PLAINS
ALL AMERICAN

March 23, 2015

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

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

Dear Dr. Oberding:

Plains All American is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Plains All American actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation Division (NMOCD). In accordance with the rules and regulations of the NMOCD, Plains All American hereby submits our Annual Monitoring reports for the following sites:

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,

Camille Bryant
Remediation Coordinator
Plains All American

CC: NMOCD, Hobbs, NM

Enclosures

AMARILLO
921 North Bivins
Amarillo, Texas 79107
Phone 806.467.0607
Fax 806.467.0622

ARTESIA
408 West Texas Ave.
Artesia, New Mexico 88210
Phone 575.746.8768
Fax 575.748.8905

HOBBS
318 East Taylor Street
Hobbs, New Mexico 88241
Phone 505.393.4261
Fax 505.393.4658

MIDLAND
2901 State Highway 349
Midland, Texas 79706
Phone 432.522.2133
Fax 432.522.2180

OKLAHOMA CITY
7700 North Hudson Ave
Suite 10
Oklahoma City, Oklahoma 73116
Phone 405.486.7030
Fax 806.467.0622

SAN ANTONIO
13111 Lookout Way
San Antonio, Texas 78233
Phone 210.265.8025
Fax 210.568.2191

ENVIRONMENTAL CONSULTING
ENGINEERING
DRILLING
CONSTRUCTION
SPILL MANAGEMENT
GENERAL CONTRACTING

Toll Free: 866.742.0742
www.talonlpe.com

2014 ANNUAL GROUNDWATER MONITORING AND ASSESSMENT REPORT LOVINGTON DEEP 6”
LEA COUNTY, NEW MEXICO
SRS #2002 - 10312
NMOCD REF. # AP-037

PREPARED FOR:

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

PREPARED BY:

TALON/LPE
13111 LOOKOUT WAY
SAN ANTONIO, TEXAS 78233

DISTRIBUTION:
COPY 1 - PLAINS MARKETING, L.P. - MIDLAND
COPY 2 - PLAINS MARKETING, L.P. - HOUSTON
COPY 3 – NMOCD – HOBBS
COPY 4 – NMOCD – SANTA FE
COPY 5 – NMSLO – SANTA FE

March 23, 2015

Recommendations

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

- **Perform monthly MDPE events.**
- **Perform 2015 quarterly groundwater monitoring events in accordance with NMOCD directives.**

AMARILLO
921 North Bivins
Amarillo, Texas 79107
Phone 806.467.0607
Fax 806.467.0622

ARTESIA
408 West Texas Ave.
Artesia, New Mexico 88210
Phone 575.746.8768
Fax 575.748.8905

HOBBS
318 East Taylor Street
Hobbs, New Mexico 88241
Phone 505.393.4261
Fax 505.393.4658

MIDLAND
2901 State Highway 349
Midland, Texas 79706
Phone 432.522.2133
Fax 432.522.2180

OKLAHOMA CITY
7700 North Hudson Ave
Suite 10
Oklahoma City, Oklahoma 73116
Phone 405.486.7030
Fax 806.467.0622

SAN ANTONIO
13111 Lookout Way
San Antonio, Texas 78233
Phone 210.265.8025
Fax 210.568.2191

ENVIRONMENTAL CONSULTING
ENGINEERING
DRILLING
CONSTRUCTION
SPILL MANAGEMENT
GENERAL CONTRACTING

Toll Free: 866.742.0742
www.talonlpe.com

2014 ANNUAL GROUNDWATER MONITORING REPORT

LOVINGTON DEEP 6"
LEA COUNTY, NEW MEXICO
SRS #2002 - 10312
NMOCD REF. # AP-037

TALON/LPE PROJECT NO. 700376.051.01

Prepared by:

Nelda Cortez
Environmental Scientist

Paul Santos
Senior Engineer

STATE OF TEXAS
PAUL A. SANTOS
95526
LICENSED
PROFESSIONAL ENGINEER

TALON/LPE
2901 S. State Highway 349
Midland, Texas 79706

March 23, 2015

Distribution List

Name	Title	Company or Agency	Mailing Address	e-mail
Tomas Oberding	Environmental Engineer	NMOCD	1220 South St. Francis Drive Santa Fe, NM 87505	tomas.oberding@state.nm.us
Tomas Oberding	Environmental Engineer	NMOCD	1625 French Dr. Hobbs, NM 88231	tomas.oberding @state.nm.us
Brian Henington	Environmental Engineer	NMSLO – Santa Fe	P.O. Box 1148 Santa Fe, NM 87504	bhenington@slo.state.nm.us
Camille Bryant	Remediation Coordinator	Plains Pipeline	2530 Highway 214 Denver City, TX 79323	cjbryant@paalp.com
Jeff Dann	Senior Environmental Specialist	Plains Pipeline	P. O. Box 4648 Houston, TX 77210-4648	jpdann@paalp.com
File		Talon/LPE	318 East Taylor Street Hobbs, New Mexico 88240	skillingsworth@talonlpe.com

NMOCD - New Mexico Oil Conservation Division

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION AND OBJECTIVES

1.1 Site Background

The Lovington Deep 6" site is located approximately 5.8 miles southwest of Lovington in Lea County, New Mexico. A release of crude oil from the Deep 6" pipeline occurred on property which is primarily utilized as pasture/range with intermittent oil production facilities land and is owned by Chevron. The site is located within the West Lovington oil field and has no residence or surface water located within a 1,000-foot radius of the release point. The remediation area is surrounded by a barbed wire fence and is gated.

The site is situated within a physiographic region that is on the extreme south-western portion of the Southern High Plains as it grades into the Edwards Plateau to the south and southeast and the Chihuahuan Desert of the Trans-Pecos Region to the southwest.

The topography proximal to the site is typical of the Southern High Plains, essentially flat with shallow depressions, or playa lakes, dotting the landscape. The prominent surface features on the Southern High Plains are the approximately 19,250 ephemeral playa lakes; however the density of the playa lakes diminishes toward the southern extent of the Southern High Plains. During periods of rainfall, the playa lakes accumulate sheet runoff from watershed areas ranging in size from less than one square mile to several square miles. Only a small portion of drainage from rainfall occurs by streams. Playa lakes that collect storm water runoff can act as a recharge mechanism for groundwater.

The average elevation of the site area is approximately 3,915-feet above mean sea level with a slight slope to the southeast. The regional slope of the land surface in the Southern High Plains is approximately 100 feet per mile in a southeasterly direction.

In December 2002, a release of approximately 25 barrels (bbls) of crude oil occurred at the site due to corrosion of the Deep 6" pipeline. Ten (10) bbls of oil were recovered during initial response activities. Approximately 6,000 square feet of surface area was impacted by the release. During the initial remediation phase, soil that was impacted by the release was excavated and transported to a New Mexico Oil Conservation Division (NMOCD) approved land farm for treatment.

Soil remediation activities were initiated by Environmental Plus, Inc. (EPI) in 2003 and the soil phase of site remediation was closed in October 2005.

On February 5, 2007, Talon/LPE (Talon) was retained by Plains Marketing, L.P. (Plains) to assume groundwater remediation activities at the Lovington Deep 6" release site. Groundwater remediation activities at the site were previously conducted by Environmental Plus, Inc. (EPI).

1.2 Site Geology

The surficial 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 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, Ogallala sediments were deposited by fluvial mechanism as paleovalley fill, which is composed of gravelly to sandy braided stream deposits that trend 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

During initial assessment activities to delineate the extent of impacted soil at the site, six soil borings were advanced from December 27, 2002 through January 2, 2004. During the assessment, soil boring BH-1 encountered groundwater that was impacted by phase separated hydrocarbons (PSH). Subsequently, soil boring BH-1 was completed as groundwater monitor well, MW-2. Soil borings BH-2, BH-4, BH-5, and BH-6 were advanced in order to delineate the extent of impacted groundwater and those soil borings were completed as groundwater monitor wells MW-1, MW-3, MW-4, and MW-5.

During November and December of 2004, six (6) additional groundwater monitor wells (MW-6 through MW-11) were installed to further delineate the lateral extent of groundwater impact at the site. Finally, in July 2006, six (6) additional groundwater monitor wells (MW-12 through MW-17) were installed to complete assessment of the areal extent of impacted groundwater.

Subsequent groundwater monitoring events indicated that benzene concentrations in the down-gradient sentinel monitor well, MW-12, consistently exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard. Therefore; monitor well MW-18 was installed further down-gradient in June of 2010.

PSH recovery operations have been performed at the site since March 2003, initially from hand bailing followed by a recovery system that utilizes skimmers with bladder pumps for PSH recovery. In April of 2010, a pneumatic total fluid pump was installed in monitor well MW-2. Since the total fluid pump increased groundwater production combined with an insignificant increase in PSH production, the total fluids pump was removed from MW-2 in September of 2010 and replaced with a skimmer and bladder pump. In order to help reduce down-gradient dissolved-phase concentrations, bubblers were installed in monitor wells MW-10 and MW-12 in January of 2011.

At the end of 2012, there were six (6) skimmers with bladder pumps operating in monitor wells MW-2, MW-13, MW-14, MW-15, MW-16, and MW-17. During 2012, three Mobile Duel Phase Extraction (MDPE) events were conducted on site. A total of approximately 27 bbls of liquid and vapor PSH were recovered during these events, and five (5) bbls of crude oil was recovered during 2012 by the skimmer pump system.

Because the MDPE events proved far more efficient at PSH recovery, the on-site recovery system was removed completely in January of 2013. MDPE events are conducted monthly. A total of 18.8 bbls of liquid and 6.5 bbls vapor PSH were recovered during the events, totaling

25.3 for the year 2014. Approximately 156.15 bbls of crude oil has been recovered to date by the remediation system and MDPE events, 23.4 bbls vapor and 132.75 liquid phase.

1.4 Regulatory Framework

Groundwater analytical data collected from the Deep 6" site is evaluated to the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards outlined 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

The subsequent sections of this report provide summaries of the groundwater monitoring activities that were conducted at the subject site during the year 2014 as well as analytical results from each groundwater sampling event. Cumulative analytical results for including the four (4) 2014 sampling events are summarized in Table 2, in Appendix B, and Figures 1, 2a through 2d, and 3a through 3d in Appendix A. Laboratory analytical data reports and chain of custody documentation are included in Appendix C.

2.0 SITE ACTIVITIES

The sections that follow summarize groundwater monitoring and PSH recovery activities conducted at the subject site during 2014. The primary function of groundwater monitoring is to measure the depths to fluids 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 groundwater 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 performance and efficiency.

2.1 Groundwater Gauging, Purging, and Sample Collection Procedures

A total of four (4) groundwater monitoring events were conducted by Talon during the year 2014 on March 3, June 4, September 4, and December 18, 2014.

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 isopleths 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.

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 on-site 55-gallon drums. After the groundwater monitoring event, all retained water was removed with a vacuum truck. Approximately 1,120 gallons of purged groundwater and decontamination water was generated during the monitoring events of 2014.

Groundwater samples were collected from all monitor wells using dedicated disposable polyethylene bailers. Each groundwater sample was contained in laboratory supplied sample containers with the appropriate preservative required for the analysis requested. The groundwater samples were maintained on ice, in the custody of Talon personnel, until they were delivered to TraceAnalysis, Inc. in Midland, Texas for analyses.

The groundwater samples collected during all four events were quantified for benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA Method SW-846 8021B and groundwater samples collected from monitor well MW-10 during the third event were analyzed for poly-nuclear aromatic hydrocarbons (PAH) by EPA Method 8270C.

2.2 Phase Separated Hydrocarbon Recovery

PSH recovery has been conducted at the site since 2003, initially by hand bailing. In 2007, an automated skimmer / bladder pump recovery system was installed at the site. The system utilized six (6) skimmers with bladder pumps in monitor wells MW-2, and MW-13 through MW-17 for recovery of PSH and to inhibit migration of the PSH plume. The skimmer assembly consisted of bladder pumps combined with 24-inch traveling float specific gravity skimmers attachments. The skimmer system was powered by a single-phase 230 volt, 7.5 HP two stage reciprocating air compressor.

Currently, Mobile Duel Phase Extraction (MDPE) events are conducted monthly. This system utilizes vapor pulled by vacuum combined with propane to power an internal combustion engine, which also powers a compressor and the blower used to create vacuum for vapor recovery. Compressed air from the system drives pneumatic pumps placed in the various wells containing PSH. Fluid, recovered by the pumps, is retained in a 1,500-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. Recovered groundwater and PSH is removed from the poly tank and transported to an NMOCD approved disposal facility via vac truck at the end of the MDPE events.

During 2014 the quarterly MDPE PSH recovery system totals are as followed:

- 1st Quarter – 7.9 bbls PSH (1.7 vapor/ 6.2 liquid), 86.3 bbls water
- 2nd Quarter – 5.53 bbls PSH (1.82 vapor/ 3.71 liquid), 100 bbls water
- 3rd Quarter – 6.72 bbls PSH (2.03 vapor/ 4.69liquid), 75.9 bbls water
- 4th Quarter – 5.15 bbls PSH (0.96 vapor/ 4.19 liquid), 135.0 bbls water

The total PSH recovery for 2014 is approximately 25.3 bbls (6.49 vapor/ 18.79 liquid). Approximately 156.15 bbls of PSH (23.4 vapor/ 132.75 liquid) have been recovered to date from the site.

3.0 GROUNDWATER MONITORING RESULTS

The results of the laboratory analyses are summarized in Table 2 – Summary of Groundwater Analytical Data in Appendix B. Laboratory analytical data reports and chain of custody documentation are provided in Appendix C.

3.1 Groundwater Monitoring Results

The following sections present the results from the monitoring of the first water-bearing zone underlying the site.

3.1.1 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 (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 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 Ogallala Aquifer is generally unconfined and the poteniometric surface generally mirrors the land surface elevation with the regional flow direction 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 depth to groundwater at the site has historically ranged from 60 to 65 feet below ground surface (bgs) and the groundwater flow direction is to the east southeast at an average of 0.0033 foot per foot or 17 feet per mile. The saturated thickness of the Ogallala formation on the High Plains ranges from 25 feet to 175 feet. The variable thickness is due to the irregularly eroded Triassic surface that underlies it.

The composition of Ogallala groundwater is defined as mixed-cation-HCO_3, 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.

3.1.2 Groundwater Gradient and Flow Direction

The depth to fluid measurements was collected during each of the four (4) groundwater monitoring events during the year 2014. The results of the fluid level measurements are summarized in Table 1, Appendix B - Summary of Historical Fluid Level Measurements.

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 indicates that the groundwater flow direction is to southeast at an approximate gradient of 0.0033 feet/foot or approximately 17 feet per mile. Groundwater levels at the subject site have remained stable for the year 2014.

3.1.3 Phase Separated Hydrocarbon (PSH)

An oil/water interface probe was used to determine the thicknesses of PSH during the four (4) groundwater monitoring events. Generally, PSH thicknesses have fluctuated from quarter to quarter during the year 2014 and have exhibited both declines and increases in thickness.

In addition to potentiometric surface maps, isopleth maps were prepared depicting the measured PSH thicknesses and PSH plume geometry. PSH plume delineation and thickness isopleths maps are presented in Appendix A as Figures 3a through 3d. Currently, the PSH plume is delineated by the current monitor well geometry.

- In March 2014, PSH was observed in six (6) monitor wells MW-2 and MW-13 through MW-17. PSH thickness ranged from 0.01 feet to 4.82 feet.
- In June 2014, PSH was observed in six (6) monitor wells MW-2 and MW-13 through MW-17. PSH thickness ranged from 0.10 feet to 3.32 feet.
- In September 2014, PSH was observed in six (6) monitor wells MW-2 and MW-13 through MW-17. PSH thickness ranged from 0.17 feet to 4.77 feet.
- In December 2014, PSH was observed in six (6) monitor wells MW-2 and MW-13 through MW-17. PSH thickness ranged from 0.26 feet to 1.76 feet.

3.1.4 Groundwater Sampling Results

During the March 2014 sampling event, groundwater samples were collected from 12 monitor wells MW-1, MW-3 through MW-12 and MW-18. Samples were not collected from monitor wells MW-2 and MW-13 through MW-17, 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 10.5 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-3, MW-10, MW-12, and MW-18.
- Toluene concentrations ranged from <0.00100 mg/L to 9.39 mg/L. The toluene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in groundwater samples collected, except from MW-12.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.915 mg/L. The ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in groundwater samples collected, except from MW-3 and MW-10.
- Xylene concentrations ranged from <0.00300 mg/L to 0.144 mg/L. The xylene concentrations did not exceed the NMWQCC groundwater standard of 0.620 mg/L in groundwater samples collected, except from MW-3.

During the June 2014 sampling event, groundwater samples were collected from 12 monitor wells MW-1, MW-3 through MW-12 and MW-18. Samples were not collected from monitor wells MW-2 and MW-13 through MW-17 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 4.64 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-3, MW-10, and MW-18.
- Toluene concentrations ranged from <0.00100 mg/L to <0.0500 mg/L. Toluene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any sampled monitor wells.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.230 mg/L. The ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in groundwater samples collected.
- Xylene concentrations ranged from <0.00100 mg/L to <0.0500 mg/L. The xylene concentrations did not exceed the NMWQCC groundwater standard of 0.620 mg/L in groundwater samples collected.
- Naphthalene concentrations totaled 0.00140 mg/L in the sample taken from MW-10. The total naphthalene concentrations did not exceed the NMWQCC groundwater standard of 0.030 in the groundwater sample collected.

During the September 2014 sampling event, groundwater samples were collected from 12 monitor wells, MW-1, MW-3 through MW-12 and MW-18. Samples were not collected from monitor wells MW-2 and MW-13 through MW-17 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 9.68 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-3, MW-10, and MW-12.
- Toluene concentrations ranged from <0.00100 mg/L to <0.0500 mg/L. The toluene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in the groundwater samples collected.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.527 mg/L. Ethylbenzene concentrations did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any of the groundwater samples collected.
- Xylene concentrations ranged from <0.00100 mg/L to 0.185 mg/L. Xylene concentrations did not exceed the NMWQCC groundwater standard of 0.620 mg/L in any of the groundwater samples collected.
- Total naphthalene concentrations did not exceed <0.000119 mg/L in the samples taken from MW-3 and MW-18. The total naphthalene concentrations did not exceed the NMWQCC groundwater standard of 0.030 in any groundwater samples collected

During the December 2014 sampling event, groundwater samples were collected from 12 monitor wells MW-1, MW-3 through MW-12 and MW-18. Samples were not collected from monitor wells MW-2 and MW-13 through MW-17, 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 6.45 mg/L. Benzene

concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor wells MW-3, MW-10, and MW-12.

- Toluene concentrations ranged from <0.00100 mg/L to <0.100 mg/L. The toluene concentration did not exceed the NMWQCC groundwater standard of 0.750 mg/L in any groundwater sample collected.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.604 mg/L. All ethylbenzene concentrations were below the NMWQCC groundwater standard of 0.750 mg/L.
- Xylene concentrations ranged from <0.00100 mg/L to 0.740 mg/L. The xylene concentrations did exceed the NMWQCC groundwater standard of 0.620 mg/L in the groundwater samples collected from two wells, MW-3 and MW-10.

The dissolved-phase plume does not appear to have delineated to NMWQCC groundwater standards according to groundwater monitor wells MW-3, MW-10, MW-12, and MW-18. During the first quarter of 2014 MW-3, MW-10, MW-12, and MW-18 exhibited benzene concentrations slightly above NMWQCC standards. During the second quarter MW-3, MW-10, and MW-18 exhibited benzene concentrations above NMWQCC standards. During the third quarter MW-3, MW-10, and MW-12 exhibited benzene concentrations above NMWQCC standards. During the fourth quarter MW-3, MW-10, and MW-12 exhibited benzene concentrations above NMWQCC standards. The laboratory analytical results are summarized in Table 2 – Summary of Groundwater Analytical Results in Appendix B. Laboratory analytical data reports and chains of custody documentation are provided in Appendix C.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The following section presents a summary of the four groundwater monitoring events conducted at the Lovington Deep 6" site and Section 4.2 provides recommendations for future corrective action.

4.1 Summary of Findings

- Groundwater elevations, on average, have remained the same according to the data collected from the groundwater monitoring events. The flow direction remains to the east. The groundwater flow direction in the first water-bearing zone is to the east at a gradient averaging 0.0033 ft/ft or approximately 17 feet per mile based upon the water level measurement data collected during 2014.
- PSH has consistently impacted monitor wells MW-2 and MW-13 through MW-17 during 2014. PSH thicknesses fluctuated in all impacted wells, but on average decreased. The PSH plume is stable and delineated.
- The MDPE PSH recovery system has removed approximately 25.3 bbls (6.5 vapor/ 18.79 liquid) of crude oil from the groundwater during 2014 indicating that the system is performing its function.

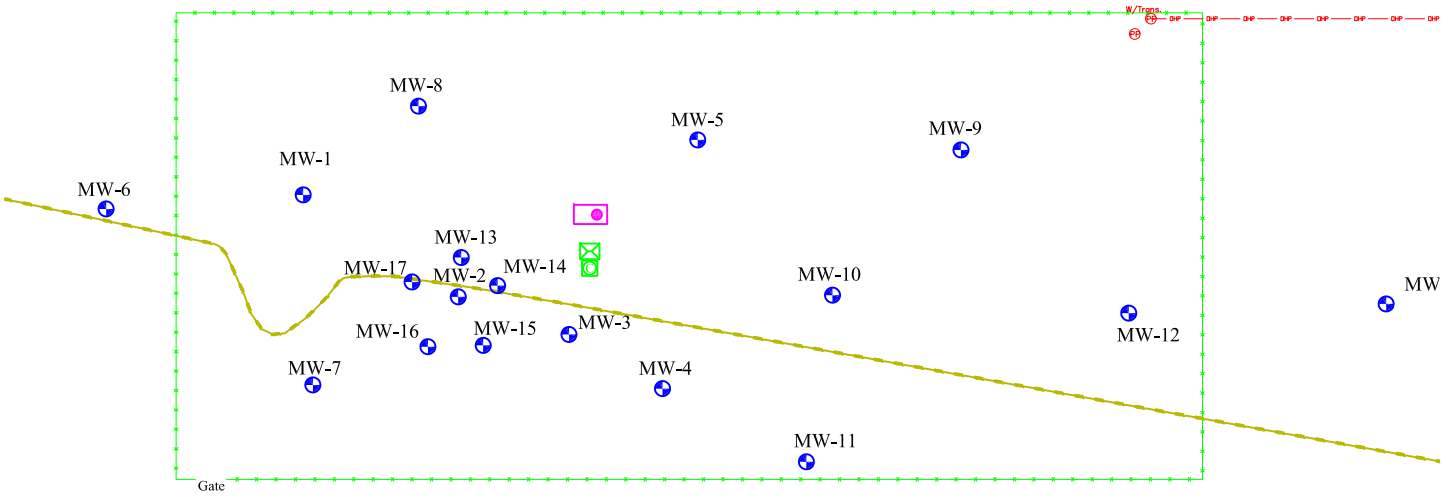
4.2 Recommendations

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

- Perform monthly MDPE events.
- Perform 2015 quarterly groundwater monitoring events in accordance with NMOCD directives.

APPENDIX A

Figures



N

0 50 100

Scale in Feet

Legend

- Monitor Well w/ Skimmer
- Monitor Well w/Total Fluid Pump
- Monitor Well
- Proposed Monitor Well
- Power Pole W/Transformer
- Overhead Powerline
- Fence line
- Pipeline
- Compressor Shed
- Controls
- Recovery System Tank and Containment

Talon/LPE # : 700376.051.01

TALON LPE

Date: 07/14/2011

Scale: 1" = 100'

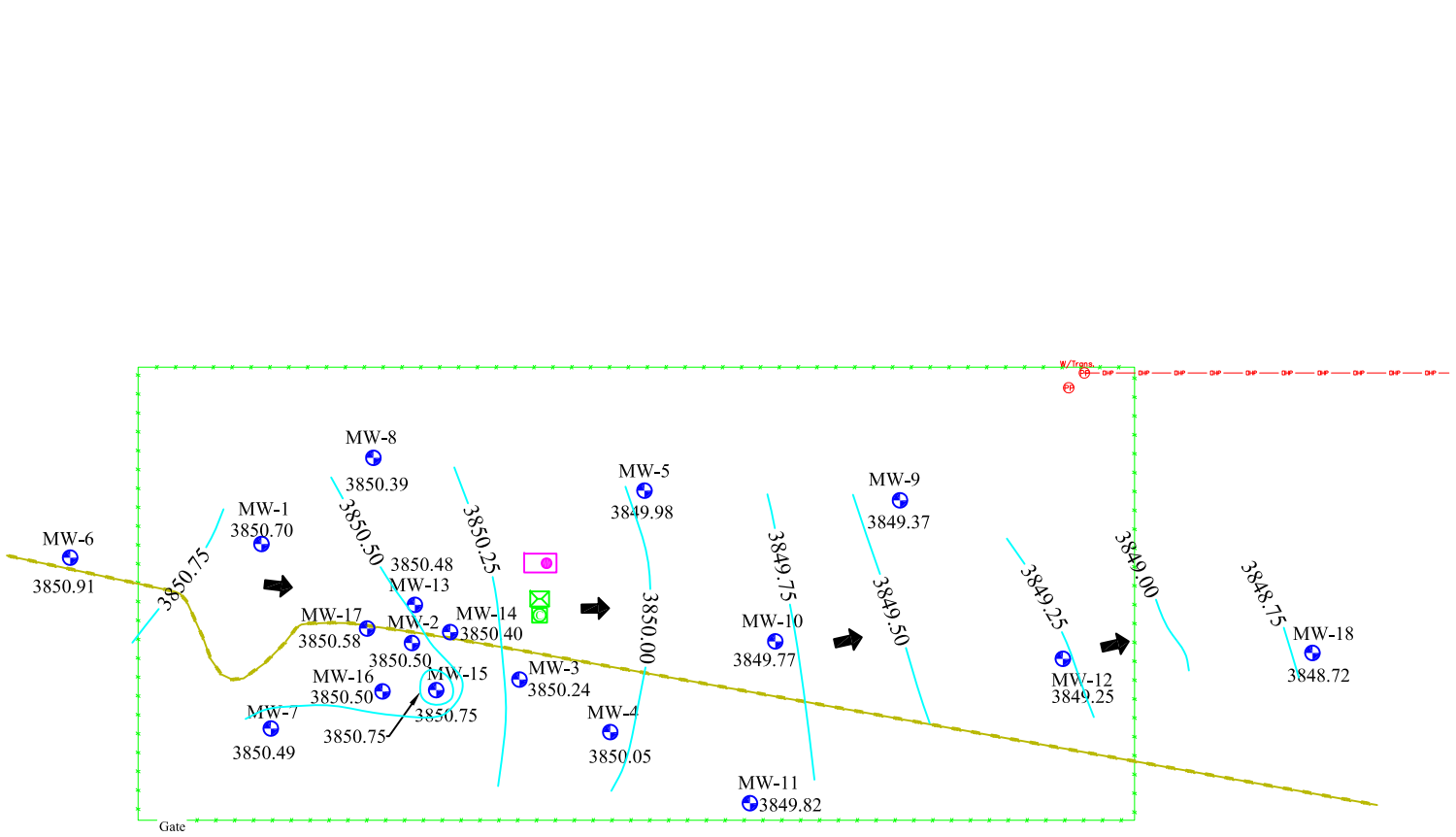
Drawn By: TJS

Lovington Deep 6"

SRS # 2002-10312, NMOCD REF. # AP-037

SE 1/4 of the NE 1/4, Sec. 6, T17S, R36E, Lea County, New Mexico

Figure 1 - Site Plan



Talon/LPE # : 700376.051.01

TALON LPE

Date: 04/15/2014

Scale: 1" = 100'

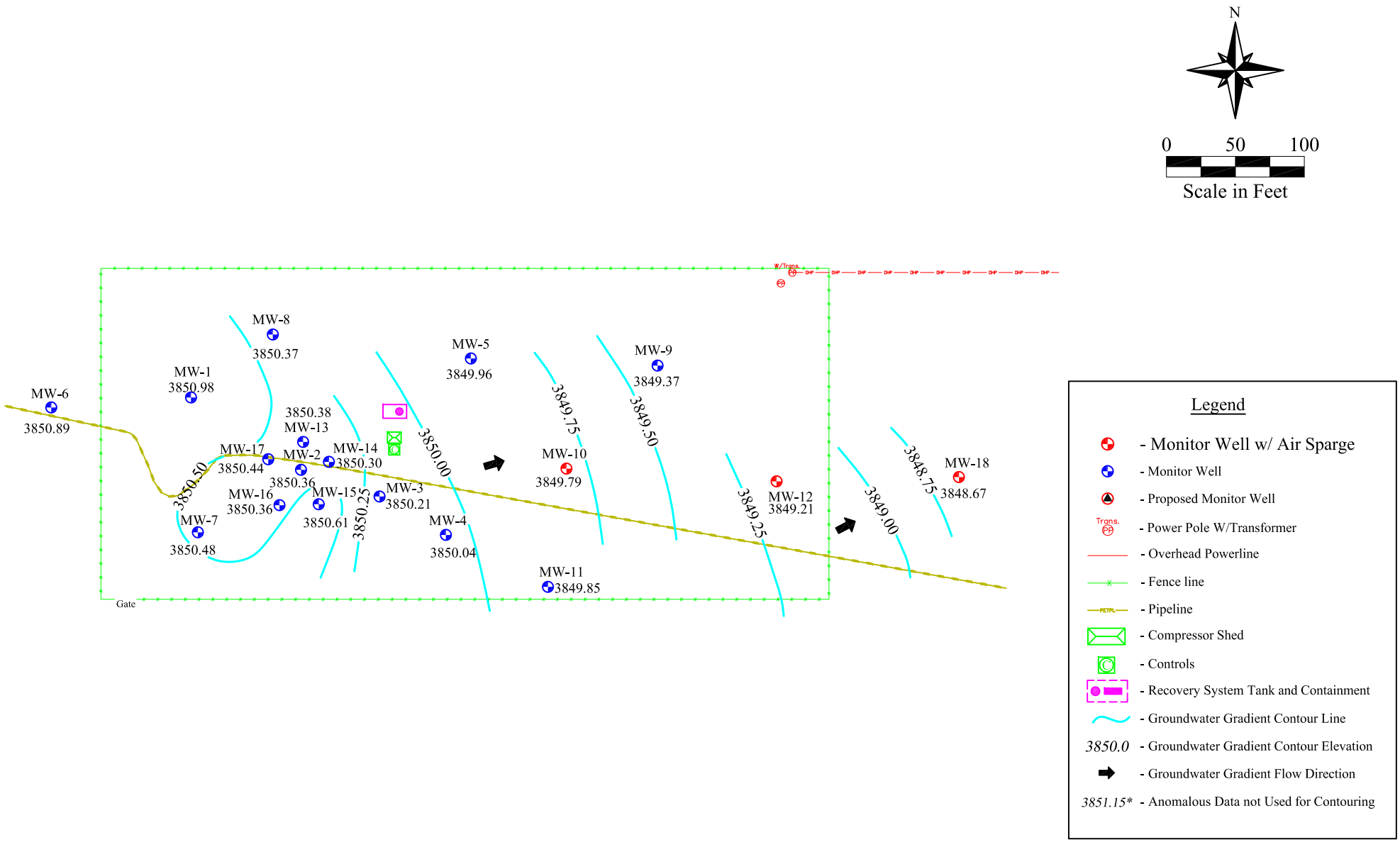
Drawn By: TJS

Lovington Deep 6"

SRS # 2002-10312, NMOCD REF. # AP-037

SE 1/4 of the NE 1/4, Sec. 6, T17S, R36E, Lea County, New Mexico

Figure 2a - Groundwater Gradient Map, (03/05/2014)



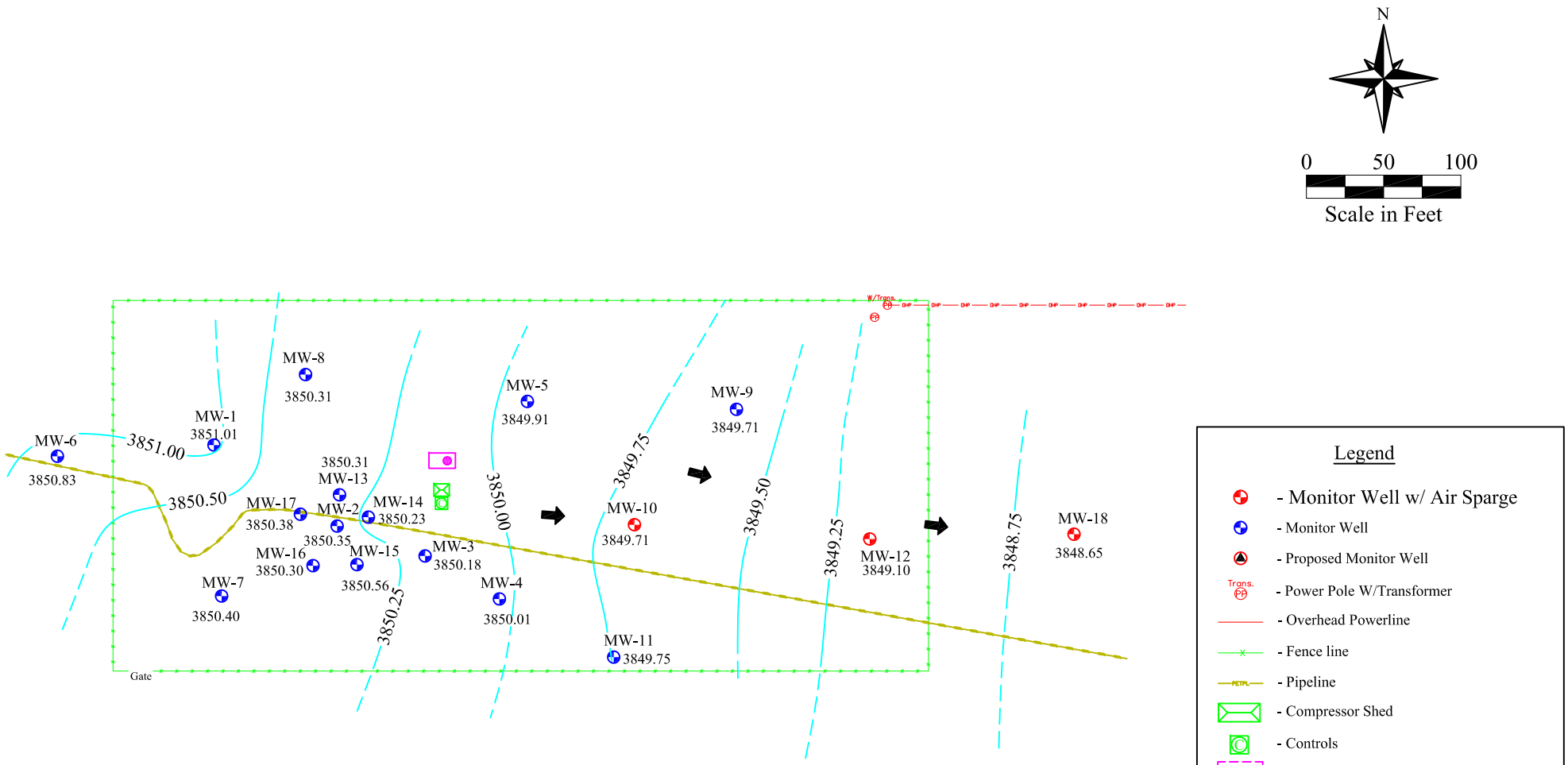
Talon/LPE # : 700376.051.01

TALON LPE

Date: 07/10/2014
Scale: 1" = 100'
Drawn By: TJS

Lovington Deep 6"

SRS # 2002-10312, NMOCD REF. # AP-037
SE 1/4 of the NE 1/4, Sec. 6, T17S, R36E, Lea County, New Mexico
Figure 2b - Groundwater Gradient Map, (06/04/2014)



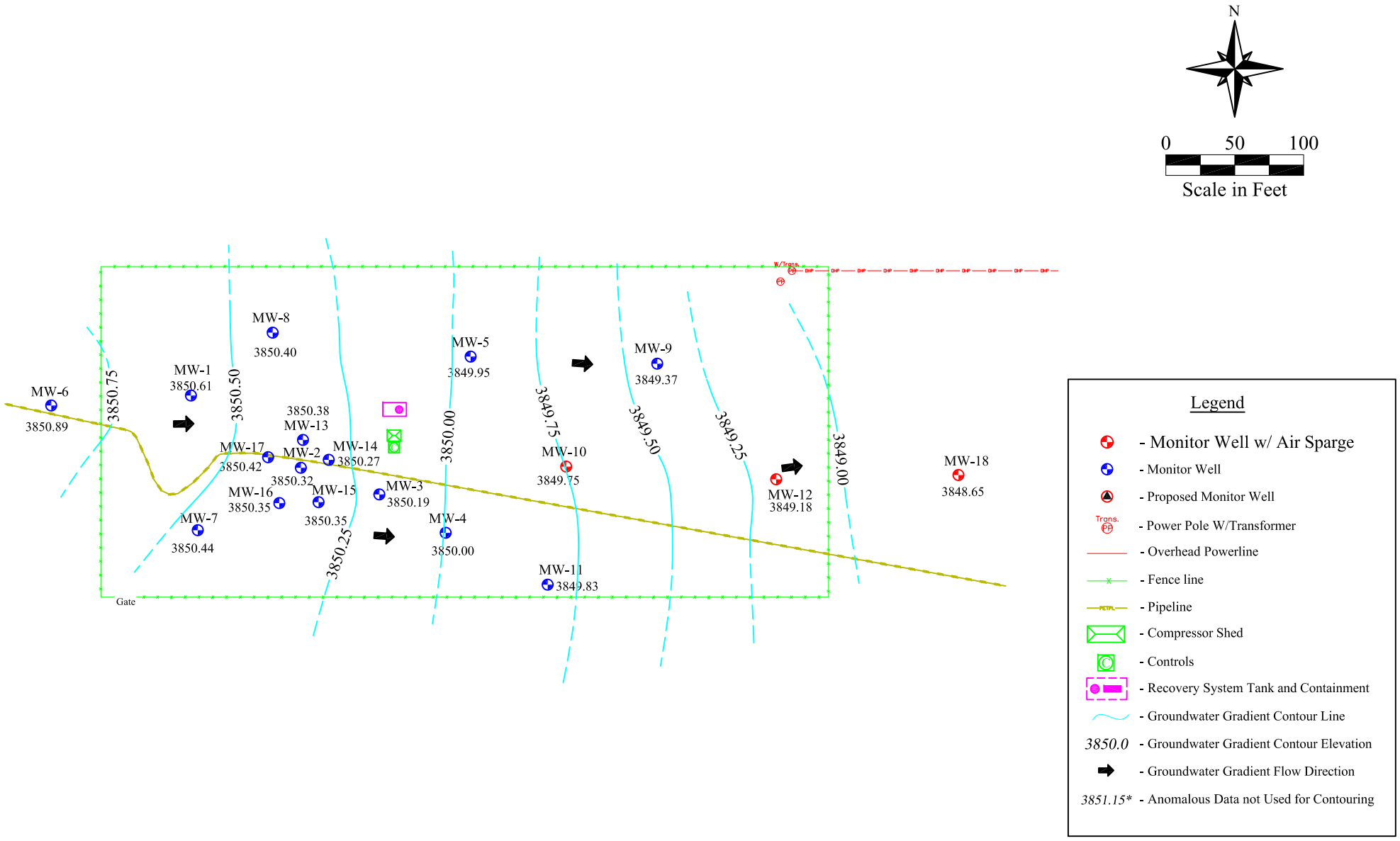
Talon/LPE # : 700376.051.01

TALON LPE

Date: 10/02/2014
Scale: 1" = 100'
Drawn By: TJS

Lovington Deep 6"

SRS # 2002-10312, NMOCD REF. # AP-037
SE 1/4 of the NE 1/4, Sec. 6, T17S, R36E, Lea County, New Mexico
Figure 2c - Groundwater Gradient Map, (09/04/2014)



Talon/LPE # : 700376.051.01

TALON LPE

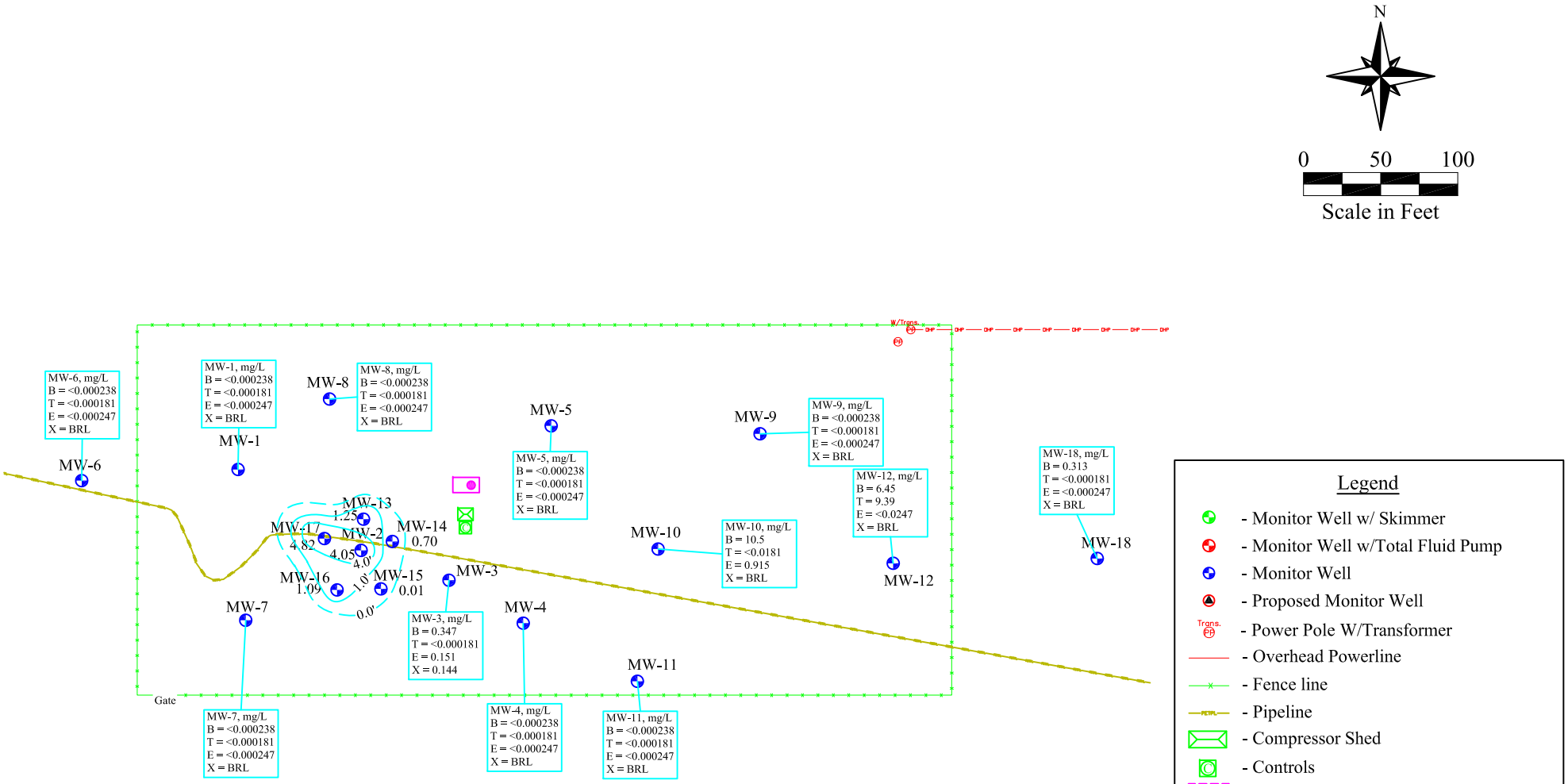
Date:	01/16/2015
Scale:	1" = 100'
Drawn By:	TJS

Lovington Deep 6"

SRS # 2002-10312, NMOCD REF. # AP-037

SE 1/4 of the NE 1/4, Sec. 6, T17S, R36E, Lea County, New Mexico

Figure 2d - Groundwater Gradient Map (12/18/2014)



Talon/LPE # : 700376.051.01

TALON LPE

Date: 04/15/2014

Scale: 1" = 100'

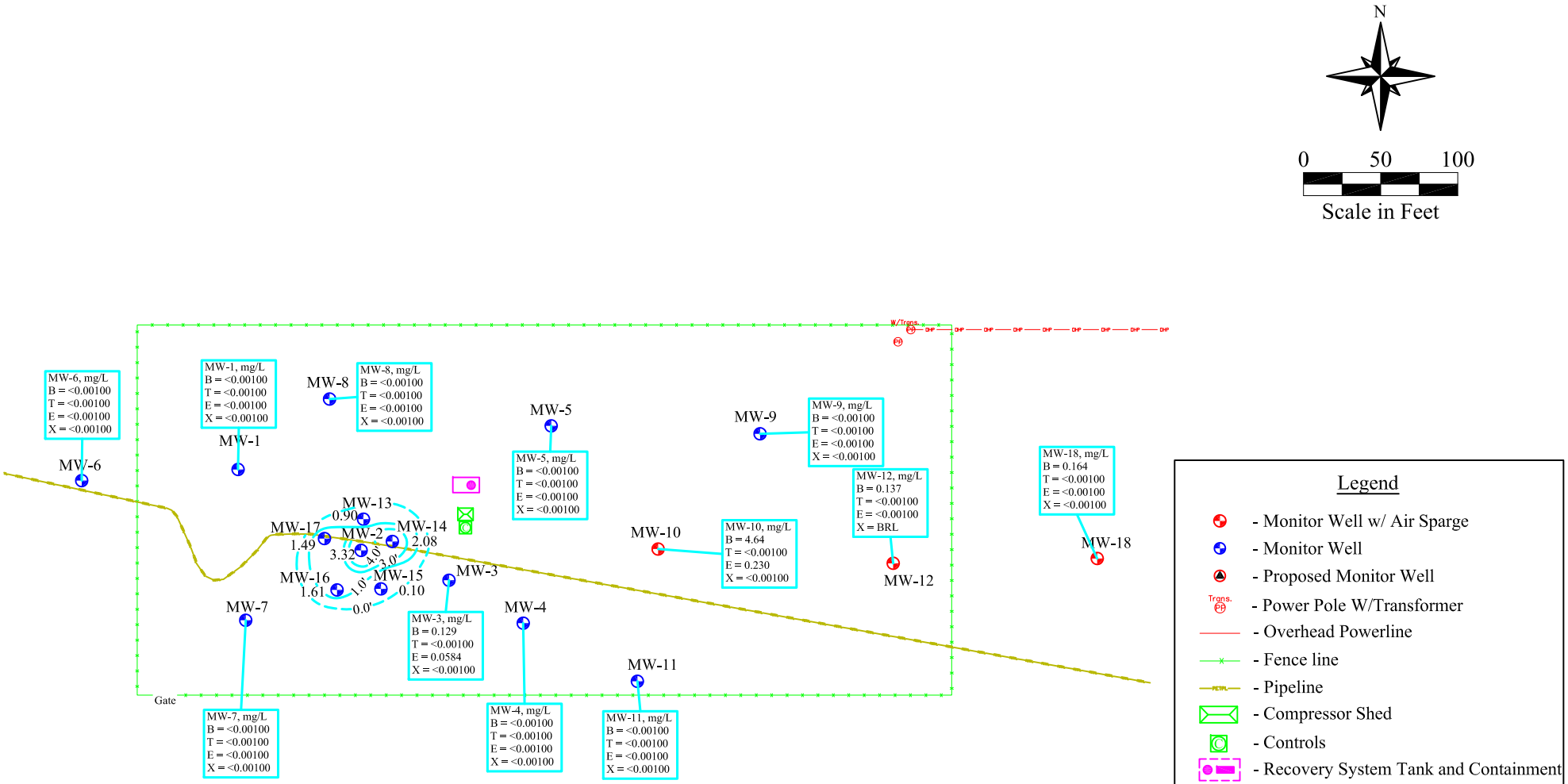
Drawn By: TJS

Lovington Deep 6"

SRS # 2002-10312, NMOCD REF. # AP-037

SE 1/4 of the NE 1/4, Sec. 6, T17S, R36E, Lea County, New Mexico

Figure 3a - PSH Thickness & Groundwater Concentration Map, (03/06/2014)



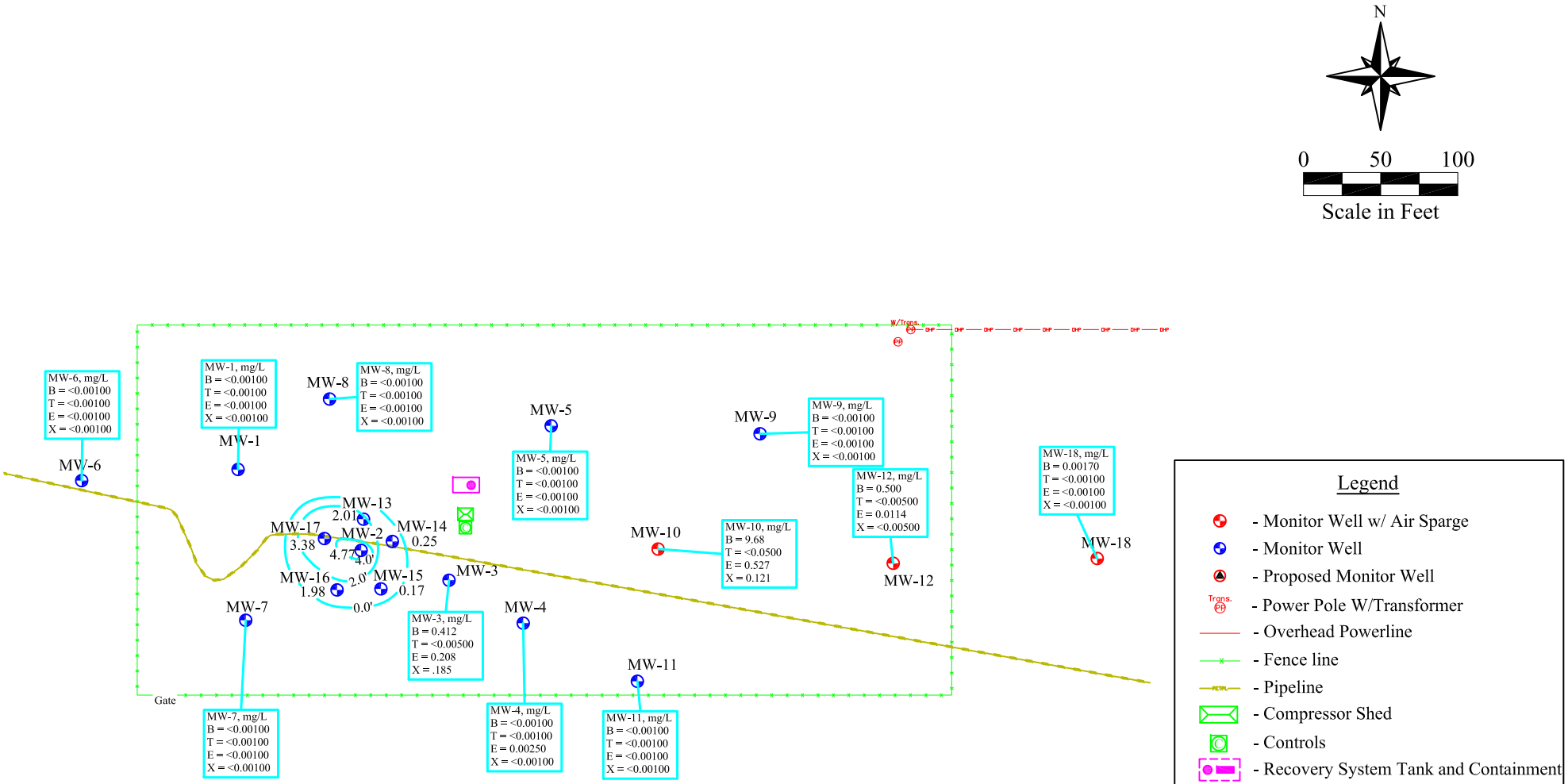
Talon/LPE # : 700376.051.01

TALON LPE

Date: 07/10/2014
Scale: 1" = 100'
Drawn By: TJS

Lovington Deep 6"

SRS # 2002-10312, NMOCD REF. # AP-037
SE 1/4 of the NE 1/4, Sec. 6, T17S, R36E, Lea County, New Mexico
Figure 3b - PSH Thickness & Groundwater Concentration Map, (06/04/2014)



Talon/LPE # : 700376.051.01

TALON LPE

Date: 10/02/2014

Scale: 1" = 100'

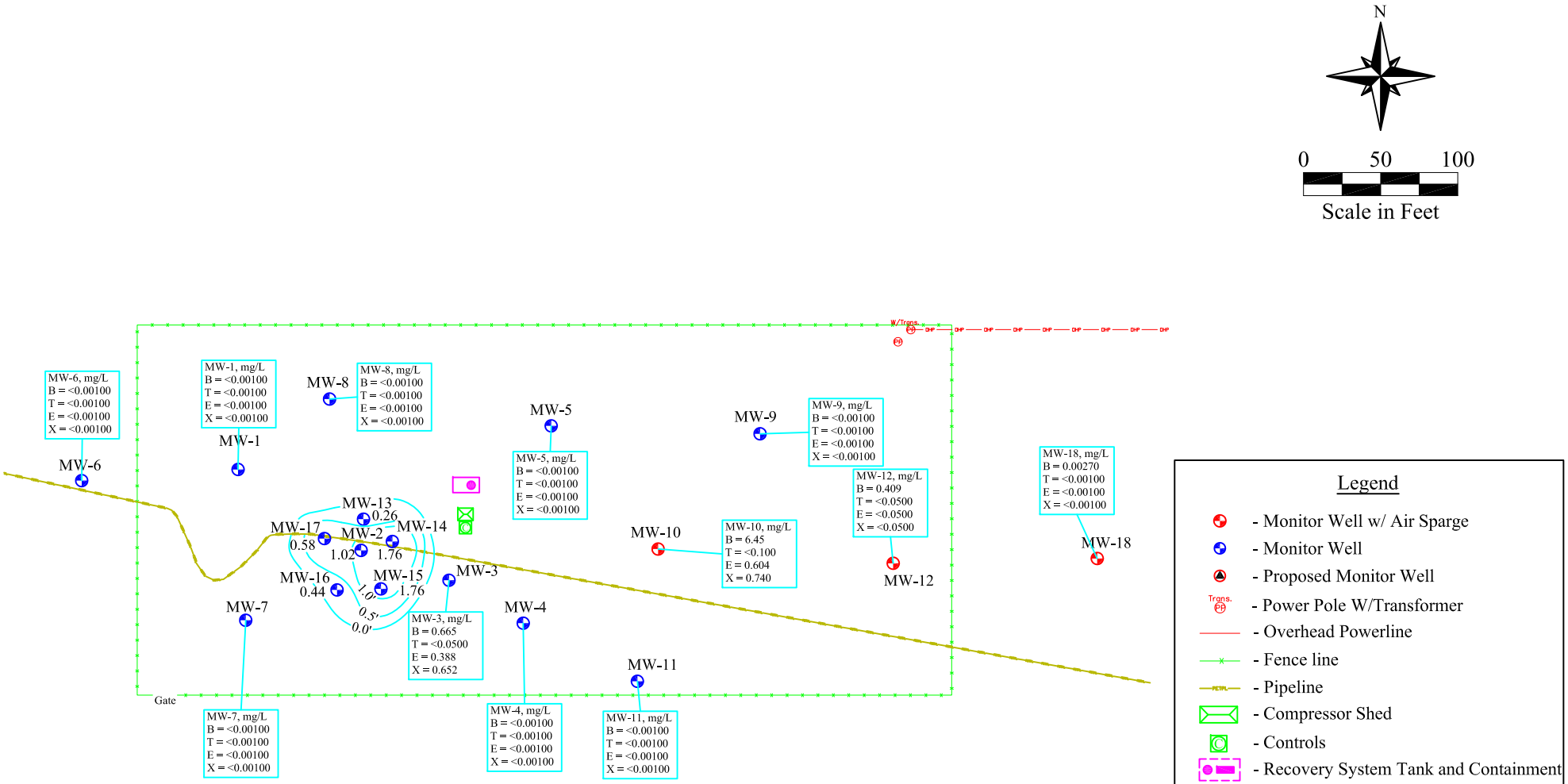
Drawn By: TJS

Lovington Deep 6"

SRS # 2002-10312, NMOCD REF. # AP-037

SE 1/4 of the NE 1/4, Sec. 6, T17S, R36E, Lea County, New Mexico

Figure 3c - PSH Thickness & Groundwater Concentration Map, (09/04/2014)



Talon/LPE # : 700376.051.01

TALON LPE

Date: 01/16/2015

Scale: 1" = 100'

Drawn By: TJS

Lovington Deep 6"

SRS # 2002-10312, NMOCD REF. # AP-037

SE 1/4 of the NE 1/4, Sec. 6, T17S, R36E, Lea County, New Mexico

Figure 3d - PSH Thickness & Groundwater Concentration Map (12/18-19/2014)

APPENDIX B

Tables

Summary of Historical Fluid Level Measurements
Lovington Deep 6"
700376.051

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-1			Diameter: 4 in.	Screened Interval: 54 ft. to 74 ft.		TD: 74 ft.
	01/03/12	3915.51	64.51	-	-	3851.00
	03/23/12	3915.51	64.51	-	-	3851.00
	06/06/12	3915.51	64.70	-	-	3850.81
	09/12/12	3915.51	64.75	-	-	3850.76
	12/05/12	3915.51	64.76	-	-	3850.75
	03/11/13	3915.51	64.61	-	-	3850.90
	06/04/13	3915.51	64.65	-	-	3850.86
	09/29/13	3915.51	64.69	-	-	3850.82
	12/04/13	3915.51	64.90	-	-	3850.61
	03/05/14	3915.51	64.81	-	-	3850.70
	06/04/14	3915.51	64.53	-	-	3850.98
	09/04/14	3915.51	64.50	-	-	3851.01
	12/18/14	3915.51	64.90	-	-	3850.61
MW-2			Diameter: 4 in.	Screened Interval: 54 ft. to 74 ft.		TD: 74 ft.
	01/03/12	3915.04	67.95	63.61	4.34	3850.71
	03/23/12	3915.04	67.74	63.53	4.21	3850.82
	06/06/12	3915.04	66.37	64.05	2.32	3850.61
	09/12/12	3915.04	65.65	64.30	1.35	3850.52
	12/05/12	3915.04	67.58	63.83	3.75	3850.59
	03/11/13	3915.04	67.53	63.70	3.83	3850.71
	06/04/13	3915.04	67.90	63.64	4.26	3850.70
	09/29/13	3915.04	68.08	63.66	4.42	3850.65
	12/04/13	3915.04	68.36	63.70	4.66	3850.57
	03/05/14	3915.04	67.92	63.87	4.05	3850.50
	06/04/14	3915.04	67.45	64.13	3.32	3850.36
	09/04/14	3915.04	68.67	63.90	4.77	3850.35
	12/18/14	3915.04	65.57	64.55	1.02	3850.32
MW-3			Diameter: 4 in.	Screened Interval: 54 ft. to 74 ft.		TD: 74 ft.
	01/03/12	3915.24	64.59	-	-	3850.65
	03/23/12	3915.24	64.71	-	-	3850.53
	06/06/12	3915.24	64.88	-	-	3850.36
	09/12/12	3915.24	64.18	-	-	3851.06
	12/05/12	3915.24	64.93	-	-	3850.31
	03/11/13	3915.24	64.78	-	-	3850.46
	06/04/13	3915.24	64.81	-	-	3850.43
	09/29/13	3915.24	64.89	-	-	3850.35
	12/04/13	3915.24	65.08	-	-	3850.16
	03/05/14	3915.24	65.00	-	-	3850.24
	06/04/14	3915.24	65.03	-	-	3850.21
	09/04/14	3915.24	65.06	-	-	3850.18
	12/18/14	3915.24	65.05	-	-	3850.19

Summary of Historical Fluid Level Measurements
Lovington Deep 6"
700376.051

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-4			Diameter: 2 in.	Screened Interval: 54 ft. to 74 ft.		TD: 74 ft.
	01/03/12	3915.30	64.84	-	-	3850.46
	03/23/12	3915.30	64.93	-	-	3850.37
	06/06/12	3915.30	65.13	-	-	3850.17
	09/12/12	3915.30	65.13	-	-	3850.17
	12/05/12	3915.30	65.18	-	-	3850.12
	03/11/13	3915.30	65.02	-	-	3850.28
	06/04/13	3915.30	65.05	-	-	3850.25
	09/29/13	3915.30	65.11	-	-	3850.19
	12/04/13	3915.30	65.29	-	-	3850.01
	03/05/14	3915.30	65.25	-	-	3850.05
	06/04/14	3915.30	65.26	-	-	3850.04
	09/04/14	3915.30	65.29	-	-	3850.01
	12/18/14	3915.30	65.30	-	-	3850.00
MW-5			Diameter: 4 in.	Screened Interval: 54 ft. to 74 ft.		TD: 74 ft.
	01/03/12	3915.26	64.82	-	-	3850.44
	03/23/12	3915.26	64.94	-	-	3850.32
	06/06/12	3915.26	65.13	-	-	3850.13
	09/12/12	3915.26	65.15	-	-	3850.11
	12/05/12	3915.26	65.17	-	-	3850.09
	03/11/13	3915.26	65.07	-	-	3850.19
	06/04/13	3915.26	65.33	-	-	3849.93
	09/29/13	3915.26	65.42	-	-	3849.84
	12/04/13	3915.26	65.32	-	-	3849.94
	03/05/14	3915.26	65.28	-	-	3849.98
	06/04/14	3915.26	65.30	-	-	3849.96
	09/04/14	3915.26	65.35	-	-	3849.91
	12/18/14	3915.26	65.31	-	-	3849.95
MW-6			Diameter: 2 in.	Screened Interval: 52 ft. to 72 ft.		TD: 72 ft.
	01/03/12	3915.45	64.16	-	-	3851.29
	03/23/12	3915.45	64.27	-	-	3851.18
	06/06/12	3915.45	64.43	-	-	3851.02
	09/12/12	3915.45	64.45	-	-	3851.00
	12/05/12	3915.45	64.48	-	-	3850.97
	03/11/13	3915.45	64.33	-	-	3851.12
	06/04/13	3915.45	64.39	-	-	3851.06
	09/29/13	3915.45	64.11	-	-	3851.34
	12/04/13	3915.45	64.67	-	-	3850.78
	03/05/14	3915.45	64.54	-	-	3850.91
	06/04/14	3915.45	64.56	-	-	3850.89
	09/04/14	3915.45	64.62	-	-	3850.83
	12/18/14	3915.45	64.56	-	-	3850.89

Summary of Historical Fluid Level Measurements
Lovington Deep 6"
700376.051

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-7			Diameter: 2 in.	Screened Interval: 51 ft. to 71 ft.		TD: 71 ft.
	01/03/12	3914.73	63.83	-	-	3850.90
	03/23/12	3914.73	63.94	-	-	3850.79
	06/06/12	3914.73	64.10	-	-	3850.63
	09/12/12	3914.73	64.16	-	-	3850.57
	12/05/12	3914.73	64.18	-	-	3850.55
	03/11/13	3914.73	64.05	-	-	3850.68
	06/04/13	3914.73	64.88	-	-	3849.85
	09/29/13	3914.73	64.12	-	-	3850.61
	12/04/13	3914.73	64.33	-	-	3850.40
	03/05/14	3914.73	64.24	-	-	3850.49
	06/04/14	3914.73	64.25	-	-	3850.48
	09/04/14	3914.73	64.33	-	-	3850.40
	12/18/14	3914.73	64.29	-	-	3850.44
MW-8			Diameter: 2 in.	Screened Interval: 53 ft. to 73 ft.		TD: 73 ft.
	01/03/12	3915.19	64.39	-	-	3850.80
	03/23/12	3915.19	64.48	-	-	3850.71
	06/06/12	3915.19	64.65	-	-	3850.54
	09/12/12	3915.19	64.70	-	-	3850.49
	12/05/12	3915.19	64.74	-	-	3850.45
	03/11/13	3915.19	64.58	-	-	3850.61
	06/04/13	3915.19	64.64	-	-	3850.55
	09/29/13	3915.19	64.72	-	-	3850.47
	12/04/13	3915.19	64.86	-	-	3850.33
	03/05/14	3915.19	64.80	-	-	3850.39
	06/04/14	3915.19	64.82	-	-	3850.37
	09/04/14	3915.19	64.88	-	-	3850.31
	12/18/14	3915.19	64.79	-	-	3850.40
MW-9			Diameter: 2 in.	Screened Interval: 55 ft. to 75 ft.		TD: 75 ft.
	01/03/12	3913.92	63.69	-	-	3850.23
	03/23/12	3913.92	63.79	-	-	3850.13
	06/06/12	3913.92	63.95	-	-	3849.97
	09/12/12	3913.92	64.00	-	-	3849.92
	12/05/12	3913.92	64.06	-	-	3849.86
	03/11/13	3913.92	63.88	-	-	3850.04
	06/04/13	3913.92	64.45	-	-	3849.47
	09/29/13	3913.92	64.48	-	-	3849.44
	12/04/13	3913.92	64.15	-	-	3849.77
	03/05/14	3913.92	64.55	-	-	3849.37
	06/04/14	3913.92	64.55	-	-	3849.37
	09/04/14	3913.92	64.21	-	-	3849.71
	12/18/14	3913.92	64.55	-	-	3849.37

Summary of Historical Fluid Level Measurements
Lovington Deep 6"
700376.051

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-10			Diameter: 2 in.	Screened Interval: 53 ft. to 73 ft.		TD: 73 ft.
	01/03/12	3914.96	64.99	-	-	3849.97
	03/23/12	3914.96	64.87	-	-	3850.09
	06/06/12	3914.96	65.04	-	-	3849.92
	09/12/12	3914.96	65.10	-	-	3849.86
	12/05/12	3914.96	65.11	-	-	3849.85
	03/11/13	3914.96	64.97	-	-	3849.99
	06/04/13	3914.96	64.99	-	-	3849.97
	09/29/13	3914.96	65.03	-	-	3849.93
	12/04/13	3914.96	65.23	-	-	3849.73
	03/05/14	3914.96	65.19	-	-	3849.77
	06/04/14	3914.96	65.17	-	-	3849.79
	09/04/14	3914.96	65.25	-	-	3849.71
	12/18/14	3914.96	65.21	-	-	3849.75
MW-11			Diameter: 2 in.	Screened Interval: 52 ft. to 72 ft.		TD: 72 ft.
	01/03/12	3914.40	64.14	-	-	3850.26
	03/23/12	3914.40	64.24	-	-	3850.16
	06/06/12	3914.40	64.40	-	-	3850.00
	09/12/12	3914.40	64.46	-	-	3849.94
	12/05/12	3914.40	64.68	-	-	3849.72
	03/11/13	3914.40	64.36	-	-	3850.04
	06/04/13	3914.40	64.90	-	-	3849.50
	09/29/13	3914.40	64.99	-	-	3849.41
	12/04/13	3914.40	64.62	-	-	3849.78
	03/05/14	3914.40	64.58	-	-	3849.82
	06/04/14	3914.40	64.55	-	-	3849.85
	09/04/14	3914.40	64.65	-	-	3849.75
	12/18/14	3914.40	64.57	-	-	3849.83
MW-12			Diameter: 2 in.	Screened Interval: 58 ft. to 78 ft.		TD: 78 ft.
	01/03/12	3913.97	64.36	-	-	3849.61
	03/23/12	3913.97	64.46	-	-	3849.51
	06/06/12	3913.97	64.61	-	-	3849.36
	09/12/12	3913.97	64.68	-	-	3849.29
	12/05/12	3913.97	64.68	-	-	3849.29
	03/11/13	3913.97	64.54	-	-	3849.43
	06/04/13	3913.97	64.59	-	-	3849.38
	09/29/13	3913.97	64.61	-	-	3849.36
	12/04/13	3913.97	64.83	-	-	3849.14
	03/05/14	3913.97	64.72	-	-	3849.25
	06/04/14	3913.97	64.76	-	-	3849.21
	09/04/14	3913.97	64.87	-	-	3849.10
	12/18/14	3913.97	64.79	-	-	3849.18

Summary of Historical Fluid Level Measurements
Lovington Deep 6"
700376.051

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-13			Diameter: ____ in.	Screened Interval: 54 ft. to 79 ft.		TD: 79 ft.
	01/03/12	3915.83	68.33	64.41	3.92	3850.77
	03/23/12	3915.83	69.09	64.14	4.95	3850.87
	06/06/12	3915.83	69.22	64.37	4.85	3850.66
	09/12/12	3915.83	65.57	65.12	0.45	3850.64
	12/05/12	3915.83	67.75	64.76	2.99	3850.58
	03/11/13	3915.83	66.65	64.49	2.16	3850.98
	06/04/13	3915.83	66.83	64.99	1.84	3850.54
	06/29/13	3915.83	67.15	64.82	2.33	3850.63
	12/04/13	3915.83	67.41	64.78	2.63	3850.62
	03/05/14	3915.83	66.39	65.14	1.25	3850.48
	06/04/14	3915.83	66.20	65.30	0.90	3850.38
	09/04/14	3915.83	67.20	65.19	2.01	3850.31
	12/18/14	3915.83	65.67	65.41	0.26	3850.38
MW-14			Diameter: 4 in.	Screened Interval: 53 ft. to 78 ft.		TD: 78 ft.
	01/03/12	3915.72	65.72	64.95	0.77	3850.64
	03/23/12	3915.72	65.75	64.82	0.93	3850.75
	06/06/12	3915.72	65.50	64.87	0.63	3850.75
	09/12/12	3915.72	67.55	64.72	2.83	3850.53
	12/05/12	3915.72	65.46	65.20	0.26	3850.48
	03/11/13	3915.72	65.19	65.07	0.12	3850.63
	06/04/13	3915.72	65.34	65.13	0.21	3850.56
	09/29/13	3915.72	65.41	65.28	0.13	3850.42
	12/04/13	3915.72	66.40	65.06	1.34	3850.44
	03/05/14	3915.72	65.90	65.20	0.70	3850.40
	06/04/14	3915.72	67.16	65.08	2.08	3850.30
	09/04/14	3915.72	65.70	65.45	0.25	3850.23
	12/18/14	3915.72	66.92	65.16	1.76	3850.27
MW-15			Diameter: 4 in.	Screened Interval: 54 ft. to 79 ft.		TD: 79 ft.
	01/03/12	3915.84	64.93	64.83	0.10	3850.99
	03/23/12	3915.84	64.84	64.76	0.08	3851.07
	06/06/12	3915.84	64.99	64.95	0.04	3850.88
	09/12/12	3915.84	65.05	64.98	0.07	3850.85
	12/05/12	3915.84	65.10	65.00	0.10	3850.82
	03/11/13	3915.84	64.98	64.86	0.12	3850.96
	06/04/13	3915.84	65.03	64.90	0.13	3850.92
	09/29/13	3915.84	65.13	64.95	0.18	3850.86
	12/04/13	3915.84	65.24	65.00	0.24	3850.80
	03/05/14	3915.84	65.10	65.09	0.01	3850.75
	06/04/14	3915.84	65.31	65.21	0.10	3850.61
	09/04/14	3915.84	65.42	65.25	0.17	3850.56
	12/18/14	3915.84	66.96	65.20	1.76	3850.35

Summary of Historical Fluid Level Measurements
Lovington Deep 6"
700376.051

Well	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Depth to PSH (ft)	PSH Thickness (ft)	Corrected Groundwater Elevation (ft)
MW-16			Diameter: 4 in.	Screened Interval:	54 ft. to 79 ft.	TD: 79 ft.
	01/03/12	3915.43	65.00	64.61	0.39	3850.76
	03/23/12	3915.43	64.92	64.54	0.38	3850.83
	06/06/12	3915.43	65.38	64.69	0.69	3850.63
	09/12/12	3915.43	65.88	64.63	1.25	3850.59
	12/05/12	3915.43	65.21	64.79	0.42	3850.57
	03/11/13	3915.43	64.85	64.67	0.18	3850.73
	06/04/13	3915.43	64.90	64.72	0.18	3850.68
	09/29/13	3915.43	65.70	64.61	1.09	3850.64
	12/04/13	3915.43	65.21	64.81	0.40	3850.55
	03/05/14	3915.43	65.84	64.75	1.09	3850.50
	06/04/14	3915.43	66.41	64.80	1.61	3850.36
	09/04/14	3915.43	66.78	64.80	1.98	3850.30
	12/18/14	3915.43	65.45	65.01	0.44	3850.35
MW-17			Diameter: 4 in.	Screened Interval:	58 ft. to 78 ft.	TD: 78 ft.
	01/03/12	3915.59	67.77	64.19	3.58	3850.81
	03/23/12	3915.59	66.51	64.32	2.19	3850.91
	06/06/12	3915.59	66.32	64.61	1.71	3850.70
	09/12/12	3915.59	66.02	64.75	1.27	3850.63
	12/05/12	3915.59	67.73	64.40	3.33	3850.64
	03/11/13	3915.59	67.92	64.24	3.68	3850.74
	06/04/13	3915.59	67.81	64.32	3.49	3850.69
	09/29/13	3915.59	68.11	64.24	3.87	3850.71
	12/04/13	3915.59	68.49	64.21	4.28	3850.67
	03/05/14	3915.59	69.03	64.21	4.82	3850.58
	06/04/14	3915.59	66.39	64.90	1.49	3850.44
	09/04/14	3915.59	68.03	64.65	3.38	3850.38
	12/18/14	3915.59	65.65	65.07	0.58	3850.42
MW-18			Diameter: 4 in.	Screened Interval:	55 ft. to 80.3 ft.	TD: 80.32 ft.
	01/03/12	3912.90	63.74	-	-	3849.16
	03/23/12	3912.90	63.88	-	-	3849.02
	06/06/12	3912.90	64.03	-	-	3848.87
	09/12/12	3912.90	64.05	-	-	3848.85
	12/05/12	3912.90	64.09	-	-	3848.81
	03/11/13	3912.90	63.95	-	-	3848.95
	06/04/13	3912.90	64.16	-	-	3848.74
	09/29/13	3912.90	64.22	-	-	3848.68
	12/04/13	3912.90	64.23	-	-	3848.67
	03/05/14	3912.90	64.18	-	-	3848.72
	06/04/14	3912.90	64.23	-	-	3848.67
	09/08/14	3912.90	64.25	-	-	3848.65
	12/18/14	3912.90	64.25	-	-	3848.65

Specific Gravity: 0.835

NG - Not Gauged
NSch - Not scheduled to be gauged
Block - Well blocked/obstructed
Locate - Can not locate/find well
Dry - Well is dry
P&A - Plug and Abandon
WD - Well Destroyed

Summary of Historical Groundwater Analytical Data
Lovington Deep 6"
700376.051

Sample Designation	Date Sampled	Concentration (mg/L)				
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX
MW-1	01/04/12	0.00310	BRL	BRL	BRL	BRL
	06/07/12	<0.000371	<0.000347	<0.000326	BRL	-
	09/12/12	<0.000371	<0.000347	<0.000326	BRL	-
	12/06/12	<0.000310	<0.000259	<0.000291	BRL	-
	03/21/13	<0.000387	<0.000465	<0.000442	BRL	-
	06/04/13	<0.000500	<0.00100	<0.000700	U	U
	09/29/13	<0.000567	<0.000518	<0.000518	BRL	-
	12/04/13	<0.000387	<0.000465	<0.000442	BRL	-
	03/06/14	<0.000238	<0.000181	<0.000247	BRL	-
	06/04/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	09/04/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	12/19/14	<0.00100	<0.00100	<0.00100	<0.00100	-
MW-3	01/04/12	4.80	BRL	0.417	0.641	5.86
	06/07/12	0.996	0.0183	0.180	0.222	-
	09/12/12	0.990	0.0133	0.235	0.251	-
	12/07/12	0.753	<0.00347	0.172	0.235	-
	03/21/13	0.740	<0.0232	0.0854	0.146	-
	06/04/13	0.332	<0.00100	0.0518	0.0620	0.446
	09/29/13	0.652	<0.00518	0.0484	0.0730	-
	12/04/13	0.164	<0.000465	0.0902	0.0476	-
	03/06/14	0.347	<0.000181	0.151	0.144	-
	06/04/14	0.129	<0.00100	0.0584	<0.00100	-
	09/04/14	0.412	<0.00500	0.208	0.185	-
	12/19/14	0.665	<0.0500	0.388	0.652	-

Summary of Historical Groundwater Analytical Data
Lovington Deep 6"
700376.051

Sample Designation	Date Sampled	Concentration (mg/L)				
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX
MW-4	01/04/12	BRL	BRL	BRL	BRL	BRL
	06/07/12	<0.000310	<0.000259	<0.000291	BRL	-
	09/12/12	0.00280	<0.000347	<0.000326	0.00120	-
	12/06/12	<0.000371	<0.000347	<0.000326	BRL	-
	03/21/13	<0.000387	<0.000465	<0.000442	BRL	-
	06/04/13	<0.000500	<0.00100	<0.000700	U	U
	09/29/13	<0.000567	<0.000518	<0.000518	BRL	-
	12/04/13	<0.000387	<0.000465	<0.000442	BRL	-
	03/06/14	<0.000238	<0.000181	<0.000247	BRL	-
	06/04/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	09/04/14	<0.00100	<0.00100	0.00250	<0.00100	-
	12/19/14	<0.00100	<0.00100	<0.00100	<0.00100	-
MW-5	01/04/12	BRL	BRL	BRL	BRL	BRL
	06/07/12	<0.000310	<0.000259	<0.000291	BRL	-
	09/12/12	<0.000371	<0.000347	<0.000326	BRL	-
	12/06/12	<0.000371	<0.000347	<0.000326	BRL	-
	03/21/13	<0.000387	<0.000465	<0.000442	BRL	-
	06/04/13	<0.000500	<0.00100	<0.000700	U	U
	09/29/13	<0.000567	<0.000518	<0.000518	BRL	-
	12/04/13	<0.000387	<0.000465	<0.000442	BRL	-
	03/06/14	<0.000238	<0.000181	<0.000247	BRL	-
	06/04/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	09/04/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	12/19/14	<0.00100	<0.00100	<0.00100	<0.00100	-

Summary of Historical Groundwater Analytical Data
Lovington Deep 6"
700376.051

Sample Designation	Date Sampled	Concentration (mg/L)				
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX
MW-6	01/04/12	BRL	BRL	BRL	BRL	BRL
	06/06/12	<0.000310	<0.000259	<0.000291	BRL	-
	09/12/12	<0.000371	<0.000347	<0.000326	BRL	-
	12/06/12	<0.000371	<0.000347	<0.000326	BRL	-
	03/14/13	<0.000567	<0.000518	<0.000518	BRL	-
	06/04/13	<0.000500	<0.00100	<0.000700	U	U
	09/29/13	<0.000567	<0.000518	<0.000518	BRL	-
	12/04/13	<0.000387	<0.000465	<0.000442	BRL	-
	03/06/14	<0.000238	<0.000181	<0.000247	BRL	-
	06/04/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	09/10/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	12/18/14	<0.00100	<0.00100	<0.00100	<0.00100	-
MW-7	01/04/12	BRL	BRL	BRL	BRL	BRL
	06/06/12	<0.000310	<0.000259	<0.000291	BRL	-
	09/12/12	<0.000371	<0.000347	<0.000326	BRL	-
	12/06/12	0.00180	<0.000347	<0.000326	BRL	-
	03/14/13	<0.000567	<0.000518	<0.000518	BRL	-
	06/04/13	<0.000500	<0.00100	<0.000700	U	U
	09/29/13	<0.000567	<0.000518	<0.000518	BRL	-
	12/04/13	<0.000387	<0.000465	<0.000442	BRL	-
	03/06/14	<0.000238	<0.000181	<0.000247	BRL	-
	06/04/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	09/10/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	12/18/14	<0.00100	<0.00100	<0.00100	<0.00100	-

Summary of Historical Groundwater Analytical Data
Lovington Deep 6"
700376.051

Sample Designation	Date Sampled	Concentration (mg/L)				
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX
MW-8	01/04/12	BRL	BRL	BRL	BRL	BRL
	06/06/12	<0.000310	<0.000259	<0.000291	BRL	-
	09/12/12	0.00240	<0.000347	<0.000326	BRL	-
	12/06/12	<0.000371	<0.000347	<0.000326	BRL	-
	03/14/13	<0.000567	<0.000518	<0.000518	BRL	-
	06/04/13	<0.000500	<0.00100	<0.000700	U	U
	09/29/13	<0.000567	<0.000518	<0.000518	BRL	-
	12/04/13	<0.000387	<0.000465	<0.000442	BRL	-
	03/06/14	<0.000238	<0.000181	<0.000247	BRL	-
	06/04/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	09/10/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	12/18/14	<0.00100	<0.00100	<0.00100	<0.00100	-
MW-9	01/04/12	BRL	BRL	BRL	BRL	BRL
	06/06/12	<0.000310	<0.000259	<0.000291	0.00120	-
	09/12/12	<0.000371	<0.000347	<0.000326	BRL	-
	12/06/12	<0.000371	<0.000347	<0.000326	BRL	-
	03/14/13	<0.000567	<0.000518	<0.000518	BRL	-
	06/04/13	<0.000500	<0.00100	<0.000700	U	U
	09/29/13	<0.000567	<0.000518	<0.000518	BRL	-
	12/04/13	0.0218	<0.000518	<0.000518	BRL	-
	03/06/14	<0.000238	<0.000181	<0.000247	BRL	-
	06/04/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	09/10/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	12/18/14	<0.00100	<0.00100	<0.00100	<0.00100	-

Summary of Historical Groundwater Analytical Data
Lovington Deep 6"
700376.051

Sample Designation	Date Sampled	Concentration (mg/L)				
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX
MW-10	01/04/12	24.6	BRL	0.690	0.356	25.6
	06/06/12	17.5	<0.130	0.665	BRL	-
	09/12/12	15.0	<0.0174	0.577	0.219	-
	12/06/12	19.7	<0.0174	0.706	0.224	-
	03/14/13	14.1	<0.0259	0.350	0.182	-
	06/04/13	14.7	<0.0500	0.559	0.175	15.4
	09/29/13	19.3	<0.0259	0.464	0.0751	-
	12/04/13	12.5	<0.0259	0.406	BRL	-
	03/06/14	10.5	<0.0181	0.915	BRL	-
	06/04/14	4.64	<0.00100	0.230	<0.00100	-
	09/10/14	9.68	<0.0500	0.527	0.121	-
	12/19/14	6.45	<0.100	0.604	0.740	-
MW-11	01/04/12	BRL	BRL	BRL	BRL	BRL
	06/06/12	<0.000310	<0.000259	<0.000291	BRL	-
	09/12/12	<0.000371	<0.000347	<0.000326	BRL	-
	12/06/12	<0.000310	<0.000259	<0.000291	BRL	-
	03/14/13	<0.000567	<0.000518	<0.000518	BRL	-
	06/04/13	0.00346	<0.00100	<0.000700	U	0.00346
	09/29/13	<0.000567	<0.000518	<0.000518	BRL	-
	12/04/13	<0.000567	<0.000518	<0.000518	BRL	-
	03/06/14	<0.000238	<0.000181	<0.000247	BRL	-
	06/04/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	09/10/14	<0.00100	<0.00100	<0.00100	<0.00100	-
	12/18/14	<0.00100	<0.00100	<0.00100	<0.00100	-

Summary of Historical Groundwater Analytical Data
Lovington Deep 6"
700376.051

Sample Designation	Date Sampled	Concentration (mg/L)				
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX
MW-12	01/04/12	0.334	BRL	BRL	BRL	0.334
	06/06/12	0.393	<0.000259	0.00160	0.00270	-
	09/12/12	0.992	<0.00347	<0.00326	BRL	-
	12/06/12	1.34	<0.00259	0.0103	BRL	-
	03/14/13	2.51	<0.0259	<0.0259	BRL	-
	06/04/13	5.17	<0.0200	0.0598	U	5.23
	09/29/13	0.00110	<0.000518	<0.000518	BRL	-
	12/04/13	9.90	<0.0259	0.0625	BRL	-
	03/06/14	6.45	9.39	<0.0247	BRL	-
	06/04/14	0.137	<0.00100	<0.00100	<0.00100	-
	09/10/14	0.500	<0.00500	0.0114	<0.00500	-
	12/19/14	0.409	<0.0500	<0.0500	<0.0500	-
MW-18	01/04/12	BRL	BRL	BRL	BRL	BRL
	06/17/12	0.549	<0.00259	<0.00291	BRL	-
	09/12/12	0.376	<0.00174	<0.00163	BRL	-
	12/06/12	0.356	<0.00130	<0.00146	BRL	-
	03/21/13	<0.000387	<0.000465	<0.000442	BRL	-
	06/04/13	<0.000500	<0.00100	<0.000700	U	U
	09/29/13	<0.000567	<0.000518	<0.000518	BRL	-
	12/04/13	0.417	<0.00259	<0.00259	BRL	-
	03/06/14	0.313	<0.000181	<0.000247	BRL	-
	06/04/14	0.164	<0.00100	<0.00100	<0.00100	-
	09/04/14	0.00170	<0.00100	<0.00100	<0.00100	-
	12/19/14	0.00270	<0.00100	<0.00100	<0.00100	-

Summary of Historical Groundwater Analytical Data - PAH Supplement
Lovington Deep 6"
700376.051

Sample Designation	Date Sampled	Concentration (mg/L)																		
		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
MW-3	09/04/14	<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
MW-4	12/06/12	<0.000104	<0.0000874	<0.000117	<0.0000957	<0.0000757	<0.0000966	<0.0000671	<0.0000778	<0.0000764	<0.0000756	<0.0000736	<0.0000814	<0.000103	<0.000119	<0.0000957	<0.0000737	<0.000116	<0.0000788	<0.0000661
MW-7	12/06/12	<0.000104	<0.0000869	<0.000116	<0.0000952	<0.0000753	<0.0000962	<0.0000667	<0.0000774	<0.0000760	<0.0000752	<0.0000732	<0.0000810	<0.000103	<0.000118	<0.0000952	<0.0000733	<0.000115	<0.0000784	<0.0000658
MW-10	12/06/12	0.00717	0.000571	<0.000116	<0.0000952	<0.0000753	<0.0000962	<0.0000667	<0.0000774	<0.0000760	<0.0000752	<0.0000732	<0.0000810	0.000732	<0.000118	0.00123	<0.0000733	0.00282	0.000837	<0.0000658
	09/29/13	<0.000107	<0.0000899	<0.000120	<0.0000985	<0.0000779	<0.0000995	<0.0000690	<0.0000801	<0.0000786	<0.0000778	<0.0000757	<0.0000838	<0.000106	<0.000122	<0.0000985	<0.0000758	<0.000119	<0.0000812	<0.0000681
	06/04/14	0.00142	0.000240	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000247	<0.000200	0.000568	<0.000200	0.00140	0.000293	<0.000200
MW-12	12/06/12	0.00622	<0.0000869	<0.000116	<0.0000952	<0.0000753	<0.0000962	<0.0000667	<0.0000774	<0.0000760	<0.0000752	<0.0000732	<0.0000810	<0.000103	<0.000118	0.000536	<0.0000733	0.00624	<0.0000784	<0.0000658
MW-18	12/06/12	<0.000103	<0.0000866	<0.000116	<0.0000948	<0.0000750	<0.0000957	<0.0000664	<0.0000771	<0.0000756	<0.0000749	<0.0000729	<0.0000807	<0.000102	<0.000118	<0.0000948	<0.0000730	<0.000115	<0.0000781	<0.0000655
	09/04/14	<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

APPENDIX C

Laboratory Analytical Data Reports and Chains of Custody Documentation

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Brad Ivy
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: March 17, 2014

Work Order: 14030702

Project Location: Hobbs, NM
Project Name: Deep 6 in.
Project Number: 700376.051.01
SRS #: 2002-10312

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
356900	MW-1	water	2014-03-06	12:55	2014-03-07
356901	MW-3	water	2014-03-06	13:05	2014-03-07
356902	MW-4	water	2014-03-06	13:00	2014-03-07
356903	MW-5	water	2014-03-06	13:05	2014-03-07
356904	MW-6	water	2014-03-06	13:30	2014-03-07
356905	MW-7	water	2014-03-06	12:50	2014-03-07
356906	MW-8	water	2014-03-06	12:55	2014-03-07
356907	MW-9	water	2014-03-06	13:20	2014-03-07
356908	MW-10	water	2014-03-06	13:15	2014-03-07
356909	MW-11	water	2014-03-06	13:10	2014-03-07
356910	MW-12	water	2014-03-06	13:25	2014-03-07
356911	MW-18	water	2014-03-06	12:45	2014-03-07

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 21 pages and shall not be reproduced except in its entirety, without written approval of

TraceAnalysis, Inc.

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

Report Contents

Case Narrative

Samples for project Deep 6 in. were received by TraceAnalysis, Inc. on 2014-03-07 and assigned to work order 14030702. Samples for work order 14030702 were received intact without headspace and at a temperature of 2.6 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	93022	2014-03-10 at 14:09	110031	2014-03-11 at 09:42
BTEX	S 8021B	93074	2014-03-12 at 10:10	110106	2014-03-12 at 10:11
BTEX	S 8021B	93153	2014-03-13 at 10:00	110171	2014-03-14 at 07:48

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 14030702 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 356900 - MW-1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110031	Date Analyzed:	2014-03-11	Analyzed By:	AK
Prep Batch:	93022	Sample Preparation:	2014-03-10	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0900	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0810	mg/L	1	0.100	81	70 - 130

Sample: 356901 - MW-3

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110031	Date Analyzed:	2014-03-11	Analyzed By:	AK
Prep Batch:	93022	Sample Preparation:	2014-03-10	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		1	**0.347**	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene		1	**0.151**	mg/L	1	0.00100
Xylene		1	**0.144**	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0982	mg/L	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.111	mg/L	1	0.100	111	70 - 130

Sample: 356902 - MW-4

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110031	Date Analyzed:	2014-03-11	Analyzed By:	AK
Prep Batch:	93022	Sample Preparation:	2014-03-10	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0913	mg/L	1	0.100	91	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0810	mg/L	1	0.100	81	70 - 130

Sample: 356903 - MW-5

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110031	Date Analyzed:	2014-03-11	Analyzed By:	AK
Prep Batch:	93022	Sample Preparation:	2014-03-10	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0852	mg/L	1	0.100	85	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0792	mg/L	1	0.100	79	70 - 130

Sample: 356904 - MW-6

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110031	Date Analyzed:	2014-03-11	Analyzed By:	AK
Prep Batch:	93022	Sample Preparation:	2014-03-10	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0950	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0798	mg/L	1	0.100	80	70 - 130

Sample: 356905 - MW-7

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110031	Date Analyzed:	2014-03-11	Analyzed By:	AK
Prep Batch:	93022	Sample Preparation:	2014-03-10	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0945	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0803	mg/L	1	0.100	80	70 - 130

Sample: 356906 - MW-8

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110031	Date Analyzed:	2014-03-11	Analyzed By:	AK
Prep Batch:	93022	Sample Preparation:	2014-03-10	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0947	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0815	mg/L	1	0.100	82	70 - 130

Sample: 356907 - MW-9

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0952	mg/L	1	0.100	95	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0830	mg/L	1	0.100	83	70 - 130

Sample: 356908 - MW-10

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110171	Date Analyzed:	2014-03-14	Analyzed By:	AK
Prep Batch:	93153	Sample Preparation:	2014-03-13	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	**10.5**	mg/L	100	0.00100
Toluene	Qr,U	1	<0.100	mg/L	100	0.00100
Ethylbenzene	Qr	1	**0.915**	mg/L	100	0.00100
Xylene	Qr,U	1	<0.300	mg/L	100	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			10.5	mg/L	100	10.0	105	70 - 130
4-Bromofluorobenzene (4-BFB)			8.49	mg/L	100	10.0	85	70 - 130

Sample: 356909 - MW-11

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0989	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0837	mg/L	1	0.100	84	70 - 130

Sample: 356910 - MW-12

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110171	Date Analyzed:	2014-03-14	Analyzed By:	AK
Prep Batch:	93153	Sample Preparation:	2014-03-13	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	**6.45**	mg/L	100	0.00100
Toluene	Qr	1	**9.39**	mg/L	100	0.00100
Ethylbenzene	Qr	1	<0.100	mg/L	100	0.00100
Xylene	Qr,U	1	<0.300	mg/L	100	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			9.39	mg/L	100	10.0	94	70 - 130
4-Bromofluorobenzene (4-BFB)			8.33	mg/L	100	10.0	83	70 - 130

Sample: 356911 - MW-18

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	110106	Date Analyzed:	2014-03-12	Analyzed By:	AK
Prep Batch:	93074	Sample Preparation:	2014-03-12	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	**0.313**	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00300	mg/L	1	0.00300

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0991	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0936	mg/L	1	0.100	94	70 - 130

Method Blanks

Method Blank (1) QC Batch: 110031

QC Batch: 110031 | Date Analyzed: 2014-03-11 | Analyzed By: AK
Prep Batch: 93022 | QC Preparation: 2014-03-10 | Prepared By: AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0993	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0846	mg/L	1	0.100	85	70 - 130

Method Blank (1) QC Batch: 110106

QC Batch: 110106 | Date Analyzed: 2014-03-12 | Analyzed By: AK
Prep Batch: 93074 | QC Preparation: 2014-03-12 | Prepared By: AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0961	mg/L	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0829	mg/L	1	0.100	83	70 - 130

Method Blank (1) QC Batch: 110171

QC Batch: 110171 | Date Analyzed: 2014-03-14 | Analyzed By: AK
Prep Batch: 93153 | QC Preparation: 2014-03-13 | Prepared By: AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0970	mg/L	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0885	mg/L	1	0.100	88	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 110031 | Date Analyzed: 2014-03-11 | Analyzed By: AK
Prep Batch: 93022 | QC Preparation: 2014-03-10 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.104	mg/L	1	0.100	<0.000238	104	70 - 130
Toluene		1	0.108	mg/L	1	0.100	<0.000181	108	70 - 130
Ethylbenzene		1	0.109	mg/L	1	0.100	<0.000247	109	70 - 130
Xylene		1	0.333	mg/L	1	0.300	<0.000189	111	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.104	mg/L	1	0.100	<0.000238	104	70 - 130	0	20
Toluene		1	0.108	mg/L	1	0.100	<0.000181	108	70 - 130	0	20
Ethylbenzene		1	0.109	mg/L	1	0.100	<0.000247	109	70 - 130	0	20
Xylene		1	0.332	mg/L	1	0.300	<0.000189	111	70 - 130	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.101	0.101	mg/L	1	0.100	101	101	70 - 130
4-Bromofluorobenzene (4-BFB)	0.106	0.105	mg/L	1	0.100	106	105	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110106 | Date Analyzed: 2014-03-12 | Analyzed By: AK
Prep Batch: 93074 | QC Preparation: 2014-03-12 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0912	mg/L	1	0.100	<0.000238	91	70 - 130
Toluene		1	0.109	mg/L	1	0.100	<0.000181	109	70 - 130
Ethylbenzene		1	0.116	mg/L	1	0.100	<0.000247	116	70 - 130
Xylene		1	0.351	mg/L	1	0.300	<0.000189	117	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0844	mg/L	1	0.100	<0.000238	84	70 - 130	8	20
Toluene		1	0.101	mg/L	1	0.100	<0.000181	101	70 - 130	8	20
Ethylbenzene		1	0.106	mg/L	1	0.100	<0.000247	106	70 - 130	9	20
Xylene		1	0.325	mg/L	1	0.300	<0.000189	108	70 - 130	8	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0995	0.0997	mg/L	1	0.100	100	100	70 - 130
4-Bromofluorobenzene (4-BFB)	0.102	0.103	mg/L	1	0.100	102	103	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 110171 | Date Analyzed: 2014-03-14 | Analyzed By: AK
Prep Batch: 93153 | QC Preparation: 2014-03-13 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0916	mg/L	1	0.100	<0.000238	92	70 - 130
Toluene		1	0.0976	mg/L	1	0.100	<0.000181	98	70 - 130
Ethylbenzene		1	0.0966	mg/L	1	0.100	<0.000247	97	70 - 130
Xylene		1	0.294	mg/L	1	0.300	<0.000189	98	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0948	mg/L	1	0.100	<0.000238	95	70 - 130	3	20
Toluene		1	0.102	mg/L	1	0.100	<0.000181	102	70 - 130	4	20
Ethylbenzene		1	0.102	mg/L	1	0.100	<0.000247	102	70 - 130	5	20
Xylene		1	0.310	mg/L	1	0.300	<0.000189	103	70 - 130	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0989	0.0982	mg/L	1	0.100	99	98	70 - 130
4-Bromofluorobenzene (4-BFB)	0.102	0.104	mg/L	1	0.100	102	104	70 - 130

Matrix Spike (MS-1) Spiked Sample: 356878

QC Batch: 110031 | Date Analyzed: 2014-03-11 | Analyzed By: AK
Prep Batch: 93022 | QC Preparation: 2014-03-10 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.105	mg/L	1	0.100	<0.000238	105	70 - 130
Toluene		1	0.108	mg/L	1	0.100	<0.000181	108	70 - 130
Ethylbenzene		1	0.106	mg/L	1	0.100	<0.000247	106	70 - 130
Xylene		1	0.324	mg/L	1	0.300	<0.000189	108	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.105	mg/L	1	0.100	<0.000238	105	70 - 130	0	20
Toluene		1	0.108	mg/L	1	0.100	<0.000181	108	70 - 130	0	20
Ethylbenzene		1	0.108	mg/L	1	0.100	<0.000247	108	70 - 130	2	20
Xylene		1	0.328	mg/L	1	0.300	<0.000189	109	70 - 130	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0998	0.100	mg/L	1	0.1	100	100	70 - 130
4-Bromofluorobenzene (4-BFB)	0.103	0.103	mg/L	1	0.1	103	103	70 - 130

Matrix Spike (MS-1) Spiked Sample: 356907

QC Batch: 110106 | Date Analyzed: 2014-03-12 | Analyzed By: AK
Prep Batch: 93074 | QC Preparation: 2014-03-12 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0834	mg/L	1	0.100	<0.000238	83	70 - 130
Toluene		1	0.101	mg/L	1	0.100	<0.000181	101	70 - 130
Ethylbenzene		1	0.104	mg/L	1	0.100	<0.000247	104	70 - 130
Xylene		1	0.320	mg/L	1	0.300	<0.000189	107	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qr Qr	1	0.103	mg/L	1	0.100	<0.000238	103	70 - 130	21	20
Toluene		1	0.107	mg/L	1	0.100	<0.000181	107	70 - 130	6	20

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Ethylbenzene		1	0.108	mg/L	1	0.100	<0.000247	108	70 - 130	4	20
Xylene		1	0.327	mg/L	1	0.300	<0.000189	109	70 - 130	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.100	0.103	mg/L	1	0.1	100	103	70 - 130
4-Bromofluorobenzene (4-BFB)	0.103	0.104	mg/L	1	0.1	103	104	70 - 130

Matrix Spike (MS-1) Spiked Sample:

QC Batch: 110171 | Date Analyzed: 2014-03-14 | Analyzed By: AK
Prep Batch: 93153 | QC Preparation: 2014-03-13 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.103	mg/L	1	0.100	<0.000238	103	70 - 130
Toluene		1	0.110	mg/L	1	0.100	<0.000181	110	70 - 130
Ethylbenzene		1	0.109	mg/L	1	0.100	<0.000247	109	70 - 130
Xylene		1	0.331	mg/L	1	0.300	<0.000189	110	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qr	Qr 1	0.0793	mg/L	1	0.100	<0.000238	79	70 - 130	26	20
Toluene	Qr	Qr 1	0.0829	mg/L	1	0.100	<0.000181	83	70 - 130	28	20
Ethylbenzene	Qr	Qr 1	0.0822	mg/L	1	0.100	<0.000247	82	70 - 130	28	20
Xylene	Qr	Qr 1	0.250	mg/L	1	0.300	<0.000189	83	70 - 130	28	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)	0.0999	0.0998	mg/L	1	0.1	100	100	70 - 130
4-Bromofluorobenzene (4-BFB)	0.107	0.104	mg/L	1	0.1	107	104	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 110031 | Date Analyzed: 2014-03-11 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.105	105	80 - 120	2014-03-11
Toluene		1	mg/L	0.100	0.108	108	80 - 120	2014-03-11
Ethylbenzene		1	mg/L	0.100	0.109	109	80 - 120	2014-03-11
Xylene		1	mg/L	0.300	0.332	111	80 - 120	2014-03-11

Standard (CCV-2)

QC Batch: 110031 | Date Analyzed: 2014-03-11 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0997	100	80 - 120	2014-03-11
Toluene		1	mg/L	0.100	0.102	102	80 - 120	2014-03-11
Ethylbenzene		1	mg/L	0.100	0.101	101	80 - 120	2014-03-11
Xylene		1	mg/L	0.300	0.306	102	80 - 120	2014-03-11

Standard (CCV-3)

QC Batch: 110031 | Date Analyzed: 2014-03-11 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.102	102	80 - 120	2014-03-11
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2014-03-11
Ethylbenzene		1	mg/L	0.100	0.104	104	80 - 120	2014-03-11
Xylene		1	mg/L	0.300	0.314	105	80 - 120	2014-03-11

Standard (CCV-1)

QC Batch: 110106 | Date Analyzed: 2014-03-12 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0882	88	80 - 120	2014-03-12
Toluene		1	mg/L	0.100	0.104	104	80 - 120	2014-03-12
Ethylbenzene		1	mg/L	0.100	0.109	109	80 - 120	2014-03-12
Xylene		1	mg/L	0.300	0.333	111	80 - 120	2014-03-12

Standard (CCV-2)

QC Batch: 110106 | Date Analyzed: 2014-03-12 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0843	84	80 - 120	2014-03-12
Toluene		1	mg/L	0.100	0.0968	97	80 - 120	2014-03-12
Ethylbenzene		1	mg/L	0.100	0.100	100	80 - 120	2014-03-12
Xylene		1	mg/L	0.300	0.306	102	80 - 120	2014-03-12

Standard (CCV-3)

QC Batch: 110106 | Date Analyzed: 2014-03-12 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0889	89	80 - 120	2014-03-12
Toluene		1	mg/L	0.100	0.100	100	80 - 120	2014-03-12
Ethylbenzene		1	mg/L	0.100	0.106	106	80 - 120	2014-03-12
Xylene		1	mg/L	0.300	0.320	107	80 - 120	2014-03-12

Standard (CCV-1)

QC Batch: 110171 | Date Analyzed: 2014-03-14 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0954	95	80 - 120	2014-03-14
Toluene		1	mg/L	0.100	0.101	101	80 - 120	2014-03-14
Ethylbenzene		1	mg/L	0.100	0.102	102	80 - 120	2014-03-14
Xylene		1	mg/L	0.300	0.316	105	80 - 120	2014-03-14

Standard (CCV-2)

QC Batch: 110171 Date Analyzed: 2014-03-14 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0934	93	80 - 120	2014-03-14
Toluene		1	mg/L	0.100	0.101	101	80 - 120	2014-03-14
Ethylbenzene		1	mg/L	0.100	0.100	100	80 - 120	2014-03-14
Xylene		1	mg/L	0.300	0.303	101	80 - 120	2014-03-14

Standard (CCV-3)

QC Batch: 110171 Date Analyzed: 2014-03-14 Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.101	101	80 - 120	2014-03-14
Toluene		1	mg/L	0.100	0.107	107	80 - 120	2014-03-14
Ethylbenzene		1	mg/L	0.100	0.107	107	80 - 120	2014-03-14
Xylene		1	mg/L	0.300	0.325	108	80 - 120	2014-03-14

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-13-7	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

LAB Order ID # 14030702

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

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

Company Name: Talon LPE
Phone #: 940 329 0691
Address: (Street, City, Zip) 2901 State HWY 349 Midland
Fax #:
Contact Person: Brad Ivy bivy@talonlpe.com cjbryant@paalp.com
Invoice to: (If different from above) 2002-10312 (Plains)
Project #: 700376.051.01
Project Name: Lovington Deep 6
Project Location (including state): Lovington NM
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC							Turn Around Time if different from standard	Hold
356900	MW 1	3	40z	X				X				X		3-6-14	1255		X																									
901	MW 3														1305																												
902	MW 4														1300																												
903	MW 5														1305																												
904	MW 6														1330																												
905	MW 7														1250																												
906	MW 8														255																												
907	MW 9														1320																												
908	MW 10														1315																												
909	MW 11														1310																												
910	MW 12														1325																												

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Jake Murray		3-7-2014	8:10	[illegible]	TA	3/7/14	8:10	INST 3.6 °C OBS 3.6 °C COR 2.6 °C
								INST ____ °C OBS ____ °C COR ____ °C
								INST ____ °C OBS ____ °C COR ____ °C

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

REMARKS:

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

Carrier #

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

ORIGINAL COPY

LAB Order ID # 140307O2

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

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

Company Name: Talon **Phone #:**

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

Contact Person: ~~Edd~~ Bivy@talonlpe.com **E-mail:** CJ Bryant@paalp.com

Invoice to: (If different from above) 2002-10312

Project #: 700376.051.01 **Project Name:** Deep 6

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
911	MW 18	3	40Z	X				X				X		3-6	1245

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
	X																				

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
		3-7-2014			TA	3/7/14	810	INST Wet OBS 2.6 °C COR 2.6 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ °C OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ °C OBS ____ °C COR ____ °C

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

REMARKS:

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

Carrier #

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

ORIGINAL COPY

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Brad Ivy
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: June 17, 2014

Work Order: 14060919

Project Location: Hobbs, NM
Project Name: Deep 6 in.
Project Number: 700376.051.01
SRS #: 2002-10312

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
365125	MW 1	water	2014-06-04	12:00	2014-06-09
365126	MW 3	water	2014-06-04	14:00	2014-06-09
365127	MW 4	water	2014-06-04	13:10	2014-06-09
365128	MW 5	water	2014-06-04	12:48	2014-06-09
365129	MW 6	water	2014-06-04	13:20	2014-06-09
365130	MW 7	water	2014-06-04	14:30	2014-06-09
365131	MW 8	water	2014-06-04	12:30	2014-06-09
365132	MW 9	water	2014-06-04	13:00	2014-06-09
365133	MW 10	water	2014-06-04	13:15	2014-06-09
365134	MW 11	water	2014-06-04	14:15	2014-06-09
365135	MW 12	water	2014-06-04	14:10	2014-06-09
365136	MW 18	water	2014-06-04	13:30	2014-06-09

Notes

- **Work Order 14060919:** shipped 6/9

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

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

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

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

Report Contents

Case Narrative

Samples for project Deep 6 in. were received by TraceAnalysis, Inc. on 2014-06-09 and assigned to work order 14060919. Samples for work order 14060919 were received intact without headspace and at a temperature of 6.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	95299	2014-06-10 at 14:22	112714	2014-06-10 at 14:22
BTEX	S 8021B	95332	2014-06-11 at 11:57	112749	2014-06-11 at 11:57
PAH	S 8270D	95422	2014-06-10 at 15:00	112860	2014-06-16 at 14:51

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 14060919 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 365125 - MW 1

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112714	Date Analyzed:	2014-06-10	Analyzed By:	JS
Prep Batch:	95299	Sample Preparation:	2014-06-10	Prepared By:	JS

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0892	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0953	mg/L	1	0.100	95	70 - 130

Sample: 365126 - MW 3

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112714	Date Analyzed:	2014-06-10	Analyzed By:	JS
Prep Batch:	95299	Sample Preparation:	2014-06-10	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		1	**0.129**	mg/L	50	0.00100
Toluene	U	1	<0.0500	mg/L	50	0.00100
Ethylbenzene		1	**0.0584**	mg/L	50	0.00100
Xylene		1	<0.0500	mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.47	mg/L	50	5.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)			4.76	mg/L	50	5.00	95	70 - 130

Sample: 365127 - MW 4

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112714	Date Analyzed:	2014-06-10	Analyzed By:	JS
Prep Batch:	95299	Sample Preparation:	2014-06-10	Prepared By:	JS

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0889	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0957	mg/L	1	0.100	96	70 - 130

Sample: 365128 - MW 5

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112714	Date Analyzed:	2014-06-10	Analyzed By:	JS
Prep Batch:	95299	Sample Preparation:	2014-06-10	Prepared By:	JS

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0891	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0942	mg/L	1	0.100	94	70 - 130

Sample: 365129 - MW 6

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112714	Date Analyzed:	2014-06-10	Analyzed By:	JS
Prep Batch:	95299	Sample Preparation:	2014-06-10	Prepared By:	JS

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0891	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0947	mg/L	1	0.100	95	70 - 130

Sample: 365130 - MW 7

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112714	Date Analyzed:	2014-06-10	Analyzed By:	JS
Prep Batch:	95299	Sample Preparation:	2014-06-10	Prepared By:	JS

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0891	mg/L	1	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0948	mg/L	1	0.100	95	70 - 130

Sample: 365131 - MW 8

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112714	Date Analyzed:	2014-06-10	Analyzed By:	JS
Prep Batch:	95299	Sample Preparation:	2014-06-10	Prepared By:	JS

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0881	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0933	mg/L	1	0.100	93	70 - 130

Sample: 365132 - MW 9

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112714	Date Analyzed:	2014-06-10	Analyzed By:	JS
Prep Batch:	95299	Sample Preparation:	2014-06-10	Prepared By:	JS

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0882	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0922	mg/L	1	0.100	92	70 - 130

Sample: 365133 - MW 10

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112714	Date Analyzed:	2014-06-10	Analyzed By:	JS
Prep Batch:	95299	Sample Preparation:	2014-06-10	Prepared By:	JS

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzene		1	**4.64**		mg/L	50	0.00100
Toluene	U	1	<0.0500		mg/L	50	0.00100
Ethylbenzene		1	**0.230**		mg/L	50	0.00100
Xylene		1	<0.0500		mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.47	mg/L	50	5.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)			4.79	mg/L	50	5.00	96	70 - 130

Sample: 365133 - MW 10

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	112860	Date Analyzed:	2014-06-16	Analyzed By:	MN
Prep Batch:	95422	Sample Preparation:	0014-06-10	Prepared By:	MN

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Naphthalene		1	**0.00140**		mg/L	0.922	0.000200
2-Methylnaphthalene		1	**0.000240**		mg/L	0.922	0.000200
1-Methylnaphthalene			**0.00142**		mg/L	0.922	0.000200
Acenaphthylene	U	1	<0.000184		mg/L	0.922	0.000200
Acenaphthene	U	1	<0.000184		mg/L	0.922	0.000200
Dibenzofuran		1	**0.000247**		mg/L	0.922	0.000200
Fluorene		1	**0.000568**		mg/L	0.922	0.000200
Anthracene	U	1	<0.000184		mg/L	0.922	0.000200
Phenanthrene		1	**0.000293**		mg/L	0.922	0.000200
Fluoranthene	U	1	<0.000184		mg/L	0.922	0.000200
Pyrene	Qc,U	1	<0.000184		mg/L	0.922	0.000200
Benzo(a)anthracene	U	1	<0.000184		mg/L	0.922	0.000200
Chrysene	U	1	<0.000184		mg/L	0.922	0.000200
Benzo(b)fluoranthene	U	1	<0.000184		mg/L	0.922	0.000200
Benzo(k)fluoranthene	U	1	<0.000184		mg/L	0.922	0.000200
Benzo(a)pyrene	U	1	<0.000184		mg/L	0.922	0.000200
Indeno(1,2,3-cd)pyrene	U	1	<0.000184		mg/L	0.922	0.000200
Dibenzo(a,h)anthracene	U	1	<0.000184		mg/L	0.922	0.000200

continued ...

sample 365133 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzo(g,h,i)perylene	U	1	<0.000184	mg/L	0.922	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0266	mg/L	0.922	0.0800	33	10 - 121
2-Fluorobiphenyl			0.0287	mg/L	0.922	0.0800	36	20.5 - 120
Terphenyl-d14			0.0346	mg/L	0.922	0.0800	43	26.4 - 120

Sample: 365134 - MW 11

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112714	Date Analyzed:	2014-06-10	Analyzed By:	JS
Prep Batch:	95299	Sample Preparation:	2014-06-10	Prepared By:	JS

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0878	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0925	mg/L	1	0.100	92	70 - 130

Sample: 365135 - MW 12

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112714	Date Analyzed:	2014-06-10	Analyzed By:	JS
Prep Batch:	95299	Sample Preparation:	2014-06-10	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	**0.137**	mg/L	50	0.00100

continued . . .

sample 365135 continued . . .

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.43	mg/L	50	5.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)			4.68	mg/L	50	5.00	94	70 - 130

Sample: 365136 - MW 18

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	112749	Date Analyzed:	2014-06-11	Analyzed By:	JS
Prep Batch:	95332	Sample Preparation:	2014-06-11	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1	**0.164**	mg/L	1	0.00100
Toluene	U	1	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1	<0.00100	mg/L	1	0.00100
Xylene	U	1	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0887	mg/L	1	0.100	89	75.4 - 120
4-Bromofluorobenzene (4-BFB)			0.100	mg/L	1	0.100	100	74.6 - 120

Method Blanks

Method Blank (1) QC Batch: 112714

QC Batch: 112714 | Date Analyzed: 2014-06-10 | Analyzed By: JS
Prep Batch: 95299 | QC Preparation: 2014-06-10 | Prepared By: JS

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000303	mg/L	0.001
Toluene		1	<0.000303	mg/L	0.001
Ethylbenzene		1	<0.000266	mg/L	0.001
Xylene		1	<0.000265	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0880	mg/L	1	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0932	mg/L	1	0.100	93	70 - 130

Method Blank (1) QC Batch: 112749

QC Batch: 112749 | Date Analyzed: 2014-06-11 | Analyzed By: JS
Prep Batch: 95332 | QC Preparation: 2014-06-11 | Prepared By: JS

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.000188	mg/L	0.001
Toluene		1	<0.000160	mg/L	0.001
Ethylbenzene		1	<0.000119	mg/L	0.001
Xylene		1	<0.000142	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0955	mg/L	1	0.100	96	75.4 - 120
4-Bromofluorobenzene (4-BFB)			0.0855	mg/L	1	0.100	86	74.6 - 120

Method Blank (1) QC Batch: 112860

QC Batch: 112860 | Date Analyzed: 2014-06-16 | Analyzed By: MN
Prep Batch: 95422 | QC Preparation: 2014-06-10 | Prepared By: MN

Parameter	Flag	Cert	MDL Result	Units	RL
Naphthalene		1	<0.0000708	mg/L	0.0002
2-Methylnaphthalene		1	<0.0000834	mg/L	0.0002
1-Methylnaphthalene			<0.000107	mg/L	0.0002
Acenaphthylene		1	<0.0000823	mg/L	0.0002
Acenaphthene		1	<0.0000888	mg/L	0.0002
Dibenzofuran		1	<0.0000787	mg/L	0.0002
Fluorene		1	<0.0000670	mg/L	0.0002
Anthracene		1	<0.0000838	mg/L	0.0002
Phenanthrene		1	<0.000106	mg/L	0.0002
Fluoranthene		1	<0.0000885	mg/L	0.0002
Pyrene		1	<0.000149	mg/L	0.0002
Benzo(a)anthracene		1	<0.000146	mg/L	0.0002
Chrysene		1	<0.000157	mg/L	0.0002
Benzo(b)fluoranthene		1	<0.000146	mg/L	0.0002
Benzo(k)fluoranthene		1	<0.000152	mg/L	0.0002
Benzo(a)pyrene		1	<0.000141	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		1	<0.000160	mg/L	0.0002
Dibenzo(a,h)anthracene		1	<0.000127	mg/L	0.0002
Benzo(g,h,i)perylene		1	<0.000175	mg/L	0.0002

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			0.0435	mg/L	1	0.0800	54	10 - 121
2-Fluorobiphenyl			0.0435	mg/L	1	0.0800	54	20.5 - 120
Terphenyl-d14			0.0503	mg/L	1	0.0800	63	26.4 - 120

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 112714 | Date Analyzed: 2014-06-10 | Analyzed By: JS
Prep Batch: 95299 | QC Preparation: 2014-06-10 | Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.0885	mg/L	1	0.100	<0.000303	88	70 - 130
Toluene		1	0.0908	mg/L	1	0.100	<0.000303	91	70 - 130
Ethylbenzene		1	0.0884	mg/L	1	0.100	<0.000266	88	70 - 130
Xylene		1	0.266	mg/L	1	0.300	<0.000265	89	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.0886	mg/L	1	0.100	<0.000303	89	70 - 130	0	20
Toluene		1	0.0902	mg/L	1	0.100	<0.000303	90	70 - 130	1	20
Ethylbenzene		1	0.0874	mg/L	1	0.100	<0.000266	87	70 - 130	1	20
Xylene		1	0.263	mg/L	1	0.300	<0.000265	88	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)	0.0885	0.0891	mg/L	1	0.100	88	89	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0951	0.0950	mg/L	1	0.100	95	95	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 112749 | Date Analyzed: 2014-06-11 | Analyzed By: JS
Prep Batch: 95332 | QC Preparation: 2014-06-11 | Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.105	mg/L	1	0.100	<0.000188	105	74.3 - 120
Toluene		1	0.105	mg/L	1	0.100	<0.000160	105	77.6 - 120
Ethylbenzene		1	0.106	mg/L	1	0.100	<0.000119	106	78.5 - 120
Xylene		1	0.294	mg/L	1	0.300	<0.000142	98	77.6 - 120

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.103	mg/L	1	0.100	<0.000188	103	74.3 - 120	1	20
Toluene		1	0.103	mg/L	1	0.100	<0.000160	103	77.6 - 120	1	20
Ethylbenzene		1	0.104	mg/L	1	0.100	<0.000119	104	78.5 - 120	2	20
Xylene		1	0.289	mg/L	1	0.300	<0.000142	96	77.6 - 120	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)	0.0959	0.0949	mg/L	1	0.100	96	95	75.4 - 120
4-Bromofluorobenzene (4-BFB)	0.103	0.102	mg/L	1	0.100	103	102	74.6 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 112860 | Date Analyzed: 2014-06-16 | Analyzed By: MN
Prep Batch: 95422 | QC Preparation: 2014-06-10 | Prepared By: MN

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene		1	0.0641	mg/L	1	0.0800	<0.0000708	80	33.4 - 120
2-Methylnaphthalene		1	0.0580	mg/L	1	0.0800	<0.0000834	72	36.7 - 120
1-Methylnaphthalene			0.0575	mg/L	1	0.0800	<0.000107	72	37.7 - 120
Acenaphthylene		1	0.0679	mg/L	1	0.0800	<0.0000832	85	39.7 - 120
Acenaphthene		1	0.0569	mg/L	1	0.0800	<0.0000888	71	10 - 120
Dibenzofuran		1	0.0629	mg/L	1	0.0800	<0.0000787	79	27.5 - 120
Fluorene		1	0.0633	mg/L	1	0.0800	<0.0000670	79	32.7 - 120
Anthracene		1	0.0599	mg/L	1	0.0800	<0.0000838	75	23.6 - 120
Phenanthrene		1	0.0683	mg/L	1	0.0800	<0.000106	85	26.7 - 120
Fluoranthene		1	0.0621	mg/L	1	0.0800	<0.0000885	78	19.2 - 120
Pyrene		1	0.0715	mg/L	1	0.0800	<0.000149	89	34.1 - 120
Benzo(a)anthracene		1	0.0655	mg/L	1	0.0800	<0.000146	82	43.4 - 120
Chrysene		1	0.0658	mg/L	1	0.0800	<0.000157	82	10 - 176
Benzo(b)fluoranthene		1	0.0570	mg/L	1	0.0800	<0.000146	71	18.4 - 120
Benzo(k)fluoranthene		1	0.0612	mg/L	1	0.0800	<0.000152	76	22 - 124
Benzo(a)pyrene		1	0.0621	mg/L	1	0.0800	<0.000141	78	25.1 - 120
Indeno(1,2,3-cd)pyrene		1	0.0611	mg/L	1	0.0800	<0.000160	76	21.3 - 120
Dibenzo(a,h)anthracene		1	0.0622	mg/L	1	0.0800	<0.000127	78	10 - 173
Benzo(g,h,i)perylene		1	0.0573	mg/L	1	0.0800	<0.000175	72	10.7 - 128

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Naphthalene		1	0.0660	mg/L	1	0.0800	<0.0000708	82	33.4 - 120	3	20

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
2-Methylnaphthalene		1	0.0598	mg/L	1	0.0800	<0.0000834	75	36.7 - 120	3	20
1-Methylnaphthalene			0.0604	mg/L	1	0.0800	<0.000107	76	37.7 - 120	5	20
Acenaphthylene		1	0.0691	mg/L	1	0.0800	<0.0000832	86	39.7 - 120	2	20
Acenaphthene		1	0.0583	mg/L	1	0.0800	<0.0000888	73	10 - 120	2	20
Dibenzofuran		1	0.0643	mg/L	1	0.0800	<0.0000787	80	27.5 - 120	2	20
Fluorene		1	0.0642	mg/L	1	0.0800	<0.0000670	80	32.7 - 120	1	20
Anthracene		1	0.0619	mg/L	1	0.0800	<0.0000838	77	23.6 - 120	3	20
Phenanthrene		1	0.0699	mg/L	1	0.0800	<0.000106	87	26.7 - 120	2	20
Fluoranthene		1	0.0619	mg/L	1	0.0800	<0.0000885	77	19.2 - 120	0	20
Pyrene		1	0.0746	mg/L	1	0.0800	<0.000149	93	34.1 - 120	4	20
Benzo(a)anthracene		1	0.0665	mg/L	1	0.0800	<0.000146	83	43.4 - 120	2	20
Chrysene		1	0.0670	mg/L	1	0.0800	<0.000157	84	10 - 176	2	20
Benzo(b)fluoranthene		1	0.0572	mg/L	1	0.0800	<0.000146	72	18.4 - 120	0	20
Benzo(k)fluoranthene		1	0.0628	mg/L	1	0.0800	<0.000152	78	22 - 124	3	20
Benzo(a)pyrene		1	0.0629	mg/L	1	0.0800	<0.000141	79	25.1 - 120	1	20
Indeno(1,2,3-cd)pyrene		1	0.0622	mg/L	1	0.0800	<0.000160	78	21.3 - 120	2	20
Dibenzo(a,h)anthracene		1	0.0630	mg/L	1	0.0800	<0.000127	79	10 - 173	1	20
Benzo(g,h,i)perylene		1	0.0583	mg/L	1	0.0800	<0.000175	73	10.7 - 128	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
Nitrobenzene-d5	0.0594	0.0617	mg/L	1	0.0800	74	77	10 - 121
2-Fluorobiphenyl	0.0604	0.0624	mg/L	1	0.0800	76	78	20.5 - 120
Terphenyl-d14	0.0668	0.0680	mg/L	1	0.0800	84	85	26.4 - 120

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 365116

QC Batch: 112714 | Date Analyzed: 2014-06-10 | Analyzed By: JS
Prep Batch: 95299 | QC Preparation: 2014-06-10 | Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.319	mg/L	1	0.100	0.233	86	70 - 130
Toluene		1	0.0904	mg/L	1	0.100	0.0005	90	70 - 130
Ethylbenzene		1	0.0973	mg/L	1	0.100	0.0097	88	70 - 130
Xylene		1	0.266	mg/L	1	0.300	0.0034	88	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.327	mg/L	1	0.100	0.233	94	70 - 130	2	20
Toluene		1	0.0925	mg/L	1	0.100	0.0005	92	70 - 130	2	20
Ethylbenzene		1	0.0998	mg/L	1	0.100	0.0097	90	70 - 130	2	20
Xylene		1	0.273	mg/L	1	0.300	0.0034	90	70 - 130	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0888	0.0884	mg/L	1	0.1	89	88	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0963	0.0962	mg/L	1	0.1	96	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 364789

QC Batch: 112749 | Date Analyzed: 2014-06-11 | Analyzed By: JS
Prep Batch: 95332 | QC Preparation: 2014-06-11 | Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	0.189	mg/L	1	0.100	0.0977	91	50.2 - 129
Toluene		1	0.144	mg/L	1	0.100	0.0427	101	58.1 - 129
Ethylbenzene		1	0.106	mg/L	1	0.100	0.0004	106	58.1 - 127
Xylene		1	0.303	mg/L	1	0.300	0.0054	99	53.1 - 128

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	0.190	mg/L	1	0.100	0.0977	92	50.2 - 129	0	20
Toluene		1	0.143	mg/L	1	0.100	0.0427	100	58.1 - 129	1	20
Ethylbenzene		1	0.104	mg/L	1	0.100	0.0004	104	58.1 - 127	2	20
Xylene		1	0.298	mg/L	1	0.300	0.0054	98	53.1 - 128	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0928	0.0937	mg/L	1	0.1	93	94	75.4 - 120
4-Bromofluorobenzene (4-BFB)	0.100	0.101	mg/L	1	0.1	100	101	74.6 - 120

Calibration Standards

Standard (CCV-1)

QC Batch: 112714 | Date Analyzed: 2014-06-10 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0882	88	80 - 120	2014-06-10
Toluene		1	mg/L	0.100	0.0899	90	80 - 120	2014-06-10
Ethylbenzene		1	mg/L	0.100	0.0876	88	80 - 120	2014-06-10
Xylene		1	mg/L	0.300	0.263	88	80 - 120	2014-06-10

Standard (CCV-2)

QC Batch: 112714 | Date Analyzed: 2014-06-10 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0892	89	80 - 120	2014-06-10
Toluene		1	mg/L	0.100	0.0933	93	80 - 120	2014-06-10
Ethylbenzene		1	mg/L	0.100	0.0908	91	80 - 120	2014-06-10
Xylene		1	mg/L	0.300	0.272	91	80 - 120	2014-06-10

Standard (CCV-3)

QC Batch: 112714 | Date Analyzed: 2014-06-10 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.0882	88	80 - 120	2014-06-10
Toluene		1	mg/L	0.100	0.0906	91	80 - 120	2014-06-10
Ethylbenzene		1	mg/L	0.100	0.0882	88	80 - 120	2014-06-10
Xylene		1	mg/L	0.300	0.264	88	80 - 120	2014-06-10

Standard (CCV-1)

QC Batch: 112749 | Date Analyzed: 2014-06-11 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.107	107	80 - 120	2014-06-11
Toluene		1	mg/L	0.100	0.107	107	80 - 120	2014-06-11
Ethylbenzene		1	mg/L	0.100	0.107	107	80 - 120	2014-06-11
Xylene		1	mg/L	0.300	0.300	100	80 - 120	2014-06-11

Standard (CCV-2)

QC Batch: 112749 | Date Analyzed: 2014-06-11 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/L	0.100	0.104	104	80 - 120	2014-06-11
Toluene		1	mg/L	0.100	0.103	103	80 - 120	2014-06-11
Ethylbenzene		1	mg/L	0.100	0.103	103	80 - 120	2014-06-11
Xylene		1	mg/L	0.300	0.285	95	80 - 120	2014-06-11

Standard (CCV-1)

QC Batch: 112860 | Date Analyzed: 2014-06-16 | 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	71.7	120	80 - 120	2014-06-16
2-Methylnaphthalene		1	mg/L	60.0	64.0	107	80 - 120	2014-06-16
1-Methylnaphthalene			mg/L	60.0	63.4	106	80 - 120	2014-06-16
Acenaphthylene		1	mg/L	60.0	70.1	117	80 - 120	2014-06-16
Acenaphthene		1	mg/L	60.0	62.4	104	80 - 120	2014-06-16
Dibenzofuran		1	mg/L	60.0	65.9	110	80 - 120	2014-06-16
Fluorene		1	mg/L	60.0	63.9	106	80 - 120	2014-06-16
Anthracene		1	mg/L	60.0	69.7	116	80 - 120	2014-06-16
Phenanthrene		1	mg/L	60.0	72.0	120	80 - 120	2014-06-16
Fluoranthene		1	mg/L	60.0	69.7	116	80 - 120	2014-06-16
Pyrene	Qc	Qc	1	mg/L	60.0	75.9	126	80 - 120	2014-06-16
Benzo(a)anthracene			1	mg/L	60.0	67.6	113	80 - 120	2014-06-16

continued . . .

standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chrysene		1	mg/L	60.0	66.7	111	80 - 120	2014-06-16
Benzo(b)fluoranthene		1	mg/L	60.0	62.3	104	80 - 120	2014-06-16
Benzo(k)fluoranthene		1	mg/L	60.0	57.0	95	80 - 120	2014-06-16
Benzo(a)pyrene		1	mg/L	60.0	60.8	101	80 - 120	2014-06-16
Indeno(1,2,3-cd)pyrene		1	mg/L	60.0	59.5	99	80 - 120	2014-06-16
Dibenzo(a,h)anthracene		1	mg/L	60.0	58.7	98	80 - 120	2014-06-16
Benzo(g,h,i)perylene		1	mg/L	60.0	57.3	96	80 - 120	2014-06-16

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			60.4	mg/L	1	60.0	101	-
2-Fluorobiphenyl			60.0	mg/L	1	60.0	100	-
Terphenyl-d14			65.6	mg/L	1	60.0	109	-

Standard (CCV-2)

QC Batch: 112860 Date Analyzed: 2014-06-16 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	71.2	119	80 - 120	2014-06-16
2-Methylnaphthalene		1	mg/L	60.0	61.9	103	80 - 120	2014-06-16
1-Methylnaphthalene			mg/L	60.0	61.0	102	80 - 120	2014-06-16
Acenaphthylene		1	mg/L	60.0	70.4	117	80 - 120	2014-06-16
Acenaphthene		1	mg/L	60.0	62.6	104	80 - 120	2014-06-16
Dibenzofuran		1	mg/L	60.0	66.3	110	80 - 120	2014-06-16
Fluorene		1	mg/L	60.0	65.5	109	80 - 120	2014-06-16
Anthracene		1	mg/L	60.0	70.4	117	80 - 120	2014-06-16
Phenanthrene		1	mg/L	60.0	71.1	118	80 - 120	2014-06-16
Fluoranthene		1	mg/L	60.0	72.0	120	80 - 120	2014-06-16
Pyrene	Qc	Qc	1	mg/L	60.0	76.2	127	80 - 120	2014-06-16
Benzo(a)anthracene		1	mg/L	60.0	67.2	112	80 - 120	2014-06-16
Chrysene		1	mg/L	60.0	66.7	111	80 - 120	2014-06-16
Benzo(b)fluoranthene		1	mg/L	60.0	62.2	104	80 - 120	2014-06-16
Benzo(k)fluoranthene		1	mg/L	60.0	59.7	100	80 - 120	2014-06-16
Benzo(a)pyrene		1	mg/L	60.0	60.8	101	80 - 120	2014-06-16
Indeno(1,2,3-cd)pyrene		1	mg/L	60.0	58.3	97	80 - 120	2014-06-16
Dibenzo(a,h)anthracene		1	mg/L	60.0	57.3	96	80 - 120	2014-06-16
Benzo(g,h,i)perylene		1	mg/L	60.0	56.4	94	80 - 120	2014-06-16

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			59.6	mg/L	1	60.0	99	-
2-Fluorobiphenyl			60.8	mg/L	1	60.0	101	-
Terphenyl-d14			67.1	mg/L	1	60.0	112	-

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	T104704219-14-10	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

LAB Order ID # 14060919

Page 1 of 2

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

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

Company Name: Talon IPE
Phone #: 940-329-0691
Address: (Street, City, Zip) 2901 St Hwy 349, Midland TX 79707
Fax #:
Contact Person: ~~Bivy~~ Brad Ivy, Camille Bryant
E-mail: bivy@talonlpe.com, CJbryant@paalp.com
Invoice to: (If different from above) SRS# 2002-10312 Plains all American Pipe Line
Project #: 100376.051.01
Project Name: Lovington Deep 6"
Project Location (including state): Hobbs NM
Sampler Signature: Jake Munsey

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC						Turn Around Time if different from standard	Hold
365125	MW 1	3	40ml	X				X				X		6-4-14	1200		X																									
126	MW 3	3													1400																											
127	MW 4	3													1310																											
128	MW 5	3													1248																											
129	MW 6	3													1320																											
130	MW 7	3													1430																											
131	MW 8	3													1230																											
132	MW 9	3													1300																											
133	MW 10	3													1315																											
134	MW 11	3													1415																											
135	MW 12	3													1410																											

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Jake Munsey	Talon LPE	6-9-2014	12:15	Allison Johnson	TA	6-9-14	12:20	INST IR, OBS 6.0 °C, COR 6.0 °C
								INST ____, OBS ____ °C, COR ____ °C
				H Tayler	TA	6/10/14		INST IR3, OBS 5.4 °C, COR 4.5 °C

LAB USE ONLY
Intact (Y) / N
Headspace Y / (N) NA
Log-in-Review SMC 6/9/14

REMARKS:

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

Carrier # Courier

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

ORIGINAL COPY

IS 2n 300297

LAB Order ID # 14060919

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

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

Company Name: Talon IPE
Phone #: 940-329-0691
Address: (Street, City, Zip) 2901 St Hwy 349, Midland, TX 79707
Fax #:
Contact Person: Brad Ivy, Camille Bryant
E-mail: bivy@talonlpe.com, cjbryant@talonlpe.com
Invoice to: (If different from above) SRSH 2002-10312 (Plains)
Project #: 700376.051.01
Project Name: Lovington Deep 6"
Project Location (including state): Hobbs NM
Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
365136	MW 18	3	40mL	X				X				X		6-4-14	1330		X																								
133	MW 10	1	1L	X								X		6-4-14	1315					X																						

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Jake Mousey		6-9-2014	12:15	Allison Johnson	TA	6-9-14	12:20	INST IR / OBS 6.0 °C / COR 6.0 °C
Jake Mousey	TalonIPE							
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ / OBS ____ °C / COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST IR3 / OBS 5.4 °C / COR 4.8 °C
				Haylea	TA	6/10/14		

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review SDC 6/9/14

REMARKS:

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

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

Carrier # CARRY-IN

LS ER300297

ORIGINAL COPY

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

(Corrected Report)

Brad Ivy
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: October 9, 2014

Work Order: 14091207

Project Location: Hobbs, NM
Project Name: Deep 6 in.
Project Number: 700376.051.01
SRS #: 2002-10312

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

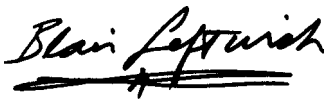
Sample	Description	Matrix	Date Taken	Time Taken	Date Received
374320	MW-1	water	2014-09-04	11:00	2014-09-11
374321	MW-3	water	2014-09-04	12:00	2014-09-11
374322	MW-4	water	2014-09-04	12:30	2014-09-11
374323	MW-5	water	2014-09-04	13:30	2014-09-11
374324	MW-6	water	2014-09-10	11:30	2014-09-11
374325	MW-7	water	2014-09-10	12:00	2014-09-11
374326	MW-8	water	2014-09-10	12:30	2014-09-11
374327	MW-9	water	2014-09-10	13:00	2014-09-11
374328	MW-10	water	2014-09-10	14:00	2014-09-11
374329	MW-11	water	2014-09-10	13:30	2014-09-11
374330	MW-12	water	2014-09-10	14:30	2014-09-11
374331	MW-18	water	2014-09-04	14:30	2014-09-11

Report Corrections (Work Order 14091207)

- 10/9/14: Corrected Project Number.

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



Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

Report Contents

Case Narrative

Samples for project Deep 6 in. were received by TraceAnalysis, Inc. on 2014-09-11 and assigned to work order 14091207. Samples for work order 14091207 were received intact without headspace and at a temperature of 3.7 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	97699	2014-09-15 at 12:57	115529	2014-09-15 at 12:57
BTEX	S 8021B	97701	2014-09-16 at 10:16	115531	2014-09-16 at 10:16
BTEX	S 8021B	97726	2014-09-17 at 15:22	115555	2014-09-17 at 15:22
PAH	S 8270D	97761	2014-09-17 at 15:00	115599	2014-09-18 at 15:13

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 14091207 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 374320 - MW-1

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115555	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97726	Sample Preparation:		Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.104	mg/L	1	0.100	104	70 - 130
4-Bromofluorobenzene (4-BFB)		5	0.0948	mg/L	1	0.100	95	70 - 130

Sample: 374321 - MW-3

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115555	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97726	Sample Preparation:		Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		1,2,3,4,5	**0.412**	mg/L	5	0.00100
Toluene	U	1,2,3,4,5	<0.00500	mg/L	5	0.00100
Ethylbenzene		1,2,3,4,5	**0.208**	mg/L	5	0.00100
Xylene		1,2,3,4,5	**0.185**	mg/L	5	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.523	mg/L	5	0.500	105	70 - 130
4-Bromofluorobenzene (4-BFB)		5	0.497	mg/L	5	0.500	99	70 - 130

Sample: 374321 - MW-3

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	115599	Date Analyzed:	2014-09-18	Analyzed By:	MN
Prep Batch:	97761	Sample Preparation:	2014-09-17	Prepared By:	MN

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Naphthalene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
2-Methylnaphthalene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
1-Methylnaphthalene	U	1	<0.000200	mg/L	1	0.000200
Acenaphthylene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Acenaphthene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Dibenzofuran	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Fluorene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Anthracene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Phenanthrene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Fluoranthene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Pyrene	Qs,U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Benzo(a)anthracene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Chrysene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene	Qr,U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene	Qr,U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Benzo(a)pyrene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.000200	mg/L	1	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			1.12	mg/L	1	8.00	14	10 - 121
2-Fluorobiphenyl	Qsr	Qsr	0.478	mg/L	1	8.00	6	20.5 - 120
Terphenyl-d14			5.22	mg/L	1	8.00	65	26.4 - 120

Sample: 374322 - MW-4

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115529	Date Analyzed:	2014-09-15	Analyzed By:	MT
Prep Batch:	97699	Sample Preparation:	2014-09-15	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

continued . . .

sample 374322 continued . . .

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Toluene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene		1,2,3,4,5	**0.00250**	mg/L	1	0.00100
Xylene		1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.105	mg/L	1	0.100	105	70 - 130
4-Bromofluorobenzene (4-BFB)		5	0.0971	mg/L	1	0.100	97	70 - 130

Sample: 374323 - MW-5

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115529	Date Analyzed:	2014-09-15	Analyzed By:	MT
Prep Batch:	97699	Sample Preparation:	2014-09-15	Prepared By:	MT

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.104	mg/L	1	0.100	104	70 - 130
4-Bromofluorobenzene (4-BFB)		5	0.0949	mg/L	1	0.100	95	70 - 130

Sample: 374324 - MW-6

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115529	Date Analyzed:	2014-09-15	Analyzed By:	MT
Prep Batch:	97699	Sample Preparation:	2014-09-15	Prepared By:	MT

continued . . .

sample 374324 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.107	mg/L	1	0.100	107	70 - 130
4-Bromofluorobenzene (4-BFB)		5	0.0970	mg/L	1	0.100	97	70 - 130

Sample: 374325 - MW-7

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115529	Date Analyzed:	2014-09-15	Analyzed By:	MT
Prep Batch:	97699	Sample Preparation:	2014-09-15	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.105	mg/L	1	0.100	105	70 - 130
4-Bromofluorobenzene (4-BFB)		5	0.0946	mg/L	1	0.100	95	70 - 130

Sample: 374326 - MW-8

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115531	Date Analyzed:	2014-09-16	Analyzed By:	MT
Prep Batch:	97701	Sample Preparation:	2014-09-16	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0811	mg/L	1	0.100	81	68.8 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0883	mg/L	1	0.100	88	67.5 - 120

Sample: 374327 - MW-9

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115531	Date Analyzed:	2014-09-16	Analyzed By:	MT
Prep Batch:	97701	Sample Preparation:	2014-09-16	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0829	mg/L	1	0.100	83	68.8 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0880	mg/L	1	0.100	88	67.5 - 120

Sample: 374328 - MW-10

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115531	Date Analyzed:	2014-09-16	Analyzed By:	MT
Prep Batch:	97701	Sample Preparation:	2014-09-16	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1,2,3,4,5	**9.68**	mg/L	50	0.00100

continued ...

sample 374328 continued . . .

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Toluene	U	1,2,3,4,5	<0.0500	mg/L	50	0.00100
Ethylbenzene		1,2,3,4,5	**0.527**	mg/L	50	0.00100
Xylene		1,2,3,4,5	**0.121**	mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	4.16	mg/L	50	5.00	83	68.8 - 120
4-Bromofluorobenzene (4-BFB)		5	4.42	mg/L	50	5.00	88	67.5 - 120

Sample: 374329 - MW-11

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115531	Date Analyzed:	2014-09-16	Analyzed By:	MT
Prep Batch:	97701	Sample Preparation:	2014-09-16	Prepared By:	MT

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Toluene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0829	mg/L	1	0.100	83	68.8 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0880	mg/L	1	0.100	88	67.5 - 120

Sample: 374330 - MW-12

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115555	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97726	Sample Preparation:		Prepared By:	JS

continued . . .

sample 374330 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1,2,3,4,5	**0.500**	mg/L	5	0.00100
Toluene	U	1,2,3,4,5	<0.00500	mg/L	5	0.00100
Ethylbenzene		1,2,3,4,5	**0.0114**	mg/L	5	0.00100
Xylene		1,2,3,4,5	<0.00500	mg/L	5	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.518	mg/L	5	0.500	104	70 - 130
4-Bromofluorobenzene (4-BFB)		5	0.496	mg/L	5	0.500	99	70 - 130

Sample: 374331 - MW-18

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	115555	Date Analyzed:	2014-09-17	Analyzed By:	JS
Prep Batch:	97726	Sample Preparation:		Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1,2,3,4,5	**0.00170**	mg/L	1	0.00100
Toluene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100
Xylene	U	1,2,3,4,5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.105	mg/L	1	0.100	105	70 - 130
4-Bromofluorobenzene (4-BFB)		5	0.0961	mg/L	1	0.100	96	70 - 130

Sample: 374331 - MW-18

Laboratory:	Lubbock				
Analysis:	PAH	Analytical Method:	S 8270D	Prep Method:	S 3510C
QC Batch:	115599	Date Analyzed:	2014-09-18	Analyzed By:	MN
Prep Batch:	97761	Sample Preparation:	2014-09-17	Prepared By:	MN

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Naphthalene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
2-Methylnaphthalene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
1-Methylnaphthalene	U	1	<0.000200		mg/L	1	0.000200
Acenaphthylene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Acenaphthene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Dibenzofuran	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Fluorene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Anthracene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Phenanthrene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Fluoranthene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Pyrene	Qs,U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Benzo(a)anthracene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Chrysene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Benzo(b)fluoranthene	Qr,U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Benzo(k)fluoranthene	Qr,U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Benzo(a)pyrene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Dibenzo(a,h)anthracene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200
Benzo(g,h,i)perylene	U	1,2,3,4,5	<0.000200		mg/L	1	0.000200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			1.16	mg/L	1	8.00	14	10 - 121
2-Fluorobiphenyl Qsr	Qsr		1.08	mg/L	1	8.00	14	20.5 - 120
Terphenyl-d14			6.59	mg/L	1	8.00	82	26.4 - 120

Method Blanks

Method Blank (1) QC Batch: 115529

QC Batch: 115529 | Date Analyzed: 2014-09-15 | Analyzed By: MT
Prep Batch: 97699 | QC Preparation: 2014-09-15 | Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,5	<0.000303	mg/L	0.001
Toluene		1,2,3,4,5	<0.000303	mg/L	0.001
Ethylbenzene		1,2,3,4,5	<0.000266	mg/L	0.001
Xylene		1,2,3,4,5	<0.000265	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.110	mg/L	1	0.100	110	70 - 130
4-Bromofluorobenzene (4-BFB)		5	0.100	mg/L	1	0.100	100	70 - 130

Method Blank (1) QC Batch: 115531

QC Batch: 115531 | Date Analyzed: 2014-09-16 | Analyzed By: MT
Prep Batch: 97701 | QC Preparation: 2014-09-16 | Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,5	<0.000425	mg/L	0.001
Toluene		1,2,3,4,5	<0.000409	mg/L	0.001
Ethylbenzene		1,2,3,4,5	<0.000281	mg/L	0.001
Xylene		1,2,3,4,5	<0.000274	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.0838	mg/L	1	0.100	84	68.8 - 120
4-Bromofluorobenzene (4-BFB)		5	0.0883	mg/L	1	0.100	88	67.5 - 120

Method Blank (1) QC Batch: 115555

QC Batch: 115555 | Date Analyzed: 2014-09-17 | Analyzed By: JS
Prep Batch: 97726 | QC Preparation: 2014-09-17 | Prepared By: JS

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,5	<0.000303	mg/L	0.001
Toluene		1,2,3,4,5	<0.000303	mg/L	0.001
Ethylbenzene		1,2,3,4,5	<0.000266	mg/L	0.001
Xylene		1,2,3,4,5	<0.000265	mg/L	0.001

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	0.106	mg/L	1	0.100	106	70 - 130
4-Bromofluorobenzene (4-BFB)		5	0.0973	mg/L	1	0.100	97	70 - 130

Method Blank (1) QC Batch: 115599

QC Batch: 115599 | Date Analyzed: 2014-09-18 | Analyzed By: MN
Prep Batch: 97761 | QC Preparation: 2014-09-17 | Prepared By: MN

Parameter	Flag	Cert	MDL Result	Units	RL
Naphthalene		1,2,3,4,5	<0.0000708	mg/L	0.0002
2-Methylnaphthalene		1,2,3,4,5	<0.0000834	mg/L	0.0002
1-Methylnaphthalene		1	<0.000107	mg/L	0.0002
Acenaphthylene		1,2,3,4,5	<0.0000823	mg/L	0.0002
Acenaphthene		1,2,3,4,5	<0.0000888	mg/L	0.0002
Dibenzofuran		1,2,3,4,5	<0.0000787	mg/L	0.0002
Fluorene		1,2,3,4,5	<0.0000670	mg/L	0.0002
Anthracene		1,2,3,4,5	<0.0000838	mg/L	0.0002
Phenanthrene		1,2,3,4,5	<0.000106	mg/L	0.0002
Fluoranthene		1,2,3,4,5	<0.0000885	mg/L	0.0002
Pyrene		1,2,3,4,5	<0.000149	mg/L	0.0002
Benzo(a)anthracene		1,2,3,4,5	<0.000146	mg/L	0.0002
Chrysene		1,2,3,4,5	<0.000157	mg/L	0.0002
Benzo(b)fluoranthene		1,2,3,4,5	<0.000146	mg/L	0.0002
Benzo(k)fluoranthene		1,2,3,4,5	<0.000152	mg/L	0.0002
Benzo(a)pyrene		1,2,3,4,5	<0.000141	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	<0.000160	mg/L	0.0002
Dibenzo(a,h)anthracene		1,2,3,4,5	<0.000127	mg/L	0.0002
Benzo(g,h,i)perylene		1,2,3,4,5	<0.000175	mg/L	0.0002

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5			1.67	mg/L	1	8.00	21	10 - 121
2-Fluorobiphenyl			1.80	mg/L	1	8.00	22	20.5 - 120

continued . . .

method blank continued . . .

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Terphenyl-d14			7.93	mg/L	1	8.00	99	26.4 - 120

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 115529 | Date Analyzed: 2014-09-15 | Analyzed By: MT
Prep Batch: 97699 | QC Preparation: 2014-09-15 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.104	mg/L	1	0.100	<0.000303	104	70 - 130
Toluene		1,2,3,4,5	0.105	mg/L	1	0.100	<0.000303	105	70 - 130
Ethylbenzene		1,2,3,4,5	0.104	mg/L	1	0.100	<0.000266	104	70 - 130
Xylene		1,2,3,4,5	0.318	mg/L	1	0.300	<0.000265	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.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,5	0.104	mg/L	1	0.100	<0.000303	104	70 - 130	0	20
Toluene		1,2,3,4,5	0.105	mg/L	1	0.100	<0.000303	105	70 - 130	0	20
Ethylbenzene		1,2,3,4,5	0.104	mg/L	1	0.100	<0.000266	104	70 - 130	0	20
Xylene		1,2,3,4,5	0.317	mg/L	1	0.300	<0.000265	106	70 - 130	0	20

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

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5	0.108	0.109	mg/L	1	0.100	108	109	70 - 130
4-Bromofluorobenzene (4-BFB)	5	0.101	0.101	mg/L	1	0.100	101	101	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 115531 | Date Analyzed: 2014-09-16 | Analyzed By: MT
Prep Batch: 97701 | QC Preparation: 2014-09-16 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.0884	mg/L	1	0.100	<0.000425	88	71.6 - 120
Toluene		1,2,3,4,5	0.0881	mg/L	1	0.100	<0.000409	88	71.6 - 120
Ethylbenzene		1,2,3,4,5	0.0884	mg/L	1	0.100	<0.000281	88	71.1 - 120
Xylene		1,2,3,4,5	0.266	mg/L	1	0.300	<0.000274	89	72.5 - 120

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,5	0.0867	mg/L	1	0.100	<0.000425	87	71.6 - 120	2	20
Toluene		1,2,3,4,5	0.0863	mg/L	1	0.100	<0.000409	86	71.6 - 120	2	20
Ethylbenzene		1,2,3,4,5	0.0873	mg/L	1	0.100	<0.000281	87	71.1 - 120	1	20
Xylene		1,2,3,4,5	0.264	mg/L	1	0.300	<0.000274	88	72.5 - 120	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)	5	0.0844	0.0854	mg/L	1	0.100	84	85	68.8 - 120
4-Bromofluorobenzene (4-BFB)	5	0.0913	0.0921	mg/L	1	0.100	91	92	67.5 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 115555 | Date Analyzed: 2014-09-17 | Analyzed By: JS
Prep Batch: 97726 | QC Preparation: 2014-09-17 | Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.103	mg/L	1	0.100	<0.000303	103	70 - 130
Toluene		1,2,3,4,5	0.104	mg/L	1	0.100	<0.000303	104	70 - 130
Ethylbenzene		1,2,3,4,5	0.103	mg/L	1	0.100	<0.000266	103	70 - 130
Xylene		1,2,3,4,5	0.315	mg/L	1	0.300	<0.000265	105	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,5	0.105	mg/L	1	0.100	<0.000303	105	70 - 130	2	20
Toluene		1,2,3,4,5	0.106	mg/L	1	0.100	<0.000303	106	70 - 130	2	20
Ethylbenzene		1,2,3,4,5	0.105	mg/L	1	0.100	<0.000266	105	70 - 130	2	20
Xylene		1,2,3,4,5	0.320	mg/L	1	0.300	<0.000265	107	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)	5	0.106	0.109	mg/L	1	0.100	106	109	70 - 130
4-Bromofluorobenzene (4-BFB)	5	0.0996	0.101	mg/L	1	0.100	100	101	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 115599 | Date Analyzed: 2014-09-18 | Analyzed By: MN
Prep Batch: 97761 | QC Preparation: 2014-09-17 | Prepared By: MN

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene		1,2,3,4,5	5.30	mg/L	1	8.00	<0.0000708	66	33.4 - 120
2-Methylnaphthalene		1,2,3,4,5	5.31	mg/L	1	8.00	<0.0000834	66	36.7 - 120
1-Methylnaphthalene		1	5.19	mg/L	1	8.00	<0.000107	65	37.7 - 120
Acenaphthylene		1,2,3,4,5	5.13	mg/L	1	8.00	<0.0000832	64	39.7 - 120
Acenaphthene		1,2,3,4,5	5.79	mg/L	1	8.00	<0.0000888	72	10 - 120
Dibenzofuran		1,2,3,4,5	5.64	mg/L	1	8.00	<0.0000787	70	27.5 - 120
Fluorene		1,2,3,4,5	3.08	mg/L	1	8.00	<0.0000670	38	32.7 - 120
Anthracene		1,2,3,4,5	3.39	mg/L	1	8.00	<0.0000838	42	23.6 - 120
Phenanthrene		1,2,3,4,5	3.56	mg/L	1	8.00	<0.000106	44	26.7 - 120
Fluoranthene		1,2,3,4,5	3.69	mg/L	1	8.00	<0.0000885	46	19.2 - 120
Pyrene	Qs	Qs 1,2,3,4,5	2.73	mg/L	1	8.00	<0.000149	34	34.1 - 120
Benzo(a)anthracene		1,2,3,4,5	5.92	mg/L	1	8.00	<0.000146	74	43.4 - 120
Chrysene		1,2,3,4,5	6.06	mg/L	1	8.00	<0.000157	76	10 - 176
Benzo(b)fluoranthene		1,2,3,4,5	5.34	mg/L	1	8.00	<0.000146	67	18.4 - 120
Benzo(k)fluoranthene		1,2,3,4,5	4.92	mg/L	1	8.00	<0.000152	62	22 - 124
Benzo(a)pyrene		1,2,3,4,5	4.20	mg/L	1	8.00	<0.000141	52	25.1 - 120
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	3.51	mg/L	1	8.00	<0.000160	44	21.3 - 120
Dibenzo(a,h)anthracene		1,2,3,4,5	3.51	mg/L	1	8.00	<0.000127	44	10 - 173
Benzo(g,h,i)perylene		1,2,3,4,5	3.91	mg/L	1	8.00	<0.000175	49	10.7 - 128

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Naphthalene		1,2,3,4,5	5.42	mg/L	1	8.00	<0.0000708	68	33.4 - 120	2	20
2-Methylnaphthalene		1,2,3,4,5	5.19	mg/L	1	8.00	<0.0000834	65	36.7 - 120	2	20
1-Methylnaphthalene		1	5.26	mg/L	1	8.00	<0.000107	66	37.7 - 120	1	20
Acenaphthylene		1,2,3,4,5	5.44	mg/L	1	8.00	<0.0000832	68	39.7 - 120	6	20
Acenaphthene		1,2,3,4,5	5.84	mg/L	1	8.00	<0.0000888	73	10 - 120	1	20
Dibenzofuran		1,2,3,4,5	5.79	mg/L	1	8.00	<0.0000787	72	27.5 - 120	3	20
Fluorene		1,2,3,4,5	3.33	mg/L	1	8.00	<0.0000670	42	32.7 - 120	8	20
Anthracene		1,2,3,4,5	3.23	mg/L	1	8.00	<0.0000838	40	23.6 - 120	5	20
Phenanthrene		1,2,3,4,5	3.36	mg/L	1	8.00	<0.000106	42	26.7 - 120	6	20
Fluoranthene		1,2,3,4,5	3.96	mg/L	1	8.00	<0.0000885	50	19.2 - 120	7	20
Pyrene	Qs	Qs 1,2,3,4,5	2.49	mg/L	1	8.00	<0.000149	31	34.1 - 120	9	20
Benzo(a)anthracene		1,2,3,4,5	6.39	mg/L	1	8.00	<0.000146	80	43.4 - 120	8	20
Chrysene		1,2,3,4,5	6.25	mg/L	1	8.00	<0.000157	78	10 - 176	3	20
Benzo(b)fluoranthene	Qr	Qr 1,2,3,4,5	4.00	mg/L	1	8.00	<0.000146	50	18.4 - 120	29	20
Benzo(k)fluoranthene	Qr	Qr 1,2,3,4,5	3.87	mg/L	1	8.00	<0.000152	48	22 - 124	24	20
Benzo(a)pyrene		1,2,3,4,5	3.59	mg/L	1	8.00	<0.000141	45	25.1 - 120	16	20

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	3.70	mg/L	1	8.00	<0.000160	46	21.3 - 120	5	20
Dibenzo(a,h)anthracene		1,2,3,4,5	3.58	mg/L	1	8.00	<0.000127	45	10 - 173	2	20
Benzo(g,h,i)perylene		1,2,3,4,5	3.82	mg/L	1	8.00	<0.000175	48	10.7 - 128	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
Nitrobenzene-d5	1.94	1.99	mg/L	1	8.00	24	25	10 - 121
2-Fluorobiphenyl	2.65	3.83	mg/L	1	8.00	33	48	20.5 - 120
Terphenyl-d14	7.66	10.1	mg/L	1	8.00	96	126	26.4 - 120

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 374220

QC Batch: 115529 | Date Analyzed: 2014-09-15 | Analyzed By: MT
Prep Batch: 97699 | QC Preparation: 2014-09-15 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	1.66	mg/L	5	1.00	0.603	106	70 - 130
Toluene		1,2,3,4,5	1.93	mg/L	5	1.00	0.812	112	70 - 130
Ethylbenzene		1,2,3,4,5	1.24	mg/L	5	1.00	0.159	108	70 - 130
Xylene		1,2,3,4,5	4.05	mg/L	5	3.00	0.728	111	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,5	1.66	mg/L	5	1.00	0.603	106	70 - 130	0	20
Toluene		1,2,3,4,5	1.93	mg/L	5	1.00	0.812	112	70 - 130	0	20
Ethylbenzene		1,2,3,4,5	1.24	mg/L	5	1.00	0.159	108	70 - 130	0	20
Xylene		1,2,3,4,5	4.04	mg/L	5	3.00	0.728	110	70 - 130	0	20

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

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5	0.557	0.549	mg/L	5	0.5	111	110	70 - 130
4-Bromofluorobenzene (4-BFB)	5	0.529	0.525	mg/L	5	0.5	106	105	70 - 130

Matrix Spike (MS-1) Spiked Sample: 374326

QC Batch: 115531 | Date Analyzed: 2014-09-16 | Analyzed By: MT
Prep Batch: 97701 | QC Preparation: 2014-09-16 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.0870	mg/L	1	0.100	<0.000425	87	54.2 - 120
Toluene		1,2,3,4,5	0.0856	mg/L	1	0.100	<0.000409	86	55.6 - 120
Ethylbenzene		1,2,3,4,5	0.0847	mg/L	1	0.100	<0.000281	85	59.6 - 120
Xylene		1,2,3,4,5	0.250	mg/L	1	0.300	<0.000274	83	61.4 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,5	0.0880	mg/L	1	0.100	<0.000425	88	54.2 - 120	1	20
Toluene		1,2,3,4,5	0.0869	mg/L	1	0.100	<0.000409	87	55.6 - 120	2	20
Ethylbenzene		1,2,3,4,5	0.0871	mg/L	1	0.100	<0.000281	87	59.6 - 120	3	20
Xylene		1,2,3,4,5	0.259	mg/L	1	0.300	<0.000274	86	61.4 - 120	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)	5	0.0851	0.0866	mg/L	1	0.1	85	87	68.8 - 120
4-Bromofluorobenzene (4-BFB)	5	0.0928	0.0937	mg/L	1	0.1	93	94	67.5 - 120

Matrix Spike (MS-1) Spiked Sample: 374321

QC Batch: 115555 | Date Analyzed: 2014-09-17 | Analyzed By: JS
Prep Batch: 97726 | QC Preparation: 2014-09-17 | Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	0.953	mg/L	5	0.500	0.412	108	70 - 130
Toluene		1,2,3,4,5	0.525	mg/L	5	0.500	<0.00152	105	70 - 130
Ethylbenzene		1,2,3,4,5	0.740	mg/L	5	0.500	0.208	106	70 - 130
Xylene		1,2,3,4,5	1.79	mg/L	5	1.50	0.185	107	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,5	0.947	mg/L	5	0.500	0.412	107	70 - 130	1	20
Toluene		1,2,3,4,5	0.512	mg/L	5	0.500	<0.00152	102	70 - 130	2	20
Ethylbenzene		1,2,3,4,5	0.729	mg/L	5	0.500	0.208	104	70 - 130	2	20
Xylene		1,2,3,4,5	1.75	mg/L	5	1.50	0.185	104	70 - 130	2	20

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

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5	0.532	0.530	mg/L	5	0.5	106	106	70 - 130
4-Bromofluorobenzene (4-BFB)	5	0.511	0.508	mg/L	5	0.5	102	102	70 - 130

Calibration Standards

Standard (CCV-2)

QC Batch: 115529 | Date Analyzed: 2014-09-15 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/L	0.100	0.104	104	80 - 120	2014-09-15
Toluene		1,2,3,4,5	mg/L	0.100	0.105	105	80 - 120	2014-09-15
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.104	104	80 - 120	2014-09-15
Xylene		1,2,3,4,5	mg/L	0.300	0.316	105	80 - 120	2014-09-15

Standard (CCV-3)

QC Batch: 115529 | Date Analyzed: 2014-09-15 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/L	0.100	0.106	106	80 - 120	2014-09-15
Toluene		1,2,3,4,5	mg/L	0.100	0.103	103	80 - 120	2014-09-15
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.102	102	80 - 120	2014-09-15
Xylene		1,2,3,4,5	mg/L	0.300	0.311	104	80 - 120	2014-09-15

Standard (CCV-1)

QC Batch: 115531 | Date Analyzed: 2014-09-16 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/L	0.100	0.0858	86	80 - 120	2014-09-16
Toluene		1,2,3,4,5	mg/L	0.100	0.0861	86	80 - 120	2014-09-16
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.0863	86	80 - 120	2014-09-16
Xylene		1,2,3,4,5	mg/L	0.300	0.260	87	80 - 120	2014-09-16

Standard (CCV-2)

QC Batch: 115531 | Date Analyzed: 2014-09-16 | Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/L	0.100	0.0881	88	80 - 120	2014-09-16
Toluene		1,2,3,4,5	mg/L	0.100	0.0866	87	80 - 120	2014-09-16
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.0867	87	80 - 120	2014-09-16
Xylene		1,2,3,4,5	mg/L	0.300	0.261	87	80 - 120	2014-09-16

Standard (CCV-1)

QC Batch: 115555 | Date Analyzed: 2014-09-17 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/L	0.100	0.107	107	80 - 120	2014-09-17
Toluene		1,2,3,4,5	mg/L	0.100	0.105	105	80 - 120	2014-09-17
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.103	103	80 - 120	2014-09-17
Xylene		1,2,3,4,5	mg/L	0.300	0.316	105	80 - 120	2014-09-17

Standard (CCV-2)

QC Batch: 115555 | Date Analyzed: 2014-09-17 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/L	0.100	0.106	106	80 - 120	2014-09-17
Toluene		1,2,3,4,5	mg/L	0.100	0.104	104	80 - 120	2014-09-17
Ethylbenzene		1,2,3,4,5	mg/L	0.100	0.103	103	80 - 120	2014-09-17
Xylene		1,2,3,4,5	mg/L	0.300	0.316	105	80 - 120	2014-09-17

Standard (CCV-1)

QC Batch: 115599 | Date Analyzed: 2014-09-18 | Analyzed By: MN

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		1,2,3,4,5	mg/L	60.0	65.1	108	80 - 120	2014-09-18
2-Methylnaphthalene		1,2,3,4,5	mg/L	60.0	64.6	108	80 - 120	2014-09-18
1-Methylnaphthalene		1	mg/L	60.0	64.3	107	80 - 120	2014-09-18
Acenaphthylene		1,2,3,4,5	mg/L	60.0	63.0	105	80 - 120	2014-09-18
Acenaphthene		1,2,3,4,5	mg/L	60.0	63.2	105	80 - 120	2014-09-18
Dibenzofuran		1,2,3,4,5	mg/L	60.0	61.9	103	80 - 120	2014-09-18
Fluorene		1,2,3,4,5	mg/L	60.0	65.9	110	80 - 120	2014-09-18
Anthracene		1,2,3,4,5	mg/L	60.0	64.7	108	80 - 120	2014-09-18
Phenanthrene		1,2,3,4,5	mg/L	60.0	64.6	108	80 - 120	2014-09-18
Fluoranthene		1,2,3,4,5	mg/L	60.0	64.2	107	80 - 120	2014-09-18
Pyrene		1,2,3,4,5	mg/L	60.0	63.3	106	80 - 120	2014-09-18
Benzo(a)anthracene		1,2,3,4,5	mg/L	60.0	62.4	104	80 - 120	2014-09-18
Chrysene		1,2,3,4,5	mg/L	60.0	61.0	102	80 - 120	2014-09-18
Benzo(b)fluoranthene		1,2,3,4,5	mg/L	60.0	62.9	105	80 - 120	2014-09-18
Benzo(k)fluoranthene		1,2,3,4,5	mg/L	60.0	63.7	106	80 - 120	2014-09-18
Benzo(a)pyrene		1,2,3,4,5	mg/L	60.0	51.3	86	80 - 120	2014-09-18
Indeno(1,2,3-cd)pyrene		1,2,3,4,5	mg/L	60.0	54.6	91	80 - 120	2014-09-18
Dibenzo(a,h)anthracene		1,2,3,4,5	mg/L	60.0	56.3	94	80 - 120	2014-09-18
Benzo(g,h,i)perylene		1,2,3,4,5	mg/L	60.0	53.0	88	80 - 120	2014-09-18

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5			57.7	mg/L	1	60.0	96	-
2-Fluorobiphenyl			62.0	mg/L	1	60.0	103	-
Terphenyl-d14			60.6	mg/L	1	60.0	101	-

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5		2014-018	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.

F	Description
U	The analyte is not detected above the SDL

Attachments

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

LAB Order ID # 1409207

Page 1 of 2

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

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

Company Name: Talon LPE
Phone #: 940-329-0691
Address: (Street, City, Zip) 2901 St Hwy 349 Midland, TX 79707
Fax #:
Contact Person: Brad Ivy, Camille Bryant
E-mail: bivy@talonlpe.com, cjbryant@paaiP.com
Invoice to: (If different from above) SRS# 2002-10312 (Plains)
Project #: 700376.052.01
Project Name: Lovington Deep 6"
Project Location (including state): Hobbs, NM
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
374320	MW 1	3	40mL	X				X				X		9-4-14	1100		X																			
321	MW 3	6	40mL	X				X				X		9-4-14	1200		X			X																
322	MW 4	3	40mL	X				X				X		9-4-14	1230																					
323	MW 5	3	40mL	X				X				X		9-4-14	1330																					
324	MW 6	3	40mL	X				X				X		9-10-14	1130																					
325	MW 7	3	40mL	X				X				X		9-10-14	1200																					
326	MW 8	3	40mL	X				X				X		9-10-14	1230																					
327	MW 9	3	40mL	X				X				X		9-10-14	1300																					
328	MW 10	3	40mL	X				X				X		9-10-14	1400																					
329	MW 11	3	40mL	X				X				X		9-10-14	1330																					
330	MW 12	3	40mL	X				X				X		9-10-14	1430																					

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
	Talon LPE	9-12-14	8:10		TA	9/12/14	8:10
	TA	9/12/14	15:30		TA	091514	1000

INST FR / OBS 38 °C / COR 37 °C
INST FR / OBS 49 °C / COR 48 °C
INST ____ / OBS ____ °C / COR ____ °C

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

REMARKS:

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

Carrier # Carlyn LSU 21295865

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

ORIGINAL COPY

LAB Order ID # 1409207

Page 2 of 2

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

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

Company Name: Talon LPE
Phone #: 940-329-0691
Address: (Street, City, Zip) 2901 St Hwy 349 Midland, Tx 79707
Fax #:
Contact Person: Brad Tivy, Camille Bryant
E-mail: btivy@talonlpe.com, cjbryant@paalp.com
Invoice to: (If different from above) SRS # 2002-10312 (Plains)
Project #: 700376.052.01
Project Name: Lovington Deep 6"
Project Location (including state): Hobbs, NM
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
331	MW 18	6	40mL	X				X				X		9-4-14	1430	X			X																					

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	Talon LPE	9-12-14	8:10		TA	9/12/14	8:10	INST 3.8 °C OBS 3.8 °C COR 3.7 °C
								INST ____ °C OBS ____ °C COR ____ °C
								INST ____ °C OBS ____ °C COR ____ °C

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

REMARKS:

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

Carrier #

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

ORIGINAL COPY

LAB Order ID # 470-11201 1

Page 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

Bra...
3403 In...
Hobbs, ...
Tel (575) ...
Fax (575) 39...

Company Name: Talon LPE
Phone #: 940-329-0691
Address: (Street, City, Zip) 2901 St Hwy 349 Midland, TX 79707
Fax #:
Contact Person: Brad Ivy, Camille Bryant
E-mail: bivy@talonlpe.com, cjbryant@paalp.com
Invoice to: (If different from above) SRS# 2002-10312 (Plains)
Project #: 700376.052.01 051.01
Project Name: Lovington Deep 6"
Project Location (including state): Hobbs, NM
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
374320	MW 1	3	40mL	X				X				X		9-4-14	1100
321	MW 3	6	40mL	X				X				X		9-4-14	1200
322	MW 4	3	40mL	X				X				X		9-4-14	1230
323	MW 5	3	40mL	X				X				X		9-4-14	1330
324	MW 6	3	40mL	X				X				X		9-10-14	1130
325	MW 7	3	40mL	X				X				X		9-10-14	1200
326	MW 8	3	40mL	X				X				X		9-10-14	1230
327	MW 9	3	40mL	X				X				X		9-10-14	1300
328	MW 10	3	40mL	X				X				X		9-10-14	1400
329	MW 11	3	40mL	X				X				X		9-10-14	1330
330	MW 12	3	40mL	X				X				X		9-10-14	1430

ANALYSIS REQUEST (Circle or Specify Method No.)	Turn Around Time if different from standard	Hold
MTBE 8021 / 602 / 8260 / 624		
BTEX 8021 / 602 / 8260 / 624	X	
TPH 418.1 / TX1005 / TX1005 Ext(C35)		
TPH 8015 GRO / DRO / TVHC		
PAH 8270 / 625	X	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7		
TCLP Metals Ag As Ba Cd Cr Pb Se Hg		
TCLP Volatiles		
TCLP Semi Volatiles		
TCLP Pesticides		
RCI		
GC/MS Vol. 8260 / 624		
GC/MS Semi. Vol. 8270 / 625		
PCB's 8082 / 608		
Pesticides 8081 / 608		
BOD, TSS, pH		
Moisture Content		
Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity		
Na, Ca, Mg, K, TDS, EC		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	Talon LPE	9-12-14	8:10		TA	9/12/14	8:10	INST 38 °C
								OBS 38 °C
								COR 37 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	TA	9/12/14	15:30		TA	09/13/14	1000	INST FR
								OBS 4.5 °C
								COR 4.8 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
								INST ____
								OBS ____ °C
								COR ____ °C

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

REMARKS:
Report Sent 9-18-14 AJ

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

Carrier # Carlyn LSU Z1295865

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

ORIGINAL COPY

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Brad Ivy
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: January 8, 2015

Work Order: 15010510

Project Location: Hobbs, NM
Project Name: Deep 6 in.
Project Number: 700376.051.01
SRS #: 2002-10312

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
383596	MW 1	water	2014-12-19	11:00	2015-01-05
383597	MW 3	water	2014-12-19	12:30	2015-01-05
383598	MW 4	water	2014-12-19	12:00	2015-01-05
383599	MW 5	water	2014-12-19	11:30	2015-01-05
383600	MW 6	water	2014-12-18	12:00	2015-01-05
383601	MW 7	water	2014-12-18	12:30	2015-01-05
383602	MW 8	water	2014-12-18	13:00	2015-01-05
383603	MW 9	water	2014-12-18	14:00	2015-01-05
383604	MW 10	water	2014-12-19	13:00	2015-01-05
383605	MW 11	water	2014-12-18	13:30	2015-01-05
383606	MW 12	water	2014-12-19	13:30	2015-01-05
383607	MW 18	water	2014-12-19	10:45	2015-01-05

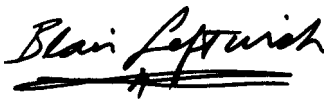
Notes

- **Work Order 15010510:** Client notified all samples out of hold.

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



Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

Report Contents

Case Narrative

Samples for project Deep 6 in. were received by TraceAnalysis, Inc. on 2015-01-05 and assigned to work order 15010510. Samples for work order 15010510 were received intact without headspace and at a temperature of 4.3 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	100122	2015-01-05 at 14:15	118410	2015-01-06 at 08:40
BTEX	S 8021B	100149	2015-01-06 at 16:00	118478	2015-01-08 at 07:28

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 15010510 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 383596 - MW 1

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	118410	Date Analyzed:	2015-01-06	Analyzed By:	AK
Prep Batch:	100122	Sample Preparation:	2015-01-05	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0933	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0906	mg/L	1	0.100	91	70 - 130

Sample: 383597 - MW 3

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	118478	Date Analyzed:	2015-01-08	Analyzed By:	AK
Prep Batch:	100149	Sample Preparation:	2015-01-06	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene [2]		5	**0.665**	mg/L	50	0.00100
Toluene	U	5	<0.0500	mg/L	50	0.00100
Ethylbenzene		5	**0.388**	mg/L	50	0.00100
Xylene		5	**0.652**	mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.47	mg/L	50	5.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)			4.64	mg/L	50	5.00	93	70 - 130

Sample: 383598 - MW 4

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	118410	Date Analyzed:	2015-01-06	Analyzed By:	AK
Prep Batch:	100122	Sample Preparation:	2015-01-05	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0913	mg/L	1	0.100	91	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0912	mg/L	1	0.100	91	70 - 130

Sample: 383599 - MW 5

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	118410	Date Analyzed:	2015-01-06	Analyzed By:	AK
Prep Batch:	100122	Sample Preparation:	2015-01-05	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene [4]	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0907	mg/L	1	0.100	91	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0893	mg/L	1	0.100	89	70 - 130

Sample: 383600 - MW 6

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	118410	Date Analyzed:	2015-01-06	Analyzed By:	AK
Prep Batch:	100122	Sample Preparation:	2015-01-05	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0895	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0896	mg/L	1	0.100	90	70 - 130

Sample: 383601 - MW 7

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	118410	Date Analyzed:	2015-01-06	Analyzed By:	AK
Prep Batch:	100122	Sample Preparation:	2015-01-05	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene [6]	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0895	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0887	mg/L	1	0.100	89	70 - 130

Sample: 383602 - MW 8

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	118410	Date Analyzed:	2015-01-06	Analyzed By:	AK
Prep Batch:	100122	Sample Preparation:	2015-01-05	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0895	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0891	mg/L	1	0.100	89	70 - 130

Sample: 383603 - MW 9

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	118478	Date Analyzed:	2015-01-08	Analyzed By:	AK
Prep Batch:	100149	Sample Preparation:	2015-01-06	Prepared By:	AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0903	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0931	mg/L	1	0.100	93	70 - 130

Sample: 383604 - MW 10

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	118478	Date Analyzed:	2015-01-08	Analyzed By:	AK
Prep Batch:	100149	Sample Preparation:	2015-01-06	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene [9]		5	**6.45**	mg/L	100	0.00100
Toluene	U	5	<0.100	mg/L	100	0.00100
Ethylbenzene		5	**0.604**	mg/L	100	0.00100
Xylene		5	**0.740**	mg/L	100	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			8.44	mg/L	100	10.0	84	70 - 130
4-Bromofluorobenzene (4-BFB)			9.30	mg/L	100	10.0	93	70 - 130

Sample: 383605 - MW 11

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	118478	Date Analyzed:	2015-01-08	Analyzed By:	AK
Prep Batch:	100149	Sample Preparation:	2015-01-06	Prepared By:	AK

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene [10]	U	5	<0.00100	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0897	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0932	mg/L	1	0.100	93	70 - 130

Sample: 383606 - MW 12

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	118478	Date Analyzed:	2015-01-08	Analyzed By:	AK
Prep Batch:	100149	Sample Preparation:	2015-01-06	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene [11]		5	**0.409**	mg/L	50	0.00100
Toluene	U	5	<0.0500	mg/L	50	0.00100
Ethylbenzene	U	5	<0.0500	mg/L	50	0.00100
Xylene	U	5	<0.0500	mg/L	50	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.38	mg/L	50	5.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)			4.70	mg/L	50	5.00	94	70 - 130

Sample: 383607 - MW 18

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	118478	Date Analyzed:	2015-01-08	Analyzed By:	AK
Prep Batch:	100149	Sample Preparation:	2015-01-06	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene [12]		5	**0.00270**	mg/L	1	0.00100
Toluene	U	5	<0.00100	mg/L	1	0.00100
Ethylbenzene	U	5	<0.00100	mg/L	1	0.00100
Xylene	U	5	<0.00100	mg/L	1	0.00100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0874	mg/L	1	0.100	87	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0987	mg/L	1	0.100	99	70 - 130

Method Blanks

Method Blank (1) QC Batch: 118410

QC Batch: 118410 | Date Analyzed: 2015-01-06 | Analyzed By: AK
Prep Batch: 100122 | QC Preparation: 2015-01-05 | Prepared By: AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0936	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0959	mg/L	1	0.100	96	70 - 130

Method Blank (1) QC Batch: 118478

QC Batch: 118478 | Date Analyzed: 2015-01-08 | Analyzed By: AK
Prep Batch: 100149 | QC Preparation: 2015-01-06 | Prepared By: AK

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0903	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0924	mg/L	1	0.100	92	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 118410 | Date Analyzed: 2015-01-06 | Analyzed By: AK
Prep Batch: 100122 | QC Preparation: 2015-01-05 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0965	mg/L	1	0.100	<0.000299	96	70 - 130
Toluene		5	0.0975	mg/L	1	0.100	<0.000247	98	70 - 130
Ethylbenzene		5	0.0960	mg/L	1	0.100	<0.000423	96	70 - 130
Xylene		5	0.291	mg/L	1	0.300	<0.000552	97	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.0955	mg/L	1	0.100	<0.000299	96	70 - 130	1	20
Toluene		5	0.0966	mg/L	1	0.100	<0.000247	97	70 - 130	1	20
Ethylbenzene		5	0.0954	mg/L	1	0.100	<0.000423	95	70 - 130	1	20
Xylene		5	0.289	mg/L	1	0.300	<0.000552	96	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)	0.0922	0.0885	mg/L	1	0.100	92	88	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0956	0.0950	mg/L	1	0.100	96	95	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 118478 | Date Analyzed: 2015-01-08 | Analyzed By: AK
Prep Batch: 100149 | QC Preparation: 2015-01-06 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0971	mg/L	1	0.100	<0.000299	97	70 - 130
Toluene		5	0.0969	mg/L	1	0.100	<0.000247	97	70 - 130
Ethylbenzene		5	0.101	mg/L	1	0.100	<0.000423	101	70 - 130
Xylene		5	0.291	mg/L	1	0.300	<0.000552	97	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.0950	mg/L	1	0.100	<0.000299	95	70 - 130	2	20
Toluene		5	0.0958	mg/L	1	0.100	<0.000247	96	70 - 130	1	20
Ethylbenzene		5	0.0959	mg/L	1	0.100	<0.000423	96	70 - 130	5	20
Xylene		5	0.285	mg/L	1	0.300	<0.000552	95	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)	0.0903	0.0876	mg/L	1	0.100	90	88	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0980	0.0940	mg/L	1	0.100	98	94	70 - 130

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 383608

QC Batch: 118410 | Date Analyzed: 2015-01-06 | Analyzed By: AK
Prep Batch: 100122 | QC Preparation: 2015-01-05 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.110	mg/L	1	0.100	0.0027	107	70 - 130
Toluene		5	0.109	mg/L	1	0.100	<0.000247	109	70 - 130
Ethylbenzene		5	0.108	mg/L	1	0.100	<0.000423	108	70 - 130
Xylene		5	0.327	mg/L	1	0.300	<0.000552	109	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.0961	mg/L	1	0.100	0.0027	93	70 - 130	14	20
Toluene		5	0.0963	mg/L	1	0.100	<0.000247	96	70 - 130	12	20
Ethylbenzene		5	0.0945	mg/L	1	0.100	<0.000423	94	70 - 130	13	20
Xylene		5	0.287	mg/L	1	0.300	<0.000552	96	70 - 130	13	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)	0.0888	0.0889	mg/L	1	0.1	89	89	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0948	0.0971	mg/L	1	0.1	95	97	70 - 130

Matrix Spike (MS-1) Spiked Sample: 383650

QC Batch: 118478 | Date Analyzed: 2015-01-08 | Analyzed By: AK
Prep Batch: 100149 | QC Preparation: 2015-01-06 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	0.0945	mg/L	1	0.100	<0.000299	94	70 - 130
Toluene		5	0.0946	mg/L	1	0.100	<0.000247	95	70 - 130
Ethylbenzene		5	0.0941	mg/L	1	0.100	<0.000423	94	70 - 130
Xylene		5	0.284	mg/L	1	0.300	<0.000552	95	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	0.0929	mg/L	1	0.100	<0.000299	93	70 - 130	2	20
Toluene		5	0.0943	mg/L	1	0.100	<0.000247	94	70 - 130	0	20
Ethylbenzene		5	0.0939	mg/L	1	0.100	<0.000423	94	70 - 130	0	20
Xylene		5	0.284	mg/L	1	0.300	<0.000552	95	70 - 130	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0923	0.0868	mg/L	1	0.1	92	87	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0938	0.0918	mg/L	1	0.1	94	92	70 - 130

Calibration Standards

Standard (CCV-2)

QC Batch: 118410 | Date Analyzed: 2015-01-06 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0922	92	80 - 120	2015-01-06
Toluene		5	mg/L	0.100	0.0931	93	80 - 120	2015-01-06
Ethylbenzene		5	mg/L	0.100	0.0924	92	80 - 120	2015-01-06
Xylene		5	mg/L	0.300	0.279	93	80 - 120	2015-01-06

Standard (CCV-3)

QC Batch: 118410 | Date Analyzed: 2015-01-06 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0935	94	80 - 120	2015-01-06
Toluene		5	mg/L	0.100	0.0934	93	80 - 120	2015-01-06
Ethylbenzene		5	mg/L	0.100	0.0931	93	80 - 120	2015-01-06
Xylene		5	mg/L	0.300	0.283	94	80 - 120	2015-01-06

Standard (CCV-1)

QC Batch: 118478 | Date Analyzed: 2015-01-08 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0973	97	80 - 120	2015-01-08
Toluene		5	mg/L	0.100	0.0988	99	80 - 120	2015-01-08
Ethylbenzene		5	mg/L	0.100	0.102	102	80 - 120	2015-01-08
Xylene		5	mg/L	0.300	0.293	98	80 - 120	2015-01-08

Standard (CCV-2)

QC Batch: 118478 | Date Analyzed: 2015-01-08 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0912	91	80 - 120	2015-01-08
Toluene		5	mg/L	0.100	0.0911	91	80 - 120	2015-01-08
Ethylbenzene		5	mg/L	0.100	0.0900	90	80 - 120	2015-01-08
Xylene		5	mg/L	0.300	0.272	91	80 - 120	2015-01-08

Standard (CCV-3)

QC Batch: 118478 | Date Analyzed: 2015-01-08 | Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/L	0.100	0.0954	95	80 - 120	2015-01-08
Toluene		5	mg/L	0.100	0.0956	96	80 - 120	2015-01-08
Ethylbenzene		5	mg/L	0.100	0.0944	94	80 - 120	2015-01-08
Xylene		5	mg/L	0.300	0.287	96	80 - 120	2015-01-08

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2014-018	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.

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

Result Comments

1 Sample received out of hold time.
2 Sample received out of hold time.
3 Sample received out of hold time.
4 Sample received out of hold time.
5 Sample received out of hold time.
6 Sample received out of hold time.
7 Sample received out of hold time.
8 Sample received out of hold time.
9 Sample received out of hold time.
10 Sample received out of hold time.
11 Sample received out of hold time.
12 Sample received out of hold time.

Attachments

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

LAB Order ID # 15010510

Page 1 of 2

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

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

Company Name: Talon LPE
Phone #: 940-329-0691
Address: (Street, City, Zip) 2901 St. Hwy 349, Midland TX
Fax #:
Contact Person: Brad Ivy, Camille Bryant
E-mail: cjbryant@paalp.com
bivy@talonlpe.com
Invoice to: (If different from above) SRS# 2002-10312 (Plains)
Project #: 700376.051.01
Project Name: Lovington Deep 6"
Project Location (including state): Hobbs NM
Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
383596	MW 1	3	40ml	✓				✓				✓		12-19	1100
597	MW 3													12-19	1230
598	MW 4													12-19	1200
599	MW 5													12-19	1130
600	MW 6													12-18	1200
601	MW 7													12-18	1230
602	MW 8													12-18	1300
603	MW 9													12-18	1400
604	MW 10													12-19	1300
605	MW 11													12-18	1330
606	MW 12													12-19	1330

ANALYSIS REQUEST	Turn Around Time if different from standard	Hold
MTBE 8021 / 602 / 8260 / 624		
BTEX 8021 / 602 / 8260 / 624	✓	
TPH 418.1 / TX1005 / TX1005 Ext(C35)		
TPH 8015 GRO / DRO / TVHC		
PAH 8270 / 625		
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7		
TCLP Metals Ag As Ba Cd Cr Pb Se Hg		
TCLP Volatiles		
TCLP Semi Volatiles		
TCLP Pesticides		
RCI		
GC/MS Vol. 8260 / 624		
GC/MS Semi. Vol. 8270 / 625		
PCB's 8082 / 608		
Pesticides 8081 / 608		
BOD, TSS, pH		
Moisture Content		
Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity		
Na, Ca, Mg, K, TDS, EC		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Jake Monsey	Talon LPE	1-5-15	1037		7A	1-5-15	10:37	INST 1R OBS 4.4 °C COR 4.3 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ °C OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ °C OBS ____ °C COR ____ °C

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

REMARKS:
* Client notified all samples out of hold. 1-5-15 AJ

- [ ] 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 # CARRY-in

ORIGINAL COPY

LAB Order ID #_____ Page 2 of 2

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

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

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

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

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

Company Name: Talon LPE
Phone #: 940-329-0691
Address: (Street, City, Zip) 2901 St Hwy 349, Midland, TX
Fax #:
Contact Person: Brad Ivy, Camille Bryant bivy@talonlpe.com
E-mail: cj bryant@paalp.com
Invoice to: (If different from above) SRS # 2002-10312 (Plains)
Project #: 700376.051.01
Project Name: Lovington Deep 6"
Project Location (including state): Hobbs, NM
Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
383607	MW 18	3	40ml	V				V				V		12-19	1045

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC						Turn Around Time if different from standard	Hold
	V																									

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Jake Mousey	Talon LPE	1-15-15	1037		TA	1.5.15	10:37
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

INST IR
OBS 4.4 °C
COR 4.3 °C
INST ____
OBS ____ °C
COR ____ °C
INST ____
OBS ____ °C
COR ____ °C

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

REMARKS:

- [ ] 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 # CARRY in

ORIGINAL COPY

APPENDIX D

NMOCD C-141