56	82.17	0.61	3691.20
MW-3	09/18/08		81.75	82.30	0.55	3691.02
MW-3	10/29/08		81.75	82.52	0.77	3690.98
MW-3	12/17/08		82.07	82.18	0.11	3690.77
MW-3	02/03/09		82.16	82.42	0.26	3690.66
MW-3	06/23/09		82.45	82.54	0.09	3690.40
MW-3	09/02/09		82.75	82.81	0.06	3690.10
MW-3	11/11/09		83.13	83.15	0.02	3689.73
MW-3	02/18/10		83.79	83.81	0.02	3689.07
MW-3	06/16/10		83.97	84.51	0.54	3688.80
MW-3	09/28/10		83.22	88.45	5.23	3688.78
MW-3	12/23/10		84.50	84.78	0.28	3688.32
MW-3	03/23/11		84.52	84.75	0.23	3688.30
MW-3	06/14/11		84.65	84.77	0.12	3688.19
MW-3	09/12/11		84.72	84.82	0.10	3688.12
MW-3	12/14/11			Dry		
MW-4	10/29/04	3772.86		79.22	0.00	3693.64
MW-4	11/04/04			79.35	0.00	3693.51
MW-4	11/10/04			79.34	0.00	3693.52
MW-4	11/17/04			79.41	0.00	3693.45
MW-4	11/24/04			79.49	0.00	3693.37
MW-4	12/02/04			79.46	0.00	3693.40
MW-4	12/08/04			79.35	0.00	3693.51
MW-4	12/15/04			79.33	0.00	3693.53
MW-4	12/27/04			79.48	0.00	3693.38
MW-4	12/29/04			79.47	0.00	3693.39
MW-4	01/06/05			79.51	0.00	3693.35
MW-4	01/13/05			79.54	0.00	3693.32
MW-4	01/19/05			79.51	0.00	3693.35
MW-4	01/26/05			79.54	0.00	3693.32
MW-4	02/02/05			79.51	0.00	3693.35
MW-4	02/09/05			79.58	0.00	3693.28
MW-4	02/16/05			79.52	0.00	3693.34



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-4	02/24/05			79.55	0.00	3693.31
MW-4	03/03/05			79.57	0.00	3693.29
MW-4	03/11/05			79.46	0.00	3693.40
MW-4	03/18/05			79.57	0.00	3693.29
MW-4	03/31/05			79.61	0.00	3693.25
MW-4	04/07/05			79.59	0.00	3693.27
MW-4	05/18/05			79.40	0.00	3693.46
MW-4	05/23/05			79.40	0.00	3693.46
MW-4	06/01/05			79.66	0.00	3693.20
MW-4	06/03/05			79.65	0.00	3693.21
MW-4	06/07/05			79.67	0.00	3693.19
MW-4	06/10/05			79.64	0.00	3693.22
MW-4	06/13/05			79.61	0.00	3693.25
MW-4	06/16/05			79.65	0.00	3693.21
MW-4	06/20/05			79.90	0.00	3692.96
MW-4	06/22/05			79.70	0.00	3693.16
MW-4	06/29/05			79.68	0.00	3693.18
MW-4	07/01/05			79.71	0.00	3693.15
MW-4	07/06/05			79.71	0.00	3693.15
MW-4	07/08/05			79.75	0.00	3693.11
MW-4	07/12/05			79.75	0.00	3693.11
MW-4	07/14/05			79.75	0.00	3693.11
MW-4	07/19/05			79.77	0.00	3693.09
MW-4	07/21/05			79.79	0.00	3693.07
MW-4	07/26/05			79.81	0.00	3693.05
MW-4	07/28/05			79.81	0.00	3693.05
MW-4	08/02/05			79.82	0.00	3693.04
MW-4	08/04/05			79.84	0.00	3693.02
MW-4	08/09/05			79.85	0.00	3693.01
MW-4	08/11/05			79.86	0.00	3693.00
MW-4	08/16/05			79.88	0.00	3692.98
MW-4	08/18/05			79.88	0.00	3692.98
MW-4	08/24/05			79.90	0.00	3692.96
MW-4	08/26/05			79.91	0.00	3692.95
MW-4	08/30/05			79.93	0.00	3692.93
MW-4	09/01/05			79.92	0.00	3692.94
MW-4	09/06/05			79.91	0.00	3692.95
MW-4	09/08/05			79.94	0.00	3692.92
MW-4	09/13/05			79.94	0.00	3692.92
MW-4	09/16/05			79.96	0.00	3692.90
MW-4	09/20/05			79.88	0.00	3692.98
MW-4	09/23/05			79.79	0.00	3693.07
MW-4	09/27/05			80.00	0.00	3692.86
MW-4	09/29/05			80.01	0.00	3692.85
MW-4	10/04/05			80.03	0.00	3692.83
MW-4	10/06/05			80.04	0.00	3692.82
MW-4	10/11/05			80.04	0.00	3692.82
MW-4	10/13/05			80.05	0.00	3692.81
MW-4	10/18/05			80.85	0.00	3692.01
MW-4	10/21/05			80.09	0.00	3692.77



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-4	10/26/05			80.08	0.00	3692.78
MW-4	10/28/05			80.09	0.00	3692.77
MW-4	11/01/05			80.13	0.00	3692.73
MW-4	11/04/05			80.14	0.00	3692.72
MW-4	11/09/05			80.18	0.00	3692.68
MW-4	11/11/05			80.16	0.00	3692.70
MW-4	11/16/05			80.21	0.00	3692.65
MW-4	11/18/05			80.20	0.00	3692.66
MW-4	11/22/05			80.20	0.00	3692.66
MW-4	11/30/05			80.22	0.00	3692.64
MW-4	12/02/05			80.22	0.00	3692.64
MW-4	12/06/05			80.20	0.00	3692.66
MW-4	12/14/05			80.25	0.00	3692.61
MW-4	12/16/05			80.20	0.00	3692.66
MW-4	12/21/05			80.20	0.00	3692.66
MW-4	12/23/05			80.27	0.00	3692.59
MW-4	12/27/05			80.26	0.00	3692.60
MW-4	12/30/05			80.15	0.00	3692.71
MW-4	01/03/06			80.31	0.00	3692.55
MW-4	01/05/06			80.28	0.00	3692.58
MW-4	01/11/06			80.31	0.00	3692.55
MW-4	01/13/06			80.26	0.00	3692.60
MW-4	01/18/06			80.32	0.00	3692.54
MW-4	01/20/06			79.36	0.00	3693.50
MW-4	01/24/06			80.37	0.00	3692.49
MW-4	01/26/06			80.35	0.00	3692.51
MW-4	02/02/06			80.36	0.00	3692.50
MW-4	02/08/06			80.32	0.00	3692.54
MW-4	02/10/06			80.33	0.00	3692.53
MW-4	02/14/06			80.35	0.00	3692.51
MW-4	02/16/06			80.35	0.00	3692.51
MW-4	02/21/06			80.36	0.00	3692.50
MW-4	02/24/06			80.36	0.00	3692.50
MW-4	02/28/06			90.34	0.00	3682.52
MW-4	03/03/06			80.30	0.00	3692.56
MW-4	03/06/06			80.31	0.00	3692.55
MW-4	03/08/06			80.35	0.00	3692.51
MW-4	03/15/06			80.38	0.00	3692.48
MW-4	03/17/06			80.30	0.00	3692.56
MW-4	03/21/06			80.35	0.00	3692.51
MW-4	03/23/06			80.25	0.00	3692.61
MW-4	03/28/06			80.38	0.00	3692.48
MW-4	03/30/06			80.29	0.00	3692.57
MW-4	04/04/06			80.38	0.00	3692.48
MW-4	04/07/06			80.45	0.00	3692.41
MW-4	04/12/06			80.40	0.00	3692.46
MW-4	04/14/06			80.40	0.00	3692.46
MW-4	04/18/06			80.40	0.00	3692.46
MW-4	04/21/06			80.44	0.00	3692.42
MW-4	04/26/06			80.40	0.00	3692.46



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-4	04/28/06			80.43	0.00	3692.43
MW-4	05/04/06			80.44	0.00	3692.42
MW-4	05/05/06			80.45	0.00	3692.41
MW-4	05/10/06			80.41	0.00	3692.45
MW-4	05/12/06			80.48	0.00	3692.38
MW-4	05/16/06			80.49	0.00	3692.37
MW-4	05/18/06			80.50	0.00	3692.36
MW-4	05/23/06			80.56	0.00	3692.30
MW-4	05/26/06			80.51	0.00	3692.35
MW-4	05/30/06			80.53	0.00	3692.33
MW-4	06/01/06			80.53	0.00	3692.33
MW-4	06/06/06			80.57	0.00	3692.29
MW-4	06/09/06			80.54	0.00	3692.32
MW-4	06/13/06			80.56	0.00	3692.30
MW-4	06/16/06			80.56	0.00	3692.30
MW-4	06/20/06			80.53	0.00	3692.33
MW-4	06/23/06			80.56	0.00	3692.30
MW-4	06/27/06			80.61	0.00	3692.25
MW-4	06/30/06			80.6	0.00	3692.26
MW-4	07/05/06			80.62	0.00	3692.24
MW-4	07/07/06			80.62	0.00	3692.24
MW-4	07/11/06			80.95	0.00	3691.91
MW-4	07/13/06			80.68	0.00	3692.18
MW-4	07/18/06			80.68	0.00	3692.18
MW-4	07/21/06			80.67	0.00	3692.19
MW-4	07/25/06			80.71	0.00	3692.15
MW-4	07/27/06			80.7	0.00	3692.16
MW-4	08/01/06			80.75	0.00	3692.11
MW-4	08/03/06			80.75	0.00	3692.11
MW-4	08/09/06			80.78	0.00	3692.08
MW-4	08/11/06			80.78	0.00	3692.08
MW-4	08/15/06			80.74	0.00	3692.12
MW-4	08/18/06			80.81	0.00	3692.05
MW-4	08/25/06			80.84	0.00	3692.02
MW-4	08/30/06			80.86	0.00	3692.00
MW-4	09/12/06			NM	0.00	#VALUE!
MW-4	09/15/06			80.93	0.00	3691.93
MW-4	09/20/06			80.93	0.00	3691.93
MW-4	09/26/06			80.98	0.00	3691.88
MW-4	09/29/06			79.98	0.00	3692.88
MW-4	10/04/06			81.04	0.00	3691.82
MW-4	10/06/06			81.03	0.00	3691.83
MW-4	10/12/06			81.05	0.00	3691.81
MW-4	10/17/06			81.08	0.00	3691.78
MW-4	10/20/06			81.40	0.00	3691.46
MW-4	10/24/06			81.05	0.00	3691.81
MW-4	10/26/06			81.05	0.00	3691.81
MW-4	11/22/06			81.17	0.00	3691.69
MW-4	11/28/06			81.20	0.00	3691.66
MW-4	12/06/06			81.27	0.00	3691.59



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-4	12/08/06			81.07	0.00	3691.79
MW-4	12/12/06			82.36	0.00	3690.50
MW-4	12/15/06			81.07	0.00	3691.79
MW-4	12/20/06			81.16	0.00	3691.70
MW-4	12/22/06			81.29	0.00	3691.57
MW-4	12/27/06			81.33	0.00	3691.53
MW-4	01/03/07			81.34	0.00	3691.52
MW-4	01/05/07			81.32	0.00	3691.54
MW-4	01/12/07			81.36	0.00	3691.50
MW-4	01/15/07			81.42	0.00	3691.44
MW-4	01/18/07			81.39	0.00	3691.47
MW-4	01/31/07			81.35	0.00	3691.51
MW-4	02/07/07			81.27	0.00	3691.59
MW-4	02/09/07			81.45	0.00	3691.41
MW-4	02/13/07			81.41	0.00	3691.45
MW-4	02/16/07		80.26	80.39	0.13	3692.58
MW-4	02/19/07		81.36	81.37	0.01	3691.50
MW-4	02/21/07			81.41		3691.45
MW-4	02/26/07			81.44		3691.42
MW-4	03/01/07			81.42		3691.44
MW-4	03/06/07			81.11		3691.75
MW-4	03/09/07			81.43		3691.43
MW-4	03/13/07			81.42		3691.44
MW-4	03/23/07			81.44		3691.42
MW-4	03/27/07	3773.76		81.43		3692.33
MW-4	03/29/07			81.12		3692.64
MW-4	04/06/07			81.47		3692.29
MW-4	04/11/07			81.46		3692.30
MW-4	04/17/07			81.47		3692.29
MW-4	04/19/07			81.47		3692.29
MW-4	04/24/07			81.43		3692.33
MW-4	05/01/07			81.51		3692.25
MW-4	05/21/07			81.51		3692.25
MW-4	05/24/07			81.57		3692.19
MW-4	06/19/07			81.51		3692.25
MW-4	06/28/07			81.49		3692.27
MW-4	08/07/07			81.54		3692.22
MW-4	08/17/07			81.62		3692.14
MW-4	08/23/07			81.64		3692.12
MW-4	09/20/07			81.72		3692.04
MW-4	10/11/07			81.77		3691.99
MW-4	11/27/07			81.97		3691.79
MW-4	12/17/07			82.04		3691.72
MW-4	12/28/07			82.06		3691.70
MW-4	03/05/08			82.28		3691.48
MW-4	03/26/08			82.34		3691.42
MW-4	04/24/08			82.31		3691.45
MW-4	05/23/08			82.39		3691.37
MW-4	06/30/08			82.57		3691.19
MW-4	08/05/08			82.62		3691.14



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-4	09/18/08			82.81		3690.95
MW-4	10/29/08			82.61		3691.15
MW-4	12/17/08			83.13		3690.63
MW-4	02/03/09			83.26		3690.50
MW-4	06/23/09			83.50		3690.26
MW-4	09/02/09			83.83		3689.93
MW-4	11/11/09			84.08		3689.68
MW-4	02/18/10			84.42		3689.34
MW-4	06/16/10			84.73		3689.03
MW-4	09/28/10			85.26		3688.50
MW-4	12/23/10			85.53		3688.23
MW-4	03/23/11			85.82		3687.94
MW-4	06/14/11			86.07		3687.69
MW-4	09/12/11			86.47		3687.29
MW-4	12/14/11		87.31	87.32	0.01	3686.45
MW-5	11/16/07	Installed Well				
MW-5	11/27/07	3772.08	79.69	79.98	0.29	3692.34
MW-5	12/17/07		79.55	80.91	1.36	3692.31
MW-5	12/28/07		79.49	81.68	2.19	3692.23
MW-5	12/31/08		79.43	81.88	2.45	3692.25
MW-5	03/05/08		78.96	84.96	6.00	3692.13
MW-5	03/24/08		78.98	81.04	2.06	3692.76
MW-5	03/26/08		79.74	81.68	1.94	3692.02
MW-5	04/24/08		79.21	84.94	5.73	3691.92
MW-5	05/05/08		79.16	85.14	5.98	3691.93
MW-5	05/23/08		79.22	85.37	6.15	3691.85
MW-5	06/30/08		79.57	85.68	6.11	3691.50
MW-5	07/03/08		79.61	85.73	6.12	3691.46
MW-5	07/16/08		79.94	84.68	4.74	3691.36
MW-5	07/23/08		80.32	83.33	3.01	3691.26
MW-5	08/01/08		80.42	83.34	2.92	3691.18
MW-5	08/05/08		80.59	82.66	2.07	3691.15
MW-5	08/28/08		79.63	84.41	4.78	3691.66
MW-5	09/18/08		79.52	85.30	5.78	3691.61
MW-5	10/29/08		79.88	84.27	4.39	3691.48
MW-5	12/17/08		80.79	81.19	0.40	3691.22
MW-5	02/03/09		80.11	85.15	5.04	3691.14
MW-5	06/23/09		81.17	81.55	0.38	3690.85
MW-5	09/02/09		80.75	85.00	4.25	3690.63
MW-5	11/11/09		81.01	86.30	5.29	3690.20
MW-5	02/18/10		81.60	86.87	5.27	3689.61
MW-5	06/16/10		81.89	87.29	5.40	3689.30
MW-5	09/28/10		82.04	87.35	5.31	3689.16
MW-5	12/23/10		83.14	84.04	0.90	3688.80
MW-5	03/23/11		83.19	84.96	1.77	3688.61
MW-5	06/14/11		83.69	84.10	0.41	3688.32
MW-5	09/12/11		84.04	84.80	0.76	3687.92
MW-5	12/14/11		84.22	87.79	3.57	3687.29



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
<b>MW-6</b>	11/15/07	<b>Installed Well</b>				
<b>MW-6</b>	11/27/07	3772.99	80.66	81.54	0.88	3692.18
<b>MW-6</b>	12/17/07		80.42	83.14	2.72	3692.12
<b>MW-6</b>	12/28/07		80.24	84.27	4.03	3692.09
<b>MW-6</b>	12/31/08		80.21	84.66	4.45	3692.05
<b>MW-6</b>	03/05/08		79.96	86.41	6.45	3691.97
<b>MW-6</b>	03/24/08		79.96	86.21	6.25	3692.00
<b>MW-6</b>	03/26/08		80.02	86.46	6.44	3691.91
<b>MW-6</b>	04/24/08		80.16	86.64	6.48	3691.76
<b>MW-6</b>	05/05/08		80.18	86.66	6.48	3691.74
<b>MW-6</b>	05/23/08		80.31	86.84	6.53	3691.60
<b>MW-6</b>	06/30/08		80.59	87.17	6.58	3691.31
<b>MW-6</b>	07/03/08		80.63	87.23	6.60	3691.27
<b>MW-6</b>	07/16/08		80.73	87.20	6.47	3691.19
<b>MW-6</b>	07/23/08		80.80	87.36	6.56	3691.11
<b>MW-6</b>	08/01/08		80.95	87.18	6.23	3691.01
<b>MW-6</b>	08/05/08		81.29	85.64	4.35	3690.98
<b>MW-6</b>	08/28/08		80.43	86.91	6.48	3691.49
<b>MW-6</b>	09/18/08		80.49	87.01	6.52	3691.42
<b>MW-6</b>	10/29/08		80.70	86.83	6.13	3691.28
<b>MW-6</b>	12/17/08		81.86	82.53	0.67	3691.02
<b>MW-6</b>	02/03/09		81.03	87.15	6.12	3690.95
<b>MW-6</b>	06/23/09		81.27	87.35	6.08	3690.72
<b>MW-6</b>	09/02/09		82.11	85.14	3.03	3690.38
<b>MW-6</b>	11/11/09		82.78	84.22	1.44	3689.97
<b>MW-6</b>	02/18/10		82.99	86.54	3.55	3689.41
<b>MW-6</b>	06/16/10		83.67	85.26	1.59	3689.06
<b>MW-6</b>	09/28/10		83.51	86.67	3.16	3688.96
<b>MW-6</b>	12/23/10		84.44	85.22	0.78	3688.43
<b>MW-6</b>	03/23/11		84.31	86.01	1.70	3688.41
<b>MW-6</b>	06/14/11		84.80	85.16	0.36	3688.13
<b>MW-6</b>	09/12/11		85.15	85.91	0.76	3687.72
<b>MW-6</b>	12/14/11		85.53	88.18	2.65	3687.04
<b>MW-7</b>	11/15/07	<b>Installed Well</b>				
<b>MW-7</b>	11/27/07	3772.92	80.72	81.56	0.84	3692.06
<b>MW-7</b>	12/17/07		80.51	82.94	2.43	3692.01
<b>MW-7</b>	12/28/07		80.44	83.86	3.42	3691.92
<b>MW-7</b>	12/31/08		80.91	84.19	3.28	3691.47
<b>MW-7</b>	03/05/08		80.04	86.55	6.51	3691.81
<b>MW-7</b>	03/24/08		80.09	86.48	6.39	3691.78
<b>MW-7</b>	03/26/08		80.16	86.55	6.39	3691.71
<b>MW-7</b>	04/24/08		80.24	86.77	6.53	3691.60
<b>MW-7</b>	05/05/08		80.24	86.77	6.53	3691.60
<b>MW-7</b>	05/23/08		80.38	86.94	6.56	3691.46
<b>MW-7</b>	06/30/08		80.67	87.25	6.58	3691.16
<b>MW-7</b>	07/03/08		80.71	87.31	6.60	3691.12
<b>MW-7</b>	07/16/08		81.12	85.84	4.72	3691.02
<b>MW-7</b>	07/23/08		80.90	86.86	5.96	3691.04
<b>MW-7</b>	08/01/08		81.24	86.26	5.02	3690.85



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-7	08/05/08		81.53	84.94	3.41	3690.83
MW-7	08/28/08		80.57	86.73	6.16	3691.33
MW-7	09/18/08		80.58	87.02	6.44	3691.28
MW-7	10/29/08		80.83	86.70	5.87	3691.12
MW-7	12/17/08		80.98	87.09	6.11	3690.93
MW-7	02/03/09		81.12	87.14	6.02	3690.81
MW-7	06/23/09		81.42	87.22	5.80	3690.54
MW-7	09/02/09		81.68	87.79	6.11	3690.23
MW-7	11/11/09		82.36	85.16	2.80	3690.10
MW-7	02/18/10		82.78	88.02	5.24	3689.28
MW-7	06/16/10		83.09	88.36	5.27	3688.96
MW-7	09/28/10		83.22	88.45	5.23	3688.84
MW-7	12/23/10		84.03	86.61	2.58	3688.46
MW-7	03/23/11		83.82	88.71	4.89	3688.29
MW-7	06/14/11		84.40	87.49	3.09	3688.01
MW-7	09/12/11		84.87	87.66	2.79	3687.59
MW-7	12/14/11		85.33	85.35	0.02	3687.59
MW-8	11/15/07	Installed Well	TD=104.70			
MW-8	11/27/07	3773.80		82.11		3691.69
MW-8	12/17/07			82.21		3691.59
MW-8	12/28/07			82.24		3691.56
MW-8	03/05/08			82.44		3691.36
MW-8	03/26/08			82.41		3691.39
MW-8	04/24/08			82.49		3691.31
MW-8	05/23/08			82.56		3691.24
MW-8	06/30/08			82.75		3691.05
MW-8	08/05/08			82.78		3691.02
MW-8	09/18/08			82.97		3690.83
MW-8	10/29/08			83.11		3690.69
MW-8	12/17/08			83.30		3690.50
MW-8	02/03/09			83.45		3690.35
MW-8	06/23/09			83.67		3690.13
MW-8	09/02/09			83.95		3689.85
MW-8	11/11/09			84.21		3689.59
MW-8	02/18/10			84.57		3689.23
MW-8	06/16/10			84.90		3688.90
MW-8	09/28/10			85.41		3688.39
MW-8	12/23/10			85.67		3688.13
MW-8	03/23/11			85.93		3687.87
MW-8	06/14/11			86.23		3687.57
MW-8	09/12/11			86.61		3687.19
MW-8	12/14/11			87.20		3686.60
MW-9	11/15/07	Installed Well				
MW-9	11/27/07	3771.79	79.47	79.93	0.46	3692.24
MW-9	12/17/07		79.35	80.82	1.47	3692.20
MW-9	12/28/07		79.30	81.48	2.18	3692.13
MW-9	12/31/08		79.27	81.76	2.49	3692.11
MW-9	03/05/08		78.73	85.07	6.34	3692.01

**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-9	03/24/08		78.84	84.93	6.09	3691.95
MW-9	03/26/08		79.54	81.64	2.10	3691.90
MW-9	04/24/08		79.21	80.16	0.95	3692.42
MW-9	05/05/08		78.92	80.24	1.32	3692.65
MW-9	05/23/08		79.06	85.48	6.42	3691.67
MW-9	06/30/08		79.34	85.61	6.27	3691.42
MW-9	07/03/08		79.39	85.87	6.48	3691.33
MW-9	07/16/08		79.57	85.49	5.92	3691.24
MW-9	07/23/08		79.93	84.16	4.23	3691.16
MW-9	08/01/08		79.97	84.75	4.78	3691.03
MW-9	08/05/08		80.24	83.32	3.08	3691.04
MW-9	08/28/08		79.22	85.31	6.09	3691.57
MW-9	09/18/08		79.25	85.57	6.32	3691.50
MW-9	10/29/08		79.47	85.25	5.78	3691.37
MW-9	12/17/08		80.60	81.19	0.59	3691.09
MW-9	02/03/09		79.79	85.67	5.88	3691.03
MW-9	06/23/09		80.95	81.70	0.75	3690.72
MW-9	09/02/09		81.18	82.29	1.11	3690.43
MW-9	11/11/09		81.72	81.98	0.26	3690.03
MW-9	02/18/10		82.31	82.61	0.30	3689.43
MW-9	06/16/10		82.19	84.96	2.77	3689.14
MW-9	09/28/10		81.90	87.01	5.11	3689.05
MW-9	12/23/10		82.87	84.45	1.58	3688.67
MW-9	03/23/11		83.10	84.49	1.39	3688.47
MW-9	06/14/11		83.45	84.24	0.79	3688.21
MW-9	09/12/11		83.90	84.49	0.59	3687.80
MW-9	12/14/11		84.20	86.47	2.27	3687.23
MW-10	11/15/07	Installed Well	TD=101.20			
MW-10	11/27/07	3771.90		79.13		3692.77
MW-10	12/17/07			79.18		3692.72
MW-10	12/28/07			79.18		3692.72
MW-10	03/05/08			79.39		3692.51
MW-10	03/26/08			79.36		3692.54
MW-10	04/24/08			79.45		3692.45
MW-10	05/23/08			79.51		3692.39
MW-10	06/30/08			79.70		3692.20
MW-10	08/05/08			79.73		3692.17
MW-10	09/18/08			79.92		3691.98
MW-10	10/29/08			80.03		3691.87
MW-10	12/17/08			80.25		3691.65
MW-10	02/03/09			80.37		3691.53
MW-10	06/23/09			80.60		3691.30
MW-10	09/02/09			80.11		3691.79
MW-10	11/11/09			81.12		3690.78
MW-10	02/18/10			81.51		3690.39
MW-10	06/16/10			81.83		3690.07
MW-10	09/28/10			82.35		3689.55
MW-10	12/23/10			82.62		3689.28
MW-10	03/23/11			82.85		3689.05

**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-10	06/14/11			83.16		3688.74
MW-10	09/12/11			83.52		3688.38
MW-10	12/14/11			84.14		3687.76
MW-11	11/14/07	Installed Well	TD=105.19			
MW-11	11/27/07	3772.97		80.50		3692.47
MW-11	12/17/07			80.52		3692.45
MW-11	12/28/07			80.58		3692.39
MW-11	03/05/08			80.77		3692.20
MW-11	03/26/08			80.73		3692.24
MW-11	04/24/08			80.81		3692.16
MW-11	05/23/08			79.89		3693.08
MW-11	06/30/08			81.09		3691.88
MW-11	08/05/08			81.12		3691.85
MW-11	09/18/08			81.32		3691.65
MW-11	10/29/08			81.45		3691.52
MW-11	12/11/08			81.64		3691.33
MW-11	02/03/09			81.78		3691.19
MW-11	06/23/09			82.00		3690.97
MW-11	09/02/09			82.31		3690.66
MW-11	11/11/09			82.54		3690.43
MW-11	02/18/10			82.92		3690.05
MW-11	06/16/10			83.23		3689.74
MW-11	09/28/10			83.75		3689.22
MW-11	12/23/10			84.03		3688.94
MW-11	03/23/11			84.33		3688.64
MW-11	06/14/11			84.55		3688.42
MW-11	09/12/11			84.96		3688.01
MW-11	12/14/11			85.59		3687.38
MW-12	11/14/07	Installed Well	TD=105.70			
MW-12	11/27/07	3773.80		82.74		3691.06
MW-12	12/17/07			81.77		3692.03
MW-12	12/28/07			81.76		3692.04
MW-12	03/05/08			81.98		3691.82
MW-12	03/26/08			81.92		3691.88
MW-12	04/24/08			82.02		3691.78
MW-12	05/23/08			82.10		3691.70
MW-12	06/30/08			82.29		3691.51
MW-12	08/05/08			82.32		3691.48
MW-12	09/18/08			82.52		3691.28
MW-12	10/29/08			82.67		3691.13
MW-12	12/17/08			82.86		3690.94
MW-12	02/03/09			82.99		3690.81
MW-12	06/23/09			83.21		3690.59
MW-12	09/02/09			83.51		3690.29
MW-12	11/11/09			83.76		3690.04
MW-12	02/18/10			84.14		3689.66
MW-12	06/16/10			84.44		3689.36
MW-12	09/28/10			84.96		3688.84

**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-12	12/23/10			85.25		3688.55
MW-12	03/23/11			85.57		3688.23
MW-12	06/14/11			85.77		3688.03
MW-12	09/12/11			86.20		3687.60
MW-12	12/14/11			86.82		3686.98
MW-13	11/14/07	Installed Well				
MW-13	11/27/07	3774.36		82.71		3691.65
MW-13	12/17/07			82.84		3691.52
MW-13	12/28/07			82.86		3691.50
MW-13	03/05/08			83.06		3691.30
MW-13	03/26/08			83.01		3691.35
MW-13	04/24/08			83.10		3691.26
MW-13	05/23/08			83.18		3691.18
MW-13	06/30/08			83.36		3691.00
MW-13	08/05/08			83.40		3690.96
MW-13	09/18/08			83.61		3690.75
MW-13	10/29/08			83.75		3690.61
MW-13	12/17/08			83.92		3690.44
MW-13	02/03/09			84.07		3690.29
MW-13	06/23/09			84.28		3690.08
MW-13	09/02/09			84.60		3689.76
MW-13	11/11/09			84.83		3689.53
MW-13	02/18/10			85.21		3689.15
MW-13	06/16/10			85.53		3688.83
MW-13	09/28/10			86.04		3688.32
MW-13	12/23/10			86.31		3688.05
MW-13	03/23/11			86.59		3687.77
MW-13	06/14/11			86.85		3687.51
MW-13	09/12/11			87.26		3687.10
MW-13	12/14/11			87.87		3686.49
MW-14	05/03/10	Installed Well		TD=106.00		
MW-14	04/13/10	3774.40		85.59		3688.81
MW-14	06/16/10			85.82		3688.58
MW-14	09/28/10			86.32		3688.08
MW-14	12/23/10			86.64		3687.76
MW-14	03/23/11			86.90		3687.50
MW-14	06/14/11			87.16		3687.24
MW-14	09/12/11			87.58		3686.82
MW-14	12/14/11			88.25		3686.15
MW-15	05/03/10	Installed Well		TD=106.00		
MW-15	04/13/10	3774.03		85.46		3688.57
MW-15	06/16/10			85.69		3688.34
MW-15	09/28/10			86.19		3687.84
MW-15	12/23/10			86.50		3687.53
MW-15	03/23/11			86.78		3687.25
MW-15	06/14/11			87.03		3687.00
MW-15	09/12/11			87.43		3686.60

**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-15	12/14/11			88.08		3685.95
MW-16	05/03/10	Installed Well		TD-107.00		
MW-16	04/13/10	3773.95		85.33		3688.62
MW-16	06/16/10			85.57		3688.38
MW-16	09/28/10			86.05		3687.90
MW-16	12/23/10			86.34		3687.61
MW-16	03/23/11			86.62		3687.33
MW-16	06/14/11			86.85		3687.10
MW-16	09/12/11			87.27		3686.68
MW-16	12/14/11			87.91		3686.04
MW-17		Installed Well				
MW-17	09/28/10	3771.29				3771.29
MW-17	09/28/10			82.32		3688.97
MW-17	12/23/10			82.58		3688.71
MW-17	03/23/11			82.87		3688.42
MW-17	06/14/11			83.10		3688.19
MW-17	09/12/11			83.54		3687.75
MW-17	12/14/11			84.12		3687.17
MW-18		Installed Well				
MW-18	09/28/10	3772.41				3772.41
MW-18	09/28/10			83.72		3688.69
MW-18	12/23/10			84.00		3688.41
MW-18	03/23/11			84.29		3688.12
MW-18	06/14/11			84.57		3687.84
MW-18	09/12/11			84.96		3687.45
MW-18	12/14/11			85.51		3686.90
MW-19		Installed Well				
MW-19	09/28/10	3773.63				3773.63
MW-19	09/28/10			85.19		3688.44
MW-19	12/23/10			85.49		3688.14
MW-19	03/23/11			85.76		3687.87
MW-19	06/14/11			86.01		3687.62
MW-19	09/12/11			86.42		3687.21
MW-19	12/14/11			87.00		3686.63
MW-20	08/19/10	Installed Well				
MW-20	09/28/10	3770.92				3770.92
MW-20	09/28/10			82.03		3688.89
MW-20	12/23/10			82.32		3688.60
MW-20	03/23/11			82.58		3688.34
MW-20	06/14/11			82.85		3688.07
MW-20	09/12/11			82.23		3688.69
MW-20	12/14/11			83.80		3687.12
MW-21	08/19/10	Installed Well				
MW-21	09/28/10	3773.30				3773.30



**TABLE 1**  
**SUMMARY OF HISTORICAL FLUID LEVEL MEASUREMENTS**  
**PLAINS PIPELINE, L.P. - SRS# 2002-10273**  
**8" MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO**  
**TALON/LPE PROJECT NUMBER 700376.045.01**

WELL ID	DATE GAUGED	Relative Top of Casing Elevation (Ft amsl)	Depth to PSH Below Top of Casing (Feet)	Depth to Water Below Top of Casing (Feet)	PSH THICKNESS (Feet)	Adjusted Potentiometric Surface (Ft amsl)
MW-21	09/28/10			84.75		3688.55
MW-21	12/23/10			84.97		3688.33
MW-21	03/23/11			85.26		3688.04
MW-21	06/14/11			85.53		3687.77
MW-21	09/12/11			85.91		3687.39
MW-21	12/14/11			86.49		3686.81

NM=Not Measured

Potentiometric surface adjusted by the following equation: = Top of casing elevation - depth to water + (PSH thickness \* 0.840)

amsl - above mean sea level



**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10273**  
**Talon/LPE Project Number 700376.045.01**

*All concentrations are in mg/L*

Sample Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
MW-1	11/04/04					
MW-1	03/18/05					
MW-1	06/14/05					
MW-1	09/30/05					
MW-1	12/30/05					
MW-1	03/30/06					
MW-1	07/06/06					
MW-1	09/29/06					
MW-1	12/20/06					
MW-1	03/29/07					
MW-1	06/19/07					
MW-1	09/20/07					
MW-1	12/18/07					
MW-1	03/27/08					
MW-1	06/30/08					
MW-1	09/20/08	16.8	3.45	1.15	2.04	23.4
MW-1	12/17/08					
MW-1	02/03/09					
MW-1	06/23/09					
MW-1	09/03/09	20.4	17.8	3.84	9.31	51.4
MW-1	11/11/09					
MW-1	02/18/10					
MW-1	06/16/10					
MW-1	09/28/10					
MW-1	12/23/10					
MW-1	03/24/11					
MW-1	06/14/11					
MW-1	09/12/11					
MW-1	12/15/11					
MW-2	11/04/04	0.254	0.108	0.0115	0.0198	0.393
MW-2	03/18/05	0.0404	0.0251	0.00231	0.00744	0.0753
MW-2	06/14/05	0.00109	<0.00100	<0.00100	<0.00200	0.00109
MW-2	09/30/05	0.0428	0.0392	0.00561	0.01275	0.1004
MW-2	12/30/05	<0.001	<0.001	<0.001	<0.001	<0.00100
MW-2	03/30/06	0.0019	0.00398	0.00428	0.01463	0.02479
MW-2	07/06/06	0.0127	0.0228	0.00216	0.01194	0.0496



**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10273**  
**Talon/LPE Project Number 700376.045.01**

*All concentrations are in mg/L*

Sample Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
MW-2	09/29/06					
MW-2	12/20/06					
MW-2	03/29/07					
MW-2	06/19/07					
MW-2	09/20/07					
MW-2	12/18/07					
MW-2	03/27/08					
MW-2	06/30/08					
MW-2	09/20/08	4.67	3.42	0.470	1.16	9.72
MW-2	12/17/08	0.0247	0.0542	0.0331	0.0586	0.1706
MW-2	02/03/09	0.0475	0.074	<0.0200	0.0419	0.1634
MW-2	06/23/09	0.0273	0.0323	<0.00100	0.0317	0.0913
MW-2	09/02/09	0.00990	0.0127	<0.00100	0.00810	0.03070
MW-2	11/11/09	0.05160	0.0672	0.0047	0.04320	0.19740
MW-2	02/18/10	0.0170	0.0235	<0.00100	0.0223	0.0628
MW-2	06/16/10	0.0202	0.0269	0.00140	0.0173	0.0658
MW-2	09/28/10	0.0140	0.0249	<0.00100	0.0166	0.0555
MW-2	12/23/10	0.0388	0.0528	0.00540	0.0435	0.1405
MW-2	03/24/11	0.0139	0.0221	0.00740	0.0328	0.0762
MW-2	06/16/11	0.0170	0.0156	<0.00100	0.0193	0.0519
MW-2	09/14/11	0.00530	0.00710	<0.00100	0.00410	0.01650
MW-2	12/16/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-3	11/04/04	0.062	0.0292	0.00463	0.00796	0.104
MW-3	03/18/05	1.23	0.338	0.0206	0.0251	1.61
MW-3	06/14/05	11.00	2.34	0.792	1.65	14.13
MW-3	09/30/05					
MW-3	12/30/05					
MW-3	03/30/06					
MW-3	07/06/06					
MW-3	09/29/06					
MW-3	12/20/06					
MW-3	03/29/07					
MW-3	06/19/07					
MW-3	09/20/07					
MW-3	12/18/07					
MW-3	03/27/08					



**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10273**  
**Talon/LPE Project Number 700376.045.01**

*All concentrations are in mg/L*

Sample Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
MW-3	06/30/08					
MW-3	09/20/08	23.4	11.7	1.74	4.13	41.0
MW-3	12/17/08					
MW-3	02/03/09					
MW-3	06/23/09					
MW-3	09/03/09					
MW-3	11/11/09					
MW-3	02/18/10					
MW-3	06/16/10					
MW-3	09/28/10					
MW-3	12/23/10					
MW-3	03/23/11					
MW-3	06/14/11					
MW-3	09/12/11					
MW-3	12/15/11					
MW-4	11/04/04	0.00258	0.00150	<0.00100	<0.00200	0.00408
MW-4	03/18/05	5.23	0.989	0.259	0.468	6.95
MW-4	06/14/05	8.29	0.827	0.308	0.3139	9.74
MW-4	09/30/05	5.36	0.148	0.153	<0.200	5.66
MW-4	12/30/05	4.49	<0.00005	<0.00005	<0.00005	4.49
MW-4	03/30/06	5.45	0.246	0.265	0.582	19.244
MW-4	07/06/06	11.0	0.906	0.308	0.487	12.7
MW-4	09/29/06	6.18	0.287	0.146	0.301	6.914
MW-4	12/20/06	9.03	0.612	0.327	0.536	10.505
MW-4	03/29/07	7.18	0.530	0.452	0.584	8.75
MW-4	06/19/07	16.85	0.7600	0.7990	0.765	19.17
MW-4	09/20/07	17.21	0.4370	0.5900	0.705	18.94
MW-4	12/18/07	20.6	0.912	0.856	1.50	23.9
MW-4	03/27/08	21.8	0.956	0.724	0.811	24.3
MW-4	06/30/08	24.3	0.558	1.02	1.04	26.9
MW-4	09/20/08	26.4	2.91	1.21	1.39	31.9
MW-4	12/17/08	26.8	0.368	1.20	1.17	29.5
MW-4	02/03/09	25.6	0.704	1.28	1.41	29.0
MW-4	06/23/09	23.1	<0.200	1.70	<0.200	24.8
MW-4	09/03/09	24.6	0.521	1.24	0.486	26.8
MW-4	11/11/09	21.3	<0.200	0.883	<0.200	22.2



**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10273**  
**Talon/LPE Project Number 700376.045.01**

*All concentrations are in mg/L*

Sample Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
MW-4	02/18/10	15.1	<0.200	0.639	<0.200	15.7
MW-4	06/16/10	16.9	<0.200	0.620	<0.200	17.5
MW-4	09/28/10	9.66	<0.200	<0.200	<0.200	9.66
MW-4	12/23/10	11.00	<0.200	0.583	<0.200	11.583
MW-4	03/23/11	15.10	<0.200	1.400	<0.200	16.500
MW-4	06/16/11	13.40	1.260	<0.200	<0.200	14.660
MW-4	09/14/11	2.36	<0.0500	<0.0500	0.0849	2.445
MW-4	12/14/11	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	11/16/07	Well Installed				
MW-5	12/18/07	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	03/27/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	06/30/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	09/20/08	5.36	4.73	0.878	2.00	12.968
MW-5	12/17/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	02/03/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	06/23/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	09/03/09	15.5	16.4	2.30	5.21	39.41
MW-5	11/11/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	02/18/10	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	06/16/10	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	09/28/10	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	12/23/10	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	03/23/11	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	06/14/11	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	09/12/11	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-5	12/15/11	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-6	11/15/07	Well Installed				
MW-6	12/18/07	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-6	03/27/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-6	06/30/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-6	09/20/08	3.22	1.94	0.285	0.697	6.142
MW-6	12/17/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-6	02/03/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-6	06/23/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-6	09/03/09	19.2	19.3	3.13	7.48	49.11



**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10273**  
**Talon/LPE Project Number 700376.045.01**

*All concentrations are in mg/L*

Sample Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
MW-6	11/11/09					
MW-6	02/18/10					
MW-6	06/16/10					
MW-6	09/28/10					
MW-6	12/23/10					
MW-6	03/23/11					
MW-6	06/14/11					
MW-6	09/12/11					
MW-6	12/15/11					
MW-7	11/15/07					
MW-7	12/18/07					
MW-7	03/27/08					
MW-7	06/30/08					
MW-7	09/20/08	10.7	1.78	0.453	0.785	13.718
MW-7	12/17/08					
MW-7	02/03/09					
MW-7	06/23/09					
MW-7	09/03/09	22.1	15.8	3.11	7.38	48.39
MW-7	11/11/09					
MW-7	02/18/10					
MW-7	06/16/10					
MW-7	09/28/10					
MW-7	12/23/10					
MW-7	03/23/11					
MW-7	06/14/11					
MW-7	09/12/11					
MW-7	12/15/11					
MW-8	11/15/07					
MW-8	12/18/07	0.660	0.0211	0.0211	0.0211	0.723
MW-8	03/27/08	3.00	0.0817	0.0283	0.187	3.297
MW-8	06/30/08	8.55	1.12	0.244	0.687	10.601
MW-8	09/20/08	5.86	0.0798	<0.0500	0.304	6.244
MW-8	12/17/08	27.7	2.36	0.845	2.46	33.365
MW-8	02/03/09	8.27	0.485	<0.100	0.346	9.101
MW-8	06/23/09	20.6	2.56	0.923	2.32	26.403



**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10273**  
**Talon/LPE Project Number 700376.045.01**

*All concentrations are in mg/L*

Sample Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
MW-8	09/02/09	12.0	2.23	0.360	0.776	15.366
MW-8	11/11/09	18.2	4.68	0.638	1.21	24.728
MW-8	02/18/10	15.1	3.46	0.719	1.38	20.659
MW-8	06/16/10	8.30	1.43	0.340	0.755	10.825
MW-8	09/28/10	10.30	2.05	0.464	0.82	13.634
MW-8	12/23/10	9.61	1.61	0.611	1.42	13.251
MW-8	03/24/11	11.5	1.41	0.774	2.13	15.814
MW-8	06/16/11	16.1	1.92	0.875	<0.100	18.895
MW-8	09/12/11	15.8	0.542	0.467	0.166	16.975
MW-8	12/16/11	12.1	0.199	0.336	0.116	12.751
MW-9	11/15/07	Well Installed				
MW-9	12/18/07	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	03/27/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	06/30/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	09/20/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	12/17/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	02/03/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	06/23/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	09/03/09	16.5	8.40	1.38	2.89	29.17
MW-9	11/11/09	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	02/18/10	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	06/16/10	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	09/28/10	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	12/23/10	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	03/23/11	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	06/14/11	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	09/12/11	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-9	12/15/11	Not Sampled Due to Presence of Phase Separated Hydrocarbons				
MW-10	11/15/07	Well Installed				
MW-10	12/18/07	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-10	03/27/08	0.0283	0.00240	<0.00100	0.00290	0.0336
MW-10	06/30/08	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-10	09/20/08	<0.00100	<0.00100	<0.00100	0.00220	<0.00100
MW-10	12/17/08	0.00790	<0.00100	<0.00100	<0.00100	0.0079
MW-10	02/03/09	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100



**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10273**  
**Talon/LPE Project Number 700376.045.01**

*All concentrations are in mg/L*

Sample Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
MW-10	06/23/09	0.00670	<0.00100	<0.00100	<0.00100	0.0067
MW-10	09/02/09	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-10	11/11/09	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-10	02/18/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-10	06/16/10	0.00160	<0.00100	<0.00100	0.00280	0.00440
MW-10	09/27/10	0.00160	<0.00100	<0.00100	<0.00100	0.0016
MW-10	12/23/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-10	03/24/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-10	06/16/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-10	09/14/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-10	12/15/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-11	11/14/07	<b>Well Installed</b>				
MW-11	12/18/07	0.0180	0.00790	0.00110	<0.00100	0.02700
MW-11	03/27/08	0.0533	0.0177	0.00230	0.00820	0.0815
MW-11	06/30/08	0.00190	<0.00100	<0.00100	<0.00100	0.0019
MW-11	09/20/08	0.0171	0.00310	<0.00100	0.00100	0.0212
MW-11	12/17/08	0.00340	<0.00100	<0.00100	<0.00100	0.0171
MW-11	02/03/09	0.00620	0.00120	<0.00100	<0.00100	0.00740
MW-11	06/23/09	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-11	09/02/09	0.00250	<0.00100	<0.00100	<0.00100	0.0025
MW-11	11/11/09	0.0819	0.0280	0.0198	0.0230	0.1527
MW-11	02/18/10	0.0023	<0.00100	<0.00100	<0.00100	0.0023
MW-11	06/16/10	0.00990	0.00410	0.00120	0.00330	0.01850
MW-11	09/28/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-11	12/23/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-11	03/24/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-11	06/16/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-11	09/14/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-11	12/15/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-12	11/14/07	<b>Well Installed</b>				
MW-12	12/18/07	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
MW-12	03/27/08	0.0566	0.0189	0.00270	0.00720	0.0854
MW-12	06/30/08	0.00780	<0.00100	<0.00100	<0.00100	0.0078
MW-12	09/20/08	0.0151	0.00140	<0.00100	<0.00100	0.0165
MW-12	12/17/08	0.00400	<0.00100	<0.00100	<0.00100	0.004



**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10273**  
**Talon/LPE Project Number 700376.045.01**

*All concentrations are in mg/L*

Sample Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
MW-12	02/03/09	0.00210	<0.00100	<0.00100	<0.00100	0.0021
MW-12	06/23/09	0.00550	<0.00100	<0.00100	<0.00100	0.0055
MW-12	09/02/09	0.00650	<0.00100	<0.00100	<0.00100	0.0065
MW-12	11/11/09	<b>0.06540</b>	0.0244	0.015	0.0184	0.12320
MW-12	02/18/10	0.00670	0.0048	<0.00100	<0.00100	0.01150
MW-12	06/16/10	<b>0.02720</b>	0.00980	0.00230	0.00390	0.04320
MW-12	09/28/10	0.00110	<0.00100	<0.00100	<0.00100	0.00110
MW-12	12/23/10	<b>0.01090</b>	0.00830	<0.00100	0.00810	0.02730
MW-12	03/23/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-12	06/16/11	<b>0.0102</b>	<0.00100	<0.00100	<0.00100	0.0102
MW-12	09/12/11	0.00140	<0.00100	<0.00100	<0.00100	0.0014
MW-12	12/15/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-13	11/14/07					
MW-13						<b>Well Installed</b>
MW-13	12/18/07	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-13	03/27/08	<b>0.598</b>	<0.00500	0.0115	0.00860	0.6181
MW-13	06/30/08	<b>0.191</b>	<0.00500	<0.00500	<0.00500	0.191
MW-13	09/20/08	<b>2.82</b>	<0.0100	0.0575	0.0890	2.9665
MW-13	12/17/08	<b>2.41</b>	<0.0100	0.0206	0.0609	2.49
MW-13	02/03/09	<b>2.90</b>	<0.100	<0.100	<0.100	2.9
MW-13	06/23/09	<b>4.63</b>	<0.0200	<0.0200	0.373	5.003
MW-13	09/02/09	<b>4.29</b>	<0.0200	<0.0200	0.104	4.394
MW-13	11/11/09	<b>14.3</b>	<0.100	0.311	<0.100	14.611
MW-13	02/18/10	<b>14.5</b>	<0.100	0.478	0.495	15.473
MW-13	06/16/10	<b>11.3</b>	<0.100	0.229	0.384	11.913
MW-13	09/28/10	<b>16.3</b>	<0.100	0.397	0.257	16.954
MW-13	12/23/10	<b>6.14</b>	<0.100	<0.100	<b>0.858</b>	6.998
MW-13	03/23/11	<b>11.3</b>	<0.100	<b>0.933</b>	<b>2.37</b>	14.603
MW-13	06/16/11	<b>15.1</b>	<0.100	<b>0.702</b>	<0.100	15.802
MW-13	09/12/11	<b>23.1</b>	<0.100	0.537	0.445	24.082
MW-13	12/15/11	<b>36.6</b>	<0.500	0.703	<0.500	37.303
MW-14	03/03/10					
MW-14						<b>Well Installed</b>
MW-14	04/13/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-14	06/16/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-14	09/28/10	0.00320	0.00130	<0.00100	<0.00100	0.00450
MW-14	12/23/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100



**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10273**  
**Talon/LPE Project Number 700376.045.01**

*All concentrations are in mg/L*

Sample Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
MW-14	03/23/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-14	06/16/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-14	09/12/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-14	09/12/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-14	12/15/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-15	03/03/10					
MW-15	04/13/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-15	06/16/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-15	09/28/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-15	12/23/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-15	03/23/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-15	06/16/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-15	09/12/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-15	12/15/11	<b>0.03580</b>	<0.00100	<0.00100	0.00100	0.03680
MW-16	03/03/10					
MW-16	04/13/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-16	06/16/10	0.00200	<0.00100	<0.00100	<0.00100	0.002
MW-16	09/28/10	0.00270	<0.00100	<0.00100	<0.00100	0.0027
MW-16	12/23/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-16	03/23/11	0.00700	<0.00100	<0.00100	<0.00100	<0.00100
MW-16	06/16/11	<b>0.03050</b>	<0.00100	<0.00100	<0.00100	0.03050
MW-16	09/12/11	<b>0.03550</b>	<0.00100	<0.00100	<0.00100	0.03550
MW-16	12/15/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-17	08/11/10					
MW-17	09/28/10	<b>0.0729</b>	0.00440	<0.00100	0.00610	0.08340
MW-17	12/23/10	<b>0.1750</b>	<0.00100	<0.00100	0.01310	0.18810
MW-17	03/24/11	<b>0.1040</b>	0.00740	<0.00100	0.02360	0.13500
MW-17	06/16/11	<b>0.0545</b>	<0.00100	<0.00100	0.01930	0.07380
MW-17	09/14/11	<b>0.0121</b>	<0.00100	<0.00100	0.00410	0.01620
MW-17	12/15/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-18	08/11/10					
MW-18	09/28/10	<b>0.111</b>	0.00220	<0.00100	0.00310	0.116
MW-18	12/23/10	<b>0.431</b>	<0.00100	<0.00100	0.01580	0.447



**TABLE 2**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
**PLAINS PIPELINE, L.P.**  
**MOORE TO JAL #2**  
**NMOCD REF. # AP-92**  
**LEA COUNTY, NEW MEXICO - SRS# 2002-10273**  
**Talon/LPE Project Number 700376.045.01**

*All concentrations are in mg/L*

Sample Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
MW-18	03/24/11	<b>0.378</b>	<0.00100	<0.00100	0.02930	0.407
MW-18	06/14/11	<b>0.415</b>	<0.00100	<0.00100	0.02810	0.443
MW-18	09/13/11	<b>0.538</b>	<0.0500	<0.0500	<0.0500	0.538
MW-18	12/15/11	<b>0.194</b>	<0.00100	<0.00100	0.01460	0.209
MW-19	08/11/10					
MW-19	09/28/10	<b>0.854</b>	<0.00100	<0.00100	0.00330	0.85730
MW-19	12/23/10	<b>0.120</b>	0.00390	<0.00100	0.01380	0.138
MW-19	03/24/11	<b>0.112</b>	0.00770	<0.00100	0.02390	0.144
MW-19	06/14/11	<b>0.117</b>	<0.00100	<0.00100	0.01680	0.134
MW-19	09/13/11	<b>0.091</b>	<0.00100	<0.00100	0.00890	0.100
MW-19	12/15/11	<b>0.0282</b>	<0.00100	<0.00100	0.00230	0.0305
MW-20	08/19/10					
MW-20	09/28/10	<b>0.00170</b>	<0.00100	<0.00100	<0.00100	0.00170
MW-20	12/23/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-20	03/23/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-20	06/14/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-20	09/13/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-20	12/15/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-21	08/19/10					
MW-21	09/28/10	<b>0.00140</b>	0.00150	<0.00100	<0.00100	0.00290
MW-21	12/23/10	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-21	03/23/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-21	06/14/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-21	09/13/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
MW-21	12/15/11	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
NMWQCC Remedial Limits		0.010	0.750	0.750	0.620	NA

*Bolded values are in excess of the NMWQCC Remediation Thresholds*

BTEX analyzed by EPA Method 8021B



TABLE 3  
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS  
POLY-NUCLEAR AROMATIC HYDROCARBONS (PAH)  
PLAINS PIPELINE, L.P. - MOORE TO JAL #2  
MMOCD REF. # AP-92  
LEA COUNTY, NEW MEXICO - SRS# 2002-10723  
Talon/LPE Project Number 700376.045.01

All concentrations are in mg/L

Sample Location	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]-anthracene	Benzo[a]-pyrene	Benzo[b]-fluoranthene	Benzo[g,h,i]-perylene	Benzo[k]-fluoranthene	Chrysene	Dibenz[a,h]-anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno[1,2,3-cd]-pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Total Naphthalenes	Phenanthrene	Pyrene
MW-2	09/02/09	<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	<0.000183
	12/16/11	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190	<0.000190
MW-4	03/29/07	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.042	NA	NA	<0.005	<0.005	<0.005	<0.005
	09/19/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.00266	<0.000200	0.00335	<0.000200	<b>0.0355</b>	<b>0.0351</b>	<b>0.0675</b>	<b>0.1381</b>	<b>0.00108</b>	<0.000200
	09/03/09	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	0.000984	<0.000184	0.00240	<0.000184	<b>0.0160</b>	<b>0.00812</b>	<b>0.0232</b>	<b>0.0473</b>	<b>0.000904</b>	<0.000184
	06/16/11	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	<0.000184	0.000984	<0.000184	0.00240	<0.000184	<b>0.00846</b>	<0.000184	<b>0.00594</b>	<b>0.0144</b>	<0.000184	<0.000184
	12/16/11	Not sampled due to the presence of phase separated hydrocarbons																			
MW-8	09/19/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000203	<0.000200	<0.000200	<0.000200	<b>0.00204</b>	<b>0.000297</b>	<b>0.000405</b>	<b>0.002742</b>	<0.000200	<0.000200
	09/02/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.000203	<0.000183	0.000420	<0.000183	<b>0.00735</b>	<b>0.00685</b>	<b>0.0108</b>	<b>0.02500</b>	<0.000183	<0.000183
MW-10	09/19/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
	09/02/09	<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	<0.000183
MW-11	09/19/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
	09/02/09	<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	<0.000183
MW-12	09/19/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
	09/02/09	<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	<0.000183
MW-13	09/19/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
	09/02/09	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	0.000441	<0.000183	0.000418	<0.000183	<b>0.00396</b>	<b>0.00126</b>	<b>0.00616</b>	<b>0.01138</b>	<0.000183



TABLE 3  
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS  
POLY-NUCLEAR AROMATIC HYDROCARBONS (PAH)  
PLAINS PIPELINE, L.P. - MOORE TO JAL #2  
NMOCD REF. # AP-92  
LEA COUNTY, NEW MEXICO - SRS# 2002-10723  
Talon/LPE Project Number 700376.045.01

All concentrations are in mg/L

Sample Location	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]-anthracene	Benzo[a]-pyrene	Benzo[b]-fluoranthene	Benzo[g,h,i]-perylene	Benzo[k]-fluoranthene	Chrysene	Dibenz[a,h]-anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno[1,2,3-cd]-pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Total Naphthalenes	Phenanthrene	Pyrene
MW-17	12/16/11	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
MW-18	12/16/11	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<b>0.00175</b>	<b>0.00129</b>	<b>0.00272</b>	<b>0.00576</b>	<b>0.0002</b>	<0.000183
MW-19	12/16/11	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183	<0.000183
NMWQCC Remedial Limits						<b>0.007</b>													<b>0.030</b>		

<sup>1</sup> Bolded values in red exceed NMWQCC Remediation Thresholds

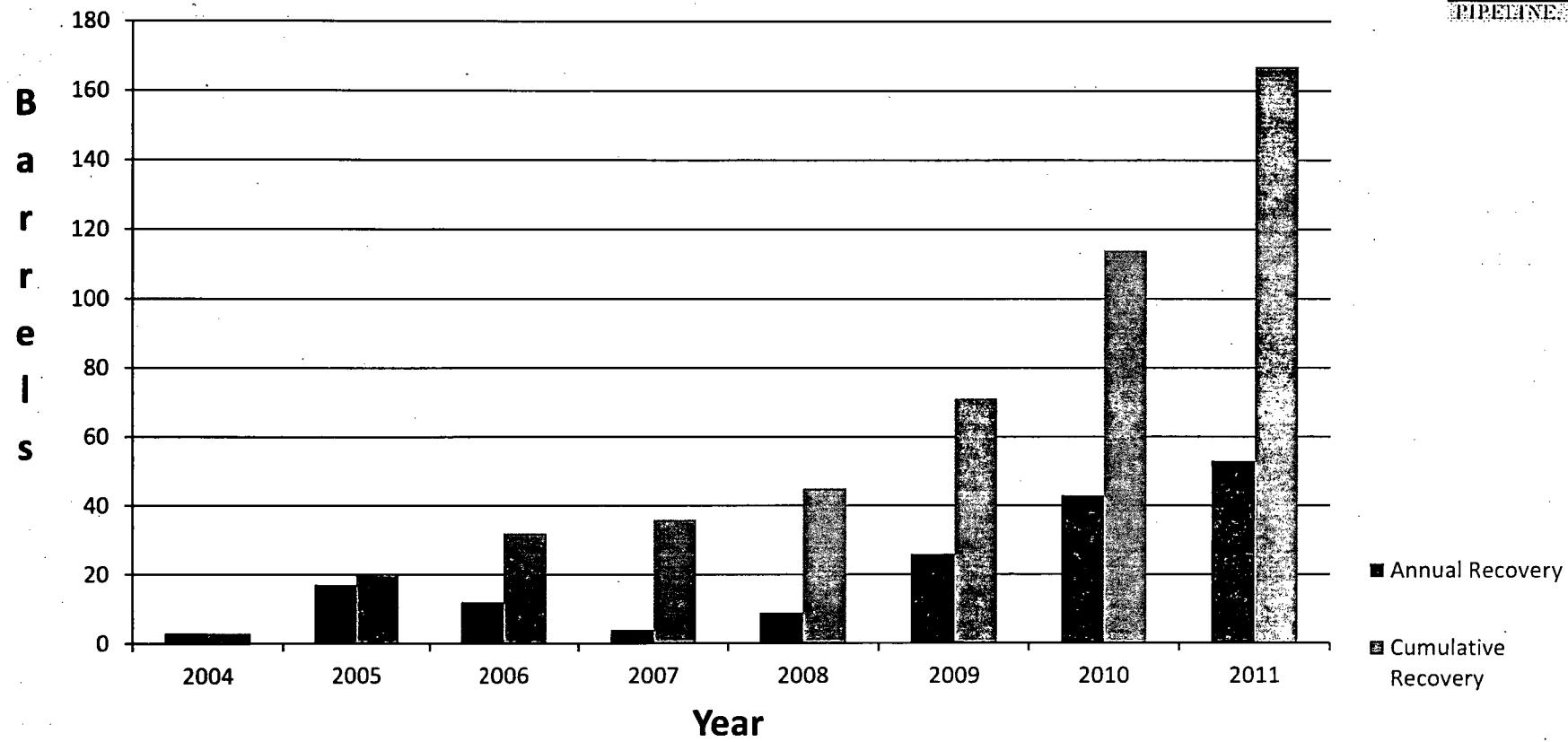
<sup>2</sup> Bolded values in black exceed Laboratory Reporting Limit

Analyzed by EPA Method 8270

NA - Not analyzed



CHART 1 - PRODUCT RECOVERY  
PLAINS PIPELINE, L.P. - SRS# 2002-10273  
MOORE TO JAL #2  
NMOCD REF. # AP-92  
LEA COUNTY, NEW MEXICO -



## **APPENDIX C**

### **Laboratory Analytical Data Reports and Chains of Custody Documentation**

## Summary Report

Steve Killingsworth  
 Talon LPE-Midland  
 2901 State Highway 349  
 Midland, TX 79706

Report Date: March 31, 2011

Work Order: 11032404



Project Location: Hobbs, NM  
 Project Name: Jal #2  
 Project Number: 700376.045.01

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
261419	MW-4	water	2011-03-23	11:45	2011-03-24
261420	MW-12	water	2011-03-23	11:25	2011-03-24
261421	MW-13	water	2011-03-23	11:55	2011-03-24
261422	MW-14	water	2011-03-23	13:03	2011-03-24
261423	MW-15	water	2011-03-23	12:43	2011-03-24
261424	MW-16	water	2011-03-23	12:25	2011-03-24
261425	MW-20	water	2011-03-23	14:30	2011-03-24
261426	MW-21	water	2011-03-23	14:45	2011-03-24

Sample - Field Code	BTEX			
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
261419 - MW-4	<b>15.1</b>	<0.200	<b>1.40</b>	<0.200
261420 - MW-12	<0.00100	<0.00100	<0.00100	<0.00100
261421 - MW-13	<b>11.3</b>	<0.100	<b>0.933</b>	<b>2.37</b>
261422 - MW-14	<0.00100	<0.00100	<0.00100	<0.00100
261423 - MW-15	<0.00100	<0.00100	<0.00100	<0.00100
261424 - MW-16	<b>0.00760</b>	<0.00100	<0.00100	<0.00100
261425 - MW-20	<0.00100	<0.00100	<0.00100	<0.00100
261426 - MW-21	<0.00100	<0.00100	<0.00100	<0.00100

# TRACEANALYSIS, INC.

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## Certifications

WBENC: 237019

HUB: 1752439743100-86536  
NCTRCA WFWB38444Y0909

DBE: VN 20657

## NELAP Certifications

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

El Paso: T104704221-08-TX  
LELAP-02002

Midland: T104704392-08-TX

## Analytical and Quality Control Report

Steve Killingsworth  
Talon LPE-Midland  
2901 State Highway 349  
Midland, TX, 79706

Report Date: March 31, 2011

Work Order: 11032404



Project Location: Hobbs, NM  
Project Name: Jal #2  
Project Number: 700376.045.01

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
261419	MW-4	water	2011-03-23	11:45	2011-03-24
261420	MW-12	water	2011-03-23	11:25	2011-03-24
261421	MW-13	water	2011-03-23	11:55	2011-03-24
261422	MW-14	water	2011-03-23	13:03	2011-03-24
261423	MW-15	water	2011-03-23	12:43	2011-03-24
261424	MW-16	water	2011-03-23	12:25	2011-03-24
261425	MW-20	water	2011-03-23	14:30	2011-03-24
261426	MW-21	water	2011-03-23	14:45	2011-03-24

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch

basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 12 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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

**Standard Flags**

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

## Case Narrative

Samples for project Jal #2 were received by TraceAnalysis, Inc. on 2011-03-24 and assigned to work order 11032404. Samples for work order 11032404 were received intact without headspace and at a temperature of 7.4 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	67776	2011-03-29 at 09:25	79873	2011-03-29 at 09:58
BTEX	S 8021B	67819	2011-03-30 at 09:25	79918	2011-03-30 at 09:25

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11032404 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.

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## Analytical Report

Sample: 261419 - MW-4

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 79873  
Prep Batch: 67776

Analytical Method: S 8021B  
Date Analyzed: 2011-03-29  
Sample Preparation: 2011-03-29

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		15.1	mg/L	200	0.00100
Toluene		<0.200	mg/L	200	0.00100
Ethylbenzene		1.40	mg/L	200	0.00100
Xylene		<0.200	mg/L	200	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		19.2	mg/L	200	20.0	96	67.8 - 129
4-Bromofluorobenzene (4-BFB)		16.9	mg/L	200	20.0	84	51.1 - 128

Sample: 261420 - MW-12

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 79873  
Prep Batch: 67776

Analytical Method: S 8021B  
Date Analyzed: 2011-03-29  
Sample Preparation: 2011-03-29

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.102	mg/L	1	0.100	102	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0870	mg/L	1	0.100	87	51.1 - 128

Sample: 261421 - MW-13

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 79918  
Prep Batch: 67819

Analytical Method: S 8021B  
Date Analyzed: 2011-03-30  
Sample Preparation: 2011-03-30

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

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Parameter	Flag	Result	Units	Dilution	RL
Benzene		<b>11.3</b>	mg/L	100	0.00100
Toluene		<0.100	mg/L	100	0.00100
Ethylbenzene		<b>0.933</b>	mg/L	100	0.00100
Xylene		<b>2.37</b>	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		10.0	mg/L	100	10.0	100	67.8 - 129
4-Bromofluorobenzene (4-BFB)		9.49	mg/L	100	10.0	95	51.1 - 128

**Sample: 261422 - MW-14**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 79918  
Prep Batch: 67819

Analytical Method: S 8021B  
Date Analyzed: 2011-03-30  
Sample Preparation: 2011-03-30

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

Parameter	Flag	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)		0.111	mg/L	1	0.100	111	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.103	mg/L	1	0.100	103	51.1 - 128

**Sample: 261423 - MW-15**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 79918  
Prep Batch: 67819

Analytical Method: S 8021B  
Date Analyzed: 2011-03-30  
Sample Preparation: 2011-03-30

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

Parameter	Flag	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

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.113	mg/L	1	0.100	113	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.104	mg/L	1	0.100	104	51.1 - 128

**Sample: 261424 - MW-16**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 79918  
Prep Batch: 67819

Analytical Method: S 8021B  
Date Analyzed: 2011-03-30  
Sample Preparation: 2011-03-30

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<b>0.00760</b>	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.108	mg/L	1	0.100	108	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0988	mg/L	1	0.100	99	51.1 - 128

**Sample: 261425 - MW-20**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 79918  
Prep Batch: 67819

Analytical Method: S 8021B  
Date Analyzed: 2011-03-30  
Sample Preparation: 2011-03-30

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.104	mg/L	1	0.100	104	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0955	mg/L	1	0.100	96	51.1 - 128

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**Sample: 261426 - MW-21**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 79918  
Prep Batch: 67819

Analytical Method: S 8021B  
Date Analyzed: 2011-03-30  
Sample Preparation: 2011-03-30

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

Parameter	Flag	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	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0957	mg/L	1	0.100	96	51.1 - 128

**Method Blank (1) QC Batch: 79873**

QC Batch: 79873  
Prep Batch: 67776

Date Analyzed: 2011-03-29  
QC Preparation: 2011-03-29

Analyzed By: ME  
Prepared By: ME

Parameter	Flag	Result	MDL	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)		0.104	mg/L	1	0.100	104	70.2 - 118
4-Bromofluorobenzene (4-BFB)		0.0922	mg/L	1	0.100	92	47.3 - 116

**Method Blank (1) QC Batch: 79918**

QC Batch: 79918  
Prep Batch: 67819

Date Analyzed: 2011-03-30  
QC Preparation: 2011-03-30

Analyzed By: ME  
Prepared By: ME

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

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Parameter	Flag	MDL Result	Units	RL			
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)		0.105	mg/L	1	0.100	105	70.2 - 118
4-Bromofluorobenzene (4-BFB)		0.0923	mg/L	1	0.100	92	47.3 - 116

#### Laboratory Control Spike (LCS-1)

QC Batch: 79873  
Prep Batch: 67776

Date Analyzed: 2011-03-29  
QC Preparation: 2011-03-29

Analyzed By: ME  
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0881	mg/L	1	0.100	<0.000400	88	76.8 - 110
Toluene	0.0939	mg/L	1	0.100	<0.000300	94	81 - 108
Ethylbenzene	0.100	mg/L	1	0.100	<0.000300	100	78.8 - 118
Xylene	0.305	mg/L	1	0.300	<0.000333	102	80.3 - 119

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.	RPD	Rec. Limit	
Benzene	0.0929	mg/L	1	0.100	<0.000400	93	76.8 - 110	5	20
Toluene	0.0977	mg/L	1	0.100	<0.000300	98	81 - 108	4	20
Ethylbenzene	0.107	mg/L	1	0.100	<0.000300	107	78.8 - 118	7	20
Xylene	0.322	mg/L	1	0.300	<0.000333	107	80.3 - 119	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.107	0.0993	mg/L	1	0.100	107	99	66.6 - 114
4-Bromofluorobenzene (4-BFB)	0.103	0.0955	mg/L	1	0.100	103	96	68.2 - 124

#### Laboratory Control Spike (LCS-1)

QC Batch: 79918  
Prep Batch: 67819

Date Analyzed: 2011-03-30  
QC Preparation: 2011-03-30

Analyzed By: ME  
Prepared By: ME

Report Date: March 31, 2011  
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Param	LCS		Dil.	Spike Amount	Matrix Result	Rec.	
	Result	Units				Rec.	Limit
Benzene	0.0835	mg/L	1	0.100	<0.000400	84	76.8 - 110
Toluene	0.0886	mg/L	1	0.100	<0.000300	89	81 - 108
Ethylbenzene	0.0963	mg/L	1	0.100	<0.000300	96	78.8 - 118
Xylene	0.288	mg/L	1	0.300	<0.000333	96	80.3 - 119

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

Param	LCSD		Spike Amount	Matrix		Rec.	Rec. Limit	RPD	RPD Limit
	Result	Units		Dil.	Result				
Benzene	0.0881	mg/L	1	0.100	<0.000400	88	76.8 - 110	5	20
Toluene	0.0947	mg/L	1	0.100	<0.000300	95	81 - 108	7	20
Ethylbenzene	0.102	mg/L	1	0.100	<0.000300	102	78.8 - 118	6	20
Xylene	0.310	mg/L	1	0.300	<0.000333	103	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)	0.0989	0.102	mg/L	1	0.100	99	102	66.6 - 114
4-Bromofluorobenzene (4-BFB)	0.0977	0.100	mg/L	1	0.100	98	100	68.2 - 124

**Matrix Spike (MS-1)** Spiked Sample: 260949

QC Batch: 79873  
Prep Batch: 67776

Date Analyzed: 2011-03-29  
QC Preparation: 2011-03-29

Analyzed By: ME  
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	10.0	mg/L	100	10.0	1.5131	85	77.9 - 114
Toluene	9.30	mg/L	100	10.0	<0.0300	93	78.3 - 111
Ethylbenzene	9.79	mg/L	100	10.0	<0.0300	98	75.3 - 110
Xylene	29.3	mg/L	100	30.0	<0.0333	98	75.7 - 109

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

Param	MSD		Spike Amount	Matrix Result	Rec.		RPD	RPD Limit	
	Result	Units			Dil.	Rec.			
Benzene	10.4	mg/L	100	10.0	1.5131	89	77.9 - 114	4	20
Toluene	9.70	mg/L	100	10.0	<0.0300	97	78.3 - 111	4	20
Ethylbenzene	10.2	mg/L	100	10.0	<0.0300	102	75.3 - 110	4	20
Xylene	30.6	mg/L	100	30.0	<0.0333	102	75.7 - 109	4	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	10.3	10.3	mg/L	100	10	103	103	68.3 - 107

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Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	9.09	9.19	mg/L	100	10	91	92	60.1 - 135

**Matrix Spike (MS-1)** Spiked Sample: 261687

QC Batch: 79918  
Prep Batch: 67819

Date Analyzed: 2011-03-30  
QC Preparation: 2011-03-30

Analyzed By: ME  
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.15	mg/L	20	2.00	0.5261	81	77.9 - 114
Toluene	1.86	mg/L	20	2.00	0.15	86	78.3 - 111
Ethylbenzene	2.02	mg/L	20	2.00	0.1327	94	75.3 - 110
Xylene	6.06	mg/L	20	6.00	0.4231	94	75.7 - 109

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.29	mg/L	20	2.00	0.5261	88	77.9 - 114	6	20
Toluene	1.96	mg/L	20	2.00	0.15	90	78.3 - 111	5	20
Ethylbenzene	2.12	mg/L	20	2.00	0.1327	99	75.3 - 110	5	20
Xylene	6.36	mg/L	20	6.00	0.4231	99	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)	1.97	2.12	mg/L	20	2	98	106	68.3 - 107
4-Bromofluorobenzene (4-BFB)	1.97	2.09	mg/L	20	2	98	104	60.1 - 135

**Standard (CCV-2)**

QC Batch: 79873

Date Analyzed: 2011-03-29

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	0.0903	90	80 - 120	2011-03-29
Toluene		mg/L	0.100	0.0945	94	80 - 120	2011-03-29
Ethylbenzene		mg/L	0.100	0.0997	100	80 - 120	2011-03-29
Xylene		mg/L	0.300	0.300	100	80 - 120	2011-03-29

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### Standard (CCV-3)

QC Batch: 79873

Date Analyzed: 2011-03-29

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	0.0873	87	80 - 120	2011-03-29
Toluene		mg/L	0.100	0.0910	91	80 - 120	2011-03-29
Ethylbenzene		mg/L	0.100	0.0981	98	80 - 120	2011-03-29
Xylene		mg/L	0.300	0.291	97	80 - 120	2011-03-29

### Standard (CCV-1)

QC Batch: 79918

Date Analyzed: 2011-03-30

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	0.0865	86	80 - 120	2011-03-30
Toluene		mg/L	0.100	0.0936	94	80 - 120	2011-03-30
Ethylbenzene		mg/L	0.100	0.102	102	80 - 120	2011-03-30
Xylene		mg/L	0.300	0.306	102	80 - 120	2011-03-30

### Standard (CCV-2)

QC Batch: 79918

Date Analyzed: 2011-03-30

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	0.0844	84	80 - 120	2011-03-30
Toluene		mg/L	0.100	0.0897	90	80 - 120	2011-03-30
Ethylbenzene		mg/L	0.100	0.0941	94	80 - 120	2011-03-30
Xylene		mg/L	0.300	0.286	95	80 - 120	2011-03-30

### Standard (CCV-3)

QC Batch: 79918

Date Analyzed: 2011-03-30

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	0.0903	90	80 - 120	2011-03-30
Toluene		mg/L	0.100	0.0966	97	80 - 120	2011-03-30
Ethylbenzene		mg/L	0.100	0.103	103	80 - 120	2011-03-30

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Xylene		mg/L	0.300	0.308	103	80 - 120	2011-03-30

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skillingsworth@talonlpe.com

Invoice to:

(If different from above) 2002-60270-10273

Project #: 700376, 045, 01

Project Name: Tal IFZ

Project Location (including state): Hobbs, NM

Sampler Signature: Brad Toy

LAB USE ONLY

## FIELD CODE

#	CONTAINERS	Volume / Amount	MATRIX			PRESERVATIVE METHOD			SAMPLING			
			WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	ICE	NONE
40149	MW4	3	X	X			X	X			3-23-11	1145
400	MW12	1										1125
401	MW13	1										1155
402	MW14	1										1303
403	MW15	1										1243
404	MW16	1										1245
405	MW20	1										1430
406	MW21	1										1445

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	LAB USE ONLY	REMARKS:
Brad Toy	Talon LPE	3-24-11	845	John Trace	Trace	3/24/11	8:45	COR	74°C	INSTRUMENT	x All tests Midland
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	Headspace	
										Y/N	
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST	OBS	COR	

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



## Summary Report

Steve Killingsworth  
 Talon LPE-Midland  
 2901 State Highway 349  
 Midland, TX 79706

Report Date: April 4, 2011

Work Order: 11032511



Project Location: Hobbs, NM  
 Project Name: Jal #2  
 Project Number: 700376.045.01

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
261720	MW 2	water	2011-03-24	13:30	2011-03-25
261721	MW 8	water	2011-03-24	13:40	2011-03-25
261722	MW 10	water	2011-03-24	13:15	2011-03-25
261723	MW 11	water	2011-03-24	12:55	2011-03-25
261724	MW 17	water	2011-03-24	12:18	2011-03-25
261725	MW 18	water	2011-03-24	12:05	2011-03-25
261726	MW 19	water	2011-03-24	11:48	2011-03-25

Sample - Field Code	BTEX			
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
261720 - MW 2	0.0139	0.0223	0.00740	0.0328
261721 - MW 8	11.5	1.41	0.774	2.13
261722 - MW 10	<0.00100	<0.00100	<0.00100	<0.00100
261723 - MW 11	<0.00100	<0.00100	<0.00100	<0.00100
261724 - MW 17	0.104	0.00740	<0.00100	0.0236
261725 - MW 18	0.378	<0.00100	<0.00100	0.0293
261726 - MW 19	0.112	0.00770	<0.00100	0.0239



# TRACEANALYSIS, INC.

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6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260  
E-Mail: lab@traceanalysis.com

## Certifications

WBENC: 237019

HUB: 1752439743100-86536  
NCTRCA WFWB38444Y0909

DBE: VN 20657

## NELAP Certifications

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

El Paso: T104704221-08-TX  
LELAP-02002

Midland: T104704392-08-TX

## Analytical and Quality Control Report

Steve Killingsworth  
Talon LPE-Midland  
2901 State Highway 349  
Midland, TX, 79706

Report Date: April 4, 2011

Work Order: 11032511



Project Location: Hobbs, NM  
Project Name: Jal #2  
Project Number: 700376.045.01

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
261720	MW 2	water	2011-03-24	13:30	2011-03-25
261721	MW 8	water	2011-03-24	13:40	2011-03-25
261722	MW 10	water	2011-03-24	13:15	2011-03-25
261723	MW 11	water	2011-03-24	12:55	2011-03-25
261724	MW 17	water	2011-03-24	12:18	2011-03-25
261725	MW 18	water	2011-03-24	12:05	2011-03-25
261726	MW 19	water	2011-03-24	11:48	2011-03-25

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(cs) in which your sample(s) were analyzed.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



---

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

**Standard Flags**

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

## Case Narrative

Samples for project Jal #2 were received by TraceAnalysis, Inc. on 2011-03-25 and assigned to work order 11032511. Samples for work order 11032511 were received intact without headspace and at a temperature of 5.1 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	67856	2011-03-31 at 08:33	79971	2011-03-31 at 08:33
BTEX	S 8021B	67885	2011-04-01 at 11:35	80014	2011-04-02 at 06:18

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11032511 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: April 4, 2011  
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Jal #2

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## Analytical Report

Sample: 261720 - MW 2

Laboratory: Midland

Analysis: BTEX

QC Batch: 80014

Prep Batch: 67885

Analytical Method: S 8021B

Date Analyzed: 2011-04-02

Sample Preparation: 2011-04-01

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.0139	mg/L	1	0.00100
Toluene		0.0223	mg/L	1	0.00100
Ethylbenzene		0.00740	mg/L	1	0.00100
Xylene		0.0328	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0862	mg/L	1	0.100	86	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0879	mg/L	1	0.100	88	51.1 - 128

Sample: 261721 - MW 8

Laboratory: Midland

Analysis: BTEX

QC Batch: 79971

Prep Batch: 67856

Analytical Method: S 8021B

Date Analyzed: 2011-03-31

Sample Preparation: 2011-03-31

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Parameter	Flag	Result	Units	Dilution	RL
Benzene		11.5	mg/L	100	0.00100
Toluene		1.41	mg/L	100	0.00100
Ethylbenzene		0.774	mg/L	100	0.00100
Xylene		2.13	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		10.4	mg/L	100	10.0	104	67.8 - 129
4-Bromofluorobenzene (4-BFB)		9.93	mg/L	100	10.0	99	51.1 - 128

Sample: 261722 - MW 10

Laboratory: Midland

Analysis: BTEX

QC Batch: 79971

Prep Batch: 67856

Analytical Method: S 8021B

Date Analyzed: 2011-03-31

Sample Preparation: 2011-03-31

Prep Method: S 5030B

Analyzed By: ME

Prepared By: ME

Report Date: April 4, 2011  
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Parameter	Flag	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)		0.0981	mg/L	1	0.100	98	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0914	mg/L	1	0.100	91	51.1 - 128

**Sample: 261723 - MW 11**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 79971  
Prep Batch: 67856

Analytical Method: S 8021B  
Date Analyzed: 2011-03-31  
Sample Preparation: 2011-03-31

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.104	mg/L	1	0.100	104	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0960	mg/L	1	0.100	96	51.1 - 128

**Sample: 261724 - MW 17**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 79971  
Prep Batch: 67856

Analytical Method: S 8021B  
Date Analyzed: 2011-03-31  
Sample Preparation: 2011-03-31

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.104	mg/L	1	0.00100
Toluene		0.00740	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		0.0236	mg/L	1	0.00100

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0923	mg/L	1	0.100	92	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0887	mg/L	1	0.100	89	51.1 - 128

**Sample: 261725 - MW 18**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 79971  
Prep Batch: 67856

Analytical Method: S 8021B  
Date Analyzed: 2011-03-31  
Sample Preparation: 2011-03-31

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.378	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		0.0293	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0923	mg/L	1	0.100	92	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0864	mg/L	1	0.100	86	51.1 - 128

**Sample: 261726 - MW 19**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 79971  
Prep Batch: 67856

Analytical Method: S 8021B  
Date Analyzed: 2011-03-31  
Sample Preparation: 2011-03-31

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.112	mg/L	1	0.00100
Toluene		0.00770	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		0.0239	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.103	mg/L	1	0.100	103	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.101	mg/L	1	0.100	101	51.1 - 128

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**Method Blank (1) QC Batch: 79971**

QC Batch: 79971  
Prep Batch: 67856

Date Analyzed: 2011-03-31  
QC Preparation: 2011-03-31

Analyzed By: ME  
Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.101	mg/L	1	0.100	101	70.2 - 118
4-Bromofluorobenzene (4-BFB)		0.0900	mg/L	1	0.100	90	47.3 - 116

**Method Blank (1) QC Batch: 80014**

QC Batch: 80014  
Prep Batch: 67885

Date Analyzed: 2011-04-02  
QC Preparation: 2011-04-01

Analyzed By: ME  
Prepared By: ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0820	mg/L	1	0.100	82	70.2 - 118
4-Bromofluorobenzene (4-BFB)		0.0831	mg/L	1	0.100	83	47.3 - 116

**Laboratory Control Spike (LCS-1)**

QC Batch: 79971  
Prep Batch: 67856

Date Analyzed: 2011-03-31  
QC Preparation: 2011-03-31

Analyzed By: ME  
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0936	mg/L	1	0.100	<0.000400	94	76.8 - 110
Toluene	0.0947	mg/L	1	0.100	<0.000300	95	81 - 108
Ethylbenzene	0.0982	mg/L	1	0.100	<0.000300	98	78.8 - 118

*continued ...*

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*control spikes continued . . .*

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Xylene	0.300	mg/L	1	0.300	<0.000333	100	80.3 - 119

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.	Rec. Limit	RPD Limit	
Benzene	0.0925	mg/L	1	0.100	<0.000400	92	76.8 - 110	1	20
Toluene	0.0948	mg/L	1	0.100	<0.000300	95	81 - 108	0	20
Ethylbenzene	0.103	mg/L	1	0.100	<0.000300	103	78.8 - 118	5	20
Xylene	0.310	mg/L	1	0.300	<0.000333	103	80.3 - 119	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)	0.0869	0.105	mg/L	1	0.100	87	105	66.6 - 114
4-Bromofluorobenzene (4-BFB)	0.0822	0.101	mg/L	1	0.100	82	101	68.2 - 124

#### Laboratory Control Spike (LCS-1)

QC Batch: 80014  
Prep Batch: 67885

Date Analyzed: 2011-04-02  
QC Preparation: 2011-04-01

Analyzed By: ME  
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Benzene	0.0889	mg/L	1	0.100	<0.000400	89	76.8 - 110
Toluene	0.0901	mg/L	1	0.100	<0.000300	90	81 - 108
Ethylbenzene	0.0961	mg/L	1	0.100	<0.000300	96	78.8 - 118
Xylene	0.291	mg/L	1	0.300	<0.000333	97	80.3 - 119

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.	Rec. Limit	RPD Limit	
Benzene	0.0894	mg/L	1	0.100	<0.000400	89	76.8 - 110	1	20
Toluene	0.0897	mg/L	1	0.100	<0.000300	90	81 - 108	0	20
Ethylbenzene	0.0981	mg/L	1	0.100	<0.000300	98	78.8 - 118	2	20
Xylene	0.294	mg/L	1	0.300	<0.000333	98	80.3 - 119	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0845	0.0854	mg/L	1	0.100	84	85	66.6 - 114
4-Bromofluorobenzene (4-BFB)	0.0907	0.0922	mg/L	1	0.100	91	92	68.2 - 124

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**Matrix Spike (MS-1) Spiked Sample: 261721**

QC Batch: 79971  
Prep Batch: 67856

Date Analyzed: 2011-03-31  
QC Preparation: 2011-03-31

Analyzed By: ME  
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	19.5	mg/L	100	10.0	11.5117	80	77.9 - 114
Toluene	10.2	mg/L	100	10.0	1.4091	88	78.3 - 111
Ethylbenzene	10.6	mg/L	100	10.0	0.7741	98	75.3 - 110
Xylene	31.3	mg/L	100	30.0	2.1336	97	75.7 - 109

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1 25.5	mg/L	100	10.0	11.5117	140	77.9 - 114	27	20
Toluene	2 13.2	mg/L	100	10.0	1.4091	118	78.3 - 111	26	20
Ethylbenzene	3 13.8	mg/L	100	10.0	0.7741	130	75.3 - 110	26	20
Xylene	4 41.1	mg/L	100	30.0	2.1336	130	75.7 - 109	27	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5 9.32	12.3	mg/L	100	10	93	123	68.3 - 107
4-Bromofluorobenzene (4-BFB)	9.46	12.6	mg/L	100	10	95	126	60.1 - 135

**Standard (CCV-2)**

QC Batch: 79971

Date Analyzed: 2011-03-31

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	0.0955	96	80 - 120	2011-03-31
Toluene		mg/L	0.100	0.0983	98	80 - 120	2011-03-31
Ethylbenzene		mg/L	0.100	0.105	105	80 - 120	2011-03-31
Xylene		mg/L	0.300	0.316	105	80 - 120	2011-03-31

**Standard (CCV-3)**

QC Batch: 79971

Date Analyzed: 2011-03-31

Analyzed By: ME

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

<sup>2</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

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

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

<sup>5</sup>High surrogate recovery due to peak interference.

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0960	96	80 - 120	2011-03-31
Toluene		mg/L	0.100	0.0972	97	80 - 120	2011-03-31
Ethylbenzene		mg/L	0.100	0.103	103	80 - 120	2011-03-31
Xylene		mg/L	0.300	0.313	104	80 - 120	2011-03-31

#### Standard (CCV-1)

QC Batch: 80014

Date Analyzed: 2011-04-02

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	0.0870	87	80 - 120	2011-04-02
Toluene		mg/L	0.100	0.0890	89	80 - 120	2011-04-02
Ethylbenzene		mg/L	0.100	0.0944	94	80 - 120	2011-04-02
Xylene		mg/L	0.300	0.290	97	80 - 120	2011-04-02

#### Standard (CCV-2)

QC Batch: 80014

Date Analyzed: 2011-04-02

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	0.0908	91	80 - 120	2011-04-02
Toluene		mg/L	0.100	0.0930	93	80 - 120	2011-04-02
Ethylbenzene		mg/L	0.100	0.101	101	80 - 120	2011-04-02
Xylene		mg/L	0.300	0.304	101	80 - 120	2011-04-02

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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Tel (972) 242-7750**

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST OBS COR	LAB USE ONLY	REMARKS:
<i>Bz Tax</i>	Talon CPE	3-29-11	0800	<i>Mitch Elliott</i>	TA	3-29-11	8:00	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<i>All tests-Midland</i>
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST OBS COR	Intact <input checked="" type="checkbox"/> Headspace <input checked="" type="checkbox"/>	<input type="checkbox"/> Dry Weight Basis Required <input type="checkbox"/> TRRP Report Required <input type="checkbox"/> Check If Special Reporting Limits Are Needed
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST OBS COR	Log-in Review <input type="checkbox"/>	<i>Carrie</i>

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

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

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## Summary Report

Steve Killingsworth  
 Talon LPE-Midland  
 2901 State Highway 349  
 Midland, TX 79706

Report Date: July 5, 2011

Work Order: 11062002



Project Location: Hobbs, NM  
 Project Name: Jal #2  
 Project Number: 700376.045.01  
 SRS #: 2002-10273

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
269863	MW-2	water	2011-06-16	12:15	2011-06-17
269864	MW-4	water	2011-06-16	12:45	2011-06-17
269865	MW-8	water	2011-06-16	13:25	2011-06-17
269866	MW-10	water	2011-06-16	12:00	2011-06-17
269867	MW-11	water	2011-06-16	12:20	2011-06-17
269868	MW-12	water	2011-06-16	12:39	2011-06-17
269869	MW-13	water	2011-06-16	13:15	2011-06-17
269870	MW-14	water	2011-06-16	14:30	2011-06-17
269871	MW-15	water	2011-06-16	14:20	2011-06-17
269872	MW-16	water	2011-06-16	14:10	2011-06-17
269873	MW-17	water	2011-06-16	11:45	2011-06-17
269874	MW-18	water	2011-06-14	13:55	2011-06-17
269875	MW-19	water	2011-06-14	13:30	2011-06-17
269876	MW-20	water	2011-06-14	12:48	2011-06-17
269877	MW-21	water	2011-06-14	12:20	2011-06-17

Sample - Field Code	BTEX			
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
269863 - MW-2	0.0170	0.0156	<0.00100	0.0193
269864 - MW-4	13.4	1.26	<0.200	<0.200
269865 - MW-8	16.1	1.92	0.875	<0.100
269866 - MW-10	<0.00100	<0.00100	<0.00100	<0.00100
269867 - MW-11	<0.00100	<0.00100	<0.00100	<0.00100
269868 - MW-12	0.0102	<0.00100	<0.00100	<0.00100
269869 - MW-13	15.1	<0.100	0.702	<0.100
269870 - MW-14	<0.00100	<0.00100	<0.00100	<0.00100
269871 - MW-15	<0.00100	<0.00100	<0.00100	<0.00100

*continued ...*

# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 806•378•1296 806•794•1296 FAX 806•794•1298  
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944  
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313  
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

Steve Killingsworth  
Talon LPE-Midland  
2901 State Highway 349  
Midland, TX, 79706

Report Date: July 5, 2011

Work Order: 11062002



Project Location: Hobbs, NM  
Project Name: Jal #2  
Project Number: 700376.045.01  
SRS #: 2002-10273

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
269863	MW-2	water	2011-06-16	12:15	2011-06-17
269864	MW-4	water	2011-06-16	12:45	2011-06-17
269865	MW-8	water	2011-06-16	13:25	2011-06-17
269866	MW-10	water	2011-06-16	12:00	2011-06-17
269867	MW-11	water	2011-06-16	12:20	2011-06-17
269868	MW-12	water	2011-06-16	12:39	2011-06-17
269869	MW-13	water	2011-06-16	13:15	2011-06-17
269870	MW-14	water	2011-06-16	14:30	2011-06-17
269871	MW-15	water	2011-06-16	14:20	2011-06-17

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
269872	MW-16	water	2011-06-16	14:10	2011-06-17
269873	MW-17	water	2011-06-16	11:45	2011-06-17
269874	MW-18	water	2011-06-14	13:55	2011-06-17
269875	MW-19	water	2011-06-14	13:30	2011-06-17
269876	MW-20	water	2011-06-14	12:48	2011-06-17
269877	MW-21	water	2011-06-14	12:20	2011-06-17

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

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




---

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

#### Standard Flags

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

## Case Narrative

Samples for project Jal #2 were received by TraceAnalysis, Inc. on 2011-06-17 and assigned to work order 11062002. Samples for work order 11062002 were received intact without headspace and at a temperature of 0.4 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	69994	2011-06-22 at 13:18	82425	2011-06-22 at 23:56
BTEX	S 8021B	70083	2011-06-24 at 15:14	82512	2011-06-24 at 18:30
PAH	S 8270D	70278	2011-06-23 at 15:00	82740	2011-07-05 at 10:32

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11062002 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: July 5, 2011  
700376.045.01

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Jal #2

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Hobbs, NM

## Analytical Report

Sample: 269863 - MW-2

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 82425  
Prep Batch: 69994

Analytical Method: S 8021B  
Date Analyzed: 2011-06-22  
Sample Preparation: 2011-06-22

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.0170	mg/L	1	0.00100
Toluene		0.0156	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		0.0193	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0859	mg/L	1	0.100	86	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0765	mg/L	1	0.100	76	51.1 - 128

Sample: 269864 - MW-4

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 82425  
Prep Batch: 69994

Analytical Method: S 8021B  
Date Analyzed: 2011-06-22  
Sample Preparation: 2011-06-22

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		13.4	mg/L	200	0.00100
Toluene		1.26	mg/L	200	0.00100
Ethylbenzene		<0.200	mg/L	200	0.00100
Xylene		<0.200	mg/L	200	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		15.7	mg/L	200	20.0	78	67.8 - 129
4-Bromofluorobenzene (4-BFB)		14.6	mg/L	200	20.0	73	51.1 - 128

Sample: 269864 - MW-4

Laboratory: Lubbock  
Analysis: PAH  
QC Batch: 82740  
Prep Batch: 70278

Analytical Method: S 8270D  
Date Analyzed: 2011-07-05  
Sample Preparation: 2011-06-23

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

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Parameter	Flag	Result	Units	Dilution	RL
Naphthalene		<b>0.00594</b>	mg/L	0.922	0.000200
2-Methylnaphthalene		<0.000184	mg/L	0.922	0.000200
1-Methylnaphthalene		<b>0.00846</b>	mg/L	0.922	0.000200
Acenaphthylene		<0.000184	mg/L	0.922	0.000200
Acenaphthene		<0.000184	mg/L	0.922	0.000200
Dibenzofuran		<0.000184	mg/L	0.922	0.000200
Fluorene		<0.000184	mg/L	0.922	0.000200
Anthracene		<0.000184	mg/L	0.922	0.000200
Phenanthrene		<0.000184	mg/L	0.922	0.000200
Fluoranthene		<0.000184	mg/L	0.922	0.000200
Pyrene		<0.000184	mg/L	0.922	0.000200
Benzo(a)anthracene		<0.000184	mg/L	0.922	0.000200
Chrysene		<0.000184	mg/L	0.922	0.000200
Benzo(b)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(k)fluoranthene		<0.000184	mg/L	0.922	0.000200
Benzo(a)pyrene		<0.000184	mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.922	0.000200
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.922	0.000200
Benzo(g,h,i)perylene		<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0330	mg/L	0.922	0.0800	41	10 - 111
2-Fluorobiphenyl		0.0345	mg/L	0.922	0.0800	43	10 - 92.7
Terphenyl-d14		0.0418	mg/L	0.922	0.0800	52	35.9 - 107

Sample: 269865 - MW-8

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 82425  
Prep Batch: 69994

Analytical Method: S 8021B  
Date Analyzed: 2011-06-22  
Sample Preparation: 2011-06-22

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<b>16.1</b>	mg/L	100	0.00100
Toluene		<b>1.92</b>	mg/L	100	0.00100
Ethylbenzene		<b>0.875</b>	mg/L	100	0.00100
Xylene		<0.100	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.46	mg/L	100	10.0	85	67.8 - 129
4-Bromofluorobenzene (4-BFB)		7.61	mg/L	100	10.0	76	51.1 - 128

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**Sample: 269866 - MW-10**

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2011-06-22	Analyzed By:	ME
QC Batch:	82425	Sample Preparation:	2011-06-22	Prepared By:	ME
Prep Batch:	69994				

Parameter	Flag	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)		0.0848	mg/L	1	0.100	85	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0768	mg/L	1	0.100	77	51.1 - 128

**Sample: 269867 - MW-11**

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2011-06-22	Analyzed By:	ME
QC Batch:	82425	Sample Preparation:	2011-06-22	Prepared By:	ME
Prep Batch:	69994				

Parameter	Flag	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)		0.0883	mg/L	1	0.100	88	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0783	mg/L	1	0.100	78	51.1 - 128

**Sample: 269868 - MW-12**

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2011-06-24	Analyzed By:	ME
QC Batch:	82512	Sample Preparation:	2011-06-24	Prepared By:	ME
Prep Batch:	70083				

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Parameter	Flag	Result	Units	Dilution	RL
Benzene		<b>0.0102</b>	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)		0.0885	mg/L	1	0.100	88	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0826	mg/L	1	0.100	83	51.1 - 128

**Sample: 269869 ~ MW-13**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 82512  
Prep Batch: 70083

Analytical Method: S 8021B  
Date Analyzed: 2011-06-24  
Sample Preparation: 2011-06-24

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<b>15.1</b>	mg/L	100	0.00100
Toluene		<0.100	mg/L	100	0.00100
Ethylbenzene		<b>0.702</b>	mg/L	100	0.00100
Xylene		<0.100	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.00	mg/L	100	10.0	80	67.8 - 129
4-Bromofluorobenzene (4-BFB)		7.47	mg/L	100	10.0	75	51.1 - 128

**Sample: 269870 ~ MW-14**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 82512  
Prep Batch: 70083

Analytical Method: S 8021B  
Date Analyzed: 2011-06-24  
Sample Preparation: 2011-06-24

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

Parameter	Flag	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

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Surrogate	Flag	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)		0.0786	mg/L	1	0.100	79	51.1 - 128

**Sample: 269871 - MW-15**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 82512  
Prep Batch: 70083

Analytical Method: S 8021B  
Date Analyzed: 2011-06-24  
Sample Preparation: 2011-06-24

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

Parameter	Flag	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)		0.0808	mg/L	1	0.100	81	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0749	mg/L	1	0.100	75	51.1 - 128

**Sample: 269872 - MW-16**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 82512  
Prep Batch: 70083

Analytical Method: S 8021B  
Date Analyzed: 2011-06-24  
Sample Preparation: 2011-06-24

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.0305	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)		0.0837	mg/L	1	0.100	84	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0776	mg/L	1	0.100	78	51.1 - 128

Report Date: July 5, 2011  
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**Sample: 269873 - MW-17**

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2011-06-24	Analyzed By:	ME
QC Batch:	82512	Sample Preparation:	2011-06-24	Prepared By:	ME
Prep Batch:	70083				

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<b>0.0545</b>	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<b>0.0193</b>	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0770	mg/L	1	0.100	77	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0708	mg/L	1	0.100	71	51.1 - 128

**Sample: 269874 - MW-18**

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2011-06-24	Analyzed By:	ME
QC Batch:	82512	Sample Preparation:	2011-06-24	Prepared By:	ME
Prep Batch:	70083				

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<b>0.415</b>	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<b>0.0281</b>	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0827	mg/L	1	0.100	83	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0766	mg/L	1	0.100	77	51.1 - 128

**Sample: 269875 - MW-19**

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2011-06-24	Analyzed By:	ME
QC Batch:	82512	Sample Preparation:	2011-06-24	Prepared By:	ME
Prep Batch:	70083				

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Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.117	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		0.0168	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0904	mg/L	1	0.100	90	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0809	mg/L	1	0.100	81	51.1 - 128

Sample: 269876 - MW-20

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 82512  
Prep Batch: 70083

Analytical Method: S 8021B  
Date Analyzed: 2011-06-24  
Sample Preparation: 2011-06-24

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

Parameter	Flag	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)		0.0775	mg/L	1	0.100	78	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0686	mg/L	1	0.100	69	51.1 - 128

Sample: 269877 - MW-21

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 82512  
Prep Batch: 70083

Analytical Method: S 8021B  
Date Analyzed: 2011-06-24  
Sample Preparation: 2011-06-24

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

Parameter	Flag	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

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0845	mg/L	1	0.100	84	67.8 - 129
4-Bromofluorobenzene (4-BFB)		0.0738	mg/L	1	0.100	74	51.1 - 128

Method Blank (1) QC Batch: 82425

QC Batch: 82425 Date Analyzed: 2011-06-22 Analyzed By: ME  
Prep Batch: 69994 QC Preparation: 2011-06-22 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)		0.0787	mg/L	1	0.100	79	70.2 - 118
4-Bromofluorobenzene (4-BFB)		0.0670	mg/L	1	0.100	67	47.3 - 116

Method Blank (1) QC Batch: 82512

QC Batch: 82512 Date Analyzed: 2011-06-24 Analyzed By: ME  
Prep Batch: 70083 QC Preparation: 2011-06-24 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)		0.0820	mg/L	1	0.100	82	70.2 - 118
4-Bromofluorobenzene (4-BFB)		0.0778	mg/L	1	0.100	78	47.3 - 116

Method Blank (1) QC Batch: 82740

QC Batch: 82740 Date Analyzed: 2011-07-05 Analyzed By: MN  
Prep Batch: 70278 QC Preparation: 2011-06-23 Prepared By: MN

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0693	mg/L	1	0.0800	87	10 - 111
2-Fluorobiphenyl		0.0528	mg/L	1	0.0800	66	10 - 92.7
Terphenyl-d14		0.0635	mg/L	1	0.0800	79	35.9 - 107

### Laboratory Control Spike (LCS-1)

QC Batch: 82425  
Prep Batch: 69994

Date Analyzed: 2011-06-22  
QC Preparation: 2011-06-22

Analyzed By: ME  
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Limit
Benzene	0.101	mg/L	1	0.100	<0.000400	101	76.8 - 110
Toluene	0.108	mg/L	1	0.100	<0.000300	108	81 - 118
Ethylbenzene	0.0912	mg/L	1	0.100	<0.000300	91	78.8 - 118
Xylene	0.272	mg/L	1	0.300	<0.000333	91	80.3 - 119

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

Param	LCSD		Spike		Matrix		Rec.		RPD
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.104	mg/L	1	0.100	<0.000400	104	76.8 - 110	3	20
Toluene	0.112	mg/L	1	0.100	<0.000300	112	81 - 118	4	20

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Param	LCSD		Spike		Matrix		Rec.		RPD
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Ethylbenzene	0.0960	mg/L	1	0.100	<0.000300	96	78.8 - 118	5	20
Xylene	0.286	mg/L	1	0.300	<0.000333	95	80.3 - 119	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0875	0.0800	mg/L	1	0.100	88	80	66.6 - 114
4-Bromofluorobenzene (4-BFB)	0.0828	0.0768	mg/L	1	0.100	83	77	68.2 - 124

## Laboratory Control Spike (LCS-1)

QC Batch: 82512  
Prep Batch: 70083

Date Analyzed: 2011-06-24  
QC Preparation: 2011-06-24

Analyzed By: ME  
Prepared By: ME

Param	LCS		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
	Result	Units					
Benzene	0.106	mg/L	1	0.100	<0.000400	106	76.8 - 110
Toluene	0.110	mg/L	1	0.100	<0.000300	110	81 - 118
Ethylbenzene	0.0926	mg/L	1	0.100	<0.000300	93	78.8 - 118
Xylene	0.277	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	LCSD		Spike		Matrix		Rec.		RPD	
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
Benzene	0.108	mg/L	1	0.100	<0.000400	108	76.8 - 110	2	20	
Toluene	0.112	mg/L	1	0.100	<0.000300	112	81 - 118	2	20	
Ethylbenzene	0.0938	mg/L	1	0.100	<0.000300	94	78.8 - 118	1	20	
Xylene	0.281	mg/L	1	0.300	<0.000333	94	80.3 - 119	1	20	

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0858	0.0830	mg/L	1	0.100	86	83	66.6 - 114
4-Bromofluorobenzene (4-BFB)	0.0898	0.0860	mg/L	1	0.100	90	86	68.2 - 124

### Laboratory Control Spike (LCS-1)

QC Batch: 82740  
Prep Batch: 70278

Date Analyzed: 2011-07-05  
QC Preparation: 2011-06-23

Analyzed By: MN  
Prepared By: MN

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene	0.0378	mg/L	1	0.0800	<0.0000904	47	32.2 - 80.3
2-Methylnaphthalene	0.0509	mg/L	1	0.0800	<0.000184	64	34.8 - 87
1-Methylnaphthalene	0.0496	mg/L	1	0.0800	<0.000120	62	36.9 - 89.6
Acenaphthylene	0.0454	mg/L	1	0.0800	<0.000101	57	35 - 93.2
Acenaphthene	0.0435	mg/L	1	0.0800	<0.000122	54	35.8 - 92.9
Dibenzofuran	0.0362	mg/L	1	0.0800	<0.000119	45	35.3 - 85.1
Fluorene	0.0483	mg/L	1	0.0800	<0.000198	60	43.4 - 101
Anthracene	0.0523	mg/L	1	0.0800	<0.000190	65	44.8 - 92.4
Phenanthrene	0.0498	mg/L	1	0.0800	<0.000190	62	44 - 93.7
Fluoranthene	0.0648	mg/L	1	0.0800	<0.000122	81	52.7 - 104
Pyrene	0.0600	mg/L	1	0.0800	<0.000142	75	42.2 - 93.8
Benzo(a)anthracene	0.0579	mg/L	1	0.0800	<0.000138	72	40.4 - 91.9
Chrysene	0.0575	mg/L	1	0.0800	<0.000155	72	44.4 - 107
Benzo(b)fluoranthene	0.0477	mg/L	1	0.0800	<0.000179	60	34.8 - 105
Benzo(k)fluoranthene	0.0539	mg/L	1	0.0800	<0.000185	67	50.2 - 158
Benzo(a)pyrene	0.0534	mg/L	1	0.0800	<0.000169	67	51.3 - 151
Indeno(1,2,3-cd)pyrene	0.0572	mg/L	1	0.0800	<0.000139	72	43.2 - 115
Dibenzo(a,h)anthracene	0.0539	mg/L	1	0.0800	<0.000107	67	43.9 - 115
Benzo(g,h,i)perylene	0.0576	mg/L	1	0.0800	<0.000143	72	45.1 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Naphthalene	0.0410	mg/L	1	0.0800	<0.0000904	51	32.2 - 80.3	8	20
2-Methylnaphthalene	0.0552	mg/L	1	0.0800	<0.000184	69	34.8 - 87	8	20
1-Methylnaphthalene	0.0526	mg/L	1	0.0800	<0.000120	66	36.9 - 89.6	6	20
Acenaphthylene	0.0454	mg/L	1	0.0800	<0.000101	57	35 - 93.2	0	20
Acenaphthene	0.0433	mg/L	1	0.0800	<0.000122	54	35.8 - 92.9	0	20
Dibenzofuran	0.0350	mg/L	1	0.0800	<0.000119	44	35.3 - 85.1	3	20
Fluorene	0.0479	mg/L	1	0.0800	<0.000198	60	43.4 - 101	1	20
Anthracene	0.0511	mg/L	1	0.0800	<0.000190	64	44.8 - 92.4	2	20
Phenanthrene	0.0507	mg/L	1	0.0800	<0.000190	63	44 - 93.7	2	20
Fluoranthene	0.0655	mg/L	1	0.0800	<0.000122	82	52.7 - 104	1	20
Pyrene	0.0599	mg/L	1	0.0800	<0.000142	75	42.2 - 93.8	0	20
Benzo(a)anthracene	0.0581	mg/L	1	0.0800	<0.000138	73	40.4 - 91.9	0	20
Chrysene	0.0592	mg/L	1	0.0800	<0.000155	74	44.4 - 107	3	20
Benzo(b)fluoranthene	0.0479	mg/L	1	0.0800	<0.000179	60	34.8 - 105	0	20
Benzo(k)fluoranthene	0.0561	mg/L	1	0.0800	<0.000185	70	50.2 - 158	4	20
Benzo(a)pyrene	0.0543	mg/L	1	0.0800	<0.000169	68	51.3 - 151	2	20
Indeno(1,2,3-cd)pyrene	0.0588	mg/L	1	0.0800	<0.000139	74	43.2 - 115	3	20
Dibenzo(a,h)anthracene	0.0554	mg/L	1	0.0800	<0.000107	69	43.9 - 115	3	20
Benzo(g,h,i)perylene	0.0580	mg/L	1	0.0800	<0.000143	72	45.1 - 115	1	20

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

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Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Nitrobenzene-d5	0.0465	0.0521	mg/L	1	0.0800	58	65	10 - 111
2-Fluorobiphenyl	0.0430	0.0445	mg/L	1	0.0800	54	56	10 - 92.7
Terphenyl-d14	0.0680	0.0683	mg/L	1	0.0800	85	85	35.9 - 107

Matrix Spike (MS-1) Spiked Sample: 269864

QC Batch: 82425 Date Analyzed: 2011-06-22 Analyzed By: ME  
Prep Batch: 69994 QC Preparation: 2011-06-22 Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	32.7	mg/L	200	20.0	13.3925	96	77.9 - 114
Toluene	21.5	mg/L	200	20.0	1.2613	101	78.3 - 111
Ethylbenzene	18.5	mg/L	200	20.0	<0.0600	92	75.3 - 110
Xylene	54.4	mg/L	200	60.0	<0.0666	91	75.7 - 109

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	RPD Limit	
Benzene	33.5	mg/L	200	20.0	13.3925	100	77.9 - 114	2	20
Toluene	22.2	mg/L	200	20.0	1.2613	105	78.3 - 111	3	20
Ethylbenzene	19.1	mg/L	200	20.0	<0.0600	96	75.3 - 110	3	20
Xylene	56.2	mg/L	200	60.0	<0.0666	94	75.7 - 109	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	15.8	17.0	mg/L	200	20	79	85	68.3 - 107
4-Bromofluorobenzene (4-BFB)	15.6	16.9	mg/L	200	20	78	84	60.1 - 135

Matrix Spike (MS-1) Spiked Sample: 269869

QC Batch: 82512 Date Analyzed: 2011-06-24 Analyzed By: ME  
Prep Batch: 70083 QC Preparation: 2011-06-24 Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	24.5	mg/L	100	10.0	15.0602	94	77.9 - 114
Toluene	10.8	mg/L	100	10.0	<0.0300	108	78.3 - 111
Ethylbenzene	9.03	mg/L	100	10.0	0.7019	83	75.3 - 110
Xylene	26.4	mg/L	100	30.0	<0.0333	88	75.7 - 109

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

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Param	MSD			Spike	Matrix	Rec.	RPD	RPD	
	Result	Units	Dil.	Amount	Result	Rec.			
Benzene	24.6	mg/L	100	10.0	15.0602	95	77.9 - 114	0	20
Toluene	10.9	mg/L	100	10.0	<0.0300	109	78.3 - 111	1	20
Ethylbenzene	9.07	mg/L	100	10.0	0.7019	84	75.3 - 110	0	20
Xylene	26.5	mg/L	100	30.0	<0.0333	88	75.7 - 109	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	7.80	8.31	mg/L	100	10	78	83	68.3 - 107
4-Bromofluorobenzene (4-BFB)	7.89	8.22	mg/L	100	10	79	82	60.1 - 135

### **Standard (CCV-2)**

QC Batch: 82425

Date Analyzed: 2011-06-22

Analyzed By: ME

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Benzene		mg/L	0.100	0.101	101	80 - 120	2011-06-22
Toluene		mg/L	0.100	0.110	110	80 - 120	2011-06-22
Ethylbenzene		mg/L	0.100	0.0920	92	80 - 120	2011-06-22
Xylene		mg/L	0.300	0.275	92	80 - 120	2011-06-22

### **Standard (CCV-3)**

QC Batch: 82425

Date Analyzed: 2011-06-22

Analyzed By: ME

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	Analyzed
Conc.	Conc.	Recovery	Limits				
Benzene		mg/L	0.100	0.104	104	80 - 120	2011-06-22
Toluene		mg/L	0.100	0.114	114	80 - 120	2011-06-22
Ethylbenzene		mg/L	0.100	0.0950	95	80 - 120	2011-06-22
Xylene		mg/L	0.300	0.287	96	80 - 120	2011-06-22

### Standard (CCV-1)

QC Batch: 82512

Date Analyzed: 2011-06-24

Analyzed By: ME

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Benzene		mg/L	0.100	0.111	111	80 - 120	2011-06-24

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Toluene		mg/L	0.100	0.116	116	80 - 120	2011-06-24
Ethylbenzene		mg/L	0.100	0.0956	96	80 - 120	2011-06-24
Xylene		mg/L	0.300	0.287	96	80 - 120	2011-06-24

### **Standard (CCV-2)**

QC Batch: 82512

Date Analyzed: 2011-06-24

Analyzed By: ME

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Conc.	Conc.	Recovery	Limits				
Benzene		mg/L	0.100	0.106	106	80 - 120	2011-06-24
Toluene		mg/L	0.100	0.108	108	80 - 120	2011-06-24
Ethylbenzene		mg/L	0.100	0.0901	90	80 - 120	2011-06-24
Xylene		mg/L	0.300	0.268	89	80 - 120	2011-06-24

### **Standard (CCV-3)**

QC Batch: 82512

Date Analyzed: 2011-06-24

Analyzed By: ME

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Benzene		mg/L	0.100	0.107	107	80 - 120	2011-06-24
Toluene		mg/L	0.100	0.110	110	80 - 120	2011-06-24
Ethylbenzene		mg/L	0.100	0.0925	92	80 - 120	2011-06-24
Xylene		mg/L	0.300	0.276	92	80 - 120	2011-06-24

### **Standard (CCV-1)**

QC Batch: 82740

Date Analyzed: 2011-07-05

Analyzed By: MN

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Naphthalene		mg/L	60.0	56.0	93	80 - 120	2011-07-05
2-Methylnaphthalene		mg/L	60.0	62.2	104	80 - 120	2011-07-05
1-Methylnaphthalene		mg/L	60.0	59.4	99	80 - 120	2011-07-05
Acenaphthylene		mg/L	60.0	56.0	93	80 - 120	2011-07-05
Acenaphthene		mg/L	60.0	54.6	91	80 - 120	2011-07-05
Dibenzofuran		mg/L	60.0	56.5	94	80 - 120	2011-07-05

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Fluorene		mg/L	60.0	54.8	91	80 - 120	2011-07-05
Anthracene		mg/L	60.0	52.3	87	80 - 120	2011-07-05
Phenanthrene		mg/L	60.0	52.6	88	80 - 120	2011-07-05
Fluoranthene		mg/L	60.0	62.4	104	80 - 120	2011-07-05
Pyrene		mg/L	60.0	57.4	96	80 - 120	2011-07-05
Benzo(a)anthracene		mg/L	60.0	54.9	92	80 - 120	2011-07-05
Chrysene		mg/L	60.0	56.7	94	80 - 120	2011-07-05
Benzo(b)fluoranthene		mg/L	60.0	55.6	93	80 - 120	2011-07-05
Benzo(k)fluoranthene		mg/L	60.0	58.3	97	80 - 120	2011-07-05
Benzo(a)pyrene		mg/L	60.0	59.0	98	80 - 120	2011-07-05
Indeno(1,2,3-cd)pyrene		mg/L	60.0	58.4	97	80 - 120	2011-07-05
Dibenzo(a,h)anthracene		mg/L	60.0	60.5	101	80 - 120	2011-07-05
Benzo(g,h,i)perylene		mg/L	60.0	60.6	101	80 - 120	2011-07-05

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		72.0	mg/L	1	60.0	120	80 - 120
2-Fluorobiphenyl		61.6	mg/L	1	60.0	103	80 - 120
Terphenyl-d14		58.0	mg/L	1	60.0	97	80 - 120

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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:	Talon LPE	Phone #:	
Address:	2901 State Hwy 349	Fax #:	
Contact Person:	Steve K. Ellsworth	E-mail:	SK.Ellsworth@TalonLPE.com
Invoice to: (If different from above)	2002-10273	Project Name:	Sal #2
Project #:	700376.045.01	Sampler Signature:	Brad Stoy
Project Location (including state):	Hobbs / NM		

**ANALYSIS REQUEST**  
 (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX			PRESERVATIVE METHOD			SAMPLING		DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO4, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO3	H2SO4	NaOH	ICE	NONE																					
29863	MW2	3	4oz X		X			X			X			6-16-11	1215	X																		
864	MW4	4	4oz 1/4oz													1245		X																
865	MW8	3	4oz													1325																		
866	MW10	1														1200																		
867	MW11															1220																		
868	MW12															1230																		
869	MW13															1315																		
870	MW14															1430																		
871	MW15															1420																		
872	MW16															1410																		
873	MW17															1145																		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST _____ OBS _____ °C COR _____ °C	LAB USE ONLY	REMARKS:
<i>Bradley Talon</i>		6-17-11	1645	<i>J/A</i>		6/17/11	16:45	<i>Intraday</i> <input checked="" type="checkbox"/> <i>Headspace Y/N</i> <input type="checkbox"/>		
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		

- 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 # *Canyon*

ORIGINAL COPY



... continued

Sample - Field Code	BTEX			
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
269872 - MW-16	0.0305	<0.00100	<0.00100	<0.00100
269873 - MW-17	0.0545	<0.00100	<0.00100	0.0193
269874 - MW-18	0.415	<0.00100	<0.00100	0.0281
269875 - MW-19	0.117	<0.00100	<0.00100	0.0168
269876 - MW-20	<0.00100	<0.00100	<0.00100	<0.00100
269877 - MW-21	<0.00100	<0.00100	<0.00100	<0.00100

**Sample: 269864 - MW-4**

Param	Flag	Result	Units	RL
Naphthalene		0.00594	mg/L	0.0002
2-Methylnaphthalene		<0.000184	mg/L	0.0002
1-Methylnaphthalene		0.00846	mg/L	0.0002
Acenaphthylene		<0.000184	mg/L	0.0002
Acenaphthene		<0.000184	mg/L	0.0002
Dibenzofuran		<0.000184	mg/L	0.0002
Fluorene		<0.000184	mg/L	0.0002
Anthracene		<0.000184	mg/L	0.0002
Phenanthrene		<0.000184	mg/L	0.0002
Fluoranthene		<0.000184	mg/L	0.0002
Pyrene		<0.000184	mg/L	0.0002
Benzo(a)anthracene		<0.000184	mg/L	0.0002
Chrysene		<0.000184	mg/L	0.0002
Benzo(b)fluoranthene		<0.000184	mg/L	0.0002
Benzo(k)fluoranthene		<0.000184	mg/L	0.0002
Benzo(a)pyrene		<0.000184	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.000184	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.000184	mg/L	0.0002
Benzo(g,h,i)perylene		<0.000184	mg/L	0.0002

## Summary Report

Steve Killingsworth  
 Talon LPE-Midland  
 2901 State Highway 349  
 Midland, TX 79706

Report Date: September 20, 2011

Work Order: 11091630



Project Location: Hobbs, NM  
 Project Name: Jal #2  
 Project Number: 700376.045.01  
 SRS #: 2002-10273

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
277560	MW-2	water	2011-09-14	13:15	2011-09-16
277561	MW-4	water	2011-09-14	13:55	2011-09-16
277562	MW-10	water	2011-09-14	13:00	2011-09-16
277563	MW-17	water	2011-09-14	14:20	2011-09-16

Sample - Field Code	BTEX				Total BTEX (mg/L)
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)	
277560 - MW-2	0.00530	0.00710	<0.00100 qr	0.00410	0.0165
277561 - MW-4	2.36	<0.0500	<0.0500 qr	0.0849	2.44
277562 - MW-10	<0.00100	<0.00100	<0.00100 qr	<0.00100	<0.00600
277563 - MW-17	0.0121	<0.00100	<0.00100 qr	0.00410	0.0170

# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 806•378•1296 806•794•1296 FAX 806•794•1298  
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944  
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313  
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

Steve Killingsworth  
Talon LPE-Midland  
2901 State Highway 349  
Midland, TX, 79706

Report Date: September 20, 2011

Work Order: 11091630



Project Location: Hobbs, NM  
Project Name: Jal #2  
Project Number: 700376.045.01  
SRS #: 2002-10273

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
277560	MW-2	water	2011-09-14	13:15	2011-09-16
277561	MW-4	water	2011-09-14	13:55	2011-09-16
277562	MW-10	water	2011-09-14	13:00	2011-09-16
277563	MW-17	water	2011-09-14	14:20	2011-09-16

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

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Blair Leftwich

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

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## Case Narrative

Samples for project Jal #2 were received by TraceAnalysis, Inc. on 2011-09-16 and assigned to work order 11091630. Samples for work order 11091630 were received intact without headspace and at a temperature of 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	71989	2011-09-16 at 13:54	84773	2011-09-16 at 13:54
Total BTEX	S 8021B	71989	2011-09-16 at 13:54	84773	2011-09-16 at 13:54

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 11091630 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: September 20, 2011  
700376.045.01

Work Order: 11091630  
Jal #2

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Hobbs, NM

## Analytical Report

### Sample: 277560 - MW-2

Laboratory: Lubbock  
Analysis: BTEX, Total BTEX  
QC Batch: 84773  
Prep Batch: 71989

Analytical Method: S 8021B  
Date Analyzed: 2011-09-16  
Sample Preparation: 2011-09-16

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

Parameter	Flag	Cert	Result	RL		Dilution	RL
				Units	Dilution		
Benzene		1	0.00530	mg/L		1	0.00100
Toluene		1	0.00710	mg/L		1	0.00100
Ethylbenzene	Q,r,u	1	<0.00100	mg/L		1	0.00100
Xylene		1	0.00410	mg/L		1	0.00100
Total BTEX			0.0165	mg/L		1	0.00600

Surrogate	Flag	Cert	Result	Units	Dilution	Spike	Percent Recovery	Recovery Limits
						Amount		
Trifluorotoluene (TFT)			0.112	mg/L	1	0.100	112	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0880	mg/L	1	0.100	88	70 - 130

### Sample: 277561 - MW-4

Laboratory: Lubbock  
Analysis: BTEX, Total BTEX  
QC Batch: 84773  
Prep Batch: 71989

Analytical Method: S 8021B  
Date Analyzed: 2011-09-16  
Sample Preparation: 2011-09-16

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

Parameter	Flag	Cert	Result	RL		Dilution	RL
				Units	Dilution		
Benzene		1	2.36	mg/L		50	0.00100
Toluene	u	1	<0.0500	mg/L		50	0.00100
Ethylbenzene	Q,r,u	1	<0.0500	mg/L		50	0.00100
Xylene		1	0.0849	mg/L		50	0.00100
Total BTEX			2.44	mg/L		50	0.00600

Surrogate	Flag	Cert	Result	Units	Dilution	Spike	Percent Recovery	Recovery Limits
						Amount		
Trifluorotoluene (TFT)			5.24	mg/L	50	5.00	105	70 - 130
4-Bromofluorobenzene (4-BFB)			4.88	mg/L	50	5.00	98	70 - 130

Report Date: September 20, 2011  
700376.045.01

Work Order: 11091630  
Jal #2

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**Sample: 277562 - MW-10**

Laboratory: Lubbock  
Analysis: BTEX, Total BTEX  
QC Batch: 84773  
Prep Batch: 71989

Analytical Method: S 8021B  
Date Analyzed: 2011-09-16  
Sample Preparation: 2011-09-16

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

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Benzene	U	1	<0.00100	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Q,r,U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100
Total BTEX			<0.00600	mg/L	1	0.00600

Surrogate	Flag	Cert	Result	Units	Dilution	Spike	Percent	Recovery
						Amount	Recovery	Limits
Trifluorotoluene (TFT)			0.108	mg/L	1	0.100	108	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0989	mg/L	1	0.100	99	70 - 130

**Sample: 277563 - MW-17**

Laboratory: Lubbock  
Analysis: BTEX, Total BTEX  
QC Batch: 84773  
Prep Batch: 71989

Analytical Method: S 8021B  
Date Analyzed: 2011-09-16  
Sample Preparation: 2011-09-16

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

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Benzene		1	0.0121	mg/L	1	0.00100
Toluene	J	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	Q,r,U	1	<0.00100	mg/L	1	0.00100
Xylene		1	0.00410	mg/L	1	0.00100
Total BTEX			0.0170	mg/L	1	0.00600

Surrogate	Flag	Cert	Result	Units	Dilution	Spike	Percent	Recovery
						Amount	Recovery	Limits
Trifluorotoluene (TFT)			0.129	mg/L	1	0.100	129	70 - 130
4-Bromofluorobenzene (4-BFB)			0.102	mg/L	1	0.100	102	70 - 130

Report Date: September 20, 2011  
700376.045.01

Work Order: 11091630  
Jal #2

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Hobbs, NM

## Method Blanks

Method Blank (1) QC Batch: 84773

QC Batch: 84773  
Prep Batch: 71989

Date Analyzed: 2011-09-16  
QC Preparation: 2011-09-16

Analyzed By: ZLM  
Prepared By: ZLM

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)			0.112	mg/L	1	0.100	112	70 - 130
4-Bromofluorobenzene (4-BFB)			0.101	mg/L	1	0.100	101	70 - 130

Report Date: September 20, 2011  
700376.045.01

Work Order: 11091630  
Jal #2

Page Number: 8 of 11  
Hobbs, NM

## Laboratory Control Spikes

### Laboratory Control Spike (LCS-1)

QC Batch: 84773  
Prep Batch: 71989

Date Analyzed: 2011-09-16  
QC Preparation: 2011-09-16

Analyzed By: ZLM  
Prepared By: ZLM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit
Benzene		1	0.0925	mg/L	1	0.100	<0.000765	92	70 - 130
Toluene		1	0.110	mg/L	1	0.100	<0.000719	110	70 - 130
Ethylbenzene		1	0.109	mg/L	1	0.100	<0.000860	109	70 - 130
Xylene		1	0.318	mg/L	1	0.300	<0.000942	106	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.	RPD	Limit	
Benzene		1	0.0916	mg/L	1	0.100	<0.000765	92	70 - 130	1	20
Toluene		1	0.0985	mg/L	1	0.100	<0.000719	98	70 - 130	11	20
Ethylbenzene		1	0.101	mg/L	1	0.100	<0.000860	101	70 - 130	8	20
Xylene		1	0.296	mg/L	1	0.300	<0.000942	98	70 - 130	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)		0.104	0.103	mg/L	1	0.100	104	103	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0970	0.0969	mg/L	1	0.100	97	97	70 - 130

### Matrix Spike (MS-1) Spiked Sample: 277563

QC Batch: 84773  
Prep Batch: 71989

Date Analyzed: 2011-09-16  
QC Preparation: 2011-09-16

Analyzed By: ZLM  
Prepared By: ZLM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit
Benzene		1	0.0972	mg/L	1	0.100	<0.000765	97	70 - 130
Toluene		1	0.0906	mg/L	1	0.100	<0.000719	91	70 - 130
Ethylbenzene		1	0.0889	mg/L	1	0.100	<0.000860	89	70 - 130
Xylene		1	0.265	mg/L	1	0.300	<0.000942	88	70 - 130

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

Report Date: September 20, 2011  
700376.045.01

Work Order: 11091630  
Jal #2

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Hobbs, NM

Param	F	C	MSD 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	8	20
Toluene		1	0.109	mg/L	1	0.100	<0.000719	109	70 - 130	18	20
Ethylbenzene		Q <sub>r</sub>	0.109	mg/L	1	0.100	<0.000860	109	70 - 130	20	20
Xylene		1	0.322	mg/L	1	0.300	<0.000942	107	70 - 130	19	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)	0.0938	0.126	mg/L	1	0.1	94	126	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0940	0.0977	mg/L	1	0.1	94	98	70 - 130

Report Date: September 20, 2011  
700376.045.01

Work Order: 11091630  
Jal #2

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Hobbs, NM

## Calibration Standards

### Standard (CCV-1)

				Date Analyzed:	2011-09-16	Analyzed By:	ZLM	
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene	1		mg/L	0.100	0.0890	89	80 - 120	2011-09-16
Toluene	1		mg/L	0.100	0.106	106	80 - 120	2011-09-16
Ethylbenzene	1		mg/L	0.100	0.108	108	80 - 120	2011-09-16
Xylene	1		mg/L	0.300	0.310	103	80 - 120	2011-09-16

### Standard (CCV-2)

				Date Analyzed:	2011-09-16	Analyzed By:	ZLM	
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene	1		mg/L	0.100	0.0955	96	80 - 120	2011-09-16
Toluene	1		mg/L	0.100	0.108	108	80 - 120	2011-09-16
Ethylbenzene	1		mg/L	0.100	0.106	106	80 - 120	2011-09-16
Xylene	1		mg/L	0.300	0.311	104	80 - 120	2011-09-16

## 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	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 than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

### Attachments

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



## Summary Report

Steve Killingsworth  
 Talon LPE-Midland  
 2901 State Highway 349  
 Midland, TX 79706

Report Date: September 20, 2011

Work Order: 11091413



Project Location: Hobbs, NM  
 Project Name: Jal #2  
 Project Number: 700376.045.01  
 SRS #: 2002-10273

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
276997	MW-8	water	2011-09-12	14:00	2011-09-14
276998	MW-11	water	2011-09-13	09:45	2011-09-14
276999	MW-12	water	2011-09-12	13:15	2011-09-14
277000	MW-13	water	2011-09-12	13:30	2011-09-14
277001	MW-14	water	2011-09-12	13:00	2011-09-14
277002	MW-15	water	2011-09-12	12:45	2011-09-14
277003	MW-16	water	2011-09-12	12:30	2011-09-14
277004	MW-18	water	2011-09-13	11:00	2011-09-14
277005	MW-19	water	2011-09-13	10:45	2011-09-14
277006	MW-20	water	2011-09-13	11:20	2011-09-14
277007	MW-21	water	2011-09-13	14:45	2011-09-14

Sample - Field Code	BTEX				Total BTEX (mg/L)
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)	
276997 - MW-8	15.8	0.542 qs	0.467	0.166	17.0
276998 - MW-11	<0.00100	<0.00100 qs	<0.00100	<0.00100	<0.00600
276999 - MW-12	0.00140	<0.00100 qs	<0.00100	<0.00100	<0.00600
277000 - MW-13	23.1	<0.100 qs	0.537	0.445	24.1
277001 - MW-14	<0.00100	<0.00100 qs	<0.00100	<0.00100	<0.00600
277002 - MW-15	<0.00100	<0.00100 qs	<0.00100	<0.00100	<0.00600
277003 - MW-16	0.0355	<0.00100 qs	<0.00100	<0.00100	0.0355
277004 - MW-18	0.538	<0.0500 qs	<0.0500	<0.0500	0.538
277005 - MW-19	0.0906	<0.00100 qs	<0.00100	0.00890	0.0995
277006 - MW-20	<0.00100	<0.00100 qs	<0.00100	<0.00100	<0.00600
277007 - MW-21	<0.00100	<0.00100 qs	<0.00100	<0.00100	<0.00600

Sample: 276997 - MW-8

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Param	Flag	Result	Units	RL
MTBE		<0.0500	mg/L	0.001

**Sample: 276998 - MW-11**

Param	Flag	Result	Units	RL
MTBE		<0.00100	mg/L	0.001

**Sample: 276999 - MW-12**

Param	Flag	Result	Units	RL
MTBE		<0.00100	mg/L	0.001

**Sample: 277000 - MW-13**

Param	Flag	Result	Units	RL
MTBE		<0.100	mg/L	0.001

**Sample: 277001 - MW-14**

Param	Flag	Result	Units	RL
MTBE		<0.00100	mg/L	0.001

**Sample: 277002 - MW-15**

Param	Flag	Result	Units	RL
MTBE		<0.00100	mg/L	0.001

**Sample: 277003 - MW-16**

Param	Flag	Result	Units	RL
MTBE		<0.00100	mg/L	0.001

**Sample: 277004 - MW-18**

Param	Flag	Result	Units	RL
MTBE		<0.0500	mg/L	0.001

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**Sample: 277005 - MW-19**

Param	Flag	Result	Units	RL
MTBE		0.0115	mg/L	0.001

**Sample: 277006 - MW-20**

Param	Flag	Result	Units	RL
MTBE		<0.00100	mg/L	0.001

**Sample: 277007 - MW-21**

Param	Flag	Result	Units	RL
MTBE		<0.00100	mg/L	0.001

# TRACEANALYSIS, INC.

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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

Steve Killingsworth  
Talon LPE-Midland  
2901 State Highway 349  
Midland, TX, 79706

Report Date: September 20, 2011

Work Order: 11091413



Project Location: Hobbs, NM  
Project Name: Jal #2  
Project Number: 700376.045.01  
SRS #: 2002-10273

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
276997	MW-8	water	2011-09-12	14:00	2011-09-14
276998	MW-11	water	2011-09-13	09:45	2011-09-14
276999	MW-12	water	2011-09-12	13:15	2011-09-14
277000	MW-13	water	2011-09-12	13:30	2011-09-14
277001	MW-14	water	2011-09-12	13:00	2011-09-14
277002	MW-15	water	2011-09-12	12:45	2011-09-14
277003	MW-16	water	2011-09-12	12:30	2011-09-14
277004	MW-18	water	2011-09-13	11:00	2011-09-14
277005	MW-19	water	2011-09-13	10:45	2011-09-14

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
277006	MW-20	water	2011-09-13	11:20	2011-09-14
277007	MW-21	water	2011-09-13	14:45	2011-09-14

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

This report consists of a total of 15 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.




---

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

#### Standard Flags

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

## Case Narrative

Samples for project Jal #2 were received by TraceAnalysis, Inc. on 2011-09-14 and assigned to work order 11091413. Samples for work order 11091413 were received intact without headspace and at a temperature of 3.4 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	71966	2011-09-15 at 08:56	84748	2011-09-15 at 08:56
MTBE	S 8021B	71966	2011-09-15 at 08:56	84748	2011-09-15 at 08:56
Total BTEX	S 8021B	71966	2011-09-15 at 08:56	84748	2011-09-15 at 08:56

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 11091413 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.

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## Analytical Report

Sample: 276997 - MW-8

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX, Total BTEX	Date Analyzed:	2011-09-15	Analyzed By:	MT
QC Batch:	84748	Sample Preparation:	2011-09-15	Prepared By:	MT
Prep Batch:	71966				

Parameter	Flag	Result	Units	Dilution	RL
Benzene		15.8	mg/L	50	0.00100
Toluene		0.542	mg/L	50	0.00100
Ethylbenzene		0.467	mg/L	50	0.00100
Xylene		0.166	mg/L	50	0.00100
Total BTEX		17.0	mg/L	50	0.00600

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.54	mg/L	50	5.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)		4.81	mg/L	50	5.00	96	70 - 130

Sample: 276997 - MW-8

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	MTBE	Date Analyzed:	2011-09-15	Analyzed By:	MT
QC Batch:	84748	Sample Preparation:	2011-09-15	Prepared By:	MT
Prep Batch:	71966				

Parameter	Flag	Result	Units	Dilution	RL
MTBE		<0.0500	mg/L	50	0.00100

Sample: 276998 - MW-11

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX, Total BTEX	Date Analyzed:	2011-09-15	Analyzed By:	MT
QC Batch:	84748	Sample Preparation:	2011-09-15	Prepared By:	MT
Prep Batch:	71966				

Parameter	Flag	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

*continued ...*

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sample 276998 continued ...

Parameter	Flag	Result	Units	Dilution	RL		
Xylene		<0.00100	mg/L	1	0.00100		
Total BTEX		<0.00600	mg/L	1	0.00600		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.114	mg/L	1	0.100	114	70 - 130
4-Bromofluorobenzene (4-BFB)		0.107	mg/L	1	0.100	107	70 - 130

Sample: 276998 - MW-11

Laboratory: Lubbock  
Analysis: MTBE  
QC Batch: 84748  
Prep Batch: 71966

Analytical Method: S 8021B  
Date Analyzed: 2011-09-15  
Sample Preparation: 2011-09-15

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

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

Sample: 276999 - MW-12

Laboratory: Lubbock  
Analysis: BTEX, Total BTEX  
QC Batch: 84748  
Prep Batch: 71966

Analytical Method: S 8021B  
Date Analyzed: 2011-09-15  
Sample Preparation: 2011-09-15

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.00140	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
Total BTEX		<0.00600	mg/L	1	0.00600

Surrogate	Flag	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)		0.100	mg/L	1	0.100	100	70 - 130

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**Sample: 276999 - MW-12**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	MTBE	Date Analyzed:	2011-09-15	Analyzed By:	MT
QC Batch:	84748	Sample Preparation:	2011-09-15	Prepared By:	MT
Prep Batch:	71966				

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

**Sample: 277000 - MW-13**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX, Total BTEX	Date Analyzed:	2011-09-15	Analyzed By:	MT
QC Batch:	84748	Sample Preparation:	2011-09-15	Prepared By:	MT
Prep Batch:	71966				

Parameter	Flag	Result	Units	Dilution	RL
Benzene		23.1	mg/L	100	0.00100
Toluene		<0.100	mg/L	100	0.00100
Ethylbenzene		0.537	mg/L	100	0.00100
Xylene		0.445	mg/L	100	0.00100
Total BTEX		24.1	mg/L	100	0.00600

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		9.84	mg/L	100	10.0	98	70 - 130
4-Bromofluorobenzene (4-BFB)		10.0	mg/L	100	10.0	100	70 - 130

**Sample: 277000 - MW-13**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	MTBE	Date Analyzed:	2011-09-15	Analyzed By:	MT
QC Batch:	84748	Sample Preparation:	2011-09-15	Prepared By:	MT
Prep Batch:	71966				

Parameter	Flag	Result	Units	Dilution	RL
MTBE		<0.100	mg/L	100	0.00100

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**Sample: 277001 - MW-14**

Laboratory: Lubbock  
Analysis: BTEX, Total BTEX  
QC Batch: 84748  
Prep Batch: 71966

Analytical Method: S 8021B  
Date Analyzed: 2011-09-15  
Sample Preparation: 2011-09-15

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

Parameter	Flag	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
Total BTEX		<0.00600	mg/L	1	0.00600

Surrogate	Flag	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)		0.104	mg/L	1	0.100	104	70 - 130

**Sample: 277001 - MW-14**

Laboratory: Lubbock  
Analysis: MTBE  
QC Batch: 84748  
Prep Batch: 71966

Analytical Method: S 8021B  
Date Analyzed: 2011-09-15  
Sample Preparation: 2011-09-15

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

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

**Sample: 277002 - MW-15**

Laboratory: Lubbock  
Analysis: BTEX, Total BTEX  
QC Batch: 84748  
Prep Batch: 71966

Analytical Method: S 8021B  
Date Analyzed: 2011-09-15  
Sample Preparation: 2011-09-15

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

Parameter	Flag	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
Total BTEX		<0.00600	mg/L	1	0.00600



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

**Sample: 277004 - MW-18**

Laboratory: Lubbock  
Analysis: BTEX, Total BTEX  
QC Batch: 84748  
Prep Batch: 71966

Analytical Method: S 8021B  
Date Analyzed: 2011-09-15  
Sample Preparation: 2011-09-15

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.538	mg/L	50	0.00100
Toluene		<0.0500	mg/L	50	0.00100
Ethylbenzene		<0.0500	mg/L	50	0.00100
Xylene		<0.0500	mg/L	50	0.00100
Total BTEX		0.538	mg/L	50	0.00600

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.21	mg/L	50	5.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)		5.05	mg/L	50	5.00	101	70 - 130

**Sample: 277004 - MW-18**

Laboratory: Lubbock  
Analysis: MTBE  
QC Batch: 84748  
Prep Batch: 71966

Analytical Method: S 8021B  
Date Analyzed: 2011-09-15  
Sample Preparation: 2011-09-15

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

Parameter	Flag	Result	Units	Dilution	RL
MTBE		<0.0500	mg/L	50	0.00100

**Sample: 277005 - MW-19**

Laboratory: Lubbock  
Analysis: BTEX, Total BTEX  
QC Batch: 84748  
Prep Batch: 71966

Analytical Method: S 8021B  
Date Analyzed: 2011-09-15  
Sample Preparation: 2011-09-15

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

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Parameter	Flag	Result	Units	Dilution	RL
Benzene		<b>0.0906</b>	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<b>0.00890</b>	mg/L	1	0.00100
Total BTEX		<b>0.0995</b>	mg/L	1	0.00600

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0971	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0991	mg/L	1	0.100	99	70 - 130

Sample: 277005 - MW-19

Laboratory: Lubbock

Analysis: MTBE

QC Batch: 84748

Prep Batch: 71966

Analytical Method: S 8021B

Date Analyzed: 2011-09-15

Sample Preparation: 2011-09-15

Prep Method: S 5030B

Analyzed By: MT

Prepared By: MT

Parameter	Flag	Result	Units	Dilution	RL
MTBE		0.0115	mg/L	1	0.00100

Sample: 277006 - MW-20

Laboratory: Lubbock

Analysis: BTEX, T

QC Batch: 84748

Prep Batch: 71966

Analytical Method: S 8021B

Date Analyzed: 2011-09-15

Sample Preparation: 2011-09-15

Prep Method: S 5030B

Analyzed By: MT

Prepared By: MT

Parameter	Flag	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
Total BTEX		≤0.00600	mg/L	1	0.00600

Surrogate	Flag	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)		0.0970	mg/L	1	0.100	97	70 - 130

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**Sample: 277006 - MW-20**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	MTBE	Date Analyzed:	2011-09-15	Analyzed By:	MT
QC Batch:	84748	Sample Preparation:	2011-09-15	Prepared By:	MT
Prep Batch:	71966				

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

**Sample: 277007 - MW-21**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX, Total BTEX	Date Analyzed:	2011-09-15	Analyzed By:	MT
QC Batch:	84748	Sample Preparation:	2011-09-15	Prepared By:	MT
Prep Batch:	71966				

Parameter	Flag	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
Total BTEX		<0.00600	mg/L	1	0.00600

Surrogate	Flag	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)		0.0986	mg/L	1	0.100	99	70 - 130

**Sample: 277007 - MW-21**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	MTBE	Date Analyzed:	2011-09-15	Analyzed By:	MT
QC Batch:	84748	Sample Preparation:	2011-09-15	Prepared By:	MT
Prep Batch:	71966				

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

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**Method Blank (1) QC Batch: 84748**

QC Batch: 84748  
Prep Batch: 71966

Date Analyzed: 2011-09-15  
QC Preparation: 2011-09-15

Analyzed By: MT  
Prepared By: MT

Parameter	Flag	MDL Result	Units	RL
MTBE		<0.000719	mg/L	0.001

**Method Blank (1) QC Batch: 84748**

QC Batch: 84748  
Prep Batch: 71966

Date Analyzed: 2011-09-15  
QC Preparation: 2011-09-15

Analyzed By: MT  
Prepared By: MT

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

Surrogate	Flag	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)		0.106	mg/L	1	0.100	106	70 - 130

**Laboratory Control Spike (LCS-1)**

QC Batch: 84748  
Prep Batch: 71966

Date Analyzed: 2011-09-15  
QC Preparation: 2011-09-15

Analyzed By: MT  
Prepared By: MT

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE	0.103	mg/L	1	0.100	<0.000719	103	70 - 130

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
MTBE	0.101	mg/L	1	0.100	<0.000719	101	70 - 130	2	20

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

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### Laboratory Control Spike (LCS-1)

QC Batch: 84748  
Prep Batch: 71966

Date Analyzed: 2011-09-15  
QC Preparation: 2011-09-15

Analyzed By: MT  
Prepared By: MT

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0998	mg/L	1	0.100	<0.000765	100	70 - 130
Toluene	0.0993	mg/L	1	0.100	<0.000719	99	70 - 130
Ethylbenzene	0.102	mg/L	1	0.100	<0.000860	102	70 - 130
Xylene	0.302	mg/L	1	0.300	<0.000942	101	70 - 130

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0968	mg/L	1	0.100	<0.000765	97	70 - 130	3	20
Toluene	0.0996	mg/L	1	0.100	<0.000719	100	70 - 130	0	20
Ethylbenzene	0.104	mg/L	1	0.100	<0.000860	104	70 - 130	2	20
Xylene	0.307	mg/L	1	0.300	<0.000942	102	70 - 130	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.104	0.0918	mg/L	1	0.100	104	92	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0987	0.0889	mg/L	1	0.100	99	89	70 - 130

### Matrix Spike (MS-1) Spiked Sample: 276974

QC Batch: 84748  
Prep Batch: 71966

Date Analyzed: 2011-09-15  
QC Preparation: 2011-09-15

Analyzed By: MT  
Prepared By: MT

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE	5.98	mg/L	50	5.00	1.03	99	70 - 130

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
MTBE	5.82	mg/L	50	5.00	1.03	96	70 - 130	3	20

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

### Matrix Spike (MS-1) Spiked Sample: 276974

QC Batch: 84748  
Prep Batch: 71966

Date Analyzed: 2011-09-15  
QC Preparation: 2011-09-15

Analyzed By: MT  
Prepared By: MT

Report Date: September 20, 2011  
700376.045.01

Work Order: 11091413  
Jal #2

Page Number: 14 of 15  
Hobbs, NM

Param	MS		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
	Result	Units					
Benzene	12.1	mg/L	50	5.00	7.74	87	70 - 130
Toluene	19.8	mg/L	50	5.00	16.5	66	70 - 130
Ethylbenzene	6.66	mg/L	50	5.00	1.93	95	70 - 130
Xylene	23.0	mg/L	50	15.0	9.16	92	70 - 130

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	12.3	mg/L	50	5.00	7.74	91	70 - 130	2	20
Toluene	20.9	mg/L	50	5.00	16.5	88	70 - 130	5	20
Ethylbenzene	6.97	mg/L	50	5.00	1.93	101	70 - 130	4	20
Xylene	23.9	mg/L	50	15.0	9.16	98	70 - 130	4	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	4.87	5.23	mg/L	50	5	97	105	70 - 130
4-Bromofluorobenzene (4-BFB)	4.62	4.94	mg/L	50	5	92	99	70 - 130

### **Standard (CCV-1)**

QC Batch: 84748

Date Analyzed: 2011-09-15

Analyzed By: MT

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.100	0.100	100	80 - 120	2011-09-15

### **Standard (CCV-1)**

QC Batch: 84748

Date Analyzed: 2011-09-15

Analyzed By: MT

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	Analyzed
Benzene		mg/L	0.100	0.0990	99	80 - 120	2011-09-15
Toluene		mg/L	0.100	0.0989	99	80 - 120	2011-09-15
Ethylbenzene		mg/L	0.100	0.102	102	80 - 120	2011-09-15
Xylene		mg/L	0.300	0.302	100	80 - 120	2011-09-15

### Standard (CCV-2)

QC Batch: 84748

Date Analyzed: 2011-09-15

Analyzed By: MT

Report Date: September 20, 2011  
700376.045.01

Work Order: 11091413  
Jal #2

Page Number: 15 of 15  
Hobbs, NM

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	Analyzed
MTBE		mg/L	0.100	0.0975	98	80 - 120	2011-09-15

## Standard (CCV-2)

QC Batch: 84748

Date Analyzed: 2011-09-15

Analyzed By: MT

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	Analyzed
Conc.	Conc.	Recovery	Limits				
Benzene		mg/L	0.100	0.100	100	80 - 120	2011-09-15
Toluene		mg/L	0.100	0.104	104	80 - 120	2011-09-15
Ethylbenzene		mg/L	0.100	0.103	103	80 - 120	2011-09-15
Xylene		mg/L	0.300	0.304	101	80 - 120	2011-09-15

### **Standard (CCV-3)**

QC Batch: 84748

Date Analyzed: 2011-09-15

Analyzed By: MT

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.100	0.0969	97	80 - 120	2011-09-15

### **Standard (CCV-3)**

QC Batch: 84748

Date Analyzed: 2011-09-15

Analyzed By: MT

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Benzene		mg/L	0.100	0.0999	100	80 - 120	2011-09-15
Toluene		mg/L	0.100	0.103	103	80 - 120	2011-09-15
Ethylbenzene		mg/L	0.100	0.102	102	80 - 120	2011-09-15
Xylene		mg/L	0.300	0.300	100	80 - 120	2011-09-15

# TraceAnalysis, Inc.

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

Company Name:	Talon LPE	Phone #:	
Address:	(Street, City, Zip) 2901 State Hwy 349	Fax #:	
Contact Person:	Steve Killingsworth	E-mail:	skillingsworth@talonper.com
Invoice to: (If different from above)	2002-10273		
Project #:	700376.045.01	Project Name:	Moore fo Jai #2
Project Location (Including state):	Hobbs, NM	Sampler Signature:	<i>Bethany</i>

## ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX		PRESERVATIVE METHOD		SAMPLING		MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCBs 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO4, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	ICE	NONE	DATE	TIME															
276997	MW8	3	4.2	X				X			X			9/12	1400	X	X													
998	MW11														9/13	0945														
999	MW12														9/12	1315														
277000	MW13															1330														
001	MW14															1300														
002	MW15															1245														
003	MW16															1230														
004	MW18														9-13	1100														
005	MW19															1045														
006	MW20															11:20														
007	MW21			V	V	V	V									14:45														

Relinquished by: Company: Date: Time:  
*Bethany* Talon LPE 0850 9-14

Relinquished by: Company: Date: Time:  
*Bethany*

Relinquished by: Company: Date: Time:  
*Brenda*

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

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

Received by: Company: Date: Time: INST *TK*  
OBS *3.2* C  
COR *3.7* C

LAB USE  
ONLY  
In tact  N  
Headspace  N NA

REMARKS:

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

Log-in Review *2011*

## Summary Report

Steve Killingsworth  
 Talon LPE-Midland  
 2901 State Highway 349  
 Midland, TX 79706

Report Date: December 23, 2011

Work Order: 11121905



Project Location: Hobbs, NM  
 Project Name: Jal #2  
 Project Number: 700376.045.01  
 SRS #: 2002-10273

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
284724	MW-2	water	2011-12-16	10:40	2011-12-16
284725	MW-8	water	2011-12-16	11:00	2011-12-16
284726	MW-10	water	2011-12-15	16:00	2011-12-16
284727	MW-11	water	2011-12-15	15:45	2011-12-16
284728	MW-12	water	2011-12-15	15:00	2011-12-16
284729	MW-13	water	2011-12-15	15:15	2011-12-16
284730	MW-14	water	2011-12-15	15:45	2011-12-16
284731	MW-15	water	2011-12-15	15:30	2011-12-16
284732	MW-16	water	2011-12-15	15:20	2011-12-16
284733	MW-17	water	2011-12-15	16:15	2011-12-16
284734	MW-18	water	2011-12-15	16:30	2011-12-16
284735	MW-19	water	2011-12-15	17:00	2011-12-16
284736	MW-20	water	2011-12-15	16:00	2011-12-16
284737	MW-21	water	2011-12-15	17:10	2011-12-16

Sample - Field Code	BTEX				MTBE MTBE (mg/L)
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)	
284724 - MW-2	<0.00100	<0.00100	<0.00100	<0.00100	
284725 - MW-8	12.1	0.199 qc	0.336	0.116	
284726 - MW-10	<0.00100	<0.00100 qc	<0.00100	<0.00100	
284727 - MW-11	<0.00100	<0.00100 qc	<0.00100	<0.00100	
284728 - MW-12	<0.00100	<0.00100 qc	<0.00100	<0.00100	
284729 - MW-13	36.6	<0.500	0.703	<0.500	
284730 - MW-14	<0.00100	<0.00100 qc	<0.00100	<0.00100	
284731 - MW-15	0.0358	<0.00100 qc	<0.00100	0.00100	
284732 - MW-16	<0.00100	<0.00100 qc	<0.00100	<0.00100	
284733 - MW-17	<0.00100	<0.00100 qc	<0.00100	<0.00100	

continued ...

... continued

Sample - Field Code	BTEX				MTBE MTBE (mg/L)
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)	
284734 - MW-18	0.194	<0.00100 Qc	<0.00100	0.0146	
284735 - MW-19	0.0282	<0.00100 Qc	<0.00100	0.00230	
284736 - MW-20	<0.00100	<0.00100 Qc	<0.00100	<0.00100	
284737 - MW-21	<0.00100	<0.00100 Qc	<0.00100	<0.00100	

Sample: 284724 - MW-2

Param	Flag	Result	Units	RL
Naphthalene		<0.000190	mg/L	0.0002
2-Methylnaphthalene		<0.000190	mg/L	0.0002
1-Methylnaphthalene		<0.000190	mg/L	0.0002
Acenaphthylene		<0.000190	mg/L	0.0002
Acenaphthene		<0.000190	mg/L	0.0002
Dibenzofuran		<0.000190	mg/L	0.0002
Fluorene	Qc	<0.000190	mg/L	0.0002
Anthracene		<0.000190	mg/L	0.0002
Phenanthrene		<0.000190	mg/L	0.0002
Fluoranthene		<0.000190	mg/L	0.0002
Pyrene		<0.000190	mg/L	0.0002
Benzo(a)anthracene		<0.000190	mg/L	0.0002
Chrysene		<0.000190	mg/L	0.0002
Benzo(b)fluoranthene		<0.000190	mg/L	0.0002
Benzo(k)fluoranthene		<0.000190	mg/L	0.0002
Benzo(a)pyrene		<0.000190	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.000190	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.000190	mg/L	0.0002
Benzo(g,h,i)perylene		<0.000190	mg/L	0.0002

Sample: 284733 - MW-17

Param	Flag	Result	Units	RL
Naphthalene		<0.000183	mg/L	0.0002
2-Methylnaphthalene		<0.000183	mg/L	0.0002
1-Methylnaphthalene		<0.000183	mg/L	0.0002
Acenaphthylene		<0.000183	mg/L	0.0002
Acenaphthene		<0.000183	mg/L	0.0002
Dibenzofuran		<0.000183	mg/L	0.0002
Fluorene	Qc	<0.000183	mg/L	0.0002
Anthracene		<0.000183	mg/L	0.0002
Phenanthrene		<0.000183	mg/L	0.0002
Fluoranthene		<0.000183	mg/L	0.0002
Pyrene		<0.000183	mg/L	0.0002
Benzo(a)anthracene		<0.000183	mg/L	0.0002

continued ...

*sample 284733 continued ...*

Param	Flag	Result	Units	RL
Chrysene		<0.000183	mg/L	0.0002
Benzo(b)fluoranthene		<0.000183	mg/L	0.0002
Benzo(k)fluoranthene		<0.000183	mg/L	0.0002
Benzo(a)pyrene		<0.000183	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.000183	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.000183	mg/L	0.0002
Benzo(g,h,i)perylene		<0.000183	mg/L	0.0002

**Sample: 284734 - MW-18**

Param	Flag	Result	Units	RL
Naphthalene		<b>0.00272</b>	mg/L	0.0002
2-Methylnaphthalene		<b>0.00129</b>	mg/L	0.0002
1-Methylnaphthalene		<b>0.00175</b>	mg/L	0.0002
Acenaphthylene		<0.000183	mg/L	0.0002
Acenaphthene		<0.000183	mg/L	0.0002
Dibenzofuran		<0.000183	mg/L	0.0002
Fluorene	QC	<0.000183	mg/L	0.0002
Anthracene		<0.000183	mg/L	0.0002
Phenanthrene		<b>0.000244</b>	mg/L	0.0002
Fluoranthene		<0.000183	mg/L	0.0002
Pyrene		<0.000183	mg/L	0.0002
Benzo(a)anthracene		<0.000183	mg/L	0.0002
Chrysene		<0.000183	mg/L	0.0002
Benzo(b)fluoranthene		<0.000183	mg/L	0.0002
Benzo(k)fluoranthene		<0.000183	mg/L	0.0002
Benzo(a)pyrene		<0.000183	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.000183	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.000183	mg/L	0.0002
Benzo(g,h,i)perylene		<0.000183	mg/L	0.0002

**Sample: 284735 - MW-19**

Param	Flag	Result	Units	RL
Naphthalene		<0.000183	mg/L	0.0002
2-Methylnaphthalene		<0.000183	mg/L	0.0002
1-Methylnaphthalene		<0.000183	mg/L	0.0002
Acenaphthylene		<0.000183	mg/L	0.0002
Acenaphthene		<0.000183	mg/L	0.0002
Dibenzofuran		<0.000183	mg/L	0.0002
Fluorene	QC	<0.000183	mg/L	0.0002
Anthracene		<0.000183	mg/L	0.0002
Phenanthrene		<0.000183	mg/L	0.0002
Fluoranthene		<0.000183	mg/L	0.0002

*continued ...*

*sample 284735 continued ...*

Param	Flag	Result	Units	RL
Pyrene		<0.000183	mg/L	0.0002
Benzo(a)anthracene		<0.000183	mg/L	0.0002
Chrysene		<0.000183	mg/L	0.0002
Benzo(b)fluoranthene		<0.000183	mg/L	0.0002
Benzo(k)fluoranthene		<0.000183	mg/L	0.0002
Benzo(a)pyrene		<0.000183	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.000183	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.000183	mg/L	0.0002
Benzo(g,h,i)perylene		<0.000183	mg/L	0.0002

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E-Mail: lab@traceanalysis.com

## Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

## Analytical and Quality Control Report

Steve Killingsworth  
Talon LPE-Midland  
2901 State Highway 349  
Midland, TX, 79706

Report Date: December 23, 2011

Work Order: 11121905



Project Location: Hobbs, NM  
Project Name: Jal #2  
Project Number: 700376.045.01  
SRS #: 2002-10273

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
284724	MW-2	water	2011-12-16	10:40	2011-12-16
284725	MW-8	water	2011-12-16	11:00	2011-12-16
284726	MW-10	water	2011-12-15	16:00	2011-12-16
284727	MW-11	water	2011-12-15	15:45	2011-12-16
284728	MW-12	water	2011-12-15	15:00	2011-12-16
284729	MW-13	water	2011-12-15	15:15	2011-12-16
284730	MW-14	water	2011-12-15	15:45	2011-12-16
284731	MW-15	water	2011-12-15	15:30	2011-12-16
284732	MW-16	water	2011-12-15	15:20	2011-12-16
284733	MW-17	water	2011-12-15	16:15	2011-12-16
284734	MW-18	water	2011-12-15	16:30	2011-12-16
284735	MW-19	water	2011-12-15	17:00	2011-12-16
284736	MW-20	water	2011-12-15	16:00	2011-12-16
284737	MW-21	water	2011-12-15	17:10	2011-12-16

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

This report consists of a total of 30 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



---

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

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## Case Narrative

Samples for project Jal #2 were received by TraceAnalysis, Inc. on 2011-12-16 and assigned to work order 11121905. Samples for work order 11121905 were received intact without headspace and at a temperature of 3.3 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	74112	2011-12-19 at 08:29	87270	2011-12-19 at 08:29
BTEX	S 8021B	74113	2011-12-19 at 08:29	87271	2011-12-19 at 08:29
BTEX	S 8021B	74181	2011-12-21 at 11:06	87361	2011-12-21 at 11:06
MTBE	S 8021B	74112	2011-12-19 at 08:29	87270	2011-12-19 at 08:29
MTBE	S 8021B	74113	2011-12-19 at 08:29	87271	2011-12-19 at 08:29
MTBE	S 8021B	74181	2011-12-21 at 11:06	87361	2011-12-21 at 11:06
PAH	S 8270D	74197	2011-12-20 at 15:00	87378	2011-12-22 at 11:26

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11121905 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: December 23, 2011  
700376.045.01

Work Order: 11121905  
Jal #2

Page Number: 6 of 30  
Hobbs, NM

## Analytical Report

Sample: 284724 - MW-2

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2011-12-19	Analyzed By:	MT
QC Batch:	87270	Sample Preparation:	2011-12-19	Prepared By:	MT
Prep Batch:	74112				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike	Percent	Recovery	Recovery
						Amount	Recovery	Limits	
Trifluorotoluene (TFT)			0.0849	mg/L	1	0.100	85	70 - 130	
4-Bromofluorobenzene (4-BFB)			0.0907	mg/L	1	0.100	91	70 - 130	

Sample: 284724 - MW-2

Laboratory:	Lubbock	Analytical Method:	S 8270D	Prep Method:	S 3510C
Analysis:	PAH	Date Analyzed:	2011-12-22	Analyzed By:	MN
QC Batch:	87378	Sample Preparation:	2011-12-20	Prepared By:	MN
Prep Batch:	74197				

Parameter	Flag	Cert	Result	RL		Dilution	RL
				Units	Dilution		
Naphthalene	u	u	<0.000190	mg/L	0.952	0.000200	
2-Methylnaphthalene	u	u	<0.000190	mg/L	0.952	0.000200	
1-Methylnaphthalene	u	u	<0.000190	mg/L	0.952	0.000200	
Acenaphthylene	u	u	<0.000190	mg/L	0.952	0.000200	
Acenaphthene	u	u	<0.000190	mg/L	0.952	0.000200	
Dibenzofuran	u	u	<0.000190	mg/L	0.952	0.000200	
Fluorene	Qc,u	Qc,u	<0.000190	mg/L	0.952	0.000200	
Anthracene	u	u	<0.000190	mg/L	0.952	0.000200	
Phenanthrene	u	u	<0.000190	mg/L	0.952	0.000200	
Fluoranthene	u	u	<0.000190	mg/L	0.952	0.000200	
Pyrene	u	u	<0.000190	mg/L	0.952	0.000200	
Benzo(a)anthracene	u	u	<0.000190	mg/L	0.952	0.000200	

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chrysene	u	u	<0.000190	mg/L	0.952	0.000200
Benzo(b)fluoranthene	u	u	<0.000190	mg/L	0.952	0.000200
Benzo(k)fluoranthene	u	u	<0.000190	mg/L	0.952	0.000200
Benzo(a)pyrene	u	u	<0.000190	mg/L	0.952	0.000200
Indeno(1,2,3-cd)pyrene	u	u	<0.000190	mg/L	0.952	0.000200
Dibenzo(a,h)anthracene	u	u	<0.000190	mg/L	0.952	0.000200
Benzo(g,h,i)perylene	u	u	<0.000190	mg/L	0.952	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0368	mg/L	0.952	0.0800	46	10 - 117
2-Fluorobiphenyl			0.0355	mg/L	0.952	0.0800	44	10 - 99
Terphenyl-d14			0.0425	mg/L	0.952	0.0800	53	22.6 - 115

Sample: 284725 - MW-8

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 87271  
Prep Batch: 74113

Analytical Method: S 8021B  
Date Analyzed: 2011-12-19  
Sample Preparation: 2011-12-19

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
MTBE	u	u	<0.0500	mg/L	50	0.00100
Benzene		1	12.1	mg/L	50	0.00100
Toluene	qc	qc	0.199	mg/L	50	0.00100
Ethylbenzene		1	0.336	mg/L	50	0.00100
Xylene		1	0.116	mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.28	mg/L	50	5.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)			4.91	mg/L	50	5.00	98	70 - 130

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**Sample: 284726 - MW-10**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2011-12-19	Analyzed By:	MT
QC Batch:	87271	Sample Preparation:	2011-12-19	Prepared By:	MT
Prep Batch:	74113				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0861	mg/L	1	0.100	86	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0908	mg/L	1	0.100	91	70 - 130

**Sample: 284727 - MW-11**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2011-12-19	Analyzed By:	MT
QC Batch:	87271	Sample Preparation:	2011-12-19	Prepared By:	MT
Prep Batch:	74113				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0799	mg/L	1	0.100	80	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0848	mg/L	1	0.100	85	70 - 130

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**Sample: 284728 - MW-12**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 87271

Prep Batch: 74113

Analytical Method: S 8021B

Date Analyzed: 2011-12-19

Sample Preparation: 2011-12-19

Prep Method: S 5030B

Analyzed By: MT

Prepared By: MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike	Percent	Recovery
						Amount	Recovery	Limits
Trifluorotoluene (TFT)			0.0895	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0943	mg/L	1	0.100	94	70 - 130

**Sample: 284729 - MW-13**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 87361

Prep Batch: 74181

Analytical Method: S 8021B

Date Analyzed: 2011-12-21

Sample Preparation: 2011-12-21

Prep Method: S 5030B

Analyzed By: ZLM

Prepared By: ZLM

Parameter	Flag	Cert	Result	RL		Dilution	RL
				Units			
MTBE	U	U	<0.500	mg/L		500	0.00100
Benzene			36.6	mg/L		500	0.00100
Toluene	U	U	<0.500	mg/L		500	0.00100
Ethylbenzene			0.703	mg/L		500	0.00100
Xylene			<0.500	mg/L		500	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike	Percent	Recovery
						Amount	Recovery	Limits
Trifluorotoluene (TFT)			47.6	mg/L	500	50.0	95	70 - 130
4-Bromofluorobenzene (4-BFB)			48.0	mg/L	500	50.0	96	70 - 130

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**Sample: 284730 - MW-14**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 87271

Prep Batch: 74113

Analytical Method: S 8021B

Date Analyzed: 2011-12-19

Sample Preparation: 2011-12-19

Prep Method: S 5030B

Analyzed By: MT

Prepared By: MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0723	mg/L	1	0.100	72	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0770	mg/L	1	0.100	77	70 - 130

**Sample: 284731 - MW-15**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 87271

Prep Batch: 74113

Analytical Method: S 8021B

Date Analyzed: 2011-12-19

Sample Preparation: 2011-12-19

Prep Method: S 5030B

Analyzed By: MT

Prepared By: MT

Parameter	Flag	Cert	Result	Units	Dilution	RL
MTBE	U	U	<0.00100	mg/L	1	0.00100
Benzene		U	0.0358	mg/L	1	0.00100
Toluene	Qc,U	Qc,U	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	U	<0.00100	mg/L	1	0.00100
Xylene		U	0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0922	mg/L	1	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0938	mg/L	1	0.100	94	70 - 130

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**Sample: 284732 - MW-16**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2011-12-19	Analyzed By:	MT
QC Batch:	87271	Sample Preparation:	2011-12-19	Prepared By:	MT
Prep Batch:	74113				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike	Percent	Recovery
						Amount	Recovery	Limits
Trifluorotoluene (TFT)			0.0831	mg/L	1	0.100	83	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0877	mg/L	1	0.100	88	70 - 130

**Sample: 284733 - MW-17**

Laboratory:	Lubbock	Analytical Method:	S 8021B	Prep Method:	S 5030B
Analysis:	BTEX	Date Analyzed:	2011-12-19	Analyzed By:	MT
QC Batch:	87271	Sample Preparation:	2011-12-19	Prepared By:	MT
Prep Batch:	74113				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike	Percent	Recovery
						Amount	Recovery	Limits
Trifluorotoluene (TFT)			0.0864	mg/L	1	0.100	86	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0906	mg/L	1	0.100	91	70 - 130

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**Sample: 284733 - MW-17**

Laboratory: Lubbock  
Analysis: PAH  
QC Batch: 87378  
Prep Batch: 74197

Analytical Method: S 8270D  
Date Analyzed: 2011-12-22  
Sample Preparation: 2011-12-20

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Naphthalene	u	u	<0.000183	mg/L	0.913	0.000200
2-Methylnaphthalene	u	u	<0.000183	mg/L	0.913	0.000200
1-Methylnaphthalene	u	u	<0.000183	mg/L	0.913	0.000200
Acenaphthylene	u	u	<0.000183	mg/L	0.913	0.000200
Acenaphthene	u	u	<0.000183	mg/L	0.913	0.000200
Dibenzofuran	u	u	<0.000183	mg/L	0.913	0.000200
Fluorene	qc,u	qc,u	<0.000183	mg/L	0.913	0.000200
Anthracene	u	u	<0.000183	mg/L	0.913	0.000200
Phenanthrene	u	u	<0.000183	mg/L	0.913	0.000200
Fluoranthene	u	u	<0.000183	mg/L	0.913	0.000200
Pyrene	u	u	<0.000183	mg/L	0.913	0.000200
Benzo(a)anthracene	u	u	<0.000183	mg/L	0.913	0.000200
Chrysene	u	u	<0.000183	mg/L	0.913	0.000200
Benzo(b)fluoranthene	u	u	<0.000183	mg/L	0.913	0.000200
Benzo(k)fluoranthene	u	u	<0.000183	mg/L	0.913	0.000200
Benzo(a)pyrene	u	u	<0.000183	mg/L	0.913	0.000200
Indeno(1,2,3-cd)pyrene	u	u	<0.000183	mg/L	0.913	0.000200
Dibenzo(a,h)anthracene	u	u	<0.000183	mg/L	0.913	0.000200
Benzo(g,h,i)perylene	u	u	<0.000183	mg/L	0.913	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0534	mg/L	0.913	0.0800	67	10 - 117
2-Fluorobiphenyl			0.0454	mg/L	0.913	0.0800	57	10 - 99
Terphenyl-d14			0.0543	mg/L	0.913	0.0800	68	22.6 - 115

**Sample: 284734 - MW-18**

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 87271  
Prep Batch: 74113

Analytical Method: S 8021B  
Date Analyzed: 2011-12-19  
Sample Preparation: 2011-12-19

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
MTBE	u	u	<0.00100	mg/L	1	0.00100

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene		1	<b>0.194</b>	mg/L	1	0.00100
Toluene	Qc,U	Qc,U	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	U	<0.00100	mg/L	1	0.00100
Xylene		1	<b>0.0146</b>	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	0.0665	mg/L	1	0.100	66	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0806	mg/L	1	0.100	81	70 - 130

### Sample: 284734 - MW-18

Laboratory:	Lubbock	Analytical Method:	S 8270D	Prep Method:	S 3510C
Analysis:	PAH	Date Analyzed:	2011-12-22	Analyzed By:	MN
QC Batch:	87378	Sample Preparation:	2011-12-20	Prepared By:	MN
Prep Batch:	74197				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Naphthalene		1	<b>0.00272</b>	mg/L	0.913	0.000200
2-Methylnaphthalene		1	<b>0.00129</b>	mg/L	0.913	0.000200
1-Methylnaphthalene			<b>0.00175</b>	mg/L	0.913	0.000200
Acenaphthylene	U	U	<0.000183	mg/L	0.913	0.000200
Acenaphthene	U	U	<0.000183	mg/L	0.913	0.000200
Dibenzofuran		1	<0.000183	mg/L	0.913	0.000200
Fluorene	Qc,U	Qc,U	<0.000183	mg/L	0.913	0.000200
Anthracene	U	U	<0.000183	mg/L	0.913	0.000200
Phenanthrene			<b>0.000244</b>	mg/L	0.913	0.000200
Fluoranthene	U	U	<0.000183	mg/L	0.913	0.000200
Pyrene	U	U	<0.000183	mg/L	0.913	0.000200
Benzo(a)anthracene	U	U	<0.000183	mg/L	0.913	0.000200
Chrysene	U	U	<0.000183	mg/L	0.913	0.000200
Benzo(b)fluoranthene	U	U	<0.000183	mg/L	0.913	0.000200
Benzo(k)fluoranthene	U	U	<0.000183	mg/L	0.913	0.000200
Benzo(a)pyrene	U	U	<0.000183	mg/L	0.913	0.000200
Indeno(1,2,3-cd)pyrene	U	U	<0.000183	mg/L	0.913	0.000200
Dibenzo(a,h)anthracene	U	U	<0.000183	mg/L	0.913	0.000200
Benzo(g,h,i)perylene	U	U	<0.000183	mg/L	0.913	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0435	mg/L	0.913	0.0800	54	10 - 117

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorobiphenyl			0.0388	mg/L	0.913	0.0800	48	10 - 99
Terphenyl-d14			0.0481	mg/L	0.913	0.0800	60	22.6 - 115

**Sample: 284735 - MW-19**

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 87271  
Prep Batch: 74113

Analytical Method: S 8021B  
Date Analyzed: 2011-12-19  
Sample Preparation: 2011-12-19

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

Parameter	Flag	Cert	Result	Units	Dilution	RL	
MTBE		1	0.00340	mg/L	1	0.00100	
Benzene		1	0.0282	mg/L	1	0.00100	
Toluene	Qc,U	Qc,U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	U	1	<0.00100	mg/L	1	0.00100
Xylene		1	0.00230	mg/L	1	0.00100	

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0845	mg/L	1	0.100	84	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0985	mg/L	1	0.100	98	70 - 130

**Sample: 284735 - MW-19**

Laboratory: Lubbock  
Analysis: PAH  
QC Batch: 87378  
Prep Batch: 74197

Analytical Method: S 8270D  
Date Analyzed: 2011-12-22  
Sample Preparation: 2011-12-20

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

Parameter	Flag	Cert	Result	Units	Dilution	RL	
Naphthalene	U	U	1	<0.000183	mg/L	0.913	0.000200
2-Methylnaphthalene	U	U	1	<0.000183	mg/L	0.913	0.000200
1-Methylnaphthalene	U	U	1	<0.000183	mg/L	0.913	0.000200
Acenaphthylene	U	U	1	<0.000183	mg/L	0.913	0.000200
Acenaphthene	U	U	1	<0.000183	mg/L	0.913	0.000200
Dibenzofuran	U	U	1	<0.000183	mg/L	0.913	0.000200
Fluorene	Qc,U	Qc,U	1	<0.000183	mg/L	0.913	0.000200
Anthracene	U	U	1	<0.000183	mg/L	0.913	0.000200

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Parameter	Flag	Cert	Result	Units	Dilution	RL	
Phenanthrene	u	u	<0.000183	mg/L	0.913	0.000200	
Fluoranthene	u	u	<0.000183	mg/L	0.913	0.000200	
Pyrene	u	u	1	<0.000183	mg/L	0.913	0.000200
Benzo(a)anthracene	u	u	<0.000183	mg/L	0.913	0.000200	
Chrysene	u	u	1	<0.000183	mg/L	0.913	0.000200
Benzo(b)fluoranthene	u	u	<0.000183	mg/L	0.913	0.000200	
Benzo(k)fluoranthene	u	u	1	<0.000183	mg/L	0.913	0.000200
Benzo(a)pyrene	u	u	1	<0.000183	mg/L	0.913	0.000200
Indeno(1,2,3-cd)pyrene	u	u	1	<0.000183	mg/L	0.913	0.000200
Dibenzo(a,h)anthracene	u	u	1	<0.000183	mg/L	0.913	0.000200
Benzo(g,h,i)perylene	u	u	<0.000183	mg/L	0.913	0.000200	

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0596	mg/L	0.913	0.0800	74	10 - 117
2-Fluorobiphenyl			0.0547	mg/L	0.913	0.0800	68	10 - 99
Terphenyl-d14			0.0705	mg/L	0.913	0.0800	88	22.6 - 115

Sample: 284736 - MW-20

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 87271  
Prep Batch: 74113

Analytical Method: S 8021B  
Date Analyzed: 2011-12-19  
Sample Preparation: 2011-12-19

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

Parameter	Flag	Cert	Result	Units	Dilution	RL	
MTBE	u	u	1	<0.00100	mg/L	1	0.00100
Benzene	u	u	1	<0.00100	mg/L	1	0.00100
Toluene	Qc,u	Qc,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)			0.0902	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0954	mg/L	1	0.100	95	70 - 130

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**Sample: 284737 - MW-21**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 87271

Prep Batch: 74113

Analytical Method: S 8021B

Date Analyzed: 2011-12-19

Sample Preparation: 2011-12-19

Prep Method: S 5030B

Analyzed By: MT

Prepared By: MT

Parameter	Flag	Cert	RL		Dilution	RL	
			Result	Units			
MTBE	U	U	1	<0.00100	mg/L	1	0.00100
Benzene	U	U	1	<0.00100	mg/L	1	0.00100
Toluene	Qc,U	Qc,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	Percent	Recovery
						Amount	Recovery	Limits
Trifluorotoluene (TFT)			0.0722	mg/L	1	0.100	72	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0761	mg/L	1	0.100	76	70 - 130

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## Method Blanks

Method Blank (1) QC Batch: 87270

QC Batch: 87270 Date Analyzed: 2011-12-19 Analyzed By: MT  
Prep Batch: 74112 QC Preparation: 2011-12-19 Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
MTBE	1		<0.000719	mg/L	0.001
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)			0.0911	mg/L	1	0.100	91	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0969	mg/L	1	0.100	97	70 - 130

Method Blank (1) QC Batch: 87271

QC Batch: 87271 Date Analyzed: 2011-12-19 Analyzed By: MT  
Prep Batch: 74113 QC Preparation: 2011-12-19 Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
MTBE	1		<0.000719	mg/L	0.001
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)			0.0753	mg/L	1	0.100	75	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0793	mg/L	1	0.100	79	70 - 130

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**Method Blank (1) QC Batch: 87361**

QC Batch: 87361  
Prep Batch: 74181

Date Analyzed: 2011-12-21  
QC Preparation: 2011-12-21

Analyzed By: ZLM  
Prepared By: ZLM

Parameter	Flag	Cert	MDL Result	Units	RL
MTBE		1	<0.000719	mg/L	0.001
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)			0.106	mg/L	1	0.100	106	70 - 130
4-Bromofluorobenzene (4-BFB)			0.102	mg/L	1	0.100	102	70 - 130

**Method Blank (1) QC Batch: 87378**

QC Batch: 87378  
Prep Batch: 74197

Date Analyzed: 2011-12-22  
QC Preparation: 2011-12-20

Analyzed By: MN  
Prepared By: MN

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

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0351	mg/L	1	0.0800	44	10 - 117
2-Fluorobiphenyl			0.0252	mg/L	1	0.0800	32	10 - 99
Terphenyl-d14			0.0493	mg/L	1	0.0800	62	22.6 - 115

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## Laboratory Control Spikes

### Laboratory Control Spike (LCS-1)

QC Batch: 87270      Date Analyzed: 2011-12-19      Analyzed By: MT  
Prep Batch: 74112      QC Preparation: 2011-12-19      Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE		1	0.0804	mg/L	1	0.100	<0.000719	80	70 - 130
Benzene		1	0.0814	mg/L	1	0.100	<0.000765	81	70 - 130
Toluene		1	0.0812	mg/L	1	0.100	<0.000719	81	70 - 130
Ethylbenzene		1	0.0837	mg/L	1	0.100	<0.000860	84	70 - 130
Xylene		1	0.251	mg/L	1	0.300	<0.000942	84	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
MTBE		1	0.0805	mg/L	1	0.100	<0.000719	80	70 - 130	0	20
Benzene		1	0.0827	mg/L	1	0.100	<0.000765	83	70 - 130	2	20
Toluene		1	0.0832	mg/L	1	0.100	<0.000719	83	70 - 130	2	20
Ethylbenzene		1	0.0851	mg/L	1	0.100	<0.000860	85	70 - 130	2	20
Xylene		1	0.254	mg/L	1	0.300	<0.000942	85	70 - 130	1	20

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

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)		0.0823	0.0893	mg/L	1	0.100	82	89	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0849	0.0892	mg/L	1	0.100	85	89	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 87271      Date Analyzed: 2011-12-19      Analyzed By: MT  
Prep Batch: 74113      QC Preparation: 2011-12-19      Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE		1	0.0835	mg/L	1	0.100	<0.000719	84	70 - 130
Benzene		1	0.0852	mg/L	1	0.100	<0.000765	85	70 - 130
Toluene		1	0.0837	mg/L	1	0.100	<0.000719	84	70 - 130

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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Ethylbenzene		1	0.0859	mg/L	1	0.100	<0.000860	86	70 - 130
Xylene		1	0.257	mg/L	1	0.300	<0.000942	86	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	Limit
MTBE		1	0.0814	mg/L	1	0.100	<0.000719	81	70 - 130	2	20
Benzene		1	0.0842	mg/L	1	0.100	<0.000765	84	70 - 130	1	20
Toluene		1	0.0832	mg/L	1	0.100	<0.000719	83	70 - 130	1	20
Ethylbenzene		1	0.0854	mg/L	1	0.100	<0.000860	85	70 - 130	1	20
Xylene		1	0.255	mg/L	1	0.300	<0.000942	85	70 - 130	1	20

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

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)		0.0875	0.0902	mg/L	1	0.100	88	90	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0896	0.0927	mg/L	1	0.100	90	93	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 87361  
Prep Batch: 74181

Date Analyzed: 2011-12-21  
QC Preparation: 2011-12-21

Analyzed By: ZLM  
Prepared By: ZLM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE		1	0.0958	mg/L	1	0.100	<0.000719	96	70 - 130
Benzene		1	0.0981	mg/L	1	0.100	<0.000765	98	70 - 130
Toluene		1	0.0962	mg/L	1	0.100	<0.000719	96	70 - 130
Ethylbenzene		1	0.0964	mg/L	1	0.100	<0.000860	96	70 - 130
Xylene		1	0.286	mg/L	1	0.300	<0.000942	95	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	Limit
MTBE		1	0.0984	mg/L	1	0.100	<0.000719	98	70 - 130	3	20
Benzene		1	0.0983	mg/L	1	0.100	<0.000765	98	70 - 130	0	20
Toluene		1	0.0982	mg/L	1	0.100	<0.000719	98	70 - 130	2	20
Ethylbenzene		1	0.0988	mg/L	1	0.100	<0.000860	99	70 - 130	2	20
Xylene		1	0.291	mg/L	1	0.300	<0.000942	97	70 - 130	2	20

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

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Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0882	0.0896	mg/L	1	0.100	88	90	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0840	0.0842	mg/L	1	0.100	84	84	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 87378  
Prep Batch: 74197

Date Analyzed: 2011-12-22  
QC Preparation: 2011-12-20

Analyzed By: MN  
Prepared By: MN

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene		1	0.0369	mg/L	1	0.0800	<0.0000904	46	10 - 89.9
2-Methylnaphthalene		1	0.0427	mg/L	1	0.0800	<0.000184	53	13.8 - 98.4
1-Methylnaphthalene			0.0486	mg/L	1	0.0800	<0.000120	61	13.1 - 103
Acenaphthylene		1	0.0485	mg/L	1	0.0800	<0.000101	61	20 - 104
Acenaphthene		1	0.0461	mg/L	1	0.0800	<0.000122	58	21.6 - 94.6
Dibenzofuran		1	0.0413	mg/L	1	0.0800	<0.000119	52	22.9 - 74.9
Fluorene		1	0.0492	mg/L	1	0.0800	<0.000198	62	30.8 - 109
Anthracene		1	0.0623	mg/L	1	0.0800	<0.000190	78	37.6 - 96.4
Phenanthrene			0.0628	mg/L	1	0.0800	<0.000190	78	42.4 - 99.8
Fluoranthene			0.0579	mg/L	1	0.0800	<0.000122	72	48 - 118
Pyrene		1	0.0566	mg/L	1	0.0800	<0.000142	71	45.3 - 109
Benzo(a)anthracene			0.0702	mg/L	1	0.0800	<0.000138	88	48 - 113
Chrysene		1	0.0770	mg/L	1	0.0800	<0.000155	96	35.2 - 175
Benzo(b)fluoranthene			0.0497	mg/L	1	0.0800	<0.000179	62	16.6 - 106
Benzo(k)fluoranthene		1	0.0523	mg/L	1	0.0800	<0.000185	65	36.8 - 99.4
Benzo(a)pyrene		1	0.0500	mg/L	1	0.0800	<0.000169	62	32.3 - 99.7
Indeno(1,2,3-cd)pyrene		1	0.0502	mg/L	1	0.0800	<0.000139	63	34.1 - 106
Dibenzo(a,h)anthracene		1	0.0430	mg/L	1	0.0800	<0.000107	54	47.1 - 103
Benzo(g,h,i)perylene			0.0522	mg/L	1	0.0800	<0.000143	65	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	0.0368	mg/L	1	0.0800	<0.0000904	46	10 - 89.9	0	20
2-Methylnaphthalene		1	0.0428	mg/L	1	0.0800	<0.000184	54	13.8 - 98.4	0	20
1-Methylnaphthalene			0.0484	mg/L	1	0.0800	<0.000120	60	13.1 - 103	0	20
Acenaphthylene		1	0.0491	mg/L	1	0.0800	<0.000101	61	20 - 104	1	20
Acenaphthene		1	0.0463	mg/L	1	0.0800	<0.000122	58	21.6 - 94.6	0	20
Dibenzofuran		1	0.0412	mg/L	1	0.0800	<0.000119	52	22.9 - 74.9	0	20
Fluorene		1	0.0494	mg/L	1	0.0800	<0.000198	62	30.8 - 109	0	20
Anthracene		1	0.0638	mg/L	1	0.0800	<0.000190	80	37.6 - 96.4	2	20
Phenanthrene			0.0635	mg/L	1	0.0800	<0.000190	79	42.4 - 99.8	1	20

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Param	LCSD			Spike		Matrix		Rec.		RPD	
	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Fluoranthene			0.0600	mg/L	1	0.0800	<0.000122	75	48 - 118	4	20
Pyrene		1	0.0576	mg/L	1	0.0800	<0.000142	72	45.3 - 109	2	20
Benzo(a)anthracene			0.0708	mg/L	1	0.0800	<0.000138	88	48 - 113	1	20
Chrysene		1	0.0770	mg/L	1	0.0800	<0.000155	96	35.2 - 175	0	20
Benzo(b)fluoranthene			0.0505	mg/L	1	0.0800	<0.000179	63	16.6 - 106	2	20
Benzo(k)fluoranthene		1	0.0498	mg/L	1	0.0800	<0.000185	62	36.8 - 99.4	5	20
Benzo(a)pyrene		1	0.0511	mg/L	1	0.0800	<0.000169	64	32.3 - 99.7	2	20
Indeno(1,2,3-cd)pyrene		1	0.0516	mg/L	1	0.0800	<0.000139	64	34.1 - 106	3	20
Dibenzo(a,h)anthracene		1	0.0443	mg/L	1	0.0800	<0.000107	55	47.1 - 103	3	20
Benzo(g,h,i)perylene			0.0529	mg/L	1	0.0800	<0.000143	66	21.9 - 112	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Nitrobenzene-d5	0.0420	0.0418	mg/L	1	0.0800	52	52	10 - 117
2-Fluorobiphenyl	0.0364	0.0367	mg/L	1	0.0800	46	46	10 - 99
Terphenyl-d14	0.0543	0.0558	mg/L	1	0.0800	68	70	22.6 - 115

### Matrix Spike (MS-1) Spiked Sample: 284464

QC Batch: 87270  
Prep Batch: 74112

Date Analyzed: 2011-12-19  
QC Preparation: 2011-12-19

Analyzed By: MT  
Prepared By: MT

Param	F	C	MS		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
			Result	Units					
MTBE		1	0.942	mg/L	10	1.00	0.164	78	70 - 130
Benzene		1	1.20	mg/L	10	1.00	0.404	80	70 - 130
Toluene		1	0.798	mg/L	10	1.00	0.0081	79	70 - 130
Ethylbenzene		1	0.831	mg/L	10	1.00	0.016	82	70 - 130
Xylene		1	2.49	mg/L	10	3.00	0.0475	81	70 - 130

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

Param	F	C	MSD		Spike		Matrix		Rec.		RPD	
			Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
MTBE		1	0.929	mg/L	10	1.00	0.164	76	70 - 130	1	20	
Benzene		1	1.19	mg/L	10	1.00	0.404	79	70 - 130	1	20	
Toluene		1	0.805	mg/L	10	1.00	0.0081	80	70 - 130	1	20	
Ethylbenzene		1	0.834	mg/L	10	1.00	0.016	82	70 - 130	0	20	
Xylene		1	2.49	mg/L	10	3.00	0.0475	81	70 - 130	0	20	

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

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Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.942	0.940	mg/L	10	1	94	94	70 - 130
4-Bromofluorobenzene (4-BFB)	0.954	0.945	mg/L	10	1	95	94	70 - 130

**Matrix Spike (MS-1) Spiked Sample: 284726**

QC Batch: 87271 Date Analyzed: 2011-12-19 Analyzed By: MT  
Prep Batch: 74113 QC Preparation: 2011-12-19 Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE		1	0.0822	mg/L	1	0.100	<0.000719	82	70 - 130
Benzene		1	0.0826	mg/L	1	0.100	<0.000765	83	70 - 130
Toluene		1	0.0808	mg/L	1	0.100	<0.000719	81	70 - 130
Ethylbenzene		1	0.0831	mg/L	1	0.100	<0.000860	83	70 - 130
Xylene		1	0.247	mg/L	1	0.300	<0.000942	82	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
MTBE		1	0.0873	mg/L	1	0.100	<0.000719	87	70 - 130	6	20
Benzene		1	0.0885	mg/L	1	0.100	<0.000765	88	70 - 130	7	20
Toluene		1	0.0877	mg/L	1	0.100	<0.000719	88	70 - 130	8	20
Ethylbenzene		1	0.0903	mg/L	1	0.100	<0.000860	90	70 - 130	8	20
Xylene		1	0.268	mg/L	1	0.300	<0.000942	89	70 - 130	8	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0897	0.0796	mg/L	1	0.1	90	80	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0915	0.0824	mg/L	1	0.1	92	82	70 - 130

**Matrix Spike (MS-1) Spiked Sample: 284742**

QC Batch: 87361 Date Analyzed: 2011-12-21 Analyzed By: ZLM  
Prep Batch: 74181 QC Preparation: 2011-12-21 Prepared By: ZLM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE		1	4.94	mg/L	50	5.00	<0.0360	99	70 - 130

*continued ...*

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*matrix spikes continued ...*

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	6.59	mg/L	50	5.00	1.66	99	70 - 130
Toluene		1	4.83	mg/L	50	5.00	<0.0360	97	70 - 130
Ethylbenzene		1	4.89	mg/L	50	5.00	<0.0430	98	70 - 130
Xylene		1	14.4	mg/L	50	15.0	<0.0471	96	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
MTBE		1	4.82	mg/L	50	5.00	<0.0360	96	70 - 130	2	20
Benzene		1	6.42	mg/L	50	5.00	1.66	95	70 - 130	3	20
Toluene		1	4.72	mg/L	50	5.00	<0.0360	94	70 - 130	2	20
Ethylbenzene		1	4.80	mg/L	50	5.00	<0.0430	96	70 - 130	2	20
Xylene		1	14.2	mg/L	50	15.0	<0.0471	95	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)	4.34	4.52	mg/L	50	5	87	90	70 - 130
4-Bromofluorobenzene (4-BFB)	4.08	4.35	mg/L	50	5	82	87	70 - 130

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## Calibration Standards

### Standard (CCV-2)

QC Batch: 87270

Date Analyzed: 2011-12-19

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE	1		mg/L	0.100	0.0817	82	80 - 120	2011-12-19
Benzene	1		mg/L	0.100	0.0819	82	80 - 120	2011-12-19
Toluene	1		mg/L	0.100	0.0812	81	80 - 120	2011-12-19
Ethylbenzene	1		mg/L	0.100	0.0839	84	80 - 120	2011-12-19
Xylene	1		mg/L	0.300	0.249	83	80 - 120	2011-12-19

### Standard (CCV-3)

QC Batch: 87270

Date Analyzed: 2011-12-19

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE	1		mg/L	0.100	0.0821	82	80 - 120	2011-12-19
Benzene	1		mg/L	0.100	0.0829	83	80 - 120	2011-12-19
Toluene	1		mg/L	0.100	0.0813	81	80 - 120	2011-12-19
Ethylbenzene	1		mg/L	0.100	0.0834	83	80 - 120	2011-12-19
Xylene	1		mg/L	0.300	0.249	83	80 - 120	2011-12-19

### Standard (CCV-1)

QC Batch: 87271

Date Analyzed: 2011-12-19

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE	1		mg/L	0.100	0.0816	82	80 - 120	2011-12-19
Benzene	1		mg/L	0.100	0.0822	82	80 - 120	2011-12-19
Toluene	1		mg/L	0.100	0.0817	82	80 - 120	2011-12-19
Ethylbenzene	1		mg/L	0.100	0.0844	84	80 - 120	2011-12-19
Xylene	1		mg/L	0.300	0.252	84	80 - 120	2011-12-19

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### Standard (CCV-2)

QC Batch: 87271

Date Analyzed: 2011-12-19

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		1	mg/L	0.100	0.0827	83	80 - 120	2011-12-19
Benzene		1	mg/L	0.100	0.0846	85	80 - 120	2011-12-19
Toluene		1	mg/L	0.100	0.0829	83	80 - 120	2011-12-19
Ethylbenzene		1	mg/L	0.100	0.0842	84	80 - 120	2011-12-19
Xylene		1	mg/L	0.300	0.251	84	80 - 120	2011-12-19

### Standard (CCV-3)

QC Batch: 87271

Date Analyzed: 2011-12-19

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		1	mg/L	0.100	0.0801	80	80 - 120	2011-12-19
Benzene		1	mg/L	0.100	0.0817	82	80 - 120	2011-12-19
Toluene	Qc	Qc	mg/L	0.100	0.0798	80	80 - 120	2011-12-19
Ethylbenzene		1	mg/L	0.100	0.0810	81	80 - 120	2011-12-19
Xylene		1	mg/L	0.300	0.244	81	80 - 120	2011-12-19

### Standard (CCV-1)

QC Batch: 87361

Date Analyzed: 2011-12-21

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		1	mg/L	0.100	0.0984	98	80 - 120	2011-12-21
Benzene		1	mg/L	0.100	0.0955	96	80 - 120	2011-12-21
Toluene		1	mg/L	0.100	0.0939	94	80 - 120	2011-12-21
Ethylbenzene		1	mg/L	0.100	0.0956	96	80 - 120	2011-12-21
Xylene		1	mg/L	0.300	0.280	93	80 - 120	2011-12-21

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### Standard (CCV-2)

QC Batch: 87361

Date Analyzed: 2011-12-21

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		1	mg/L	0.100	0.0974	97	80 - 120	2011-12-21
Benzene		1	mg/L	0.100	0.0978	98	80 - 120	2011-12-21
Toluene		1	mg/L	0.100	0.0958	96	80 - 120	2011-12-21
Ethylbenzene		1	mg/L	0.100	0.0974	97	80 - 120	2011-12-21
Xylene		1	mg/L	0.300	0.286	95	80 - 120	2011-12-21

### Standard (CCV-1)

QC Batch: 87378

Date Analyzed: 2011-12-22

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	50.7	84	80 - 120	2011-12-22
2-Methylnaphthalene		1	mg/L	60.0	50.0	83	80 - 120	2011-12-22
1-Methylnaphthalene			mg/L	60.0	58.9	98	80 - 120	2011-12-22
Acenaphthylene		1	mg/L	60.0	51.1	85	80 - 120	2011-12-22
Acenaphthene		1	mg/L	60.0	50.6	84	80 - 120	2011-12-22
Dibenzofuran		1	mg/L	60.0	49.1	82	80 - 120	2011-12-22
Fluorene	Qc	Qc	mg/L	60.0	47.9	80	80 - 120	2011-12-22
Anthracene		1	mg/L	60.0	59.0	98	80 - 120	2011-12-22
Phenanthrene			mg/L	60.0	58.6	98	80 - 120	2011-12-22
Fluoranthene			mg/L	60.0	59.2	99	80 - 120	2011-12-22
Pyrrene		1	mg/L	60.0	54.2	90	80 - 120	2011-12-22
Benzo(a)anthracene			mg/L	60.0	60.3	100	80 - 120	2011-12-22
Chrysene		1	mg/L	60.0	52.5	88	80 - 120	2011-12-22
Benzo(b)fluoranthene			mg/L	60.0	50.6	84	80 - 120	2011-12-22
Benzo(k)fluoranthene		1	mg/L	60.0	49.7	83	80 - 120	2011-12-22
Benzo(a)pyrene		1	mg/L	60.0	53.3	89	80 - 120	2011-12-22
Indeno(1,2,3-cd)pyrene		1	mg/L	60.0	53.6	89	80 - 120	2011-12-22
Dibenzo(a,h)anthracene		1	mg/L	60.0	54.8	91	80 - 120	2011-12-22
Benzo(g,h,i)perylene			mg/L	60.0	52.3	87	80 - 120	2011-12-22

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			58.4	mg/L	1	60.0	97	-
2-Fluorobiphenyl			53.8	mg/L	1	60.0	90	-
Terphenyl-d14			58.2	mg/L	1	60.0	97	-

Report Date: December 23, 2011  
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**Standard (CCV-2)**

QC Batch: 87378

Date Analyzed: 2011-12-22

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	50.8	85	80 - 120	2011-12-22	
2-Methylnaphthalene	1	mg/L	60.0	49.0	82	80 - 120	2011-12-22	
1-Methylnaphthalene		mg/L	60.0	56.9	95	80 - 120	2011-12-22	
Acenaphthylene	1	mg/L	60.0	52.0	87	80 - 120	2011-12-22	
Acenaphthene	1	mg/L	60.0	50.8	85	80 - 120	2011-12-22	
Dibenzofuran	1	mg/L	60.0	49.5	82	80 - 120	2011-12-22	
Fluorene	1	mg/L	60.0	48.1	80	80 - 120	2011-12-22	
Anthracene	1	mg/L	60.0	59.3	99	80 - 120	2011-12-22	
Phenanthrene		mg/L	60.0	58.8	98	80 - 120	2011-12-22	
Fluoranthene		mg/L	60.0	61.4	102	80 - 120	2011-12-22	
Pyrene	1	mg/L	60.0	57.8	96	80 - 120	2011-12-22	
Benzo(a)anthracene		mg/L	60.0	59.9	100	80 - 120	2011-12-22	
Chrysene	1	mg/L	60.0	52.4	87	80 - 120	2011-12-22	
Benzo(b)fluoranthene		mg/L	60.0	50.8	85	80 - 120	2011-12-22	
Benzo(k)fluoranthene	1	mg/L	60.0	50.3	84	80 - 120	2011-12-22	
Benzo(a)pyrene	1	mg/L	60.0	51.4	86	80 - 120	2011-12-22	
Indeno(1,2,3-cd)pyrene	1	mg/L	60.0	52.7	88	80 - 120	2011-12-22	
Dibenzo(a,h)anthracene	1	mg/L	60.0	55.0	92	80 - 120	2011-12-22	
Benzo(g,h,i)perylene		mg/L	60.0	51.7	86	80 - 120	2011-12-22	

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			60.2	mg/L	1	60.0	100	-
2-Fluorobiphenyl			56.9	mg/L	1	60.0	95	-
Terphenyl-d14			61.6	mg/L	1	60.0	103	-

## Appendix

### Report Definitions

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

### Laboratory Certifications

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

### Standard Flags

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

### Attachments

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

# TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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:	Talon LPE	Phone #:				
Address:	2801 St Hwy 349	Fax #:				
Contact Person:	Steve Killingsworth	E-mail:	SKillingsworth@talonlpe.com			
Invoice to: (If different from above)	700376.045.01					
Project #:	2002-10273	Project Name:	Tal #2			
Project Location (including state):	Hobbs NM	Sampler Signature:	B. L. C.			

## ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX		PRESERVATIVE METHOD	SAMPLING	DATE	TIME	MTBE 8021 / 602 / 8260 / 624	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 60/10/2007	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO4, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
				WATER	SOIL																									
284724	MW 2	4	402	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
725	MW 8	3	402																											
726	MW 10	1	1																											
727	MW 11																													
728	MW 12																													
729	MW 13																													
730	MW 14																													
731	MW 15																													
732	MW 16			V	V																									
733	MW 17	4	402																											
734	MW 18	4	402	V	V			V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V			

Relinquished by: Company: Date: Time:

R. J. Talon 12/16/11 3:40

Relinquished by: Company: Date: Time:

B. L. C. 12/16/11 3:40

Relinquished by: Company: Date: Time:

B. L. C. 12/16/11 3:40

Received by: Company: Date: Time:

INST OBS COR

LAB USE  
ONLY

Inlet Y N

Headspace Y N NA

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.

pm

Carrier #

C. Casper

ORIGINAL COPY



## **APPENDIX D**

### **NMOCD C-141**



**ENVIRONMENTAL PLUS, INC.**  
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

Micro-Blaze

Micro-Blaze One™

October 23, 2003

Mr. Larry Johnson  
Environmental Engineer  
New Mexico Oil Conservation Division  
1625 North French  
Hobbs, New Mexico 88240

Subject: EOTT Initial C-141

Re: 8" Moore to Jal #2, 2002-10273  
UL- J, NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 16 T17S R37E  
Latitude 32 49' 56.61"N and Longitude 103 15' 08.47"W  
State of New Mexico

Dear Mr. Larry Johnson,

Environmental Plus, Inc. (EPI), on behalf of Mr. Frank Hernandez, EOTT, submits the attached New Mexico Oil Conservation Division (NMOCD) form C-141 for the above referenced leak site located on land owned by the State of New Mexico, approximately ~11 miles southeast of Hobbs, New Mexico. The New Mexico Tech Geo-Information Database records an average groundwater depth of ~66'bgs. The attached site information and metrics form ranks the site in accordance with the NMOCD Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993).

A remediation plan will be developed and submitted for NMOCD approval and will address issues identified during delineation of the vertical and horizontal extents of contamination of the Constituents of Concern (CoCs), i.e., Chloride, Total Petroleum Hydrocarbon EPA method 8015m (TPH<sup>8015m</sup>), Benzene, and BTEX, i.e., the mass sum of Benzene, Toluene, Ethyl Benzene, and Xylenes. The contaminated soil is not exempted from RCRA 40 CFR Part 261.

If there are any questions please call Mr. Ben Miller or myself at the office or at 505.390.0288 and 505.390.7864, respectively or Mr. Frank Hernandez at 915.638.3799. All official communication should be addressed to:

Mr. Frank Hernandez  
EOTT  
PO Box 1660 5805 East Highway 80  
Midland, Texas 79702

Sincerely,

Pat McCasland  
EPI Technical Services Manager

cc: Frank Hernandez, EOTT, w/enclosure  
Ben Miller, EPI Vice President and General Manager  
Sherry Miller, EPI President  
file

<b>EOTT Site Information and Metrics</b>		<b>Incident Date:</b> <b>10-22-02 @ 5:00 Pm</b>	<b>NMOCD Notified:</b> <b>10-23-02 @ 7:00 AM</b>
SITE: 8" Moore to Jal #2	Assigned Site Reference #: 2002-10273		
Company: EOTT			
Street Address: PO Box 1660			
Mailing Address: 5805 East Highway 80			
City, State, Zip: Midland, Texas 79702			
Representative: Frank Hernandez			
Representative Telephone: 915.638.3799			
Telephone:			
Fluid volume released (bbls): 25 bbls	Recovered (bbls): 0 bbls		
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)			
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)			
Leak, Spill, or Pit (LSP) Name: 8" Moore to Jal #2			
Source of contamination: 8" Steel Pipeline			
Land Owner, i.e., BLM, ST, Fee, Other: State of New Mexico			
LSP Dimensions ~160' x 40'			
LSP Area: 5,794 sqft ft <sup>2</sup>			
Location of Reference Point (RP)			
Location distance and direction from RP			
Latitude: 32 49' 56.61"N			
Longitude: 103 15' 08.47"W			
Elevation above mean sea level:			
Feet from South Section Line			
Feet from West Section Line			
Location- Unit or ¼¼: NW¼ of the SE¼		Unit Letter: J	
Location- Section: 16			
Location- Township: T17S			
Location- Range: R37E			
Surface water body within 1000 ' radius of site: none			
Surface water body within 1000 ' radius of site:			
Domestic water wells within 1000' radius of site: none			
Domestic water wells within 1000' radius of site:			
Agricultural water wells within 1000' radius of site: none			
Agricultural water wells within 1000' radius of site:			
Public water supply wells within 1000' radius of site: none			
Public water supply wells within 1000' radius of site:			
Depth from land surface to ground water (DG) ~66'bgs			
Depth of contamination (DC) - ?			
Depth to ground water (DG - DC = DtGW) - 0			
<b>1. Ground Water</b>		<b>2. Wellhead Protection Area</b>	
If Depth to GW <50 feet: 20 points		If <1000' from water source, or; <200' from private domestic water source: 20 points	
If Depth to GW 50 to 99 feet: 10 points		<200 horizontal feet: 20 points 200-100 horizontal feet: 10 points	
If Depth to GW >100 feet: 0 points		If >1000' from water source, or; >200' from private domestic water source: 0 points >1000 horizontal feet: 0 points	
Ground water Score = 20		Wellhead Protection Area Score = 0	
Site Rank (1+2+3) = 20		Surface Water Score = 0	
<b>Total Site Ranking Score and Acceptable Concentrations</b>			
Parameter	>19	10-19	0-9
Benzene <sup>1</sup>	10 ppm	10 ppm	10 ppm
BTEX <sup>1</sup>	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1000 ppm	5000 ppm

<sup>1</sup>100 ppm field VOC headspace measurement may be substituted for lab analysis

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

Initial Report  Final Report

Name of Company <b>EOTT</b>	Contact <b>Frank Hernandez</b>
Address PO Box 1660 5805 East Highway 80 Midland, Texas 79702	Telephone No. 915.638.3799
Facility Name 8" Moore to Jal #2	Facility Type 8" Steel Pipeline

Surface Owner State of New Mexico	Mineral Owner	Lease No.
--------------------------------------	---------------	-----------

### LOCATION OF RELEASE

Unit Letter 16	Section 16	Township T17S	Range R37E	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea Lat. 32 49' 56.61"N Lon. 103 15' 08.47"W
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### NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 25 bbls barrels	Volume Recovered 0 bbls barrels
Source of Release 8" Steel Pipeline	Date and Hour of Occurrence EOTT	Date and Hour of Discovery 10-22-02 @ 7:00 PM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Larry Johnson	
By Whom? Pat McCasland, EPI	Date and Hour 10-23-02 @ 7:00 AM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. NA	

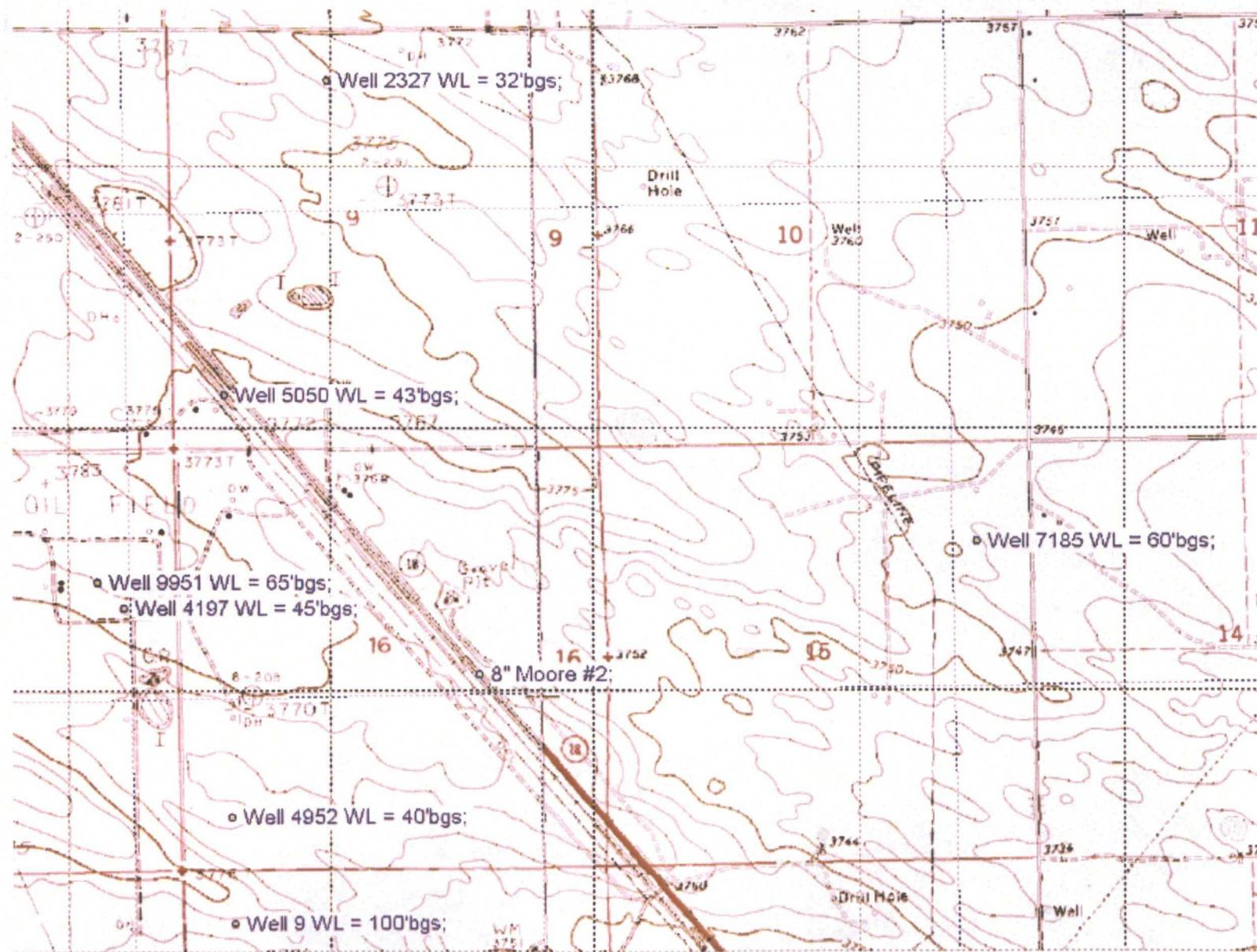
If a Watercourse was Impacted, Describe Fully.* NA
Describe Cause of Problem and Remedial Action Taken.* 8" Steel Pipeline Site will be delineated to determine the vertical and horizontal extents of contamination. Contaminated soil will be blended on site or disposed of.

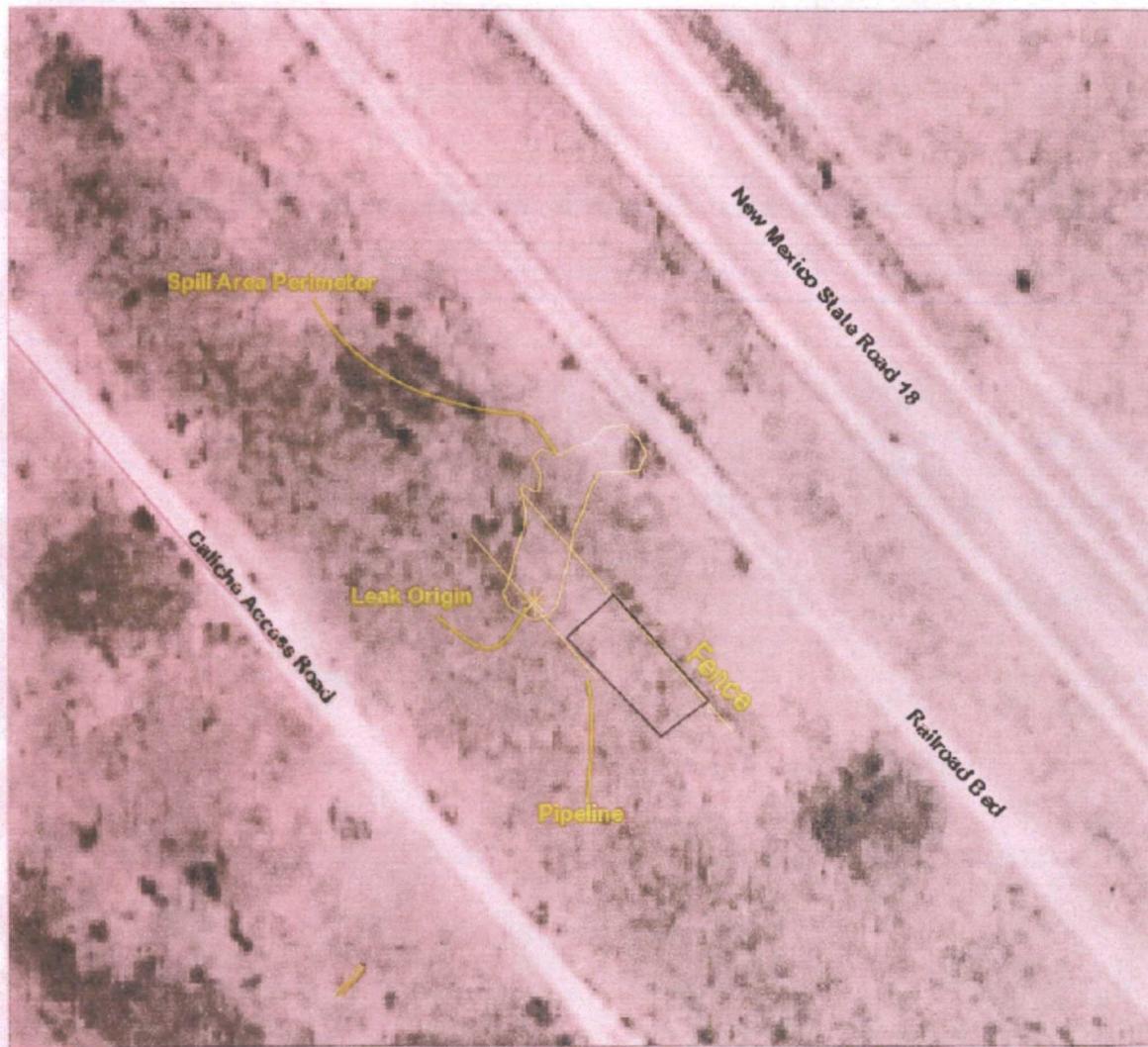
Describe Area Affected and Cleanup Action Taken.* 5,794 sqft ~160' x 40' Site will be delineated to determine the vertical and horizontal extents of contamination. Contaminated soil will be blended on site or disposed of. Remedial Goals: TPH 8015m = 100 mg/Kg, Benzene = 10 mg/Kg, and BTEX, i.e., the mass sum of Benzene, Ethyl Benzene, Toluene, and Xylenes = 50 mg/Kg.
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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.
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Signature:	<b>OIL CONSERVATION DIVISION</b>		
Printed Name: Frank Hernandez	Approved by District Supervisor:		
Title: District Environmental Supervisor	Approval Date:	Expiration Date:	
Date: October 23, 2003	Phone: 915.638.3799		Conditions of Approval: Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary





EOTT ENERGY  
LLC  
8" MOORE TO  
JAL #2  
#2002-10273  
UL-J SEC 16  
T17S R37E  
AFFECTED AREA  
~5794 SQFT

N  
↑

SCALE 1:1,500



UNIVERSAL TRANSVERSE MERCATOR  
13 NORTH  
NAD 1983 HPGN (NEW MEXICO)

8MOORE#2.CDR  
7/21/2003



