# GW-350

# Groundwater Monitor Report

# DATE:
# 2009

H2A
ENVIRONMENTAL, LTD.

WWW.H2ALTD.COM

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KELLER, TX

76248

682.593.0220

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March 30, 2010

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

**Re: 2009 Annual Groundwater Monitoring Report**
Shell Pipeline Company LP
Jal Basin Station (GW-350)
Jal, Lea County, New Mexico

Section 5, Township 26 South, Range 37 East
Section 32, Township 25 South, Range 37 East

$H_2A$ Job No. 106.001



Dear Mr. Von Gonten:

$H_2A$ Environmental, Ltd. ($H_2A$) is pleased to provide the enclosed 2009 Annual Groundwater Monitoring Report on behalf of Shell Pipeline Company LP, as required by the OCD letter dated December 18, 2001, for the above referenced site. The attached report presents the results of remediation and monitoring activities conducted at the Jal Basin Station during 2009.

We would appreciate the opportunity to meet at your office in Santa Fe to discuss the report findings, and to review and discuss planned activities to complete this site closure. If your schedule permits, we would like to suggest a date in June of this year for the meeting.

We trust that the enclosed information meets your needs at this time; however, should you have any questions or require any additional information, please do not hesitate to contact Kenneth Springer at 281.324.5921, or via electronic mail at kenneth.springer@shell.com.

Sincerely,

**$H_2A$ ENVIRONMENTAL, LTD.**

Shannon S. Walker, PE
Senior Remediation Engineer

enclosure

cc: L. Hill, NMOCD District 1, Hobbs
K. Springer, Shell Oil Products US
I. Olness, URS Corporation

H2A Environmental, Ltd.

# 2009 ANNUAL GROUNDWATER MONITORING REPORT

## JAL BASIN STATION
## JAL, LEA COUNTY, NEW MEXICO

Prepared For:
Shell Oil Products US
Shell Pipeline Company LP

Prepared By:
$H_2A$ Environmental, Ltd.

$H_2A$
Environmental Ltd.

*MARCH 2010*

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# 1.0 INTRODUCTION

$H_2A$ Environmental, Ltd. ($H_2A$) is pleased to provide this 2009 Annual Groundwater Monitoring Report for the Jal Basin Station (the Site), located south of Jal, in Lea County, New Mexico. Quarterly gauging events were conducted at the Site in March, June, September, and December 2009 and semi-annual sampling events were conducted in March and September 2009. Results of the 2009 monitoring and investigation activities are summarized herein.

# 2.0 GROUNDWATER MONITORING ACTIVITIES

Groundwater monitoring activities consisted of gauging the depth to water, and the depth to light non-aqueous phase liquid (LNAPL) if present, in all monitoring wells (shown in Figure 1), then purging static water from all wells not exhibiting detectable LNAPL. After the monitoring wells had been purged, groundwater samples were collected and submitted to a certified laboratory. Groundwater samples were collected on a semi-annual basis during 2009 and analyzed for determination of benzene, toluene, ethylbenzene, and total xylene (BTEX) concentrations and dissolved metals concentrations. Additionally, samples collected during the first half of 2009 were also analyzed for oxygenates and polycyclic aromatic hydrocarbons (PAHs).

During 2009, $H_2A$ implemented the plan for decreased sampling frequency as outlined in the *2008 Annual Groundwater Monitoring Report*. Analytical results from the 2007 and 2008 sampling events indicated no dissolved-phase BTEX concentrations above the New Mexico Standards in any of the nine perimeter wells (MW-01, MW-05, MW-10, MW-11, MW-13, MW-15, MW-16, MW-17, and MW-21). Therefore, $H_2A$ performed two semi-annual sampling events during 2009. The first half 2009 monitoring event involved sampling all delineation and monitoring wells to ensure that no plume migration had occurred. The second half 2009 event focused on historically impacted wells only to monitor attenuation progress.

Groundwater samples collected for BTEX and oxygenates analysis (Method SW846 8260B) were placed in sterile, 40-milliliter (mL) glass volatile organic analysis (VOA) vials equipped with Teflon-lined caps and hydrochloric acid preservative, as provided by the analytical laboratory. The vials were filled to a positive meniscus, sealed, and visually checked for the absence of air bubbles.

Groundwater samples collected for dissolved metals analysis (Methods SW846 6020A and 7470A) were filtered using a 10-micron filter and then placed in 500-mL sterile plastic containers

equipped with Teflon-lined caps and nitric acid preservative, as provided by the analytical laboratory.

Groundwater samples collected for PAH analysis (Method EPA 8270C) were placed in unpreserved, sterile, 1-liter amber glass containers equipped with Teflon-lined caps.

Following collection, all sample containers were labeled, placed on ice in an insulated cooler, and chilled to an approximate temperature of 40°F (4°C). The cooler was sealed prior to transport to the analytical laboratory. Proper chain-of-custody documentation was maintained throughout the sampling process.

## 3.0 GROUNDWATER MEASUREMENTS

Groundwater measurements were obtained in March, June, September, and December 2009. Groundwater contour maps, illustrating groundwater elevations measured during each quarterly event, are presented as Figures 2 through 5 and groundwater measurements are summarized in Table 1. Quarterly LNAPL thickness maps are presented as Figures 6 through 9. Figure 10 summarizes groundwater elevations versus product thicknesses through time. As noted on Figure 10, the average corrected groundwater elevation at the Site decreased throughout 2009.

## 4.0 GROUNDWATER MONITORING RESULTS

Constituent concentrations for each semi-annual event are summarized in Figures 6 and 8, and in Table 2. Copies of the certified laboratory reports with appropriate chain-of-custody documentation are provided in Appendix A.

## 5.0 PRODUCT RECOVERY ACTIVITIES

Active remediation at the Site utilizing a high vacuum remediation (HVR) system was initiated in January 2001 and system capacity was expanded in July 2002 via the addition of a second liquid ring pump (LRP). The system continued to operate through the first half of 2008; however, as a result of diminished LNAPL recovery, it was turned off and an evaluation to determine the need for continued active remediation was initiated. When the system was shut down in June 2008, approximately 60,000 gallons of product had been recovered via active remediation efforts at the Site.

## 6.0 ADDITIONAL FIELD INVESTIGATION ACTIVITIES

In addition to the quarterly groundwater gauging and semi-annual sampling completed during 2009, $H_2A$ also sampled phase-separated hydrocarbon obtained from well MW-14 during the September quarterly gauging event. Removal of this sample volume explains the decrease in LNAPL thickness from 0.77 feet to 0.37 feet between the September and December 2009 gauging events.

The LNAPL sample collected at MW-14 was submitted to Torkelson Geochemistry, Inc. in Tulsa, Oklahoma for the evaluation of physical properties and hydrocarbon fingerprinting to confirm the nature of the LNAPL and also the degree of weathering. A summary of the results of the physical properties analyses is provided in the chart below and a simulated distillation curve identifying the type of NAPL is provided in Figure 11. The NAPL was identified as a slightly weathered diesel fuel. A copy of the laboratory report with appropriate chain-of-custody documentation is provided in Appendix B.

| ***Parameter*** | ***Result*[1]** |
|---|---|
| ***Density*** *(g/ml)* | 0.8615 |
| ***Viscosity*** *(centipoise)* | 5.16 |
| ***Surface Tension*[2]** *(air/water, dynes/cm)* | 69.1 |
| ***Interfacial Tension*[2]** *(NAPL/water, dynes/cm)* | 19.5 |
| ***Surface Tension*** *(air/NAPL, dynes/cm)* | 27.3 |

Notes:
1. All measurements assume a temperature of 60°F.
2. Distilled water was used where required to complete analyses.

## 7.0 2010 PROJECT SCHEDULE

Based on the results of 2009 monitoring activities and LNAPL recharge observations, $H_2A$ plans to continue quarterly gauging and semi-annual groundwater sampling efforts at the Site as outlined in the *2008 Annual Groundwater Monitoring Report*. $H_2A$ would also like to propose a meeting with the New Mexico Oil Conservation Division to discuss the direction of future Site activities and to outline a plan for realizing closure goals at the Site.

# *FIGURES*

H2A
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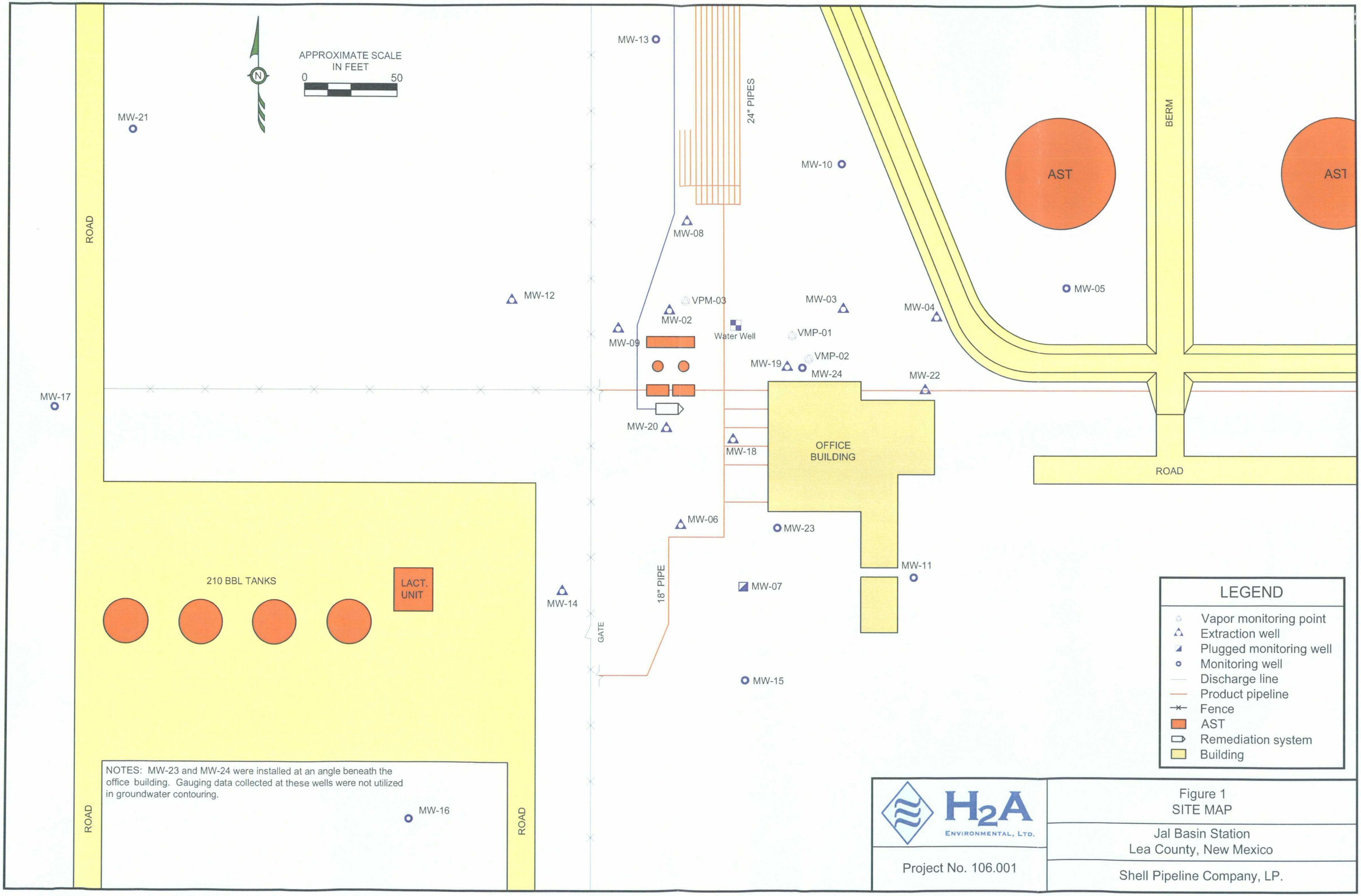
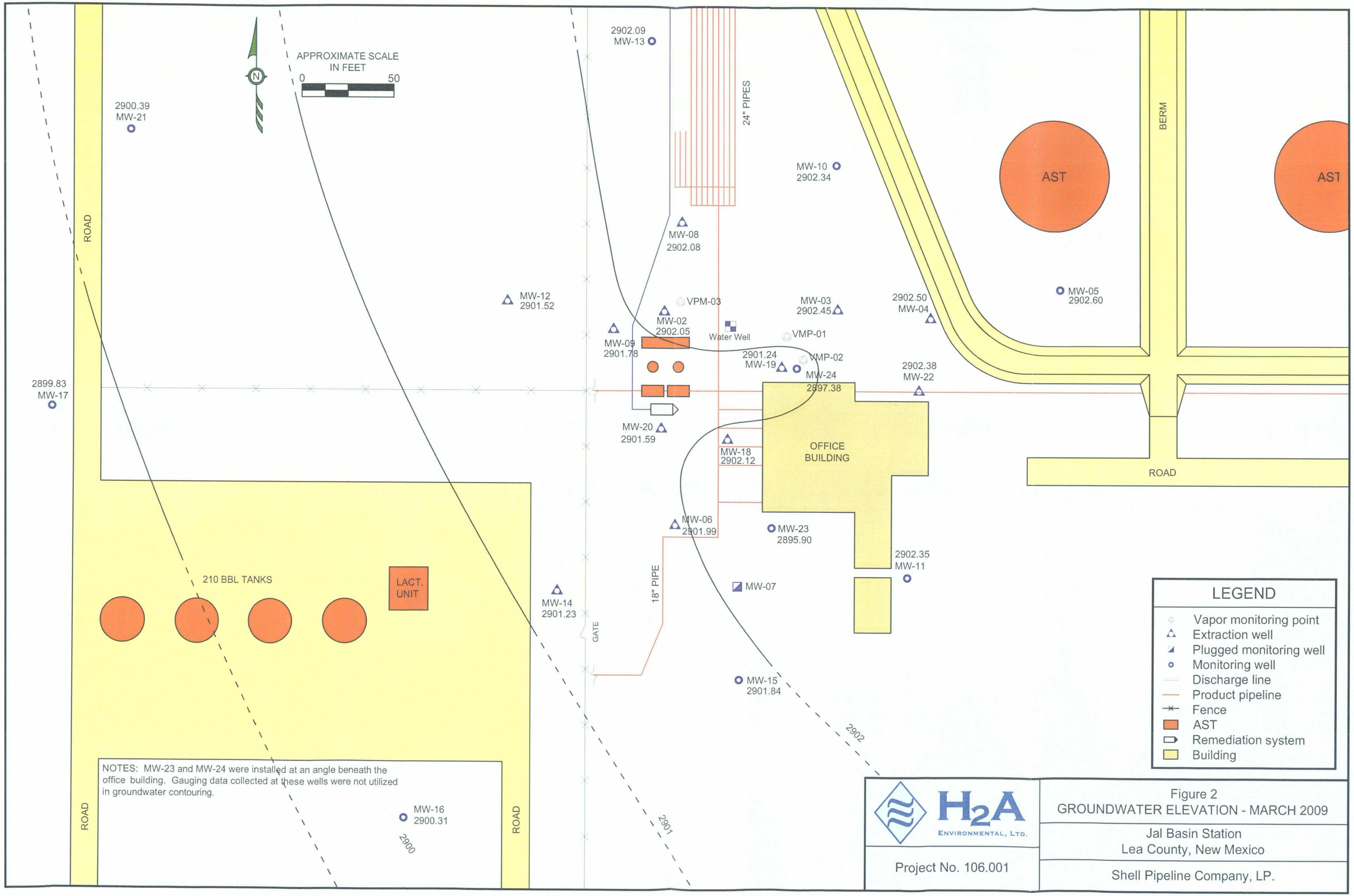

APPROXIMATE SCALE
IN FEET
0
50
N
MW-21
MW-13
24" PIPES
BERM
AST
AST
MW-10
MW-08
MW-12
MW-05
VPM-03
MW-02
MW-03
MW-04
MW-09
Water Well
VMP-01
VMP-02
MW-19
MW-24
MW-22
MW-17
MW-20
MW-18
OFFICE
BUILDING
ROAD
ROAD
MW-06
MW-23
MW-11
210 BBL TANKS
LACT.
UNIT
MW-14
18" PIPE
MW-07
GATE
MW-15
ROAD
ROAD
NOTES: MW-23 and MW-24 were installed at an angle beneath the office building. Gauging data collected at these wells were not utilized in groundwater contouring.
MW-16
LEGEND
Vapor monitoring point
Extraction well
Plugged monitoring well
Monitoring well
Discharge line
Product pipeline
Fence
AST
Remediation system
Building
H2A
ENVIRONMENTAL, LTD.
Project No. 106.001
Figure 1
SITE MAP
Jal Basin Station
Lea County, New Mexico
Shell Pipeline Company, LP.


APPROXIMATE SCALE
IN FEET
0
50
N
2900.39
MW-21
ROAD
2902.09
MW-13
24" PIPES
MW-10
2902.34
AST
BERM
AST
MW-08
2902.08
MW-12
2901.52
VPM-03
MW-02
2902.05
MW-09
2901.78
Water Well
MW-03
2902.45
2902.50
MW-04
MW-05
2902.60
VMP-01
2901.24
MW-19
VMP-02
MW-24
2897.38
2902.38
MW-22
2899.83
MW-17
MW-20
2901.59
MW-18
2902.12
OFFICE
BUILDING
ROAD
MW-06
2901.99
MW-23
2895.90
2902.35
MW-11
210 BBL TANKS
LACT.
UNIT
MW-14
2901.23
18" PIPE
GATE
MW-07
MW-15
2901.84
2902
2901
2900
ROAD
ROAD
NOTES: MW-23 and MW-24 were installed at an angle beneath the office building. Gauging data collected at these wells were not utilized in groundwater contouring.
MW-16
2900.31
LEGEND
Vapor monitoring point
Extraction well
Plugged monitoring well
Monitoring well
Discharge line
Product pipeline
Fence
AST
Remediation system
Building
H2A
ENVIRONMENTAL, LTD.
Project No. 106.001
Figure 2
GROUNDWATER ELEVATION - MARCH 2009
Jal Basin Station
Lea County, New Mexico
Shell Pipeline Company, LP.

APPROXIMATE SCALE
IN FEET
0 50

N

2900.42
MW-21

2902.00
MW-13

24" PIPES

BERM

MW-10
2902.17

AST

AST

ROAD

MW-08
2901.92

MW-12
2901.41

MW-05
2902.41

VPM-03

MW-03
2902.19

2902.28
MW-04

MW-02
2901.90

Water Well

MW-09
2901.64

VMP-01

2902.03
MW-19

VMP-02

MW-24
2897.21

2902.17
MW-22

2899.87
MW-17

MW-20
2901.44

MW-18
2901.96

OFFICE
BUILDING

ROAD

MW-06
2901.85

MW-23
2895.78

2902.25
MW-11

210 BBL TANKS

LACT.
UNIT

MW-14
2901.21

18" PIPE

MW-07

GATE

MW-15
2901.90

2902

2901

2900

ROAD

ROAD

NOTES: MW-23 and MW-24 were installed at an angle beneath the office building. Gauging data collected at these wells were not utilized in groundwater contouring.

MW-16
2900.33

## LEGEND

- Vapor monitoring point
- Extraction well
- Plugged monitoring well
- Monitoring well
- Discharge line
- Product pipeline
- Fence
- AST
- Remediation system
- Building

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Figure 3
GROUNDWATER ELEVATION - JUNE 2009

Jal Basin Station
Lea County, New Mexico

Shell Pipeline Company, LP.

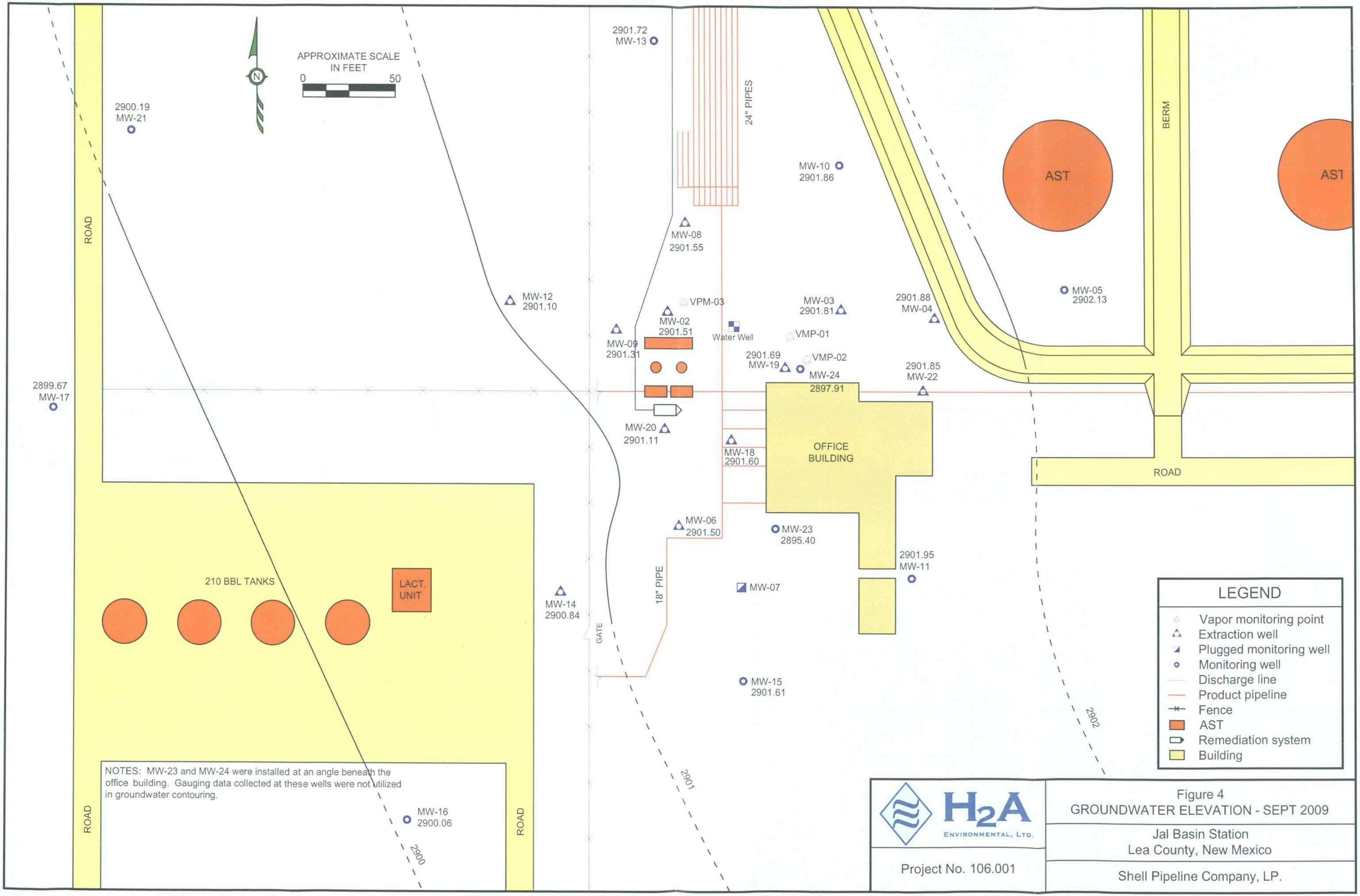


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Figure 4
GROUNDWATER ELEVATION - SEPT 2009

Jal Basin Station
Lea County, New Mexico

Shell Pipeline Company, LP.

APPROXIMATE SCALE
IN FEET
0 50

2900.09
MW-21

2901.50
MW-13

24" PIPES

BERM

MW-10
2901.67

AST

AST

ROAD

MW-08
2901.41

MW-12
2900.96

VPM-03

MW-02
2901.40

MW-03
2901.71

2901.76
MW-04

MW-05
2901.91

MW-09
2901.15

Water Well

VMP-01

2901.56
MW-19

VMP-02

MW-24
2896.71

2901.64
MW-22

2899.60
MW-17

MW-20
2900.99

MW-18
2901.47

OFFICE
BUILDING

ROAD

MW-06
2901.39

MW-23
2895.17

2902

2901.78
MW-11

210 BBL TANKS

LACT.
UNIT

MW-14
2900.48

18" PIPE

MW-07

GATE

MW-15
2901.44

NOTES: MW-23 and MW-24 were installed at an angle beneath the office building. Gauging data collected at these wells were not utilized in groundwater contouring.

ROAD

ROAD

MW-16
2899.99

2900

2901

## LEGEND

- Vapor monitoring point
- Extraction well
- Plugged monitoring well
- Monitoring well
- Discharge line
- Product pipeline
- Fence
- AST
- Remediation system
- Building

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Figure 5
GROUNDWATER ELEVATION - DEC 2009

Jal Basin Station
Lea County, New Mexico

Shell Pipeline Company, LP.

APPROXIMATE SCALE IN FEET
0 50

N

ROAD

MW-21
B <0.0005
T <0.0005
E <0.0005
X <0.0015

MW-17
B <0.0005
T <0.0005
E <0.0005
X <0.0015

MW-13
B <0.0005
T <0.0005
E <0.0005
X <0.0015

24" PIPES

MW-10
B <0.0005
T <0.0005
E <0.0005
X <0.0015

PSH - <0.01
MW-08

0.01
0.10
MW-12
PSH - 0.12

PSH - 0.03
0.01
VPM-03
MW-02

PSH - <0.01
MW-09

Water Well
VMP-01
VMP-02
MW-19
MW-24
PSH - 0.03

MW-20
PSH - <0.01

PSH - 0.06
MW-18

OFFICE BUILDING

PSH - <0.01
MW-03

PSH - <0.01
MW-04

B <0.0005
T <0.0005
E <0.0005
X <0.0015
MW-05

BERM

AST

AST

MW-22
PSH - <0.01

ROAD

B 0.036
T <0.0005
E 0.038
X 0.0096

MW-11
B <0.0005
T <0.0005
E <0.0005
X <0.0015

PSH - <0.01
MW-06

MW-23
B <0.0005
T <0.0005
E <0.0005
X <0.0015
MW-07

18" PIPE

0.01
0.10
PSH - 0.31
MW-14

GATE

210 BBL TANKS

LACT. UNIT

MW-15
B <0.0005
T <0.0005
E <0.0005
X <0.0015

ROAD

MW-16
B <0.0005
T <0.0005
E <0.0005
X <0.0015

ROAD

## LEGEND

| | |
|---|---|
| B | Benzene (mg/L) |
| T | Toluene (mg/L) |
| E | Ethylbenzene (mg/L) |
| X | Xylenes (mg/L) |
| PSH | Phase Separated HC Thickness (ft) |
| | Vapor monitoring point |
| | Extraction well |
| | Plugged monitoring well |
| | Monitoring well |
| | Discharge line |
| | Product pipeline |
| | Fence |
| | AST |
| | Remediation system |
| | Building |

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Project No. 106.001

Figure 6
LNAPL THICKNESS & COC CONCENTRATION - MAR 2009

Jal Basin Station
Lea County, New Mexico

Shell Pipeline Company, LP.

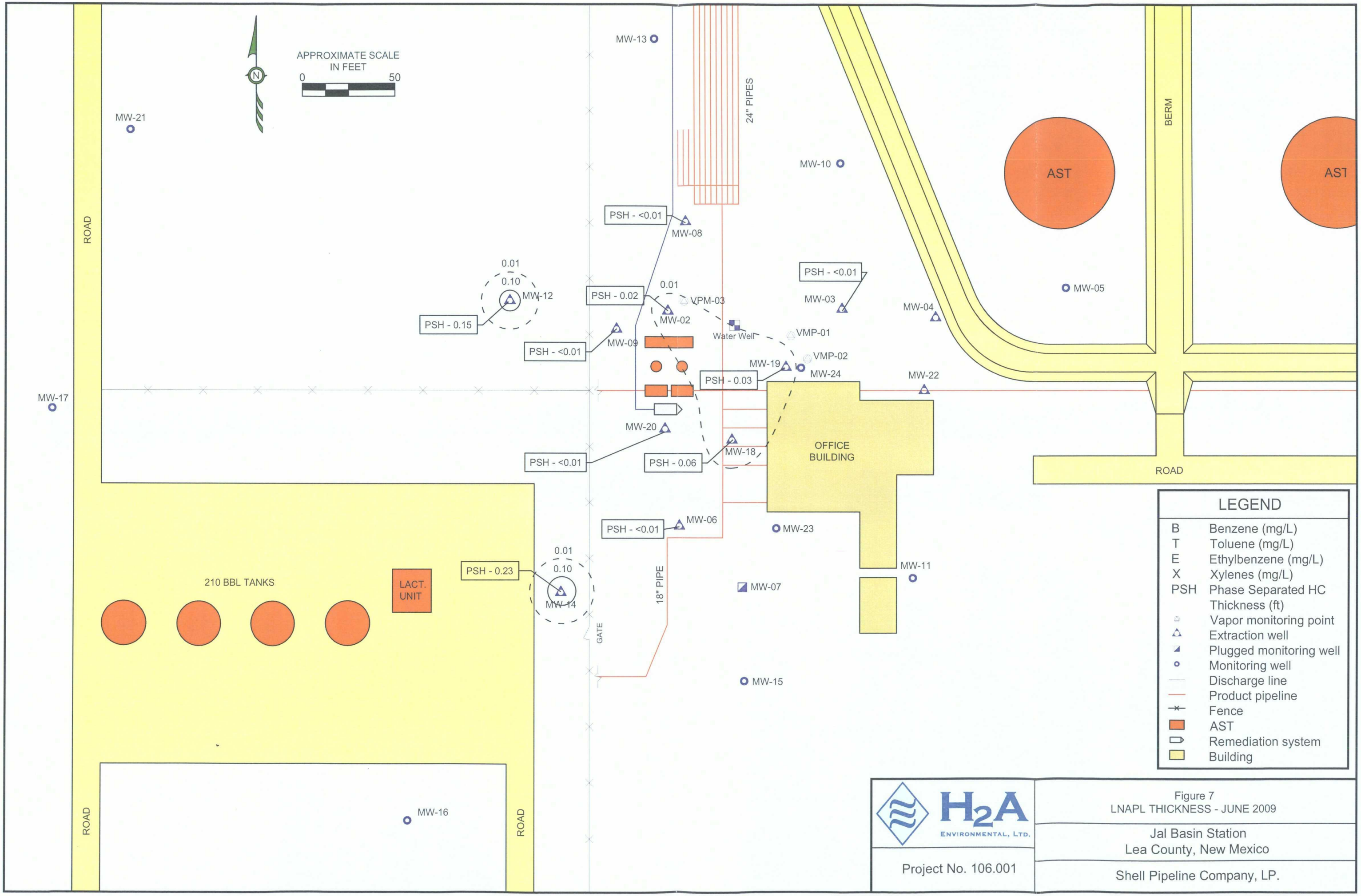


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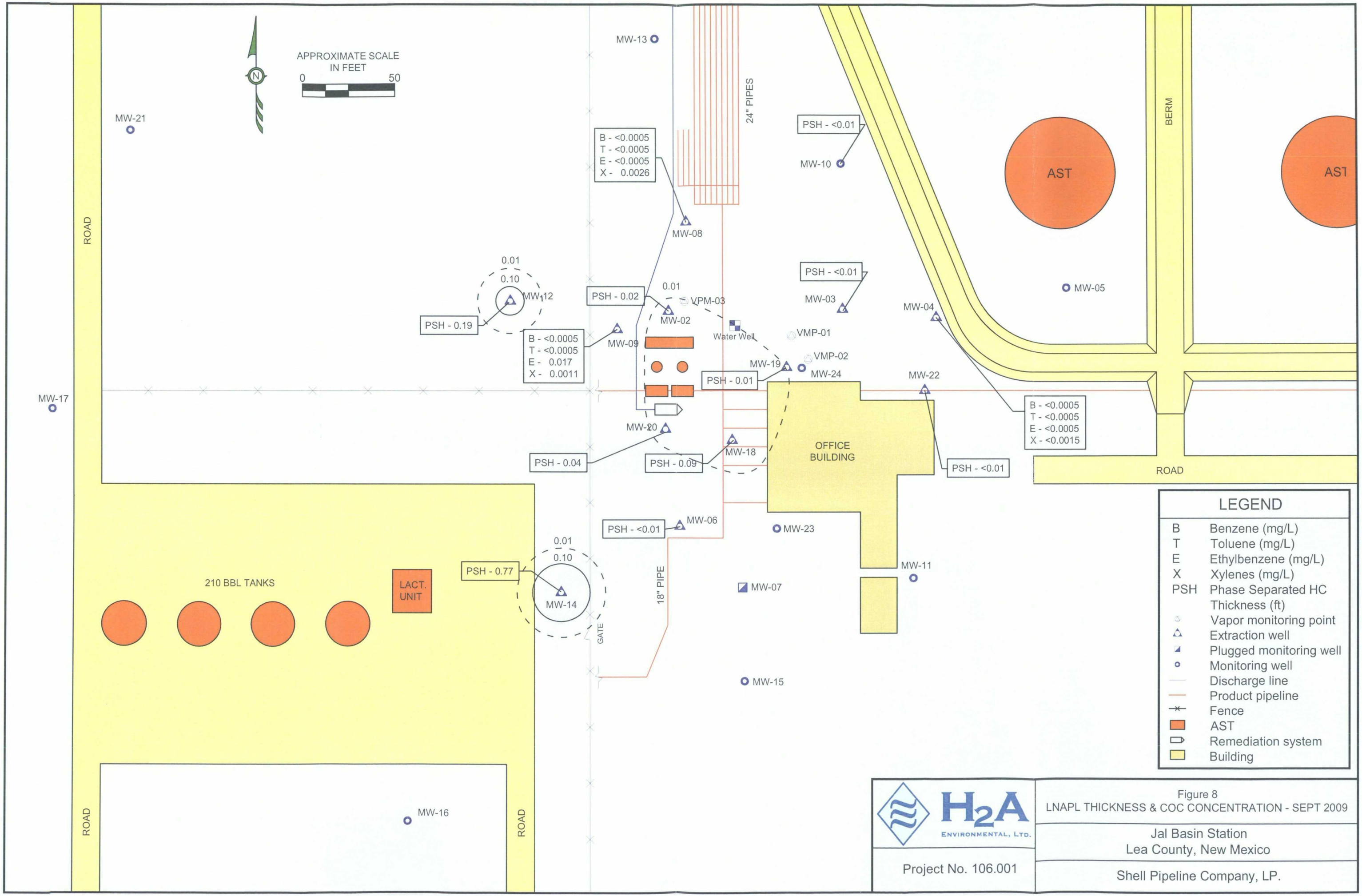
Figure 7
LNAPL THICKNESS - JUNE 2009

Jal Basin Station
Lea County, New Mexico

Shell Pipeline Company, LP.

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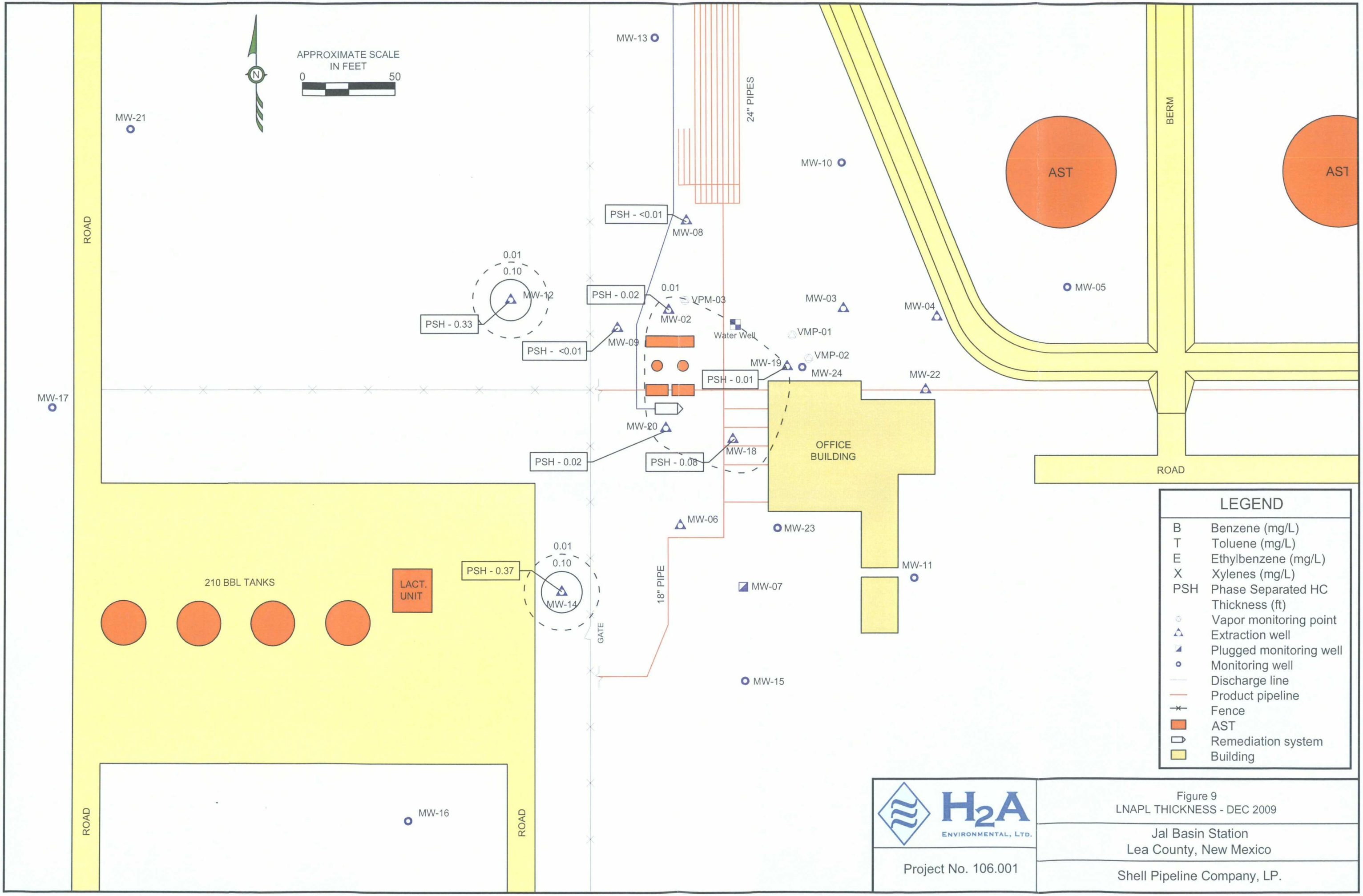
Project No. 106.001

Figure 8
LNAPL THICKNESS & COC CONCENTRATION - SEPT 2009

Jal Basin Station
Lea County, New Mexico

Shell Pipeline Company, LP.




## LEGEND

| | |
|---|---|
| B | Benzene (mg/L) |
| T | Toluene (mg/L) |
| E | Ethylbenzene (mg/L) |
| X | Xylenes (mg/L) |
| PSH | Phase Separated HC Thickness (ft) |
| | Vapor monitoring point |
| | Extraction well |
| | Plugged monitoring well |
| | Monitoring well |
| | Discharge line |
| | Product pipeline |
| | Fence |
| | AST |
| | Remediation system |
| | Building |

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Project No. 106.001

Figure 9
LNAPL THICKNESS - DEC 2009

Jal Basin Station
Lea County, New Mexico

Shell Pipeline Company, LP.

106.001
Shell Oil Products US
Jal Station Diesel Remediation

Jal, NM

# Figure 10
## Corrected GW Elevation (Avg) vs. LNAPL Thickness

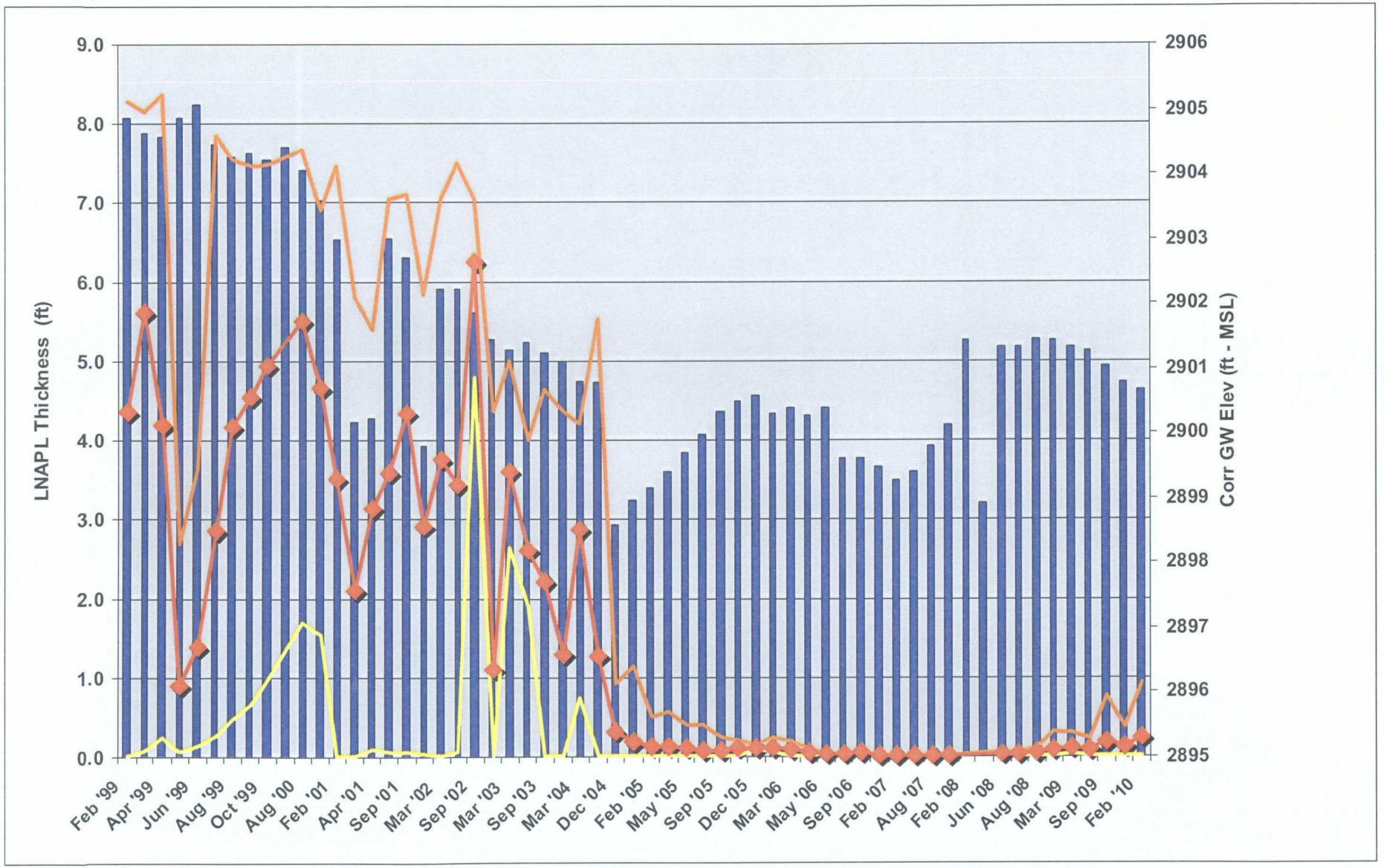
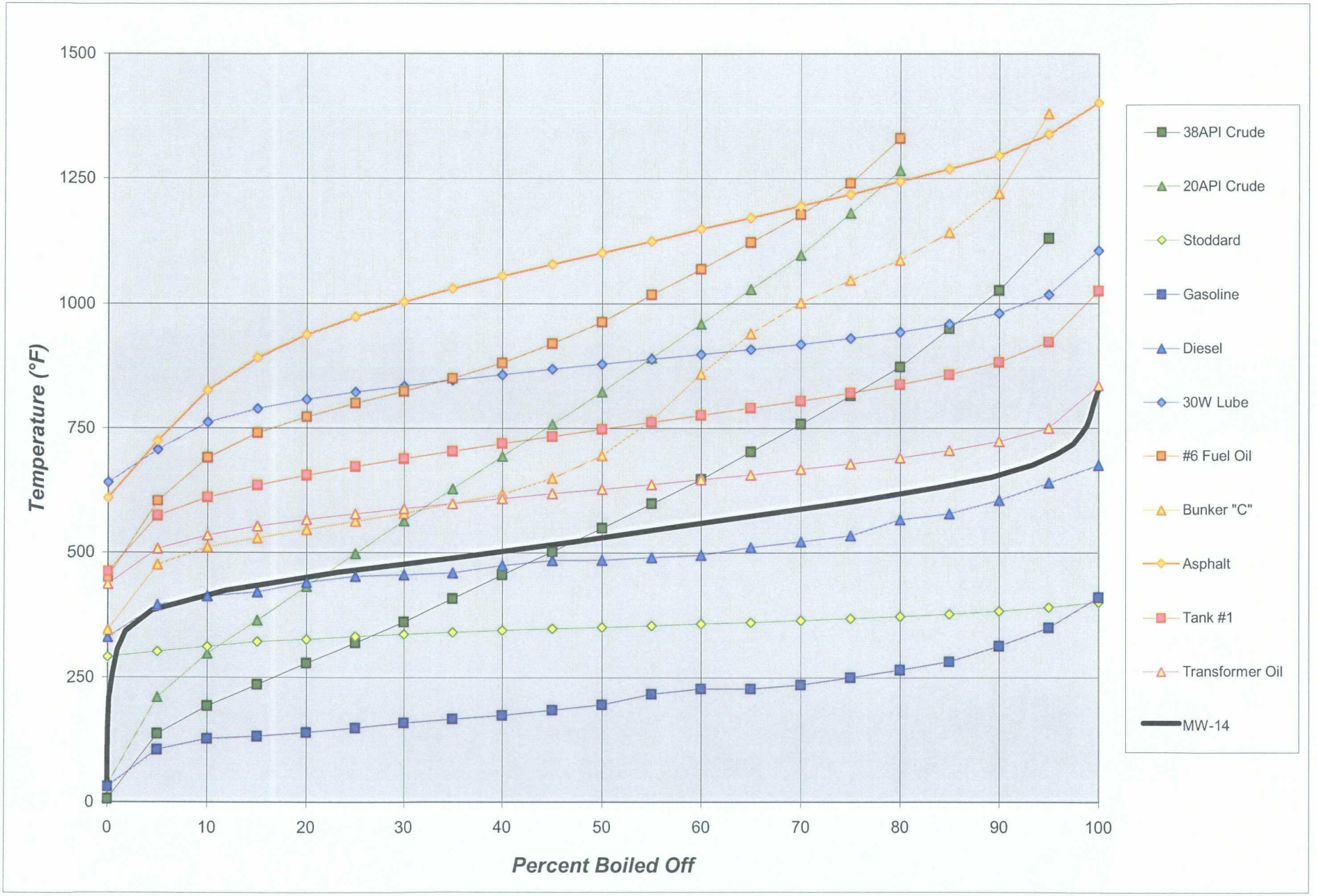


***Figure 11. MW-14 Simulated Distillation Curve***

*Jal Basin Station*

*Jal, Lea County, New Mexico*



# *TABLES*

H2A
ENVIRONMENTAL, LTD.

# *Table 1*
# *GROUNDWATER MEASUREMENTS TABLE*
*Jal Station Diesel Remediation*

*Jal, NM*

**MW-01**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/11/2009 | 2992.30 | 2994.62 | TOC | 85.00 | 94.50 | 91.82 | | | | 2902.80 |
| 6/29/2009 | 2992.30 | 2994.62 | TOC | 85.00 | 94.50 | 91.87 | | | | 2902.75 |
| 9/17/2009 | 2992.30 | 2994.62 | TOC | 85.00 | 94.50 | 91.12 | | | | 2903.50 |
| 12/20/2009 | 2992.30 | 2994.62 | TOC | 85.00 | 94.50 | 92.35 | | | | 2902.27 |

**MW-02**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2987.02 | 2989.43 | TOC | 82.00 | 101.50 | 87.40 | 87.37 | 0.03 | 0.830 | 2902.05 |
| 6/29/2009 | 2987.02 | 2989.43 | TOC | 82.00 | 101.50 | 87.55 | 87.53 | 0.02 | 0.830 | 2901.90 |
| 9/17/2009 | 2987.02 | 2989.43 | TOC | 82.00 | 101.50 | 87.94 | 87.92 | 0.02 | 0.830 | 2901.51 |
| 12/20/2009 | 2987.02 | 2989.43 | TOC | 82.00 | 101.50 | 88.05 | 88.03 | 0.02 | 0.830 | 2901.40 |

**MW-03**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2987.91 | 2990.81 | TOC | 85.00 | 100.00 | 88.36 | 88.36 | | 0.830 | 2902.45 |
| 6/29/2009 | 2987.91 | 2990.81 | TOC | 85.00 | 100.00 | 88.62 | 88.62 | | 0.830 | 2902.19 |
| 9/16/2009 | 2987.91 | 2990.81 | TOC | 85.00 | 100.00 | 89.00 | 89.00 | | 0.830 | 2901.81 |
| 12/20/2009 | 2987.91 | 2990.81 | TOC | 85.00 | 100.00 | 89.10 | | | | 2901.71 |

**MW-04**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2988.22 | 2991.16 | TOC | 77.00 | 97.00 | 88.66 | 88.66 | | 0.830 | 2902.50 |
| 6/29/2009 | 2988.22 | 2991.16 | TOC | 77.00 | 97.00 | 88.88 | | | | 2902.28 |
| 9/17/2009 | 2988.22 | 2991.16 | TOC | 77.00 | 97.00 | 89.28 | | | | 2901.88 |
| 12/20/2009 | 2988.22 | 2991.16 | TOC | 77.00 | 97.00 | 89.40 | | | | 2901.76 |

**MW-05**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/11/2009 | 2988.47 | 2991.38 | TOC | 80.00 | 95.00 | 88.78 | | | | 2902.60 |
| 6/29/2009 | 2988.47 | 2991.38 | TOC | 80.00 | 95.00 | 88.97 | | | | 2902.41 |
| 9/17/2009 | 2988.47 | 2991.38 | TOC | 80.00 | 95.00 | 89.25 | | | | 2902.13 |
| 12/20/2009 | 2988.47 | 2991.38 | TOC | 80.00 | 95.00 | 89.47 | | | | 2901.91 |

# *Table 1*
# *GROUNDWATER MEASUREMENTS TABLE*
*Jal Station Diesel Remediation*

*Jal, NM*

**MW-06**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2987.40 | 2990.17 | TOC | 80.00 | 95.00 | 88.18 | 88.18 | | 0.830 | 2901.99 |
| 6/29/2009 | 2987.40 | 2990.17 | TOC | 80.00 | 95.00 | 88.32 | 88.32 | | 0.830 | 2901.85 |
| 9/16/2009 | 2987.40 | 2990.17 | TOC | 80.00 | 95.00 | 88.67 | 88.67 | | 0.830 | 2901.50 |
| 12/20/2009 | 2987.40 | 2990.17 | TOC | 80.00 | 95.00 | 88.78 | | | | 2901.39 |

**MW-08**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2987.97 | 2990.73 | TOC | 80.00 | 95.00 | 88.65 | 88.65 | | 0.830 | 2902.08 |
| 6/29/2009 | 2987.97 | 2990.73 | TOC | 80.00 | 95.00 | 88.81 | 88.81 | | 0.830 | 2901.92 |
| 9/17/2009 | 2987.97 | 2990.73 | TOC | 80.00 | 95.00 | 89.18 | | | | 2901.55 |
| 12/20/2009 | 2987.97 | 2990.73 | TOC | 80.00 | 95.00 | 89.32 | 89.32 | | 0.830 | 2901.41 |

**MW-09**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2987.39 | 2990.31 | TOC | 81.00 | 96.00 | 88.53 | 88.53 | | 0.830 | 2901.78 |
| 6/29/2009 | 2987.39 | 2990.31 | TOC | 81.00 | 96.00 | 88.67 | 88.67 | | 0.830 | 2901.64 |
| 9/16/2009 | 2987.39 | 2990.31 | TOC | 81.00 | 96.00 | 89.00 | | | | 2901.31 |
| 12/20/2009 | 2987.39 | 2990.31 | TOC | 81.00 | 96.00 | 89.16 | 89.16 | | 0.830 | 2901.15 |

**MW-10**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2987.96 | 2990.84 | TOC | 81.00 | 96.00 | 88.50 | | | | 2902.34 |
| 6/29/2009 | 2987.96 | 2990.84 | TOC | 81.00 | 96.00 | 88.67 | | | | 2902.17 |
| 9/17/2009 | 2987.96 | 2990.84 | TOC | 81.00 | 96.00 | 88.98 | 88.98 | | 0.830 | 2901.86 |
| 12/20/2009 | 2987.96 | 2990.84 | TOC | 81.00 | 96.00 | 89.17 | | | | 2901.67 |

**MW-11**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/12/2009 | 2989.37 | 2992.30 | TOC | 83.00 | 98.00 | 89.95 | | | | 2902.35 |
| 6/29/2009 | 2989.37 | 2992.30 | TOC | 83.00 | 98.00 | 90.05 | | | | 2902.25 |
| 9/17/2009 | 2989.37 | 2992.30 | TOC | 83.00 | 98.00 | 90.35 | | | | 2901.95 |
| 12/20/2009 | 2989.37 | 2992.30 | TOC | 83.00 | 98.00 | 90.52 | | | | 2901.78 |

# *Table 1*
# *GROUNDWATER MEASUREMENTS TABLE*
*Jal Station Diesel Remediation*

*Jal, NM*

**MW-12**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2987.79 | 2990.99 | TOC | 81.00 | 96.00 | 89.57 | 89.45 | 0.12 | 0.830 | 2901.52 |
| 6/29/2009 | 2987.79 | 2990.99 | TOC | 81.00 | 96.00 | 89.70 | 89.55 | 0.15 | 0.830 | 2901.41 |
| 9/17/2009 | 2987.79 | 2990.99 | TOC | 81.00 | 96.00 | 90.05 | 89.86 | 0.19 | 0.830 | 2901.10 |
| 12/20/2009 | 2987.79 | 2990.99 | TOC | 81.00 | 96.00 | 90.30 | 89.97 | 0.33 | 0.830 | 2900.96 |

**MW-13**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/12/2009 | 2989.79 | 2992.97 | TOC | 85.65 | 100.65 | 90.88 | | | | 2902.09 |
| 6/29/2009 | 2989.79 | 2992.97 | TOC | 85.65 | 100.65 | 90.97 | | | | 2902.00 |
| 9/17/2009 | 2989.79 | 2992.97 | TOC | 85.65 | 100.65 | 91.25 | | | | 2901.72 |
| 12/20/2009 | 2989.79 | 2992.97 | TOC | 85.65 | 100.65 | 91.47 | | | | 2901.50 |

**MW-14**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2986.02 | 2989.12 | TOC | 86.20 | 101.20 | 88.15 | 87.84 | 0.31 | 0.830 | 2901.23 |
| 6/29/2009 | 2986.02 | 2989.12 | TOC | 86.20 | 101.20 | 88.10 | 87.87 | 0.23 | 0.830 | 2901.21 |
| 9/17/2009 | 2986.02 | 2989.12 | TOC | 86.20 | 101.20 | 88.92 | 88.15 | 0.77 | 0.830 | 2900.84 |
| 12/20/2009 | 2986.02 | 2989.12 | TOC | 86.20 | 101.20 | 88.95 | 88.58 | 0.37 | 0.830 | 2900.48 |

**MW-15**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/12/2009 | 2986.45 | 2989.64 | TOC | 85.98 | 100.98 | 87.80 | | | | 2901.84 |
| 6/29/2009 | 2986.45 | 2989.64 | TOC | 85.98 | 100.98 | 87.74 | | | | 2901.90 |
| 9/17/2009 | 2986.45 | 2989.64 | TOC | 85.98 | 100.98 | 88.03 | | | | 2901.61 |
| 12/20/2009 | 2986.45 | 2989.64 | TOC | 85.98 | 100.98 | 88.20 | | | | 2901.44 |

**MW-16**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/12/2009 | 2985.80 | 2988.71 | TOC | 78.50 | 98.50 | 88.40 | | | | 2900.31 |
| 6/29/2009 | 2985.80 | 2988.71 | TOC | 78.50 | 98.50 | 88.38 | | | | 2900.33 |
| 9/17/2009 | 2985.80 | 2988.71 | TOC | 78.50 | 98.50 | 88.65 | | | | 2900.06 |
| 12/20/2009 | 2985.80 | 2988.71 | TOC | 78.50 | 98.50 | 88.72 | | | | 2899.99 |

# *Table 1*
# *GROUNDWATER MEASUREMENTS TABLE*
*Jal Station Diesel Remediation*

*Jal, NM*

**MW-17**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/12/2009 | 2985.09 | 2987.77 | TOC | 80.00 | 100.00 | 87.94 | | | | 2899.83 |
| 6/29/2009 | 2985.09 | 2987.77 | TOC | 80.00 | 100.00 | 87.90 | | | | 2899.87 |
| 9/17/2009 | 2985.09 | 2987.77 | TOC | 80.00 | 100.00 | 88.10 | | | | 2899.67 |
| 12/20/2009 | 2985.09 | 2987.77 | TOC | 80.00 | 100.00 | 88.17 | | | | 2899.60 |

**MW-18**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2987.16 | 2989.68 | TOC | 75.00 | 95.00 | 87.61 | 87.55 | 0.06 | 0.830 | 2902.12 |
| 6/29/2009 | 2987.16 | 2989.68 | TOC | 75.00 | 95.00 | 87.77 | 87.71 | 0.06 | 0.830 | 2901.96 |
| 9/16/2009 | 2987.16 | 2989.68 | TOC | 75.00 | 95.00 | 88.15 | 88.06 | 0.09 | 0.830 | 2901.60 |
| 12/20/2009 | 2987.16 | 2989.68 | TOC | 75.00 | 95.00 | 88.28 | 88.20 | 0.08 | 0.830 | 2901.47 |

**MW-19**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2988.86 | 2991.92 | TOC | 80.00 | 100.00 | 90.70 | 90.67 | 0.03 | 0.830 | 2901.24 |
| 6/29/2009 | 2988.86 | 2991.92 | TOC | 80.00 | 100.00 | 89.91 | 89.88 | 0.03 | 0.830 | 2902.03 |
| 9/16/2009 | 2988.86 | 2991.92 | TOC | 80.00 | 100.00 | 90.24 | 90.23 | 0.01 | 0.830 | 2901.69 |
| 12/20/2009 | 2988.86 | 2991.92 | TOC | 80.00 | 100.00 | 90.37 | 90.36 | 0.01 | 0.830 | 2901.56 |

**MW-20**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2987.22 | 2989.64 | TOC | 75.00 | 95.00 | 88.05 | 88.05 | | 0.830 | 2901.59 |
| 6/29/2009 | 2987.22 | 2989.64 | TOC | 75.00 | 95.00 | 88.20 | 88.20 | | 0.830 | 2901.44 |
| 9/16/2009 | 2987.22 | 2989.64 | TOC | 75.00 | 95.00 | 88.56 | 88.52 | 0.04 | 0.830 | 2901.11 |
| 12/20/2009 | 2987.22 | 2989.64 | TOC | 75.00 | 95.00 | 88.67 | 88.65 | 0.02 | 0.830 | 2900.99 |

**MW-21**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/12/2009 | 2986.63 | 2989.19 | TOC | 78.00 | 98.00 | 88.80 | | | | 2900.39 |
| 6/29/2009 | 2986.63 | 2989.19 | TOC | 78.00 | 98.00 | 88.77 | | | | 2900.42 |
| 9/17/2009 | 2986.63 | 2989.19 | TOC | 78.00 | 98.00 | 89.00 | | | | 2900.19 |
| 12/20/2009 | 2986.63 | 2989.19 | TOC | 78.00 | 98.00 | 89.10 | | | | 2900.09 |

# *Table 1*
# *GROUNDWATER MEASUREMENTS TABLE*
*Jal Station Diesel Remediation*

*Jal, NM*

**MW-22**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2989.24 | 2991.56 | TOC | 80.00 | 100.00 | 89.18 | 89.18 | | 0.830 | 2902.38 |
| 6/29/2009 | 2989.24 | 2991.56 | TOC | 80.00 | 100.00 | 89.39 | | | | 2902.17 |
| 9/17/2009 | 2989.24 | 2991.56 | TOC | 80.00 | 100.00 | 89.71 | 89.71 | | 0.830 | 2901.85 |
| 12/20/2009 | 2989.24 | 2991.56 | TOC | 80.00 | 100.00 | 89.92 | | | | 2901.64 |

**MW-23**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2986.90 | 2991.90 | TOC | 80.00 | 120.00 | 96.00 | | | | 2895.90 |
| 6/29/2009 | 2986.90 | 2991.90 | TOC | 80.00 | 120.00 | 96.12 | | | | 2895.78 |
| 9/17/2009 | 2986.90 | 2991.90 | TOC | 80.00 | 120.00 | 96.50 | | | | 2895.40 |
| 12/20/2009 | 2986.90 | 2991.90 | TOC | 80.00 | 120.00 | 96.73 | | | | 2895.17 |

**MW-24**

| Sample Date | Grd. Surf. Elevation | TOC Elevation | Ref. Point | Depth of Screen | | Depth to GW | Depth to LNAPL | LNAPL Thickness | LNAPL Spec.Grav. | Corrected GW Elev. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Top | Bottom | | | | | |
| 3/14/2009 | 2988.76 | 2993.76 | TOC | 77.00 | 117.00 | 96.38 | | | | 2897.38 |
| 6/29/2009 | 2988.76 | 2993.76 | TOC | 77.00 | 117.00 | 96.55 | | | | 2897.21 |
| 9/17/2009 | 2988.76 | 2993.76 | TOC | 77.00 | 117.00 | 95.85 | | | | 2897.91 |
| 12/20/2009 | 2988.76 | 2993.76 | TOC | 77.00 | 117.00 | 97.05 | | | | 2896.71 |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**MW-01**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Acenaphthylene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Anthracene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Arsenic | 6020 | 3/11/2009 | 0 | 9.0E-03 | | | 1.0E-01 |
| Barium | 6020 | 3/11/2009 | 0 | 1.8E-02 | | | 1.0E+00 |
| Benzene | 8260 | 3/11/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Benzo(a)anthracene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(a)pyrene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 7.0E-04 |
| Benzo(b)fluoranthene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(g,h,i)perylene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(k)fluoranthene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Cadmium | 6020 | 3/11/2009 | 0 | | | 1.0E-03 | 1.0E-02 |
| Chromium | 6020 | 3/11/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Chrysene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Di Isopropyl Ether | 8260 | 3/11/2009 | 0 | | | 3.0E-03 | |
| Dibenzo(a,h)anthracene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Ethyl tert butyl Ether | 8260 | 3/11/2009 | 0 | | | 3.0E-03 | |
| Ethylbenzene | 8260 | 3/11/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Fluoranthene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Fluorene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Indeno(1,2,3-cd)pyrene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Lead | 6020 | 3/11/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| m,p-Xylene | 8260 | 3/11/2009 | 0 | | | 1.0E-03 | |
| Methyl tert butyl Ether | 8260 | 3/11/2009 | 0 | | | 2.5E-03 | |
| Naphthalene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| o-Xylene | 8260 | 3/11/2009 | 0 | | | 5.0E-04 | |
| Phenanthrene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Pyrene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Selenium | 6020 | 3/11/2009 | 0 | 1.0E-02 | | | 5.0E-02 |
| Silver | 6020 | 3/11/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| tert-Amyl methyl Ether | 8260 | 3/11/2009 | 0 | | | 3.0E-03 | |
| tert-butyl alcohol | 8260 | 3/11/2009 | 0 | | | 5.0E-03 | |
| Toluene | 8260 | 3/11/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 3/11/2009 | 0 | 5.0E-04 | | | 2.0E-03 |

**MW-04**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Arsenic | 6020 | 9/17/2009 | 0 | 2.1E-02 | | | 1.0E-01 |
| Arsenic | 6020 | 9/17/2009 | 0 | 2.7E-02 | | | 1.0E-01 |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**MW-04**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Barium | 6020 | 9/17/2009 | 0 | 4.9E-01 | | | 1.0E+00 |
| Barium | 6020 | 9/17/2009 | 0 | 5.4E-01 | | | 1.0E+00 |
| Benzene | 8260 | 9/17/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Cadmium | 6020 | 9/17/2009 | 0 | | | 1.0E-03 | 1.0E-02 |
| Cadmium | 6020 | 9/17/2009 | 0 | | | 2.0E-04 | 1.0E-02 |
| Chromium | 6020 | 9/17/2009 | 0 | | | 5.0E-03 | 5.0E-02 |
| Chromium | 6020 | 9/17/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Ethylbenzene | 8260 | 9/17/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Lead | 6020 | 9/17/2009 | 0 | | | 5.0E-03 | 5.0E-02 |
| Lead | 6020 | 9/17/2009 | 0 | 3.0E-03 | | | 5.0E-02 |
| m,p-Xylene | 8260 | 9/17/2009 | 0 | | | 1.0E-03 | |
| o-Xylene | 8260 | 9/17/2009 | 0 | | | 5.0E-04 | |
| Selenium | 6020 | 9/17/2009 | 0 | | | 5.0E-03 | 5.0E-02 |
| Selenium | 6020 | 9/17/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Silver | 6020 | 9/17/2009 | 0 | | | 5.0E-03 | 5.0E-02 |
| Silver | 6020 | 9/17/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Toluene | 8260 | 9/17/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 9/17/2009 | 0 | | | 0.0E+00 | 2.0E-03 |
| Total Xylenes | 8260 | 9/17/2009 | 0 | | | 5.0E-04 | 6.2E-01 |

**MW-05**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Acenaphthylene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Anthracene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Arsenic | 6020 | 3/11/2009 | 0 | 1.0E-02 | | | 1.0E-01 |
| Barium | 6020 | 3/11/2009 | 0 | 9.7E-02 | | | 1.0E+00 |
| Benzene | 8260 | 3/11/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Benzo(a)anthracene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(a)pyrene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 7.0E-04 |
| Benzo(b)fluoranthene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(g,h,i)perylene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(k)fluoranthene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Cadmium | 6020 | 3/11/2009 | 0 | | | 1.0E-03 | 1.0E-02 |
| Chromium | 6020 | 3/11/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Chrysene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Di Isopropyl Ether | 8260 | 3/11/2009 | 0 | | | 3.0E-03 | |
| Dibenzo(a,h)anthracene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Ethyl tert butyl Ether | 8260 | 3/11/2009 | 0 | | | 3.0E-03 | |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**MW-05**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Ethylbenzene | 8260 | 3/11/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Fluoranthene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Fluorene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Indeno(1,2,3-cd)pyrene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Lead | 6020 | 3/11/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| m,p-Xylene | 8260 | 3/11/2009 | 0 | | | 1.0E-03 | |
| Methyl tert butyl Ether | 8260 | 3/11/2009 | 0 | | | 2.5E-03 | |
| Naphthalene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| o-Xylene | 8260 | 3/11/2009 | 0 | | | 5.0E-04 | |
| Phenanthrene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Pyrene | 8270 | 3/11/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Selenium | 6020 | 3/11/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Silver | 6020 | 3/11/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| tert-Amyl methyl Ether | 8260 | 3/11/2009 | 0 | | | 3.0E-03 | |
| tert-butyl alcohol | 8260 | 3/11/2009 | 0 | | | 5.0E-03 | |
| Toluene | 8260 | 3/11/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 3/11/2009 | 0 | 3.0E-04 | | | 2.0E-03 |

**MW-08**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Arsenic | 6020 | 9/17/2009 | 0 | 1.7E-02 | | | 1.0E-01 |
| Barium | 6020 | 9/17/2009 | 0 | 1.5E-01 | | | 1.0E+00 |
| Benzene | 8260 | 9/17/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Cadmium | 6020 | 9/17/2009 | 0 | | | 2.0E-04 | 1.0E-02 |
| Chromium | 6020 | 9/17/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Ethylbenzene | 8260 | 9/17/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Lead | 6020 | 9/17/2009 | 0 | 4.0E-03 | | | 5.0E-02 |
| m,p-Xylene | 8260 | 9/17/2009 | 0 | | | 1.0E-03 | |
| o-Xylene | 8260 | 9/17/2009 | 0 | 2.6E-03 | | | |
| Selenium | 6020 | 9/17/2009 | 0 | 7.0E-03 | | | 5.0E-02 |
| Silver | 6020 | 9/17/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Toluene | 8260 | 9/17/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 9/17/2009 | 0 | | | 0.0E+00 | 2.0E-03 |
| Total Xylenes | 8260 | 9/17/2009 | 0 | 2.6E-03 | | | 6.2E-01 |

**MW-09**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Arsenic | 6020 | 9/16/2009 | 0 | 1.5E-02 | | | 1.0E-01 |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**MW-09**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Barium | 6020 | 9/16/2009 | 0 | 1.7E-01 | | | 1.0E+00 |
| Benzene | 8260 | 9/16/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Cadmium | 6020 | 9/16/2009 | 0 | | | 2.0E-04 | 1.0E-02 |
| Chromium | 6020 | 9/16/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Ethylbenzene | 8260 | 9/16/2009 | 0 | 1.7E-02 | | | 7.5E-01 |
| Lead | 6020 | 9/16/2009 | 0 | 2.0E-03 | | | 5.0E-02 |
| m,p-Xylene | 8260 | 9/16/2009 | 0 | | | 1.0E-03 | |
| o-Xylene | 8260 | 9/16/2009 | 0 | 1.1E-03 | | | |
| Selenium | 6020 | 9/16/2009 | 0 | 5.0E-03 | | | 5.0E-02 |
| Silver | 6020 | 9/16/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Toluene | 8260 | 9/16/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 9/16/2009 | 0 | | | 0.0E+00 | 2.0E-03 |
| Total Xylenes | 8260 | 9/16/2009 | 0 | 1.1E-03 | | | 6.2E-01 |

**MW-10**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Acenaphthylene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Anthracene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Arsenic | 6020 | 3/14/2009 | 0 | 1.2E-02 | | | 1.0E-01 |
| Barium | 6020 | 3/14/2009 | 0 | 3.0E-01 | | | 1.0E+00 |
| Benzene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Benzo(a)anthracene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(a)pyrene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 7.0E-04 |
| Benzo(b)fluoranthene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(g,h,i)perylene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(k)fluoranthene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Cadmium | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 1.0E-02 |
| Chromium | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Chrysene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Di Isopropyl Ether | 8260 | 3/14/2009 | 0 | | | 3.0E-03 | |
| Dibenzo(a,h)anthracene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Ethyl tert butyl Ether | 8260 | 3/14/2009 | 0 | | | 3.0E-03 | |
| Ethylbenzene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Fluoranthene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Fluorene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Indeno(1,2,3-cd)pyrene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Lead | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| m,p-Xylene | 8260 | 3/14/2009 | 0 | | | 1.0E-03 | |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**MW-10**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Methyl tert butyl Ether | 8260 | 3/14/2009 | 0 | | | 2.5E-03 | |
| Naphthalene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| o-Xylene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | |
| Phenanthrene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Pyrene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Selenium | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Silver | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| tert-Amyl methyl Ether | 8260 | 3/14/2009 | 0 | | | 3.0E-03 | |
| tert-butyl alcohol | 8260 | 3/14/2009 | 0 | | | 5.0E-03 | |
| Toluene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 3/14/2009 | 0 | 1.0E-04 | | | 2.0E-03 |

**MW-11**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Acenaphthylene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Arsenic | 6020 | 3/12/2009 | 0 | 1.1E-02 | | | 1.0E-01 |
| Barium | 6020 | 3/12/2009 | 0 | 2.3E-02 | | | 1.0E+00 |
| Benzene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Benzo(a)anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(a)pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 7.0E-04 |
| Benzo(b)fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(g,h,i)perylene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(k)fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Cadmium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 1.0E-02 |
| Chromium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Chrysene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Di Isopropyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| Dibenzo(a,h)anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Ethyl tert butyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| Ethylbenzene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Fluorene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Indeno(1,2,3-cd)pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Lead | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| m,p-Xylene | 8260 | 3/12/2009 | 0 | | | 1.0E-03 | |
| Methyl tert butyl Ether | 8260 | 3/12/2009 | 0 | | | 2.5E-03 | |
| Naphthalene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**MW-11**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| o-Xylene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | |
| Phenanthrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Selenium | 6020 | 3/12/2009 | 0 | 4.0E-03 | | | 5.0E-02 |
| Silver | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| tert-Amyl methyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| tert-butyl alcohol | 8260 | 3/12/2009 | 0 | | | 5.0E-03 | |
| Toluene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 3/12/2009 | 0 | 3.0E-04 | | | 2.0E-03 |

**MW-13**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Acenaphthylene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Arsenic | 6020 | 3/12/2009 | 0 | 1.3E-02 | | | 1.0E-01 |
| Barium | 6020 | 3/12/2009 | 0 | 1.5E-01 | | | 1.0E+00 |
| Benzene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Benzo(a)anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(a)pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 7.0E-04 |
| Benzo(b)fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(g,h,i)perylene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(k)fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Cadmium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 1.0E-02 |
| Chromium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Chrysene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Di Isopropyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| Dibenzo(a,h)anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Ethyl tert butyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| Ethylbenzene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Fluorene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Indeno(1,2,3-cd)pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Lead | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| m,p-Xylene | 8260 | 3/12/2009 | 0 | | | 1.0E-03 | |
| Methyl tert butyl Ether | 8260 | 3/12/2009 | 0 | | | 2.5E-03 | |
| Naphthalene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| o-Xylene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | |
| Phenanthrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**MW-13**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Selenium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Silver | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| tert-Amyl methyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| tert-butyl alcohol | 8260 | 3/12/2009 | 0 | | | 5.0E-03 | |
| Toluene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 3/12/2009 | 0 | 3.0E-04 | | | 2.0E-03 |

**MW-15**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Acenaphthylene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Arsenic | 6020 | 3/12/2009 | 0 | 1.4E-02 | | | 1.0E-01 |
| Barium | 6020 | 3/12/2009 | 0 | 2.5E-02 | | | 1.0E+00 |
| Benzene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Benzo(a)anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(a)pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 7.0E-04 |
| Benzo(b)fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(g,h,i)perylene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(k)fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Cadmium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 1.0E-02 |
| Chromium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Chrysene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Di Isopropyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| Dibenzo(a,h)anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Ethyl tert butyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| Ethylbenzene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Fluorene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Indeno(1,2,3-cd)pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Lead | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| m,p-Xylene | 8260 | 3/12/2009 | 0 | | | 1.0E-03 | |
| Methyl tert butyl Ether | 8260 | 3/12/2009 | 0 | | | 2.5E-03 | |
| Naphthalene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| o-Xylene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | |
| Phenanthrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Selenium | 6020 | 3/12/2009 | 0 | 1.5E-02 | | | 5.0E-02 |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**MW-15**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Silver | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| tert-Amyl methyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| tert-butyl alcohol | 8260 | 3/12/2009 | 0 | | | 5.0E-03 | |
| Toluene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 3/12/2009 | 0 | 1.0E-04 | | | 2.0E-03 |

**MW-16**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Acenaphthylene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Arsenic | 6020 | 3/12/2009 | 0 | 1.5E-02 | | | 1.0E-01 |
| Barium | 6020 | 3/12/2009 | 0 | 3.7E-02 | | | 1.0E+00 |
| Benzene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Benzo(a)anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(a)pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 7.0E-04 |
| Benzo(b)fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(g,h,i)perylene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(k)fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Cadmium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 1.0E-02 |
| Chromium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Chrysene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Di Isopropyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| Dibenzo(a,h)anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Ethyl tert butyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| Ethylbenzene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Fluorene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Indeno(1,2,3-cd)pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Lead | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| m,p-Xylene | 8260 | 3/12/2009 | 0 | | | 1.0E-03 | |
| Methyl tert butyl Ether | 8260 | 3/12/2009 | 0 | | | 2.5E-03 | |
| Naphthalene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| o-Xylene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | |
| Phenanthrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Selenium | 6020 | 3/12/2009 | 0 | 4.0E-02 | | | 5.0E-02 |
| Silver | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| tert-Amyl methyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**MW-16**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| tert-butyl alcohol | 8260 | 3/12/2009 | 0 | | | 5.0E-03 | |
| Toluene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 3/12/2009 | 0 | 4.0E-04 | | | 2.0E-03 |

**MW-17**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Acenaphthylene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Arsenic | 6020 | 3/12/2009 | 0 | 7.0E-03 | | | 1.0E-01 |
| Barium | 6020 | 3/12/2009 | 0 | 4.0E-02 | | | 1.0E+00 |
| Benzene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Benzo(a)anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(a)pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 7.0E-04 |
| Benzo(b)fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(g,h,i)perylene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(k)fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Cadmium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 1.0E-02 |
| Chromium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Chrysene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Di Isopropyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| Dibenzo(a,h)anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Ethyl tert butyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| Ethylbenzene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Fluorene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Indeno(1,2,3-cd)pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Lead | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| m,p-Xylene | 8260 | 3/12/2009 | 0 | | | 1.0E-03 | |
| Methyl tert butyl Ether | 8260 | 3/12/2009 | 0 | | | 2.5E-03 | |
| Naphthalene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| o-Xylene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | |
| Phenanthrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Selenium | 6020 | 3/12/2009 | 0 | 5.0E-03 | | | 5.0E-02 |
| Silver | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| tert-Amyl methyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| tert-butyl alcohol | 8260 | 3/12/2009 | 0 | | | 5.0E-03 | |
| Toluene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 7.5E-01 |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**MW-17**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Total Mercury | 7470 | 3/12/2009 | 0 | 2.0E-04 | | | 2.0E-03 |

**MW-21**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Acenaphthylene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Arsenic | 6020 | 3/12/2009 | 0 | 1.0E-02 | | | 1.0E-01 |
| Barium | 6020 | 3/12/2009 | 0 | 4.2E-02 | | | 1.0E+00 |
| Benzene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Benzo(a)anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(a)pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 7.0E-04 |
| Benzo(b)fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(g,h,i)perylene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(k)fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Cadmium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 1.0E-02 |
| Chromium | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Chrysene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Di Isopropyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| Dibenzo(a,h)anthracene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Ethyl tert butyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| Ethylbenzene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Fluoranthene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Fluorene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Indeno(1,2,3-cd)pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Lead | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| m,p-Xylene | 8260 | 3/12/2009 | 0 | | | 1.0E-03 | |
| Methyl tert butyl Ether | 8260 | 3/12/2009 | 0 | | | 2.5E-03 | |
| Naphthalene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| o-Xylene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | |
| Phenanthrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Pyrene | 8270 | 3/12/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Selenium | 6020 | 3/12/2009 | 0 | 6.0E-03 | | | 5.0E-02 |
| Silver | 6020 | 3/12/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| tert-Amyl methyl Ether | 8260 | 3/12/2009 | 0 | | | 3.0E-03 | |
| tert-butyl alcohol | 8260 | 3/12/2009 | 0 | | | 5.0E-03 | |
| Toluene | 8260 | 3/12/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 3/12/2009 | 0 | 2.0E-04 | | | 2.0E-03 |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**MW-23**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Acenaphthylene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Anthracene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Arsenic | 6020 | 3/14/2009 | 0 | 1.3E-02 | | | 1.0E-01 |
| Barium | 6020 | 3/14/2009 | 0 | 5.6E-02 | | | 1.0E+00 |
| Benzene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Benzo(a)anthracene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(a)pyrene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 7.0E-04 |
| Benzo(b)fluoranthene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(g,h,i)perylene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(k)fluoranthene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Cadmium | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 1.0E-02 |
| Chromium | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Chrysene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Di Isopropyl Ether | 8260 | 3/14/2009 | 0 | | | 3.0E-03 | |
| Dibenzo(a,h)anthracene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Ethyl tert butyl Ether | 8260 | 3/14/2009 | 0 | | | 3.0E-03 | |
| Ethylbenzene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Fluoranthene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Fluorene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Indeno(1,2,3-cd)pyrene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Lead | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| m,p-Xylene | 8260 | 3/14/2009 | 0 | | | 1.0E-03 | |
| Methyl tert butyl Ether | 8260 | 3/14/2009 | 0 | | | 2.5E-03 | |
| Naphthalene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| o-Xylene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | |
| Phenanthrene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Pyrene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Selenium | 6020 | 3/14/2009 | 0 | 8.0E-03 | | | 5.0E-02 |
| Silver | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| tert-Amyl methyl Ether | 8260 | 3/14/2009 | 0 | | | 3.0E-03 | |
| tert-butyl alcohol | 8260 | 3/14/2009 | 0 | | | 5.0E-03 | |
| Toluene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 3/14/2009 | 0 | | | 0.0E+00 | 2.0E-03 |

**MW-24**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Acenaphthylene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**MW-24**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Anthracene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Arsenic | 6020 | 3/14/2009 | 0 | 1.1E-02 | | | 1.0E-01 |
| Barium | 6020 | 3/14/2009 | 0 | 6.0E-02 | | | 1.0E+00 |
| Benzene | 8260 | 3/14/2009 | 0 | 3.6E-02 | | | 1.0E-02 |
| Benzo(a)anthracene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(a)pyrene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 7.0E-04 |
| Benzo(b)fluoranthene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(g,h,i)perylene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Benzo(k)fluoranthene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Cadmium | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 1.0E-02 |
| Chromium | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Chrysene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Di Isopropyl Ether | 8260 | 3/14/2009 | 0 | | | 3.0E-03 | |
| Dibenzo(a,h)anthracene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Ethyl tert butyl Ether | 8260 | 3/14/2009 | 0 | | | 3.0E-03 | |
| Ethylbenzene | 8260 | 3/14/2009 | 0 | 3.8E-02 | | | 7.5E-01 |
| Fluoranthene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Fluorene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Indeno(1,2,3-cd)pyrene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Lead | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| m,p-Xylene | 8260 | 3/14/2009 | 0 | 2.5E-03 | | | |
| Methyl tert butyl Ether | 8260 | 3/14/2009 | 0 | | | 2.5E-03 | |
| Naphthalene | 8270 | 3/14/2009 | 0 | 6.0E-03 | | | 3.0E-02 |
| o-Xylene | 8260 | 3/14/2009 | 0 | 7.1E-03 | | | |
| Phenanthrene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Pyrene | 8270 | 3/14/2009 | 0 | | | 1.0E-03 | 3.0E-02 |
| Selenium | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| Silver | 6020 | 3/14/2009 | 0 | | | 1.0E-03 | 5.0E-02 |
| tert-Amyl methyl Ether | 8260 | 3/14/2009 | 0 | | | 3.0E-03 | |
| tert-butyl alcohol | 8260 | 3/14/2009 | 0 | 7.4E-02 | | | |
| Toluene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Mercury | 7470 | 3/14/2009 | 0 | 2.0E-04 | | | 2.0E-03 |

**Trip Blank**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Benzene | 8260 | 3/10/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Benzene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Benzene | 8260 | 9/15/2009 | 0 | | | 5.0E-04 | 1.0E-02 |
| Ethylbenzene | 8260 | 3/10/2009 | 0 | | | 5.0E-04 | 7.5E-01 |

# *Table 2*
# *SUMMARY OF CURRENT, ON-SITE LABORATORY ANALYTICAL RESULTS FOR GROUNDWATER*

*Jal Station Diesel Remediation*

*Jal, NM*

**Trip Blank**

| Analyte | Analytical Method | Sample Date | Sample Depth (ft) | Detected Conc. | Flag | Non-detect SQLs | New Mexico Standard |
|---|---|---|---|---|---|---|---|
| Ethylbenzene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Ethylbenzene | 8260 | 9/15/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| m,p-Xylene | 8260 | 3/10/2009 | 0 | | | 1.0E-03 | |
| m,p-Xylene | 8260 | 3/14/2009 | 0 | | | 1.0E-03 | |
| m,p-Xylene | 8260 | 9/15/2009 | 0 | | | 1.0E-03 | |
| o-Xylene | 8260 | 3/10/2009 | 0 | | | 5.0E-04 | |
| o-Xylene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | |
| o-Xylene | 8260 | 9/15/2009 | 0 | | | 5.0E-04 | |
| Toluene | 8260 | 3/10/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Toluene | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Toluene | 8260 | 9/15/2009 | 0 | | | 5.0E-04 | 7.5E-01 |
| Total Xylenes | 8260 | 3/10/2009 | 0 | | | 5.0E-04 | 6.2E-01 |
| Total Xylenes | 8260 | 3/14/2009 | 0 | | | 5.0E-04 | 6.2E-01 |
| Total Xylenes | 8260 | 9/15/2009 | 0 | | | 5.0E-04 | 6.2E-01 |

# ***APPENDIX A***

## *Groundwater Sampling Laboratory Analytical Results with Chain-of-Custody Documentation*

H2A
ENVIRONMENTAL, LTD.

# Analytical Report 327399

## for

## URS Corporation

**Project Manager: Iain Olness**

**EQPL Basin Jal Pump Station**

**49194426**

**27-MAR-09**

**12600 West I-20 East Odessa, Texas 79765**

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

27-MAR-09

Project Manager: **Iain Olness**
**URS Corporation**
7720 N. 16th St. Suite100
Phoenix, AZ 85020

Reference: XENCO Report No: **327399**
**EQPL Basin Jal Pump Station**
Project Address:

**Iain Olness**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 327399. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 327399 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron, II**
Odessa Laboratory Manager

# Sample Cross Reference 327399

## URS Corporation, Phoenix, AZ

EQPL Basin Jal Pump Station

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| MW-01 | W | Mar-11-09 13:42 | | 327399-001 |
| MW-05 | W | Mar-11-09 14:45 | | 327399-002 |
| MW-11 | W | Mar-12-09 09:12 | | 327399-003 |
| MW-15 | W | Mar-12-09 10:34 | | 327399-004 |
| MW-13 | W | Mar-12-09 11:43 | | 327399-005 |
| MW-21 | W | Mar-12-09 13:44 | | 327399-006 |
| MW-17 | W | Mar-12-09 14:49 | | 327399-007 |
| MW-16 | W | Mar-12-09 15:55 | | 327399-008 |
| Trip Blank | W | Mar-10-09 00:00 | | 327399-009 |

# Certificate of Analysis Summary 327399
## URS Corporation, Phoenix, AZ

### Project Name: EQPL Basin Jal Pump Station

**Project Id:** 49194426
**Contact:** Iain Olness
**Project Location:**

**Date Received in Lab:** Mar-13-09 10:39 am
**Report Date:** 27-MAR-09
**Project Manager:** Brent Barron, II

| *Analysis Requested* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 327399-001 | | 327399-002 | | 327399-003 | | 327399-004 | |
| | *Field Id:* | MW-01 | | MW-05 | | MW-11 | | MW-15 | |
| | *Depth:* | | | | | | | | |
| | *Matrix:* | WATER | | WATER | | WATER | | WATER | |
| | *Sampled:* | Mar-11-09 13:42 | | Mar-11-09 14:45 | | Mar-12-09 09:12 | | Mar-12-09 10:34 | |
| **BTEX and Oxygenates by SW 8260B** | *Extracted:* | Mar-21-09 11:16 | | Mar-21-09 11:18 | | Mar-21-09 11:20 | | Mar-21-09 11:22 | |
| | *Analyzed:* | Mar-21-09 17:34 | | Mar-21-09 17:58 | | Mar-21-09 18:21 | | Mar-21-09 18:45 | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | mg/L | RL |
| Methyl tert butyl Ether | | BRL | 0.0050 | BRL | 0.0050 | BRL | 0.0050 | BRL | 0.0050 |
| Benzene | | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 |
| Toluene | | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 |
| Ethylbenzene | | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 |
| m,p-Xylene | | BRL | 0.0020 | BRL | 0.0020 | BRL | 0.0020 | BRL | 0.0020 |
| o-Xylene | | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 |
| tert-Amyl methyl Ether | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| tert-butyl alcohol | | BRL | 0.010 | BRL | 0.010 | BRL | 0.010 | BRL | 0.010 |
| Ethyl tert butyl Ether | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Di Isopropyl Ether | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| **Dissolved Mercury by EPA 7470A** | *Extracted:* | Mar-19-09 07:15 | | Mar-19-09 07:15 | | Mar-19-09 07:15 | | Mar-19-09 07:15 | |
| | *Analyzed:* | Mar-19-09 10:29 | | Mar-19-09 10:30 | | Mar-19-09 10:47 | | Mar-19-09 10:48 | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | mg/L | RL |
| Mercury | | 0.0005 | 0.0001 | 0.0003 | 0.0001 | 0.0003 | 0.0001 | 0.0001 | 0.0001 |
| **Dissolved Metals by EPA 6020** | *Extracted:* | Mar-17-09 12:00 | | Mar-17-09 12:00 | | Mar-17-09 12:00 | | Mar-17-09 12:00 | |
| | *Analyzed:* | Mar-20-09 22:30 | | Mar-20-09 22:35 | | Mar-20-09 22:40 | | Mar-20-09 22:45 | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | mg/L | RL |
| Arsenic | | 0.009 | 0.002 | 0.010 | 0.002 | 0.011 | 0.002 | 0.014 | 0.002 |
| Barium | | 0.018 | 0.005 | 0.097 | 0.005 | 0.023 | 0.005 | 0.025 | 0.005 |
| Cadmium | | BRL | 0.001 | BRL | 0.001 | BRL | 0.001 | BRL | 0.001 |
| Chromium | | BRL | 0.003 | BRL | 0.003 | BRL | 0.003 | BRL | 0.003 |
| Lead | | BRL | 0.002 | BRL | 0.002 | BRL | 0.002 | BRL | 0.002 |
| Selenium | | 0.010 | 0.003 | BRL | 0.003 | 0.004 | 0.003 | 0.015 | 0.003 |
| Silver | | BRL | 0.002 | BRL | 0.002 | BRL | 0.002 | BRL | 0.002 |





Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 327399
## URS Corporation, Phoenix, AZ

### Project Name: EQPL Basin Jal Pump Station

**Project Id:** 49194426
**Contact:** Iain Olness
**Project Location:**

**Date Received in Lab:** Mar-13-09 10:39 am
**Report Date:** 27-MAR-09
**Project Manager:** Brent Barron, II

| *Analysis Requested* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 327399-001 | | 327399-002 | | 327399-003 | | 327399-004 | |
| | ***Field Id:*** | MW-01 | | MW-05 | | MW-11 | | MW-15 | |
| | ***Depth:*** | | | | | | | | |
| | ***Matrix:*** | WATER | | WATER | | WATER | | WATER | |
| | ***Sampled:*** | Mar-11-09 13:42 | | Mar-11-09 14:45 | | Mar-12-09 09:12 | | Mar-12-09 10:34 | |
| **SVOA PAHs List by EPA 8270C** | ***Extracted:*** | Mar-17-09 09:39 | | Mar-17-09 09:42 | | Mar-17-09 09:45 | | Mar-17-09 09:48 | |
| | ***Analyzed:*** | Mar-18-09 15:42 | | Mar-18-09 16:25 | | Mar-18-09 17:08 | | Mar-18-09 17:51 | |
| | ***Units/RL:*** | mg/L | RL | mg/L | RL | mg/L | RL | mg/L | RL |
| Acenaphthene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Acenaphthylene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Anthracene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Benzo(a)anthracene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Benzo(a)pyrene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Benzo(b)fluoranthene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Benzo(g,h,i)perylene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Benzo(k)fluoranthene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Chrysene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Dibenz(a,h)Anthracene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Fluoranthene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Fluorene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Indeno(1,2,3-c,d)Pyrene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Naphthalene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Phenanthrene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Pyrene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |





Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 327399
## URS Corporation, Phoenix, AZ

### Project Name: EQPL Basin Jal Pump Station

**Project Id:** 49194426
**Contact:** Iain Olness
**Project Location:**

**Date Received in Lab:** Mar-13-09 10:39 am
**Report Date:** 27-MAR-09
**Project Manager:** Brent Barron, II

| *Analysis Requested* | *Lab Id:* | 327399-005 | | 327399-006 | | 327399-007 | | 327399-008 | |
|---|---|---|---|---|---|---|---|---|---|
| | *Field Id:* | MW-13 | | MW-21 | | MW-17 | | MW-16 | |
| | *Depth:* | | | | | | | | |
| | *Matrix:* | WATER | | WATER | | WATER | | WATER | |
| | *Sampled:* | Mar-12-09 11:43 | | Mar-12-09 13:44 | | Mar-12-09 14:49 | | Mar-12-09 15:55 | |
| **BTEX and Oxygenates by SW 8260B** | *Extracted:* | Mar-21-09 11:24 | | Mar-21-09 11:26 | | Mar-21-09 11:28 | | Mar-21-09 11:30 | |
| | *Analyzed:* | Mar-21-09 19:09 | | Mar-21-09 19:33 | | Mar-21-09 19:56 | | Mar-21-09 20:20 | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | mg/L | RL |
| Methyl tert butyl Ether | | BRL | 0.0050 | BRL | 0.0050 | BRL | 0.0050 | BRL | 0.0050 |
| Benzene | | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 |
| Toluene | | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 |
| Ethylbenzene | | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 |
| m,p-Xylene | | BRL | 0.0020 | BRL | 0.0020 | BRL | 0.0020 | BRL | 0.0020 |
| o-Xylene | | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 |
| tert-Amyl methyl Ether | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| tert-butyl alcohol | | BRL | 0.010 | BRL | 0.010 | BRL | 0.010 | BRL | 0.010 |
| Ethyl tert butyl Ether | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Di Isopropyl Ether | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| **Dissolved Mercury by EPA 7470A** | *Extracted:* | Mar-19-09 07:15 | | Mar-19-09 07:15 | | Mar-19-09 07:15 | | Mar-19-09 07:15 | |
| | *Analyzed:* | Mar-19-09 10:50 | | Mar-19-09 10:52 | | Mar-19-09 10:54 | | Mar-19-09 10:55 | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | mg/L | RL |
| Mercury | | 0.0003 | 0.0001 | 0.0002 | 0.0001 | 0.0002 | 0.0001 | 0.0004 | 0.0001 |
| **Dissolved Metals by EPA 6020** | *Extracted:* | Mar-17-09 12:00 | | Mar-17-09 12:00 | | Mar-17-09 12:00 | | Mar-17-09 12:00 | |
| | *Analyzed:* | Mar-20-09 22:50 | | Mar-20-09 23:09 | | Mar-20-09 23:14 | | Mar-20-09 23:19 | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | mg/L | RL |
| Arsenic | | 0.013 | 0.002 | 0.010 | 0.002 | 0.007 | 0.002 | 0.015 | 0.002 |
| Barium | | 0.153 | 0.005 | 0.042 | 0.005 | 0.040 | 0.005 | 0.037 | 0.005 |
| Cadmium | | BRL | 0.001 | BRL | 0.001 | BRL | 0.001 | BRL | 0.001 |
| Chromium | | BRL | 0.003 | BRL | 0.003 | BRL | 0.003 | BRL | 0.003 |
| Lead | | BRL | 0.002 | BRL | 0.002 | BRL | 0.002 | BRL | 0.002 |
| Selenium | | BRL | 0.003 | 0.006 | 0.003 | 0.005 | 0.003 | 0.040 | 0.003 |
| Silver | | BRL | 0.002 | BRL | 0.002 | BRL | 0.002 | BRL | 0.002 |





Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 327399
## URS Corporation, Phoenix, AZ

### Project Name: EQPL Basin Jal Pump Station

**Project Id:** 49194426
**Contact:** Iain Olness
**Project Location:**

**Date Received in Lab:** Mar-13-09 10:39 am
**Report Date:** 27-MAR-09
**Project Manager:** Brent Barron, II

| *Analysis Requested* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 327399-005 | | 327399-006 | | 327399-007 | | 327399-008 | |
| | *Field Id:* | MW-13 | | MW-21 | | MW-17 | | MW-16 | |
| | *Depth:* | | | | | | | | |
| | *Matrix:* | WATER | | WATER | | WATER | | WATER | |
| | *Sampled:* | Mar-12-09 11:43 | | Mar-12-09 13:44 | | Mar-12-09 14:49 | | Mar-12-09 15:55 | |
| **SVOA PAHs List by EPA 8270C** | *Extracted:* | Mar-17-09 09:51 | | Mar-17-09 09:54 | | Mar-17-09 09:57 | | Mar-17-09 10:00 | |
| | *Analyzed:* | Mar-18-09 18:34 | | Mar-18-09 19:17 | | Mar-18-09 20:00 | | Mar-18-09 20:43 | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | mg/L | RL |
| Acenaphthene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Acenaphthylene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Anthracene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Benzo(a)anthracene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Benzo(a)pyrene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Benzo(b)fluoranthene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Benzo(g,h,i)perylene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Benzo(k)fluoranthene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Chrysene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Dibenz(a,h)Anthracene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Fluoranthene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Fluorene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Indeno(1,2,3-c,d)Pyrene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Naphthalene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Phenanthrene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |
| Pyrene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 |





Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 327399
## URS Corporation, Phoenix, AZ

### Project Name: EQPL Basin Jal Pump Station

**Project Id:** 49194426
**Contact:** Iain Olness
**Project Location:**

**Date Received in Lab:** Mar-13-09 10:39 am
**Report Date:** 27-MAR-09
**Project Manager:** Brent Barron, II

| *Analysis Requested* | | | | | |
|---|---|---|---|---|---|
| | *Lab Id:* | 327399-009 | | | |
| | *Field Id:* | Trip Blank | | | |
| | *Depth:* | | | | |
| | *Matrix:* | WATER | | | |
| | *Sampled:* | Mar-10-09 00:00 | | | |
| **BTEX by SW 8260B** | *Extracted:* | Mar-21-09 11:04 | | | |
| | *Analyzed:* | Mar-21-09 15:11 | | | |
| | *Units/RL:* | mg/L RL | | | |
| Benzene | | BRL 0.0010 | | | |
| Toluene | | BRL 0.0010 | | | |
| Ethylbenzene | | BRL 0.0010 | | | |
| m,p-Xylene | | BRL 0.0020 | | | |
| o-Xylene | | BRL 0.0010 | | | |
| Total Xylenes | | BRL 0.0010 | | | |
| Total BTEX | | BRL 0.0010 | | | |





Brent Barron
Odessa Laboratory Director

# Flagging Criteria

**X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

**B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

**D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

**E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

**F** RPD exceeded lab control limits.

**J** The target analyte was positively identified below the MQL and above the SQL.

**U** Analyte was not detected.

**L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

**H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

**K** Sample analyzed outside of recommended hold time.

**JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Outside XENCO's scope of NELAC Accreditation.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| 12600 West I-20 East, Odessa, TX 79765 | (432) 563-1800 | (432) 563-1713 |
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# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327399,

**Project ID:** 49194426

**Lab Batch #:** 753410 **Sample:** 526877-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 11:24

| BTEX by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0429 | 0.0500 | 86 | 70-130 | |
| Dibromofluoromethane | 0.0453 | 0.0500 | 91 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0443 | 0.0500 | 89 | 70-130 | |
| Toluene-D8 | 0.0470 | 0.0500 | 94 | 70-130 | |

**Lab Batch #:** 753410 **Sample:** 526877-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 12:18

| BTEX by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0445 | 0.0500 | 89 | 70-130 | |
| Dibromofluoromethane | 0.0439 | 0.0500 | 88 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0431 | 0.0500 | 86 | 70-130 | |
| Toluene-D8 | 0.0470 | 0.0500 | 94 | 70-130 | |

**Lab Batch #:** 753410 **Sample:** 327183-001 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 13:14

| BTEX by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0463 | 0.0500 | 93 | 70-130 | |
| Dibromofluoromethane | 0.0464 | 0.0500 | 93 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0450 | 0.0500 | 90 | 70-130 | |
| Toluene-D8 | 0.0466 | 0.0500 | 93 | 70-130 | |

**Lab Batch #:** 753410 **Sample:** 327183-001 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 13:37

| BTEX by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0450 | 0.0500 | 90 | 70-130 | |
| Dibromofluoromethane | 0.0461 | 0.0500 | 92 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0435 | 0.0500 | 87 | 70-130 | |
| Toluene-D8 | 0.0468 | 0.0500 | 94 | 70-130 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327399,

**Project ID:** 49194426

**Lab Batch #:** 753410 **Sample:** 327399-001 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 17:34

| BTEX and Oxygenates by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0431 | 0.0500 | 86 | 70-130 | |
| Dibromofluoromethane | 0.0460 | 0.0500 | 92 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0454 | 0.0500 | 91 | 70-130 | |
| Toluene-D8 | 0.0480 | 0.0500 | 96 | 70-130 | |

**Lab Batch #:** 753410 **Sample:** 327399-002 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 17:58

| BTEX and Oxygenates by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0463 | 0.0500 | 93 | 70-130 | |
| Dibromofluoromethane | 0.0468 | 0.0500 | 94 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0438 | 0.0500 | 88 | 70-130 | |
| Toluene-D8 | 0.0462 | 0.0500 | 92 | 70-130 | |

**Lab Batch #:** 753410 **Sample:** 327399-003 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 18:21

| BTEX and Oxygenates by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0430 | 0.0500 | 86 | 70-130 | |
| Dibromofluoromethane | 0.0463 | 0.0500 | 93 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0460 | 0.0500 | 92 | 70-130 | |
| Toluene-D8 | 0.0472 | 0.0500 | 94 | 70-130 | |

**Lab Batch #:** 753410 **Sample:** 327399-004 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 18:45

| BTEX and Oxygenates by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0453 | 0.0500 | 91 | 70-130 | |
| Dibromofluoromethane | 0.0476 | 0.0500 | 95 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0454 | 0.0500 | 91 | 70-130 | |
| Toluene-D8 | 0.0479 | 0.0500 | 96 | 70-130 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327399,

**Project ID:** 49194426

**Lab Batch #:** 753410 **Sample:** 327399-005 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 19:09

| BTEX and Oxygenates by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0429 | 0.0500 | 86 | 70-130 | |
| Dibromofluoromethane | 0.0468 | 0.0500 | 94 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0465 | 0.0500 | 93 | 70-130 | |
| Toluene-D8 | 0.0482 | 0.0500 | 96 | 70-130 | |

**Lab Batch #:** 753410 **Sample:** 327399-006 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 19:33

| BTEX and Oxygenates by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0447 | 0.0500 | 89 | 70-130 | |
| Dibromofluoromethane | 0.0474 | 0.0500 | 95 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0472 | 0.0500 | 94 | 70-130 | |
| Toluene-D8 | 0.0470 | 0.0500 | 94 | 70-130 | |

**Lab Batch #:** 753410 **Sample:** 327399-007 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 19:56

| BTEX and Oxygenates by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0437 | 0.0500 | 87 | 70-130 | |
| Dibromofluoromethane | 0.0462 | 0.0500 | 92 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0444 | 0.0500 | 89 | 70-130 | |
| Toluene-D8 | 0.0473 | 0.0500 | 95 | 70-130 | |

**Lab Batch #:** 753410 **Sample:** 327399-008 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 20:20

| BTEX and Oxygenates by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0433 | 0.0500 | 87 | 70-130 | |
| Dibromofluoromethane | 0.0473 | 0.0500 | 95 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0454 | 0.0500 | 91 | 70-130 | |
| Toluene-D8 | 0.0491 | 0.0500 | 98 | 70-130 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327399,

**Project ID:** 49194426

**Lab Batch #:** 753410 **Sample:** 327399-009 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/21/09 15:11

| BTEX by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0444 | 0.0500 | 89 | 70-130 | |
| Dibromofluoromethane | 0.0455 | 0.0500 | 91 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0439 | 0.0500 | 88 | 70-130 | |
| Toluene-D8 | 0.0487 | 0.0500 | 97 | 70-130 | |

**Lab Batch #:** 753368 **Sample:** 526845-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/17/09 18:37

| SVOA PAHs List by EPA 8270C<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.041 | 0.050 | 82 | 43-116 | |
| 2-Fluorophenol | 0.036 | 0.050 | 72 | 21-100 | |
| Nitrobenzene-d5 | 0.046 | 0.050 | 92 | 35-114 | |
| Phenol-d6 | 0.028 | 0.050 | 56 | 10-94 | |
| Terphenyl-D14 | 0.045 | 0.050 | 90 | 33-141 | |
| 2,4,6-Tribromophenol | 0.033 | 0.050 | 66 | 10-123 | |

**Lab Batch #:** 753368 **Sample:** 526845-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/17/09 19:20

| SVOA PAHs List by EPA 8270C<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.043 | 0.050 | 86 | 43-116 | |
| 2-Fluorophenol | 0.039 | 0.050 | 78 | 21-100 | |
| Nitrobenzene-d5 | 0.049 | 0.050 | 98 | 35-114 | |
| Phenol-d6 | 0.033 | 0.050 | 66 | 10-94 | |
| Terphenyl-D14 | 0.048 | 0.050 | 96 | 33-141 | |
| 2,4,6-Tribromophenol | 0.043 | 0.050 | 86 | 10-123 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327399,

**Project ID:** 49194426

**Lab Batch #:** 753368 **Sample:** 526845-1-BSD / BSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/17/09 20:03

| SVOA PAHs List by EPA 8270C | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fluorobiphenyl | 0.045 | 0.050 | 90 | 43-116 | |
| 2-Fluorophenol | 0.035 | 0.050 | 70 | 21-100 | |
| Nitrobenzene-d5 | 0.049 | 0.050 | 98 | 35-114 | |
| Phenol-d6 | 0.032 | 0.050 | 64 | 10-94 | |
| Terphenyl-D14 | 0.047 | 0.050 | 94 | 33-141 | |
| 2,4,6-Tribromophenol | 0.044 | 0.050 | 88 | 10-123 | |

**Lab Batch #:** 753368 **Sample:** 327399-001 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/18/09 15:42

| SVOA PAHs List by EPA 8270C | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fluorobiphenyl | 0.037 | 0.052 | 71 | 43-116 | |
| 2-Fluorophenol | 0.022 | 0.052 | 42 | 21-100 | |
| Nitrobenzene-d5 | 0.038 | 0.052 | 73 | 35-114 | |
| Phenol-d6 | 0.011 | 0.052 | 21 | 10-94 | |
| Terphenyl-D14 | 0.040 | 0.052 | 77 | 33-141 | |
| 2,4,6-Tribromophenol | 0.042 | 0.052 | 81 | 10-123 | |

**Lab Batch #:** 753368 **Sample:** 327399-002 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/18/09 16:25

| SVOA PAHs List by EPA 8270C | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fluorobiphenyl | 0.038 | 0.055 | 69 | 43-116 | |
| 2-Fluorophenol | 0.027 | 0.055 | 49 | 21-100 | |
| Nitrobenzene-d5 | 0.042 | 0.055 | 76 | 35-114 | |
| Phenol-d6 | 0.016 | 0.055 | 29 | 10-94 | |
| Terphenyl-D14 | 0.046 | 0.055 | 84 | 33-141 | |
| 2,4,6-Tribromophenol | 0.049 | 0.055 | 89 | 10-123 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327399,

**Project ID:** 49194426

**Lab Batch #:** 753368 **Sample:** 327399-003 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/18/09 17:08

| SVOA PAHs List by EPA 8270C | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fluorobiphenyl | 0.037 | 0.051 | 73 | 43-116 | |
| 2-Fluorophenol | 0.022 | 0.051 | 43 | 21-100 | |
| Nitrobenzene-d5 | 0.040 | 0.051 | 78 | 35-114 | |
| Phenol-d6 | 0.013 | 0.051 | 25 | 10-94 | |
| Terphenyl-D14 | 0.042 | 0.051 | 82 | 33-141 | |
| 2,4,6-Tribromophenol | 0.042 | 0.051 | 82 | 10-123 | |

**Lab Batch #:** 753368 **Sample:** 327399-004 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/18/09 17:51

| SVOA PAHs List by EPA 8270C | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fluorobiphenyl | 0.032 | 0.052 | 62 | 43-116 | |
| 2-Fluorophenol | 0.012 | 0.052 | 23 | 21-100 | |
| Nitrobenzene-d5 | 0.031 | 0.052 | 60 | 35-114 | |
| Phenol-d6 | 0.007 | 0.052 | 13 | 10-94 | |
| Terphenyl-D14 | 0.039 | 0.052 | 75 | 33-141 | |
| 2,4,6-Tribromophenol | 0.034 | 0.052 | 65 | 10-123 | |

**Lab Batch #:** 753368 **Sample:** 327399-005 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/18/09 18:34

| SVOA PAHs List by EPA 8270C | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fluorobiphenyl | 0.041 | 0.052 | 79 | 43-116 | |
| 2-Fluorophenol | 0.026 | 0.052 | 50 | 21-100 | |
| Nitrobenzene-d5 | 0.042 | 0.052 | 81 | 35-114 | |
| Phenol-d6 | 0.013 | 0.052 | 25 | 10-94 | |
| Terphenyl-D14 | 0.044 | 0.052 | 85 | 33-141 | |
| 2,4,6-Tribromophenol | 0.044 | 0.052 | 85 | 10-123 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327399,

**Project ID:** 49194426

**Lab Batch #:** 753368 **Sample:** 327399-006 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/18/09 19:17

| SVOA PAHs List by EPA 8270C | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fluorobiphenyl | 0.037 | 0.051 | 73 | 43-116 | |
| 2-Fluorophenol | 0.023 | 0.051 | 45 | 21-100 | |
| Nitrobenzene-d5 | 0.040 | 0.051 | 78 | 35-114 | |
| Phenol-d6 | 0.014 | 0.051 | 27 | 10-94 | |
| Terphenyl-D14 | 0.042 | 0.051 | 82 | 33-141 | |
| 2,4,6-Tribromophenol | 0.042 | 0.051 | 82 | 10-123 | |

**Lab Batch #:** 753368 **Sample:** 327399-007 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/18/09 20:00

| SVOA PAHs List by EPA 8270C | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fluorobiphenyl | 0.042 | 0.052 | 81 | 43-116 | |
| 2-Fluorophenol | 0.025 | 0.052 | 48 | 21-100 | |
| Nitrobenzene-d5 | 0.045 | 0.052 | 87 | 35-114 | |
| Phenol-d6 | 0.013 | 0.052 | 25 | 10-94 | |
| Terphenyl-D14 | 0.045 | 0.052 | 87 | 33-141 | |
| 2,4,6-Tribromophenol | 0.046 | 0.052 | 88 | 10-123 | |

**Lab Batch #:** 753368 **Sample:** 327399-008 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/18/09 20:43

| SVOA PAHs List by EPA 8270C | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fluorobiphenyl | 0.040 | 0.052 | 77 | 43-116 | |
| 2-Fluorophenol | 0.027 | 0.052 | 52 | 21-100 | |
| Nitrobenzene-d5 | 0.042 | 0.052 | 81 | 35-114 | |
| Phenol-d6 | 0.018 | 0.052 | 35 | 10-94 | |
| Terphenyl-D14 | 0.043 | 0.052 | 83 | 33-141 | |
| 2,4,6-Tribromophenol | 0.039 | 0.052 | 75 | 10-123 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Blank Spike Recovery

## Project Name: EQPL Basin Jal Pump Station

**Work Order #:** 327399 **Project ID:** 49194426

**Lab Batch #:** 753410 **Sample:** 526877-1-BKS **Matrix:** Water

**Date Analyzed:** 03/21/2009 **Date Prepared:** 03/21/2009 **Analyst:** PAB

**Reporting Units:** mg/L **Batch #:** 1

| BTEX by SW 8260B<br>Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | BLANK /BLANK SPIKE RECOVERY STUDY | | | | |
| Methyl tert butyl Ether | <0.0050 | 0.5000 | 0.5203 | 104 | 65-135 | |
| Benzene | <0.0010 | 0.1000 | 0.0990 | 99 | 66-142 | |
| Toluene | <0.0010 | 0.1000 | 0.0928 | 93 | 59-139 | |
| Ethylbenzene | <0.0010 | 0.1000 | 0.0941 | 94 | 75-125 | |
| m,p-Xylene | <0.0020 | 0.2000 | 0.1985 | 99 | 75-125 | |
| o-Xylene | <0.0010 | 0.1000 | 0.1026 | 103 | 75-125 | |
| tert-Amyl methyl Ether | <0.005 | 0.500 | 0.566 | 113 | 65-135 | |
| tert-butyl alcohol | <0.010 | 1.00 | 1.20 | 120 | 65-135 | |
| Ethyl tert butyl Ether | <0.005 | 0.500 | 0.489 | 98 | 65-135 | |
| Di Isopropyl Ether | <0.005 | 0.500 | 0.455 | 91 | 65-135 | |

**Lab Batch #:** 753335 **Sample:** 526657-1-BKS **Matrix:** Water

**Date Analyzed:** 03/21/2009 **Date Prepared:** 03/17/2009 **Analyst:** TOH

**Reporting Units:** mg/L **Batch #:** 1

| Dissolved Metals by EPA 6020<br>Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | BLANK /BLANK SPIKE RECOVERY STUDY | | | | |
| Arsenic | <0.002 | 0.050 | 0.050 | 100 | 75-125 | |
| Barium | <0.005 | 0.050 | 0.062 | 124 | 75-125 | |
| Cadmium | <0.001 | 0.020 | 0.021 | 105 | 75-125 | |
| Chromium | <0.003 | 0.050 | 0.042 | 84 | 75-125 | |
| Lead | <0.002 | 0.050 | 0.051 | 102 | 75-125 | |
| Selenium | <0.003 | 0.050 | 0.047 | 94 | 75-125 | |
| Silver | <0.002 | 0.020 | 0.020 | 100 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

# Blank Spike Recovery

## Project Name: EQPL Basin Jal Pump Station

**Work Order #:** 327399 **Project ID:** 49194426

**Lab Batch #:** 753773 **Sample:** 526657-1-BKS **Matrix:** Water

**Date Analyzed:** 03/20/2009 **Date Prepared:** 03/17/2009 **Analyst:** MCH

**Reporting Units:** mg/L **Batch #:** 1

| Dissolved Metals by EPA 6020<br>Analytes | Blank Result [A] | BLANK /BLANK SPIKE RECOVERY STUDY<br>Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| Arsenic | <0.002 | 0.050 | 0.052 | 104 | 75-125 | |
| Barium | <0.005 | 0.050 | 0.051 | 102 | 75-125 | |
| Cadmium | <0.001 | 0.020 | 0.021 | 105 | 75-125 | |
| Chromium | <0.003 | 0.050 | 0.048 | 96 | 75-125 | |
| Lead | <0.002 | 0.050 | 0.042 | 84 | 75-125 | |
| Selenium | <0.003 | 0.050 | 0.054 | 108 | 75-125 | |
| Silver | <0.002 | 0.020 | 0.021 | 105 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

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# BS / BSD Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Order #:** 327399 **Project ID:** 49194426

**Analyst:** DAT **Date Prepared:** 03/19/2009 **Date Analyzed:** 03/19/2009

**Lab Batch ID:** 753006 **Sample:** 526644-1-BKS **Batch #:** 1 **Matrix:** Water

**Units:** mg/L

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

| Dissolved Mercury by EPA 7470A<br>Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Blk. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.0001 | 0.0050 | 0.0053 | 106 | 0.005 | 0.0052 | 104 | 2 | 75-125 | 20 | |

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

# BS / BSD Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Order #:** 327399 **Project ID:** 49194426

**Analyst:** CLR **Date Prepared:** 03/17/2009 **Date Analyzed:** 03/17/2009

**Lab Batch ID:** 753368 **Sample:** 526845-1-BKS **Batch #:** 1 **Matrix:** Water

**Units:** mg/L

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

| SVOA PAHs List by EPA 8270C<br>Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Blk. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | <0.005 | 0.050 | 0.049 | 98 | 0.05 | 0.051 | 102 | 4 | 54-114 | 25 | |
| Acenaphthylene | <0.005 | 0.050 | 0.049 | 98 | 0.05 | 0.048 | 96 | 2 | 53-113 | 25 | |
| Anthracene | <0.005 | 0.050 | 0.048 | 96 | 0.05 | 0.048 | 96 | 0 | 56-116 | 25 | |
| Benzo(a)anthracene | <0.005 | 0.050 | 0.051 | 102 | 0.05 | 0.050 | 100 | 2 | 59-116 | 25 | |
| Benzo(a)pyrene | <0.005 | 0.050 | 0.049 | 98 | 0.05 | 0.049 | 98 | 0 | 58-118 | 25 | |
| Benzo(b)fluoranthene | <0.005 | 0.050 | 0.048 | 96 | 0.05 | 0.053 | 106 | 10 | 54-123 | 25 | |
| Benzo(g,h,i)perylene | <0.005 | 0.050 | 0.033 | 66 | 0.05 | 0.035 | 70 | 6 | 47-129 | 25 | |
| Benzo(k)fluoranthene | <0.005 | 0.050 | 0.050 | 100 | 0.05 | 0.054 | 108 | 8 | 52-122 | 25 | |
| Chrysene | <0.005 | 0.050 | 0.050 | 100 | 0.05 | 0.049 | 98 | 2 | 58-116 | 25 | |
| Dibenz(a,h)Anthracene | <0.005 | 0.050 | 0.033 | 66 | 0.05 | 0.036 | 72 | 9 | 46-131 | 25 | |
| Fluoranthene | <0.005 | 0.050 | 0.048 | 96 | 0.05 | 0.048 | 96 | 0 | 55-120 | 25 | |
| Fluorene | <0.005 | 0.050 | 0.048 | 96 | 0.05 | 0.049 | 98 | 2 | 56-114 | 25 | |
| Indeno(1,2,3-c,d)Pyrene | <0.005 | 0.050 | 0.040 | 80 | 0.05 | 0.042 | 84 | 5 | 44-132 | 25 | |
| Naphthalene | <0.005 | 0.050 | 0.047 | 94 | 0.05 | 0.048 | 96 | 2 | 53-110 | 25 | |
| Phenanthrene | <0.005 | 0.050 | 0.048 | 96 | 0.05 | 0.049 | 98 | 2 | 56-116 | 25 | |
| Pyrene | <0.005 | 0.050 | 0.049 | 98 | 0.05 | 0.051 | 102 | 4 | 57-119 | 25 | |

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

# Form 3 - MS / MSD Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Order # :** 327399 **Project ID:** 49194426

**Lab Batch ID:** 753410 **QC- Sample ID:** 327183-001 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 03/21/2009 **Date Prepared:** 03/21/2009 **Analyst:** PAB

**Reporting Units:** mg/L

| BTEX by SW 8260B Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Methyl tert butyl Ether | <0.0050 | 0.5000 | 0.5387 | 108 | 0.5000 | 0.4810 | 96 | 11 | 65-135 | 20 | |
| Benzene | 0.0123 | 0.1000 | 0.1208 | 109 | 0.1000 | 0.1045 | 92 | 14 | 66-142 | 20 | |
| Toluene | <0.0010 | 0.1000 | 0.1079 | 108 | 0.1000 | 0.0898 | 90 | 18 | 59-139 | 20 | |
| Ethylbenzene | 0.0358 | 0.1000 | 0.1520 | 116 | 0.1000 | 0.1298 | 94 | 16 | 75-125 | 20 | |
| m,p-Xylene | 0.0139 | 0.2000 | 0.2416 | 114 | 0.2000 | 0.2032 | 95 | 17 | 75-125 | 20 | |
| o-Xylene | 0.0030 | 0.1000 | 0.1217 | 119 | 0.1000 | 0.1019 | 99 | 18 | 75-125 | 20 | |
| tert-Amyl methyl Ether | <0.005 | 0.500 | 0.579 | 116 | 0.500 | 0.507 | 101 | 13 | 65-135 | 20 | |
| tert-butyl alcohol | <0.010 | 1.00 | 1.03 | 103 | 1.00 | 0.921 | 92 | 11 | 65-135 | 20 | |
| Ethyl tert butyl Ether | <0.005 | 0.500 | 0.528 | 106 | 0.500 | 0.467 | 93 | 12 | 65-135 | 20 | |
| Di Isopropyl Ether | <0.005 | 0.500 | 0.494 | 99 | 0.500 | 0.437 | 87 | 12 | 65-135 | 20 | |

**Lab Batch ID:** 753006 **QC- Sample ID:** 327258-002 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 03/19/2009 **Date Prepared:** 03/19/2009 **Analyst:** DAT

**Reporting Units:** mg/L

| Dissolved Mercury by EPA 7470A Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Mercury | <0.0001 | 0.0050 | 0.0053 | 106 | 0.0050 | 0.0055 | 110 | 4 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

# Form 3 - MS / MSD Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Order # :** 327399 **Project ID:** 49194426

**Lab Batch ID:** 753773 **QC- Sample ID:** 327335-001 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 03/20/2009 **Date Prepared:** 03/17/2009 **Analyst:** MCH

**Reporting Units:** mg/L

| Dissolved Metals by EPA 6020<br>Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Arsenic | 0.013 | 0.250 | 0.234 | 88 | 0.250 | 0.237 | 90 | 1 | 75-125 | 25 | |
| Barium | 0.025 | 0.250 | 0.269 | 98 | 0.250 | 0.280 | 102 | 4 | 75-125 | 25 | |
| Cadmium | <0.005 | 0.100 | 0.085 | 85 | 0.100 | 0.088 | 88 | 3 | 75-125 | 25 | |
| Chromium | <0.015 | 0.250 | 0.246 | 98 | 0.250 | 0.241 | 96 | 2 | 75-125 | 25 | |
| Lead | <0.010 | 0.250 | 0.215 | 86 | 0.250 | 0.216 | 86 | 0 | 75-125 | 25 | |
| Selenium | <0.015 | 0.250 | 0.184 | 74 | 0.250 | 0.186 | 74 | 1 | 75-125 | 25 | X |
| Silver | <0.010 | 0.100 | 0.085 | 85 | 0.100 | 0.088 | 88 | 3 | 75-125 | 25 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

# Sample Duplicate Recovery

## Project Name: EQPL Basin Jal Pump Station

**Work Order #:** 327399

**Lab Batch #:** 753773 **Project ID:** 49194426

**Date Analyzed:** 03/20/2009 **Date Prepared:** 03/17/2009 **Analyst:** MCH

**QC- Sample ID:** 327335-001 D **Batch #:** 1 **Matrix:** Water

**Reporting Units:** mg/L

| Dissolved Metals by EPA 6020 | SAMPLE / SAMPLE DUPLICATE RECOVERY | | | | |
|---|---|---|---|---|---|
| Analyte | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Arsenic | 0.013 | 0.012 | 8 | 25 | |
| Barium | 0.025 | 0.027 | 8 | 25 | |
| Cadmium | <0.005 | <0.005 | NC | 25 | |
| Chromium | <0.015 | <0.015 | NC | 25 | |
| Lead | <0.010 | <0.010 | NC | 25 | |
| Selenium | <0.015 | <0.015 | NC | 25 | |
| Silver | <0.010 | <0.010 | NC | 25 | |

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

# Shell Oil Products Chain Of Custody Record

**LAB (LOCATION)**
- [x] XENCO (_____)
- [ ] CALSCIENCE (_____)
- [ ] TEST AMERICA (_____)
- [ ] SPL (_____)
- [ ] OTHER (_____)

**Please Check Appropriate Box:**
- [ ] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [ ] CONSULTANT
- [ ] LUBES
- [x] SHELL PIPELINE
- [ ] OTHER _____

Print Bill To Contact Name: Kenneth Springer

INCIDENT # (ENV. SERVICES): 3 0 0 1 4 3

PO #:

SAP #: 7 2 0 8 0 3 7

- [ ] CHECK IF NO INCIDENT # APPLIES

DATE: 3/13/09

PAGE: 1 of 1

CONSULTANT COMPANY: URS Corporation

ADDRESS: 7720 N. 16th Street, Suite 100

CITY: Phoenix, AZ 85020

TELEPHONE: (602) 648-2402 | FAX: (602) 371-1615 | E-MAIL: iain_olness@urscorp.com

SITE ADDRESS (Street, City and State): EQPL Basin Jal Pump Station

CONSULTANT PROJECT CONTACT (Report to): Iain Olness

CONSULTANT PROJECT NO.: 49194426

SAMPLER NAME(S) (Print): John Savoie

LAB USE ONLY: 327399

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

DELIVERABLES:
- [ ] LEVEL 1
- [x] LEVEL 2
- [ ] LEVEL 3
- [ ] LEVEL 4
- [ ] OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C°: Cooler #1 -1.0 (not noted) | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:

Send edd to jsavoie@h2altd.com

Metals samples were field filtered. w/ labels no seals

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | BTEX 8260B | Oxygenates (5) 8260 | Dissolved Metals (8) | PAH | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | MW-01 | 3/11/09 | 1342 | WATER | X | X | | | | 5 | X | X | X | X | |
| 02 | MW-05 | 3/11/09 | 1445 | WATER | X | X | | | | 5 | X | X | X | X | |
| 03 | MW-11 | 3/12/09 | 912 | WATER | X | X | | | | 5 | X | X | X | X | |
| 04 | MW-15 | 3/12/09 | 1034 | WATER | X | X | | | | 5 | X | X | X | X | |
| 05 | MW-13 | 3/12/09 | 1143 | WATER | X | X | | | | 5 | X | X | X | X | |
| 06 | MW-21 | 3/12/09 | 1344 | WATER | X | X | | | | 5 | X | X | X | X | |
| 07 | MW-17 | 3/12/09 | 1449 | WATER | X | X | | | | 5 | X | X | X | X | |
| 08 | MW-16 | 3/12/09 | 1555 | WATER | X | X | | | | 5 | X | X | X | X | |
| 09 | TRIP BLANK | | | WATER | X | | | | | 3 | X | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | | Date: 3-13-09 | Time: 1012 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) Andrea Sam | Date: 3-13-09 | Time: 10:12 |

05/2/08 Revision

# Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: URS

Date/ Time: 3·13·09 10:12

Lab ID # : 327399

Initials: aL

## Sample Receipt Checklist

| | | | | not frozen | Client Initials |
|---|---|---|---|---|---|
| #1 | Temperature of container/ cooler? | (Yes) | No | -1.0 °C | |
| #2 | Shipping container in good condition? | (Yes) | No | | |
| #3 | Custody Seals intact on shipping container/ cooler? | Yes | No | (Not Present) | |
| #4 | Custody Seals intact on sample bottles/ container? | Yes | No | (Not Present) | |
| #5 | Chain of Custody present? | (Yes) | No | | |
| #6 | Sample instructions complete of Chain of Custody? | (Yes) | No | | |
| #7 | Chain of Custody signed when relinquished/ received? | (Yes) | No | | |
| #8 | Chain of Custody agrees with sample label(s)? | (Yes) | No | ID written on Cont./ Lid | |
| #9 | Container label(s) legible and intact? | (Yes) | No | Not Applicable | |
| #10 | Sample matrix/ properties agree with Chain of Custody? | (Yes) | No | | |
| #11 | Containers supplied by ELOT? | (Yes) | No | | |
| #12 | Samples in proper container/ bottle? | (Yes) | No | See Below | |
| #13 | Samples properly preserved? | (Yes) | No | See Below | |
| #14 | Sample bottles intact? | (Yes) | No | | |
| #15 | Preservations documented on Chain of Custody? | (Yes) | No | | |
| #16 | Containers documented on Chain of Custody? | (Yes) | No | | |
| #17 | Sufficient sample amount for indicated test(s)? | (Yes) | No | See Below | |
| #18 | All samples received within sufficient hold time? | (Yes) | No | See Below | |
| #19 | Subcontract of sample(s)? | Yes | No | (Not Applicable) | |
| #20 | VOC samples have zero headspace? | (Yes) | No | Not Applicable | |

## Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

# Analytical Report 327587

## for

## URS Corporation

**Project Manager: Iain Olness**

**EQPL Basin Jal Pump Station**

**49194426**

**31-MAR-09**

**12600 West I-20 East Odessa, Texas 79765**

Texas certification numbers:
Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Miramar, FL E86349
Norcross(Atlanta), GA E87429

South Carolina certification numbers:
Norcross(Atlanta), GA 98015

North Carolina certification numbers:
Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

31-MAR-09

Project Manager: **Iain Olness**
**URS Corporation**
7720 N. 16th St. Suite100
Phoenix, AZ 85020

Reference: XENCO Report No: **327587**
**EQPL Basin Jal Pump Station**
Project Address:

**Iain Olness**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 327587. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 327587 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron, II**
Odessa Laboratory Manager

# Sample Cross Reference 327587

## URS Corporation, Phoenix, AZ

EQPL Basin Jal Pump Station

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| MW-23 | W | Mar-14-09 09:18 | | 327587-001 |
| MW-24 | W | Mar-14-09 10:48 | | 327587-002 |
| MW-10 | W | Mar-14-09 12:04 | | 327587-003 |
| Trip Blank | W | Mar-14-09 00:00 | | 327587-004 |

# Certificate of Analysis Summary 327587
## URS Corporation, Phoenix, AZ

### Project Name: EQPL Basin Jal Pump Station

**Project Id:** 49194426
**Contact:** Iain Olness
**Project Location:**

**Date Received in Lab:** Mar-16-09 10:15 am
**Report Date:** 31-MAR-09
**Project Manager:** Brent Barron, II

| *Analysis Requested* | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 327587-001 | | 327587-002 | | 327587-003 | | 327587-004 | | | |
| | *Field Id:* | MW-23 | | MW-24 | | MW-10 | | Trip Blank | | | |
| | *Depth:* | | | | | | | | | | |
| | *Matrix:* | WATER | | WATER | | WATER | | WATER | | | |
| | *Sampled:* | Mar-14-09 09:18 | | Mar-14-09 10:48 | | Mar-14-09 12:04 | | Mar-14-09 00:00 | | | |
| **BTEX and Oxygenates by SW 8260B** | *Extracted:* | Mar-28-09 08:36 | | Mar-28-09 08:38 | | Mar-28-09 08:40 | | | | | |
| | *Analyzed:* | Mar-28-09 12:37 | | Mar-28-09 12:59 | | Mar-28-09 13:21 | | | | | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | | | | |
| Methyl tert butyl Ether | | BRL | 0.0050 | BRL | 0.0050 | BRL | 0.0050 | | | | |
| Benzene | | BRL | 0.0010 | 0.0355 | 0.0010 | BRL | 0.0010 | | | | |
| Toluene | | BRL | 0.0010 | BRL | 0.0010 | BRL | 0.0010 | | | | |
| Ethylbenzene | | BRL | 0.0010 | 0.0377 | 0.0010 | BRL | 0.0010 | | | | |
| m,p-Xylene | | BRL | 0.0020 | 0.0025 | 0.0020 | BRL | 0.0020 | | | | |
| o-Xylene | | BRL | 0.0010 | 0.0071 | 0.0010 | BRL | 0.0010 | | | | |
| tert-Amyl methyl Ether | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | | | | |
| tert-butyl alcohol | | BRL | 0.010 | 0.074 | 0.010 | BRL | 0.010 | | | | |
| Ethyl tert butyl Ether | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | | | | |
| Di Isopropyl Ether | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | | | | |
| **BTEX by SW 8260B** | *Extracted:* | | | | | | | Mar-27-09 16:18 | | | |
| | *Analyzed:* | | | | | | | Mar-27-09 20:14 | | | |
| | *Units/RL:* | | | | | | | mg/L | RL | | |
| Benzene | | | | | | | | BRL | 0.0010 | | |
| Toluene | | | | | | | | BRL | 0.0010 | | |
| Ethylbenzene | | | | | | | | BRL | 0.0010 | | |
| m,p-Xylene | | | | | | | | BRL | 0.0020 | | |
| o-Xylene | | | | | | | | BRL | 0.0010 | | |
| Total Xylenes | | | | | | | | BRL | 0.0010 | | |
| Total BTEX | | | | | | | | BRL | 0.0010 | | |
| **Dissolved Mercury by EPA 7470A** | *Extracted:* | Mar-20-09 07:00 | | Mar-20-09 07:00 | | Mar-20-09 07:00 | | | | | |
| | *Analyzed:* | Mar-20-09 13:23 | | Mar-20-09 13:28 | | Mar-20-09 13:29 | | | | | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | | | | |
| Mercury | | BRL | 0.0001 | 0.0002 | 0.0001 | 0.0001 | 0.0001 | | | | |
| **Dissolved Metals by EPA 6020** | *Extracted:* | Mar-17-09 12:00 | | Mar-17-09 12:00 | | Mar-17-09 12:00 | | | | | |
| | *Analyzed:* | Mar-27-09 17:32 | | Mar-27-09 17:36 | | Mar-27-09 17:41 | | | | | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | | | | |
| Arsenic | | 0.013 | 0.002 | 0.011 | 0.002 | 0.012 | 0.002 | | | | |
| Barium | | 0.056 | 0.005 | 0.060 | 0.005 | 0.299 | 0.005 | | | | |
| Cadmium | | BRL | 0.001 | BRL | 0.001 | BRL | 0.001 | | | | |
| Chromium | | BRL | 0.003 | BRL | 0.003 | BRL | 0.003 | | | | |
| Lead | | BRL | 0.002 | BRL | 0.002 | BRL | 0.002 | | | | |
| Selenium | | 0.008 | 0.003 | BRL | 0.003 | BRL | 0.003 | | | | |
| Silver | | BRL | 0.002 | BRL | 0.002 | BRL | 0.002 | | | | |





Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 327587
## URS Corporation, Phoenix, AZ

### Project Name: EQPL Basin Jal Pump Station

**Project Id:** 49194426
**Contact:** Iain Olness
**Project Location:**

**Date Received in Lab:** Mar-16-09 10:15 am
**Report Date:** 31-MAR-09
**Project Manager:** Brent Barron, II

| *Analysis Requested* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 327587-001 | | 327587-002 | | 327587-003 | | 327587-004 |
| | ***Field Id:*** | MW-23 | | MW-24 | | MW-10 | | Trip Blank |
| | ***Depth:*** | | | | | | | |
| | ***Matrix:*** | WATER | | WATER | | WATER | | WATER |
| | ***Sampled:*** | Mar-14-09 09:18 | | Mar-14-09 10:48 | | Mar-14-09 12:04 | | Mar-14-09 00:00 |
| **SVOA PAHs List by EPA 8270C** | ***Extracted:*** | Mar-17-09 10:03 | | Mar-17-09 10:06 | | Mar-17-09 10:09 | | |
| | ***Analyzed:*** | Mar-18-09 21:26 | | Mar-18-09 22:09 | | Mar-18-09 22:52 | | |
| | ***Units/RL:*** | mg/L | RL | mg/L | RL | mg/L | RL | |
| Acenaphthene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Acenaphthylene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Anthracene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Benzo(a)anthracene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Benzo(a)pyrene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Benzo(b)fluoranthene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Benzo(g,h,i)perylene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Benzo(k)fluoranthene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Chrysene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Dibenz(a,h)Anthracene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Fluoranthene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Fluorene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Indeno(1,2,3-c,d)Pyrene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Naphthalene | | BRL | 0.005 | 0.006 | 0.005 | BRL | 0.005 | |
| Phenanthrene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |
| Pyrene | | BRL | 0.005 | BRL | 0.005 | BRL | 0.005 | |





Brent Barron
Odessa Laboratory Director

# Flagging Criteria

**X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

**B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

**D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

**E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

**F** RPD exceeded lab control limits.

**J** The target analyte was positively identified below the MQL and above the SQL.

**U** Analyte was not detected.

**L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

**H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

**K** Sample analyzed outside of recommended hold time.

**JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Outside XENCO's scope of NELAC Accreditation.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327587,

**Project ID:** 49194426

**Lab Batch #:** 754359 **Sample:** 527437-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/28/09 09:07

| BTEX and Oxygenates by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0458 | 0.0500 | 92 | 70-130 | |
| Dibromofluoromethane | 0.0465 | 0.0500 | 93 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0467 | 0.0500 | 93 | 70-130 | |
| Toluene-D8 | 0.0510 | 0.0500 | 102 | 70-130 | |

**Lab Batch #:** 754359 **Sample:** 527437-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/28/09 09:59

| BTEX and Oxygenates by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0510 | 0.0500 | 102 | 70-130 | |
| Dibromofluoromethane | 0.0502 | 0.0500 | 100 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0524 | 0.0500 | 105 | 70-130 | |
| Toluene-D8 | 0.0490 | 0.0500 | 98 | 70-130 | |

**Lab Batch #:** 754359 **Sample:** 327587-001 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/28/09 12:37

| BTEX and Oxygenates by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0513 | 0.0500 | 103 | 70-130 | |
| Dibromofluoromethane | 0.0539 | 0.0500 | 108 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0534 | 0.0500 | 107 | 70-130 | |
| Toluene-D8 | 0.0511 | 0.0500 | 102 | 70-130 | |

**Lab Batch #:** 754359 **Sample:** 327587-002 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/28/09 12:59

| BTEX and Oxygenates by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0457 | 0.0500 | 91 | 70-130 | |
| Dibromofluoromethane | 0.0569 | 0.0500 | 114 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0534 | 0.0500 | 107 | 70-130 | |
| Toluene-D8 | 0.0466 | 0.0500 | 93 | 70-130 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327587,

**Project ID:** 49194426

**Lab Batch #:** 754359 **Sample:** 327587-003 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/28/09 13:21

| BTEX and Oxygenates by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0493 | 0.0500 | 99 | 70-130 | |
| Dibromofluoromethane | 0.0536 | 0.0500 | 107 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0530 | 0.0500 | 106 | 70-130 | |
| Toluene-D8 | 0.0496 | 0.0500 | 99 | 70-130 | |

**Lab Batch #:** 754359 **Sample:** 327847-003 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/28/09 15:32

| BTEX and Oxygenates by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0500 | 0.0500 | 100 | 70-130 | |
| Dibromofluoromethane | 0.0552 | 0.0500 | 110 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0540 | 0.0500 | 108 | 70-130 | |
| Toluene-D8 | 0.0529 | 0.0500 | 106 | 70-130 | |

**Lab Batch #:** 754359 **Sample:** 327847-003 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/28/09 15:54

| BTEX and Oxygenates by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0512 | 0.0500 | 102 | 70-130 | |
| Dibromofluoromethane | 0.0511 | 0.0500 | 102 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0518 | 0.0500 | 104 | 70-130 | |
| Toluene-D8 | 0.0527 | 0.0500 | 105 | 70-130 | |

**Lab Batch #:** 754167 **Sample:** 527332-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/27/09 16:04

| BTEX by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0488 | 0.0500 | 98 | 70-130 | |
| Dibromofluoromethane | 0.0471 | 0.0500 | 94 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0487 | 0.0500 | 97 | 70-130 | |
| Toluene-D8 | 0.0502 | 0.0500 | 100 | 70-130 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327587,

**Project ID:** 49194426

**Lab Batch #:** 754167 **Sample:** 527332-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/27/09 16:56

| BTEX by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0519 | 0.0500 | 104 | 70-130 | |
| Dibromofluoromethane | 0.0526 | 0.0500 | 105 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0523 | 0.0500 | 105 | 70-130 | |
| Toluene-D8 | 0.0501 | 0.0500 | 100 | 70-130 | |

**Lab Batch #:** 754167 **Sample:** 327662-001 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/27/09 17:40

| BTEX by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0493 | 0.0500 | 99 | 70-130 | |
| Dibromofluoromethane | 0.0507 | 0.0500 | 101 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0501 | 0.0500 | 100 | 70-130 | |
| Toluene-D8 | 0.0526 | 0.0500 | 105 | 70-130 | |

**Lab Batch #:** 754167 **Sample:** 327662-001 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/27/09 18:01

| BTEX by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0473 | 0.0500 | 95 | 70-130 | |
| Dibromofluoromethane | 0.0493 | 0.0500 | 99 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0494 | 0.0500 | 99 | 70-130 | |
| Toluene-D8 | 0.0501 | 0.0500 | 100 | 70-130 | |

**Lab Batch #:** 754167 **Sample:** 327587-004 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/27/09 20:14

| BTEX by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0527 | 0.0500 | 105 | 70-130 | |
| Dibromofluoromethane | 0.0577 | 0.0500 | 115 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0560 | 0.0500 | 112 | 70-130 | |
| Toluene-D8 | 0.0516 | 0.0500 | 103 | 70-130 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327587,  **Project ID:** 49194426

**Lab Batch #:** 750046  **Sample:** ICB-BLK / ICB  **Batch:** 1  **Matrix:** Water

**Units:** mg/L  **Date Analyzed:** 01/23/09 11:03

| BTEX-MTBE by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0498 | 0.0500 | 100 | 70-130 | |
| Dibromofluoromethane | 0.0502 | 0.0500 | 100 | 70-130 | |
| 1,2-Dichloroethane-D4 | 0.0502 | 0.0500 | 100 | 70-130 | |
| Toluene-D8 | 0.0506 | 0.0500 | 101 | 70-130 | |

**Lab Batch #:** 753368  **Sample:** 526845-1-BLK / BLK  **Batch:** 1  **Matrix:** Water

**Units:** mg/L  **Date Analyzed:** 03/17/09 18:37

| SVOA PAHs List by EPA 8270C<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.041 | 0.050 | 82 | 43-116 | |
| 2-Fluorophenol | 0.036 | 0.050 | 72 | 21-100 | |
| Nitrobenzene-d5 | 0.046 | 0.050 | 92 | 35-114 | |
| Phenol-d6 | 0.028 | 0.050 | 56 | 10-94 | |
| Terphenyl-D14 | 0.045 | 0.050 | 90 | 33-141 | |
| 2,4,6-Tribromophenol | 0.033 | 0.050 | 66 | 10-123 | |

**Lab Batch #:** 753368  **Sample:** 526845-1-BKS / BKS  **Batch:** 1  **Matrix:** Water

**Units:** mg/L  **Date Analyzed:** 03/17/09 19:20

| SVOA PAHs List by EPA 8270C<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.043 | 0.050 | 86 | 43-116 | |
| 2-Fluorophenol | 0.039 | 0.050 | 78 | 21-100 | |
| Nitrobenzene-d5 | 0.049 | 0.050 | 98 | 35-114 | |
| Phenol-d6 | 0.033 | 0.050 | 66 | 10-94 | |
| Terphenyl-D14 | 0.048 | 0.050 | 96 | 33-141 | |
| 2,4,6-Tribromophenol | 0.043 | 0.050 | 86 | 10-123 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327587,

**Project ID:** 49194426

**Lab Batch #:** 753368 **Sample:** 526845-1-BSD / BSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/17/09 20:03

| SVOA PAHs List by EPA 8270C<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.045 | 0.050 | 90 | 43-116 | |
| 2-Fluorophenol | 0.035 | 0.050 | 70 | 21-100 | |
| Nitrobenzene-d5 | 0.049 | 0.050 | 98 | 35-114 | |
| Phenol-d6 | 0.032 | 0.050 | 64 | 10-94 | |
| Terphenyl-D14 | 0.047 | 0.050 | 94 | 33-141 | |
| 2,4,6-Tribromophenol | 0.044 | 0.050 | 88 | 10-123 | |

**Lab Batch #:** 753368 **Sample:** 327587-001 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/18/09 21:26

| SVOA PAHs List by EPA 8270C<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.044 | 0.051 | 86 | 43-116 | |
| 2-Fluorophenol | 0.026 | 0.051 | 51 | 21-100 | |
| Nitrobenzene-d5 | 0.048 | 0.051 | 94 | 35-114 | |
| Phenol-d6 | 0.017 | 0.051 | 33 | 10-94 | |
| Terphenyl-D14 | 0.046 | 0.051 | 90 | 33-141 | |
| 2,4,6-Tribromophenol | 0.049 | 0.051 | 96 | 10-123 | |

**Lab Batch #:** 753368 **Sample:** 327587-002 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/18/09 22:09

| SVOA PAHs List by EPA 8270C<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 2-Fluorobiphenyl | 0.033 | 0.050 | 66 | 43-116 | |
| 2-Fluorophenol | 0.025 | 0.050 | 50 | 21-100 | |
| Nitrobenzene-d5 | 0.044 | 0.050 | 88 | 35-114 | |
| Phenol-d6 | 0.014 | 0.050 | 28 | 10-94 | |
| Terphenyl-D14 | 0.042 | 0.050 | 84 | 33-141 | |
| 2,4,6-Tribromophenol | 0.053 | 0.050 | 106 | 10-123 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Orders :** 327587,

**Project ID:** 49194426

**Lab Batch #:** 753368 **Sample:** 327587-003 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 03/18/09 22:52

| SVOA PAHs List by EPA 8270C | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 2-Fluorobiphenyl | 0.042 | 0.053 | 79 | 43-116 | |
| 2-Fluorophenol | 0.025 | 0.053 | 47 | 21-100 | |
| Nitrobenzene-d5 | 0.045 | 0.053 | 85 | 35-114 | |
| Phenol-d6 | 0.016 | 0.053 | 30 | 10-94 | |
| Terphenyl-D14 | 0.046 | 0.053 | 87 | 33-141 | |
| 2,4,6-Tribromophenol | 0.053 | 0.053 | 100 | 10-123 | |

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Blank Spike Recovery

## Project Name: EQPL Basin Jal Pump Station

**Work Order #:** 327587 **Project ID:** 49194426

**Lab Batch #:** 754359 **Sample:** 527437-1-BKS **Matrix:** Water

**Date Analyzed:** 03/28/2009 **Date Prepared:** 03/28/2009 **Analyst:** PAB

**Reporting Units:** mg/L **Batch #:** 1

| BTEX and Oxygenates by SW 8260B<br>Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | BLANK /BLANK SPIKE RECOVERY STUDY | | | | |
| Methyl tert butyl Ether | <0.0050 | 0.5000 | 0.4827 | 97 | 65-135 | |
| Benzene | <0.0010 | 0.1000 | 0.0917 | 92 | 66-142 | |
| Toluene | <0.0010 | 0.1000 | 0.0979 | 98 | 59-139 | |
| Ethylbenzene | <0.0010 | 0.1000 | 0.0985 | 99 | 75-125 | |
| m,p-Xylene | <0.0020 | 0.2000 | 0.1978 | 99 | 75-125 | |
| o-Xylene | <0.0010 | 0.1000 | 0.1033 | 103 | 75-125 | |
| tert-Amyl methyl Ether | <0.005 | 0.500 | 0.493 | 99 | 65-135 | |
| tert-butyl alcohol | <0.010 | 1.00 | 0.985 | 99 | 65-135 | |
| Ethyl tert butyl Ether | <0.005 | 0.500 | 0.480 | 96 | 65-135 | |
| Di Isopropyl Ether | <0.005 | 0.500 | 0.476 | 95 | 65-135 | |

**Lab Batch #:** 754167 **Sample:** 527332-1-BKS **Matrix:** Water

**Date Analyzed:** 03/27/2009 **Date Prepared:** 03/27/2009 **Analyst:** PAB

**Reporting Units:** mg/L **Batch #:** 1

| BTEX by SW 8260B<br>Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | BLANK /BLANK SPIKE RECOVERY STUDY | | | | |
| Benzene | <0.0010 | 0.1000 | 0.0839 | 84 | 66-142 | |
| Toluene | <0.0010 | 0.1000 | 0.0911 | 91 | 59-139 | |
| Ethylbenzene | <0.0010 | 0.1000 | 0.0940 | 94 | 75-125 | |
| m,p-Xylene | <0.0020 | 0.2000 | 0.1862 | 93 | 75-125 | |
| o-Xylene | <0.0010 | 0.1000 | 0.0940 | 94 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

# Blank Spike Recovery

## Project Name: EQPL Basin Jal Pump Station

**Work Order #:** 327587 **Project ID:** 49194426

**Lab Batch #:** 754218 **Sample:** 527364-1-BKS **Matrix:** Water

**Date Analyzed:** 03/27/2009 **Date Prepared:** 03/17/2009 **Analyst:** HAT

**Reporting Units:** mg/L **Batch #:** 1

| Dissolved Metals by EPA 6020<br>Analytes | Blank Result [A] | BLANK /BLANK SPIKE RECOVERY STUDY<br>Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| Arsenic | <0.002 | 0.050 | 0.051 | 102 | 75-125 | |
| Barium | <0.005 | 0.050 | 0.052 | 104 | 75-125 | |
| Cadmium | <0.001 | 0.020 | 0.021 | 105 | 75-125 | |
| Chromium | <0.003 | 0.050 | 0.045 | 90 | 75-125 | |
| Lead | <0.002 | 0.050 | 0.050 | 100 | 75-125 | |
| Selenium | <0.003 | 0.050 | 0.051 | 102 | 75-125 | |
| Silver | <0.002 | 0.020 | 0.021 | 105 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

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# BS / BSD Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Order #:** 327587 **Project ID:** 49194426

**Analyst:** DAT **Date Prepared:** 03/20/2009 **Date Analyzed:** 03/20/2009

**Lab Batch ID:** 753158 **Sample:** 526737-1-BKS **Batch #:** 1 **Matrix:** Water

**Units:** mg/L

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

| Dissolved Mercury by EPA 7470A<br>Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Blk. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.0001 | 0.0050 | 0.0051 | 102 | 0.005 | 0.0049 | 98 | 4 | 75-125 | 20 | |

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

# BS / BSD Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Order #:** 327587 **Project ID:** 49194426

**Analyst:** CLR **Date Prepared:** 03/17/2009 **Date Analyzed:** 03/17/2009

**Lab Batch ID:** 753368 **Sample:** 526845-1-BKS **Batch #:** 1 **Matrix:** Water

**Units:** mg/L

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

| SVOA PAHs List by EPA 8270C<br>Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Blk. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | <0.005 | 0.050 | 0.049 | 98 | 0.05 | 0.051 | 102 | 4 | 54-114 | 25 | |
| Acenaphthylene | <0.005 | 0.050 | 0.049 | 98 | 0.05 | 0.048 | 96 | 2 | 53-113 | 25 | |
| Anthracene | <0.005 | 0.050 | 0.048 | 96 | 0.05 | 0.048 | 96 | 0 | 56-116 | 25 | |
| Benzo(a)anthracene | <0.005 | 0.050 | 0.051 | 102 | 0.05 | 0.050 | 100 | 2 | 59-116 | 25 | |
| Benzo(a)pyrene | <0.005 | 0.050 | 0.049 | 98 | 0.05 | 0.049 | 98 | 0 | 58-118 | 25 | |
| Benzo(b)fluoranthene | <0.005 | 0.050 | 0.048 | 96 | 0.05 | 0.053 | 106 | 10 | 54-123 | 25 | |
| Benzo(g,h,i)perylene | <0.005 | 0.050 | 0.033 | 66 | 0.05 | 0.035 | 70 | 6 | 47-129 | 25 | |
| Benzo(k)fluoranthene | <0.005 | 0.050 | 0.050 | 100 | 0.05 | 0.054 | 108 | 8 | 52-122 | 25 | |
| Chrysene | <0.005 | 0.050 | 0.050 | 100 | 0.05 | 0.049 | 98 | 2 | 58-116 | 25 | |
| Dibenz(a,h)Anthracene | <0.005 | 0.050 | 0.033 | 66 | 0.05 | 0.036 | 72 | 9 | 46-131 | 25 | |
| Fluoranthene | <0.005 | 0.050 | 0.048 | 96 | 0.05 | 0.048 | 96 | 0 | 55-120 | 25 | |
| Fluorene | <0.005 | 0.050 | 0.048 | 96 | 0.05 | 0.049 | 98 | 2 | 56-114 | 25 | |
| Indeno(1,2,3-c,d)Pyrene | <0.005 | 0.050 | 0.040 | 80 | 0.05 | 0.042 | 84 | 5 | 44-132 | 25 | |
| Naphthalene | <0.005 | 0.050 | 0.047 | 94 | 0.05 | 0.048 | 96 | 2 | 53-110 | 25 | |
| Phenanthrene | <0.005 | 0.050 | 0.048 | 96 | 0.05 | 0.049 | 98 | 2 | 56-116 | 25 | |
| Pyrene | <0.005 | 0.050 | 0.049 | 98 | 0.05 | 0.051 | 102 | 4 | 57-119 | 25 | |

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

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# Form 3 - MS / MSD Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Order # :** 327587 **Project ID:** 49194426

**Lab Batch ID:** 754359 **QC- Sample ID:** 327847-003 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 03/28/2009 **Date Prepared:** 03/28/2009 **Analyst:** PAB

**Reporting Units:** mg/L

| BTEX and Oxygenates by SW 8260B<br>Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Methyl tert butyl Ether | 0.0139 | 0.5000 | 0.6307 | 123 | 0.5000 | 0.5241 | 102 | 18 | 65-135 | 20 | |
| Benzene | <0.0010 | 0.1000 | 0.1021 | 102 | 0.1000 | 0.0987 | 99 | 3 | 66-142 | 20 | |
| Toluene | <0.0010 | 0.1000 | 0.1077 | 108 | 0.1000 | 0.1049 | 105 | 3 | 59-139 | 20 | |
| Ethylbenzene | <0.0010 | 0.1000 | 0.1079 | 108 | 0.1000 | 0.1068 | 107 | 1 | 75-125 | 20 | |
| m,p-Xylene | <0.0020 | 0.2000 | 0.2246 | 112 | 0.2000 | 0.2167 | 108 | 4 | 75-125 | 20 | |
| o-Xylene | <0.0010 | 0.1000 | 0.1167 | 117 | 0.1000 | 0.1090 | 109 | 7 | 75-125 | 20 | |
| tert-Amyl methyl Ether | <0.005 | 0.500 | 0.575 | 115 | 0.500 | 0.495 | 99 | 15 | 65-135 | 20 | |
| tert-butyl alcohol | 17.8 | 1.00 | 21.9 | 410 | 1.00 | 18.6 | 80 | 16 | 65-135 | 20 | X |
| Ethyl tert butyl Ether | <0.005 | 0.500 | 0.615 | 123 | 0.500 | 0.515 | 103 | 18 | 65-135 | 20 | |
| Di Isopropyl Ether | 0.065 | 0.500 | 0.674 | 122 | 0.500 | 0.581 | 103 | 15 | 65-135 | 20 | |

**Lab Batch ID:** 754167 **QC- Sample ID:** 327662-001 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 03/27/2009 **Date Prepared:** 03/27/2009 **Analyst:** PAB

**Reporting Units:** mg/L

| BTEX by SW 8260B<br>Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | <0.0010 | 0.1000 | 0.0888 | 89 | 0.1000 | 0.0910 | 91 | 2 | 66-142 | 20 | |
| Toluene | <0.0010 | 0.1000 | 0.0999 | 100 | 0.1000 | 0.0935 | 94 | 7 | 59-139 | 20 | |
| Ethylbenzene | <0.0010 | 0.1000 | 0.0965 | 97 | 0.1000 | 0.0974 | 97 | 1 | 75-125 | 20 | |
| m,p-Xylene | <0.0020 | 0.2000 | 0.2029 | 101 | 0.2000 | 0.2060 | 103 | 2 | 75-125 | 20 | |
| o-Xylene | <0.0010 | 0.1000 | 0.1025 | 103 | 0.1000 | 0.1039 | 104 | 1 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

# Form 3 - MS / MSD Recoveries

## Project Name: EQPL Basin Jal Pump Station

**Work Order # :** 327587 **Project ID:** 49194426

**Lab Batch ID:** 753158 **QC- Sample ID:** 327587-001 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 03/20/2009 **Date Prepared:** 03/20/2009 **Analyst:** DAT

**Reporting Units:** mg/L

| Dissolved Mercury by EPA 7470A<br>Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Mercury | <0.0001 | 0.0050 | 0.0049 | 98 | 0.0050 | 0.0048 | 96 | 2 | 75-125 | 20 | |

**Lab Batch ID:** 754218 **QC- Sample ID:** 327431-004 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 03/27/2009 **Date Prepared:** 03/17/2009 **Analyst:** HAT

**Reporting Units:** mg/L

| Dissolved Metals by EPA 6020<br>Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Arsenic | 0.002 | 0.050 | 0.047 | 90 | 0.050 | 0.046 | 88 | 2 | 75-125 | 25 | |
| Barium | 0.145 | 0.050 | 0.221 | 152 | 0.050 | 0.221 | 152 | 0 | 75-125 | 25 | X |
| Cadmium | <0.001 | 0.020 | 0.021 | 105 | 0.020 | 0.020 | 100 | 5 | 75-125 | 25 | |
| Chromium | 0.014 | 0.050 | 0.074 | 120 | 0.050 | 0.057 | 86 | 26 | 75-125 | 25 | F |
| Lead | 0.028 | 0.050 | 0.082 | 108 | 0.050 | 0.083 | 110 | 1 | 75-125 | 25 | |
| Selenium | <0.003 | 0.050 | 0.039 | 78 | 0.050 | 0.037 | 74 | 5 | 75-125 | 25 | X |
| Silver | <0.002 | 0.020 | 0.021 | 105 | 0.020 | 0.021 | 105 | 0 | 75-125 | 25 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

# Sample Duplicate Recovery

## Project Name: EQPL Basin Jal Pump Station

**Work Order #:** 327587

**Lab Batch #:** 754218 **Project ID:** 49194426

**Date Analyzed:** 03/27/2009 **Date Prepared:** 03/17/2009 **Analyst:** HAT

**QC- Sample ID:** 327431-004 D **Batch #:** 1 **Matrix:** Water

**Reporting Units:** mg/L

| Dissolved Metals by EPA 6020 | SAMPLE / SAMPLE DUPLICATE RECOVERY | | | | |
|---|---|---|---|---|---|
| Analyte | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Arsenic | 0.002 | 0.003 | 40 | 20 | F |
| Barium | 0.145 | 0.175 | 19 | 20 | |
| Cadmium | <0.001 | <0.001 | NC | 20 | |
| Chromium | 0.014 | 0.015 | 7 | 20 | |
| Lead | 0.028 | 0.035 | 22 | 20 | F |
| Selenium | <0.003 | <0.003 | NC | 20 | |
| Silver | <0.002 | <0.002 | NC | 20 | |

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- [x] XENCO (_____)
- [ ] CALSCIENCE (_____)
- [ ] TEST AMERICA (_____)
- [ ] SPL (_____)
- [ ] OTHER (_____)

Please Check Appropriate Box:
- [ ] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [ ] CONSULTANT
- [ ] LUBES
- [x] SHELL PIPELINE
- [ ] OTHER _____

Print Bill To Contact Name: Kenneth Springer

PO. #:

INCIDENT # (ENV SERVICES): 3 0 0 1 4 3

SAP #: 7 2 0 8 0 3 7

- [ ] CHECK IF NO INCIDENT # APPLIES

DATE: 3/16/09

PAGE: 1 of 1

CONSULTANT COMPANY: URS Corporation

ADDRESS: 7720 N. 16th Street, Suite 100

CITY: Phoenix, AZ 85020

TELEPHONE: (602) 648-2402 FAX: (602) 371-1615 E-MAIL: iain_olness@urscorp.com

SITE ADDRESS (Street, City and State): EQPL Basin Jal Pump Station

CONSULTANT PROJECT CONTACT (Report to): Iain Olness

CONSULTANT PROJECT NO.: 49194426

SAMPLER NAME(S) (Print): John Savoie

LAB USE ONLY: 327587

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

DELIVERABLES:
- [ ] LEVEL 1
- [x] LEVEL 2
- [ ] LEVEL 3
- [ ] LEVEL 4
- [ ] OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° Cooler #1: 2.0 Cooler #2: Cooler #3:

SPECIAL INSTRUCTIONS OR NOTES :

Send edd to jsavoie@h2alld.com

Metals samples were field filtered. w/labels no seals

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | BTEX 8260B | Oxygenates (5) 8260 | Dissolved Metals (8) | PAH | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | MW-23 | 3/14/09 | 918 | WATER | X | X | | | | 5 | X | X | X | X | |
| 02 | MW-24 | 3/14/09 | 1048 | WATER | X | X | | | | 5 | X | X | X | X | |
| 03 | MW-10 | 3/14/09 | 1204 | WATER | X | X | | | | 5 | X | X | X | X | |
| 04 | TRIP BLANK | | | WATER | X | | | | | 3 | X | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | | Date: 3-16-09 | Time: 1015 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) Andrea Lam | Date: 3.16.09 | Time: 10:15 |

05/2/06 Revision

# Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: URS

Date/ Time: 3·16·09 10:15

Lab ID # : 327587

Initials: QL

## Sample Receipt Checklist

| | | | | | Client Initials |
|---|---|---|---|---|---|
| #1 | Temperature of container/ cooler? | (Yes) | No | 0.0 °C | |
| #2 | Shipping container in good condition? | (Yes) | No | | |
| #3 | Custody Seals intact on shipping container/ cooler? | Yes | No | (Not Present) | |
| #4 | Custody Seals intact on sample bottles/ container? | Yes | No | (Not Present) | |
| #5 | Chain of Custody present? | (Yes) | No | | |
| #6 | Sample instructions complete of Chain of Custody? | (Yes) | No | | |
| #7 | Chain of Custody signed when relinquished/ received? | (Yes) | No | | |
| #8 | Chain of Custody agrees with sample label(s)? | (Yes) | No | ID written on Cont./ Lid | |
| #9 | Container label(s) legible and intact? | (Yes) | No | Not Applicable | |
| #10 | Sample matrix/ properties agree with Chain of Custody? | (Yes) | No | | |
| #11 | Containers supplied by ELOT? | (Yes) | No | | |
| #12 | Samples in proper container/ bottle? | (Yes) | No | See Below | |
| #13 | Samples properly preserved? | (Yes) | No | See Below | |
| #14 | Sample bottles intact? | (Yes) | No | | |
| #15 | Preservations documented on Chain of Custody? | (Yes) | No | | |
| #16 | Containers documented on Chain of Custody? | (Yes) | No | | |
| #17 | Sufficient sample amount for indicated test(s)? | (Yes) | No | See Below | |
| #18 | All samples received within sufficient hold time? | (Yes) | No | See Below | |
| #19 | Subcontract of sample(s)? | Yes | No | (Not Applicable) | |
| #20 | VOC samples have zero headspace? | (Yes) | No | Not Applicable | |

## Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

# Analytical Report 345209

## for

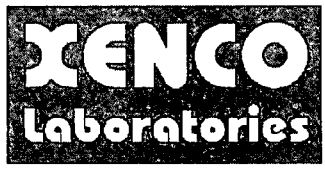
## URS Corporation

### Project Manager: Iain Olness

### EQPL Basin

### 49194426

### 29-SEP-09





**12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)

29-SEP-09

Project Manager: **Iain Olness**
**URS Corporation**
7720 N. 16th St. Suite100
Phoenix, AZ 85020

Reference: XENCO Report No: **345209**
**EQPL Basin**
Project Address: Jal Pump Station

**Iain Olness**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 345209. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 345209 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron, II**
Odessa Laboratory Manager

# Sample Cross Reference 345209

## URS Corporation, Phoenix, AZ

EQPL Basin

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| MW-04 | W | Sep-17-09 09:41 | | 345209-001 |
| MW-08 | W | Sep-17-09 08:22 | | 345209-002 |
| MW-09 | W | Sep-16-09 13:55 | | 345209-003 |
| Trip Blank | W | Sep-15-09 00:00 | | 345209-004 |

# CASE NARRATIVE

*Client Name: URS Corporation*
*Project Name: EQPL Basin*

*Project ID:* 49194426
*Work Order Number:* 345209

*Report Date:* 29-SEP-09
*Date Received:* 09/18/2009

***Sample receipt non conformances and Comments:***

None

***Sample receipt Non Conformances and Comments per Sample:***

None

***Analytical Non Conformances and Comments:***

Batch: LBA-774057 Mercury by SW-846 7470
None

Batch: LBA-774237 BTEX by SW 8260B
None

Batch: LBA-774401 Metals per ICP-MS by SW 6020A
Batch 774401, Barium recovered above QC limits in the Matrix Spike. Samples affected are: 345209-001 S
Barium recovered within QC limits in the Laboratory Control Sample.

Batch: LBA-774457 BTEX by SW 8260B
SW8260BTX

Batch 774457, Ethylbenzene recovered below QC limits in the Matrix Spike. m,p-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 345209-004.
The Laboratory Control Sample for m,p-Xylene, Ethylbenzene is within laboratory Control Limits

Batch: LBA-774719 Metals per ICP-MS by SW 6020A
Batch 774719, Chromium %RPD recovered outside QC limits. Chromium%RPD passing in Laboratory Control Sample. Samples affected are: 345209-001 D.

# Certificate of Analysis Summary 345209

## URS Corporation, Phoenix, AZ

## Project Name: EQPL Basin

**Project Id:** 49194426
**Contact:** Iain Olness
**Project Location:** Jal Pump Station

**Date Received in Lab:** Fri Sep-18-09 12:52 pm
**Report Date:** 29-SEP-09
**Project Manager:** Brent Barron, II

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 345209-001 | | 345209-002 | | 345209-003 | | 345209-004 | | | | | |
| | *Field Id:* | MW-04 | | MW-08 | | MW-09 | | Trip Blank | | | | | |
| | *Depth:* | | | | | | | | | | | | |
| | *Matrix:* | WATER | | WATER | | WATER | | WATER | | | | | |
| | *Sampled:* | Sep-17-09 09:41 | | Sep-17-09 08:22 | | Sep-16-09 13:55 | | Sep-15-09 00:00 | | | | | |
| **BTEX by SW 8260B** | *Extracted:* | Sep-24-09 12:06 | | Sep-24-09 12:08 | | Sep-24-09 13:00 | | Sep-23-09 17:04 | | | | | |
| **SUB: E871002 Xenco Houston** | *Analyzed:* | Sep-24-09 13:53 | | Sep-24-09 14:15 | | Sep-24-09 15:46 | | Sep-23-09 18:21 | | | | | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | mg/L | RL | | | | |
| Benzene | | ND | 0.0010 | ND | 0.0010 | ND | 0.0010 | ND | 0.0010 | | | | |
| Toluene | | ND | 0.0010 | ND | 0.0010 | ND | 0.0010 | ND | 0.0010 | | | | |
| Ethylbenzene | | ND | 0.0010 | ND | 0.0010 | 0.0171 | 0.0010 | ND | 0.0010 | | | | |
| m,p-Xylene | | ND | 0.0020 | ND | 0.0020 | ND | 0.0020 | ND | 0.0020 | | | | |
| o-Xylene | | ND | 0.0010 | 0.0026 | 0.0010 | 0.0011 | 0.0010 | ND | 0.0010 | | | | |
| Total Xylenes | | ND | 0.0010 | 0.0026 | 0.0010 | 0.0011 | 0.0010 | ND | 0.0010 | | | | |
| Total BTEX | | ND | 0.001 | 0.0026 | 0.001 | 0.0182 | 0.001 | ND | 0.001 | | | | |
| **Dissolved Mercury by SW-846 7470A** | *Extracted:* | Sep-24-09 09:00 | | Sep-24-09 09:00 | | Sep-24-09 09:00 | | | | | | | |
| | *Analyzed:* | Sep-25-09 08:39 | | Sep-25-09 08:39 | | Sep-25-09 08:39 | | | | | | | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | | | | | | |
| Dissolved Mercury | | ND | 0.0001 | ND | 0.0001 | ND | 0.0001 | | | | | | |
| **Dissolved Metals by SW6020A** | *Extracted:* | Sep-23-09 14:00 | | Sep-23-09 14:00 | | Sep-23-09 14:00 | | | | | | | |
| **SUB: E871002 Xenco Houston** | *Analyzed:* | Sep-29-09 00:34 | | Sep-29-09 00:54 | | Sep-29-09 00:59 | | | | | | | |
| | *Units/RL:* | mg/L | RL | mg/L | RL | mg/L | RL | | | | | | |
| Arsenic | | 0.027 | 0.002 | 0.017 | 0.002 | 0.015 | 0.002 | | | | | | |
| Barium | | 0.539 | 0.005 | 0.147 | 0.005 | 0.166 | 0.005 | | | | | | |
| Cadmium | | ND | 0.001 | ND | 0.001 | ND | 0.001 | | | | | | |
| Chromium | | ND | 0.003 | ND | 0.003 | ND | 0.003 | | | | | | |
| Lead | | 0.003 | 0.002 | 0.004 | 0.002 | 0.002 | 0.002 | | | | | | |
| Selenium | | ND | 0.003 | 0.007 | 0.003 | 0.005 | 0.003 | | | | | | |
| Silver | | ND | 0.002 | ND | 0.002 | ND | 0.002 | | | | | | |





Brent Barron, II
Odessa Laboratory Manager

# Flagging Criteria

**X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

**B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

**D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

**E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

**F** RPD exceeded lab control limits.

**J** The target analyte was positively identified below the MQL and above the SQL.

**U** Analyte was not detected.

**L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

**H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

**K** Sample analyzed outside of recommended hold time.

**JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

* Outside XENCO's scope of NELAC Accreditation.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin

**Work Orders :** 345209,

**Project ID:** 49194426

**Lab Batch #:** 774237 **Sample:** 538848-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/24/09 12:44

| BTEX by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0489 | 0.0500 | 98 | 74-124 | |
| Dibromofluoromethane | 0.0475 | 0.0500 | 95 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0439 | 0.0500 | 88 | 63-144 | |
| Toluene-D8 | 0.0491 | 0.0500 | 98 | 80-117 | |

**Lab Batch #:** 774237 **Sample:** 538848-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/24/09 13:30

| BTEX by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0506 | 0.0500 | 101 | 74-124 | |
| Dibromofluoromethane | 0.0492 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0440 | 0.0500 | 88 | 63-144 | |
| Toluene-D8 | 0.0486 | 0.0500 | 97 | 80-117 | |

**Lab Batch #:** 774237 **Sample:** 345209-001 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/24/09 13:53

| BTEX by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0478 | 0.0500 | 96 | 74-124 | |
| Dibromofluoromethane | 0.0543 | 0.0500 | 109 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0475 | 0.0500 | 95 | 63-144 | |
| Toluene-D8 | 0.0441 | 0.0500 | 88 | 80-117 | |

**Lab Batch #:** 774237 **Sample:** 345209-002 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/24/09 14:15

| BTEX by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0488 | 0.0500 | 98 | 74-124 | |
| Dibromofluoromethane | 0.0535 | 0.0500 | 107 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0459 | 0.0500 | 92 | 63-144 | |
| Toluene-D8 | 0.0481 | 0.0500 | 96 | 80-117 | |

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

**Project Name:** EQPL Basin

**Work Orders :** 345209,

**Project ID:** 49194426

**Lab Batch #:** 774237 **Sample:** 345209-002 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/24/09 14:38

| BTEX by SW 8260B Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0497 | 0.0500 | 99 | 74-124 | |
| Dibromofluoromethane | 0.0519 | 0.0500 | 104 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0518 | 0.0500 | 104 | 63-144 | |
| Toluene-D8 | 0.0486 | 0.0500 | 97 | 80-117 | |

**Lab Batch #:** 774237 **Sample:** 345209-002 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/24/09 15:01

| BTEX by SW 8260B Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0471 | 0.0500 | 94 | 74-124 | |
| Dibromofluoromethane | 0.0530 | 0.0500 | 106 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0517 | 0.0500 | 103 | 63-144 | |
| Toluene-D8 | 0.0503 | 0.0500 | 101 | 80-117 | |

**Lab Batch #:** 774237 **Sample:** 345209-003 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/24/09 15:46

| BTEX by SW 8260B Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0498 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0545 | 0.0500 | 109 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0462 | 0.0500 | 92 | 63-144 | |
| Toluene-D8 | 0.0483 | 0.0500 | 97 | 80-117 | |

**Lab Batch #:** 774439 **Sample:** ICB-BLK / ICB **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/23/09 17:58

| BTEX by SW 8260B Analytes | SURROGATE RECOVERY STUDY Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0510 | 0.0500 | | 74-124 | |
| Dibromofluoromethane | 0.0458 | 0.0500 | | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0442 | 0.0500 | | 63-144 | |
| Toluene-D8 | 0.0483 | 0.0500 | | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

**Project Name:** EQPL Basin

**Work Orders :** 345209,

**Project ID:** 49194426

**Lab Batch #:** 774457 **Sample:** 538955-1-BKS / BKS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/23/09 17:05

| BTEX by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0501 | 0.0500 | 100 | 74-124 | |
| Dibromofluoromethane | 0.0469 | 0.0500 | 94 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0460 | 0.0500 | 92 | 63-144 | |
| Toluene-D8 | 0.0508 | 0.0500 | 102 | 80-117 | |

**Lab Batch #:** 774457 **Sample:** 538955-1-BLK / BLK **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/23/09 17:58

| BTEX by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0510 | 0.0500 | 102 | 74-124 | |
| Dibromofluoromethane | 0.0458 | 0.0500 | 92 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0442 | 0.0500 | 88 | 63-144 | |
| Toluene-D8 | 0.0483 | 0.0500 | 97 | 80-117 | |

**Lab Batch #:** 774457 **Sample:** 345209-004 / SMP **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/23/09 18:21

| BTEX by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0514 | 0.0500 | 103 | 74-124 | |
| Dibromofluoromethane | 0.0491 | 0.0500 | 98 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0465 | 0.0500 | 93 | 63-144 | |
| Toluene-D8 | 0.0480 | 0.0500 | 96 | 80-117 | |

**Lab Batch #:** 774457 **Sample:** 344703-004 S / MS **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/23/09 19:52

| BTEX by SW 8260B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 4-Bromofluorobenzene | 0.0509 | 0.0500 | 102 | 74-124 | |
| Dibromofluoromethane | 0.0496 | 0.0500 | 99 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0488 | 0.0500 | 98 | 63-144 | |
| Toluene-D8 | 0.0498 | 0.0500 | 100 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Form 2 - Surrogate Recoveries

## Project Name: EQPL Basin

**Work Orders :** 345209,

**Project ID:** 49194426

**Lab Batch #:** 774457 **Sample:** 344703-004 SD / MSD **Batch:** 1 **Matrix:** Water

**Units:** mg/L **Date Analyzed:** 09/23/09 20:15

| BTEX by SW 8260B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 0.0510 | 0.0500 | 102 | 74-124 | |
| Dibromofluoromethane | 0.0512 | 0.0500 | 102 | 75-131 | |
| 1,2-Dichloroethane-D4 | 0.0466 | 0.0500 | 93 | 63-144 | |
| Toluene-D8 | 0.0488 | 0.0500 | 98 | 80-117 | |

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

# Blank Spike Recovery

## Project Name: EQPL Basin

**Work Order #:** 345209 **Project ID:** 49194426

**Lab Batch #:** 774237 **Sample:** 538848-1-BKS **Matrix:** Water
**Date Analyzed:** 09/24/2009 **Date Prepared:** 09/24/2009 **Analyst:** HDO
**Reporting Units:** mg/L **Batch #:** 1

| BTEX by SW 8260B Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | | BLANK /BLANK SPIKE RECOVERY STUDY | | | |
| Benzene | ND | 0.1000 | 0.0891 | 89 | 66-142 | |
| Toluene | ND | 0.1000 | 0.1020 | 102 | 59-139 | |
| Ethylbenzene | ND | 0.1000 | 0.0977 | 98 | 75-125 | |
| m,p-Xylene | ND | 0.2000 | 0.1931 | 97 | 75-125 | |
| o-Xylene | ND | 0.1000 | 0.1000 | 100 | 75-125 | |

**Lab Batch #:** 774457 **Sample:** 538955-1-BKS **Matrix:** Water
**Date Analyzed:** 09/23/2009 **Date Prepared:** 09/23/2009 **Analyst:** HDO
**Reporting Units:** mg/L **Batch #:** 1

| BTEX by SW 8260B Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | | BLANK /BLANK SPIKE RECOVERY STUDY | | | |
| Benzene | ND | 0.1000 | 0.0902 | 90 | 66-142 | |
| Toluene | ND | 0.1000 | 0.1024 | 102 | 59-139 | |
| Ethylbenzene | ND | 0.1000 | 0.0966 | 97 | 75-125 | |
| m,p-Xylene | ND | 0.2000 | 0.1976 | 99 | 75-125 | |
| o-Xylene | ND | 0.1000 | 0.0993 | 99 | 75-125 | |

**Lab Batch #:** 774719 **Sample:** 538921-1-BKS **Matrix:** Water
**Date Analyzed:** 09/29/2009 **Date Prepared:** 09/23/2009 **Analyst:** HAT
**Reporting Units:** mg/L **Batch #:** 1

| Dissolved Metals by SW6020A Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| | | | BLANK /BLANK SPIKE RECOVERY STUDY | | | |
| Arsenic | ND | 0.050 | 0.047 | 94 | 75-125 | |
| Barium | ND | 0.050 | 0.051 | 102 | 75-125 | |
| Cadmium | ND | 0.020 | 0.019 | 95 | 75-125 | |
| Chromium | ND | 0.050 | 0.046 | 92 | 75-125 | |
| Lead | ND | 0.050 | 0.047 | 94 | 75-125 | |
| Selenium | ND | 0.050 | 0.049 | 98 | 75-125 | |
| Silver | ND | 0.020 | 0.021 | 105 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

XENCO Laboratories

# BS / BSD Recoveries

## Project Name: EQPL Basin

**Work Order #:** 345209 **Project ID:** 49194426

**Analyst:** LATCOR **Date Prepared:** 09/24/2009 **Date Analyzed:** 09/25/2009

**Lab Batch ID:** 774057 **Sample:** 538752-1-BKS **Batch #:** 1 **Matrix:** Water

**Units:** mg/L

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

| Dissolved Mercury by SW-846 7470A<br>Analytes | Blank Sample Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Spike Added [E] | Blank Spike Duplicate Result [F] | Blk. Spk Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dissolved Mercury | ND | 0.0010 | 0.0010 | 100 | 0.001 | 0.0010 | 100 | 0 | 75-125 | 20 | |

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

# Form 3 - MS / MSD Recoveries

## Project Name: EQPL Basin

**Work Order # :** 345209 **Project ID:** 49194426

**Lab Batch ID:** 774237 **QC- Sample ID:** 345209-002 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 09/24/2009 **Date Prepared:** 09/24/2009 **Analyst:** HDO

**Reporting Units:** mg/L

| BTEX by SW 8260B Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | ND | 0.1000 | 0.0911 | 91 | 0.1000 | 0.0976 | 98 | 7 | 66-142 | 20 | |
| Toluene | ND | 0.1000 | 0.0957 | 96 | 0.1000 | 0.1043 | 104 | 9 | 59-139 | 20 | |
| Ethylbenzene | ND | 0.1000 | 0.0947 | 95 | 0.1000 | 0.1016 | 102 | 7 | 75-125 | 20 | |
| m,p-Xylene | ND | 0.2000 | 0.1873 | 94 | 0.2000 | 0.2071 | 104 | 10 | 75-125 | 20 | |
| o-Xylene | 0.0026 | 0.1000 | 0.1019 | 99 | 0.1000 | 0.1091 | 107 | 7 | 75-125 | 20 | |

**Lab Batch ID:** 774457 **QC- Sample ID:** 344703-004 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 09/23/2009 **Date Prepared:** 09/23/2009 **Analyst:** HDO

**Reporting Units:** mg/L

| BTEX by SW 8260B Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | ND | 0.1000 | 0.0659 | 66 | 0.1000 | 0.0696 | 70 | 5 | 66-142 | 20 | |
| Toluene | ND | 0.1000 | 0.0731 | 73 | 0.1000 | 0.0767 | 77 | 5 | 59-139 | 20 | |
| Ethylbenzene | ND | 0.1000 | 0.0737 | 74 | 0.1000 | 0.0759 | 76 | 3 | 75-125 | 20 | X |
| m,p-Xylene | ND | 0.2000 | 0.1437 | 72 | 0.2000 | 0.1486 | 74 | 3 | 75-125 | 20 | X |
| o-Xylene | ND | 0.1000 | 0.0772 | 77 | 0.1000 | 0.0797 | 80 | 3 | 75-125 | 20 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

# Form 3 - MS / MSD Recoveries

## Project Name: EQPL Basin

**Work Order # :** 345209 **Project ID:** 49194426

**Lab Batch ID:** 774057 **QC- Sample ID:** 345200-001 S **Batch #:** 1 **Matrix:** Solid

**Date Analyzed:** 09/25/2009 **Date Prepared:** 09/24/2009 **Analyst:** LATCOR

**Reporting Units:** mg/L

| Dissolved Mercury by SW-846 7470A<br>Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Dissolved Mercury | ND | 0.0010 | 0.0009 | 90 | 0.0010 | 0.0009 | 90 | 0 | 75-125 | 20 | |

**Lab Batch ID:** 774719 **QC- Sample ID:** 345209-001 S **Batch #:** 1 **Matrix:** Water

**Date Analyzed:** 09/29/2009 **Date Prepared:** 09/23/2009 **Analyst:** HAT

**Reporting Units:** mg/L

| Dissolved Metals by SW6020A<br>Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Arsenic | 0.027 | 0.050 | 0.087 | 120 | 0.050 | 0.083 | 112 | 5 | 75-125 | 25 | |
| Barium | 0.539 | 0.050 | 0.608 | 138 | 0.050 | 0.591 | 104 | 3 | 75-125 | 25 | X |
| Cadmium | ND | 0.020 | 0.021 | 105 | 0.020 | 0.020 | 100 | 5 | 75-125 | 25 | |
| Chromium | ND | 0.050 | 0.054 | 108 | 0.050 | 0.049 | 98 | 10 | 75-125 | 25 | |
| Lead | 0.003 | 0.050 | 0.049 | 92 | 0.050 | 0.048 | 90 | 2 | 75-125 | 25 | |
| Selenium | ND | 0.050 | 0.052 | 104 | 0.050 | 0.045 | 90 | 14 | 75-125 | 25 | |
| Silver | ND | 0.020 | 0.017 | 85 | 0.020 | 0.015 | 75 | 13 | 75-125 | 25 | |

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

# Sample Duplicate Recovery

## Project Name: EQPL Basin

**Work Order #:** 345209

**Lab Batch #:** 774719 **Project ID:** 49194426

**Date Analyzed:** 09/29/2009 **Date Prepared:** 09/23/2009 **Analyst:** HAT

**QC- Sample ID:** 345209-001 D **Batch #:** 1 **Matrix:** Water

**Reporting Units:** mg/L

| Dissolved Metals by SW6020A | SAMPLE / SAMPLE DUPLICATE RECOVERY | | | | |
|---|---|---|---|---|---|
| Analyte | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Arsenic | 0.027 | 0.029 | 7 | 25 | |
| Barium | 0.539 | 0.543 | 1 | 25 | |
| Cadmium | ND | ND | NC | 25 | |
| Chromium | ND | ND | NC | 25 | |
| Lead | 0.003 | 0.002 | 40 | 25 | F |
| Selenium | ND | 0.003 | NC | 25 | |
| Silver | ND | ND | NC | 25 | |

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

# Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- [x] XENCO (_____)
- [ ] CALSCIENCE (_____)
- [ ] TEST AMERICA (_____)
- [ ] SPL (_____)
- [ ] OTHER (_____)

Please Check Appropriate Box:
- [ ] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [ ] CONSULTANT
- [ ] LUBES
- [x] SHELL PIPELINE
- [ ] OTHER _____

Print Bill To Contact Name: Kenneth Springer

INCIDENT #(ENV SERVICES): 3 0 0 1 4 3

[ ] CHECK IF NO INCIDENT # APPLIES

DATE: 9/18/09

PAGE: 1 of 1

PO #:

SAP #: 7 2 0 8 0 3 7

CONSULTANT COMPANY: URS Corporation

ADDRESS: 7720 N. 16th Street, Suite 100

CITY: Phoenix, AZ 85020

TELEPHONE: (602) 648-2402 FAX: (602) 371-1615 E-MAIL: iain_olness@urscorp.com

SITE ADDRESS (Street, City and State): EQPL Basin Jal Pump Station

CONSULTANT PROJECT CONTACT (Report to): Iain Olness

CONSULTANT PROJECT NO.: 49194426

SAMPLER NAME(S) (Print): John Savoie

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

DELIVERABLES:
- [ ] LEVEL 1
- [x] LEVEL 2
- [ ] LEVEL 3
- [ ] LEVEL 4
- [ ] OTHER (SPECIFY) _____

TEMPERATURE ON RECEIPT C° Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

Send edd to jsavoie@h2altd.com

Metals samples were field filtered. 345209

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCl | PRESERVATIVE HNO3 | PRESERVATIVE H2SO4 | PRESERVATIVE NONE | PRESERVATIVE OTHER | NO. OF CONT. | BTEX 8260B | Dissolved Metals (8) | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | MW-04 | 9/17/09 | 941 | WATER | X | X | | | | 4 | X | X | |
| 002 | MW-08 | 9/17/09 | 822 | WATER | X | X | | | | 4 | X | X | |
| 003 | MW-09 | 9/16/09 | 1355 | WATER | X | X | | | | 4 | X | X | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | TRIP BLANK | | | WATER | X | | | | | 3 | X | | |
| | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) | Received by: (Signature) | Date: 9-18-09 | Time: 1252 PM |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time |

05/2008 Revision

w/labels, no seals -7°C

# Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: URS Corp.

Date/ Time: 09/18/09 12:52

Lab ID # : 345209

Initials: gmA

## Sample Receipt Checklist

| | | | | | Client Initials |
|---|---|---|---|---|---|
| #1 | Temperature of container/ cooler? | (Yes) | No | .7 °C | |
| #2 | Shipping container in good condition? | (Yes) | No | | |
| #3 | Custody Seals intact on shipping container/ cooler? | Yes | No | (Not Present) | |
| #4 | Custody Seals intact on sample bottles/ container? | Yes | No | (Not Present) | |
| #5 | Chain of Custody present? | (Yes) | No | | |
| #6 | Sample instructions complete of Chain of Custody? | (Yes) | No | | |
| #7 | Chain of Custody signed when relinquished/ received? | (Yes) | No | | |
| #8 | Chain of Custody agrees with sample label(s)? | (Yes) | No | ID written on Cont./ Lid | |
| #9 | Container label(s) legible and intact? | (Yes) | No | Not Applicable | |
| #10 | Sample matrix/ properties agree with Chain of Custody? | (Yes) | No | | |
| #11 | Containers supplied by ELOT? | (Yes) | No | | |
| #12 | Samples in proper container/ bottle? | (Yes) | No | See Below | |
| #13 | Samples properly preserved? | (Yes) | No | See Below | |
| #14 | Sample bottles intact? | (Yes) | No | | |
| #15 | Preservations documented on Chain of Custody? | (Yes) | No | | |
| #16 | Containers documented on Chain of Custody? | (Yes) | No | | |
| #17 | Sufficient sample amount for indicated test(s)? | (Yes) | No | See Below | |
| #18 | All samples received within sufficient hold time? | (Yes) | No | See Below | |
| #19 | Subcontract of sample(s)? | (Yes) | No | Not Applicable – Xenco Houston | |
| #20 | VOC samples have zero headspace? | (Yes) | No | Not Applicable | |

## Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

# ***APPENDIX B***

## *LNAPL Fingerprint Analysis Laboratory Analytical Results with Chain-of-Custody Documentation*

H2A
ENVIRONMENTAL, LTD.

# Torkelson Geochemistry, Inc.

2528 S. Columbia Place
Tulsa, OK 74114-3233
Phone: 918-749-8441
Fax: 918-749-6005
e-mail: BTorkelson@torkelsongeochemistry.com

## CHAIN-OF-CUSTODY RECORD



Project: Jal Station
Location: Jal, NM

Proj. No.: 106.001
P.O.: 106.001
Sampled By: John Savoie

Report/Bill To: H2A Environmental
Address: 1862 Keller Parkway
Keller, TX 76248

Phone: 682-593-0270
Fax: 682-592-0660
e-mail: swalker@h2altd.com

**Additional Instructions**
Questions: Contact Shannon Walker H2A Environmental
817-360-6961

Requested Turn-Around Time:

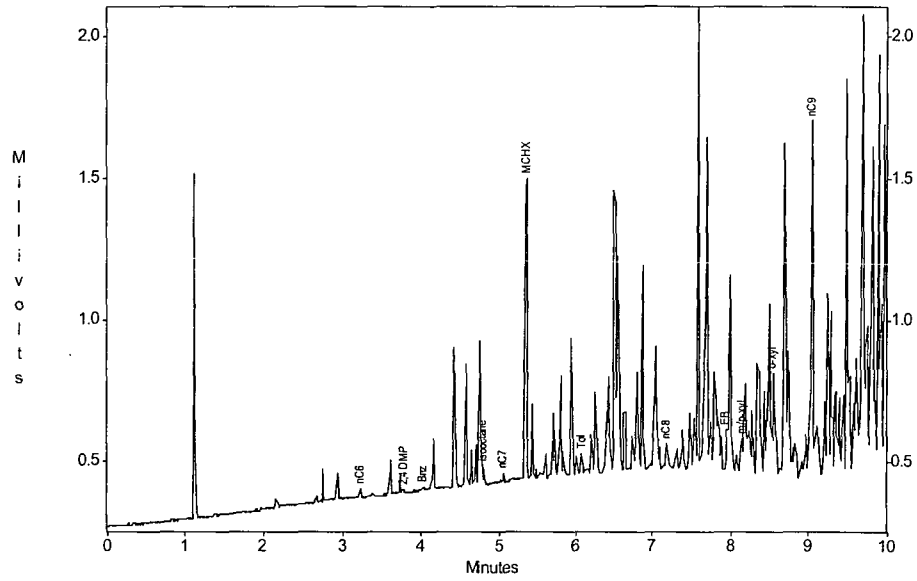
| ITEM NO. | SAMPLE DESCRIPTION | DATE | MATRIX | LAB NO. | Total # OF Vials | PRESERVATIVES: cool | ANALYSES REQUESTED: GC Characterization | Density | Viscosity | Water Surface Tension | NAPL Surface Tension | NAPL/Water Interfac. Tens. | Lead | Sulfur | Hydrocarbon Fingerprinting | Physical Properties | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-14 LNAPL | 9/17/2009 | liquid | | 3 | X | | | | | | | | | X | X | |
| 2 | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

| RELINQUISHED BY | DATE | TIME | ACCEPTED BY | DATE | TIME |
|---|---|---|---|---|---|
| [signature] | 9-2709 | 1300 | Bruce Torkelson | 10-25-09 | 1000 |
| | | | | | |
| | | | | | |

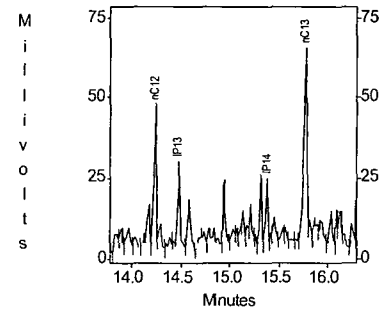
# Torkelson Geochemistry, Inc.

Jal Station, Jal, NM
Sample ID : MW-14 LNAPL
Acquired : Sep 25, 2009 17:22:19

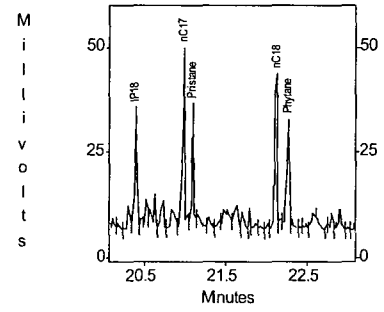
c:\ezchrom\chrom\09148\mw-14 – Channel A



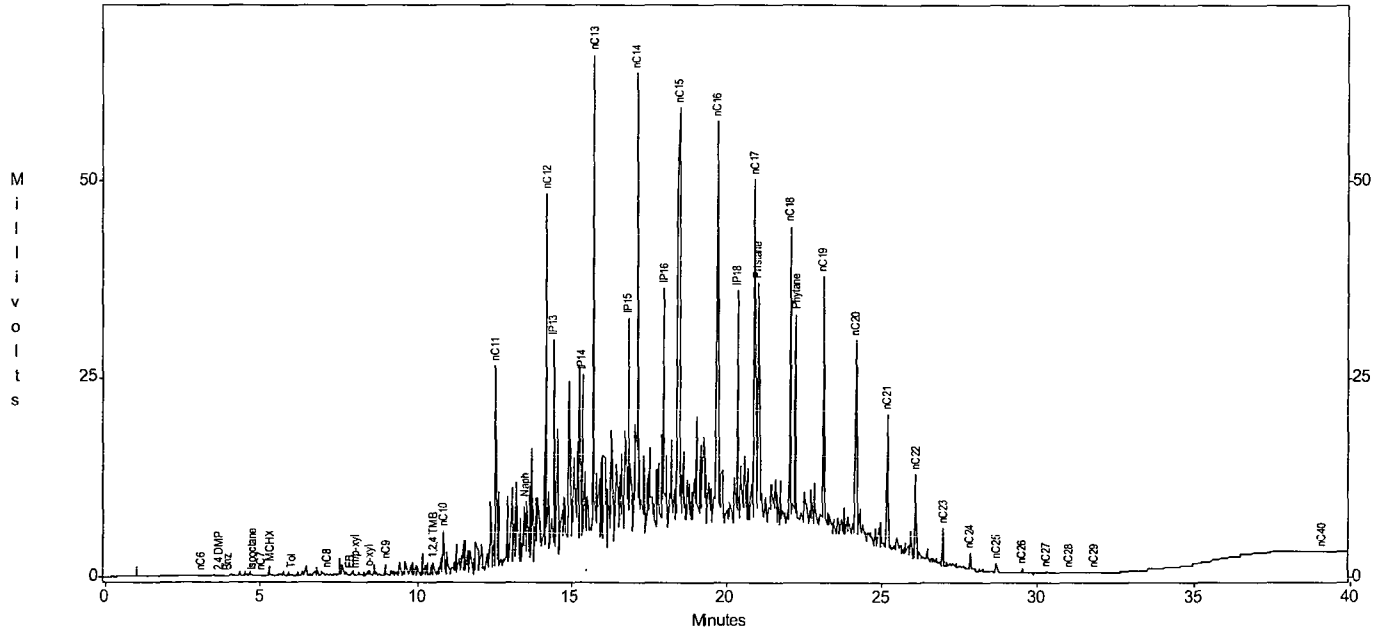

c:\ezchrom\chrom\09148\mw-14 – Channel A




c:\ezchrom\chrom\09148\mw-14 – Channel A




c:\ezchrom\chrom\09148\mw-14 – Channel A



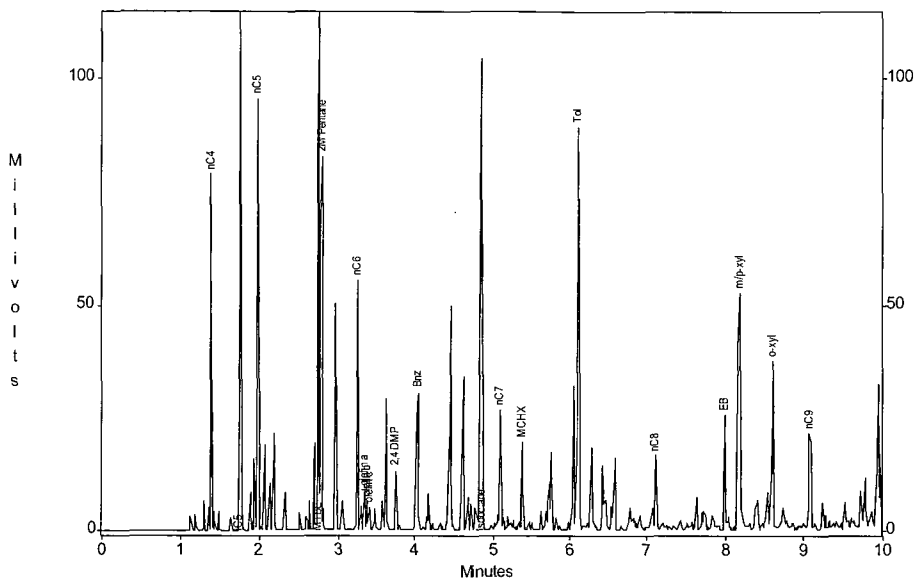

Channel A Results

| Peak | Area | Height |
|---|---|---|
| nC4 | 0 | 0 |
| iC5 | 0 | 0 |
| nC5 | 0 | 0 |
| MTBE | 0 | 0 |
| 2M Pentane | 0 | 0 |
| nC6 | 29 | 27 |
| olefin a | 0 | 0 |
| olefin b | 0 | 0 |
| olefin c | 0 | 0 |
| 2,4 DMP | 12 | 10 |
| Bnz | 12 | 9 |
| Isooctane | 80 | 63 |
| nC7 | 33 | 30 |
| MCHX | 1238 | 1060 |
| Tol | 164 | 81 |
| nC8 | 409 | 115 |
| EB | 193 | 157 |
| m/p-xyl | 279 | 128 |
| o-xyl | 742 | 354 |
| nC9 | 2822 | 1252 |
| 1,2,4 TMB | 2639 | 1417 |
| nC10 | 7320 | 5285 |
| nC11 | 38658 | 25495 |
| Naph | 32410 | 7674 |
| nC12 | 75676 | 44588 |
| IP13 | 50739 | 26839 |
| IP14 | 30499 | 20552 |
| nC13 | 122721 | 59546 |
| IP15 | 45094 | 27857 |
| nC14 | 129999 | 58634 |
| IP16 | 71455 | 29369 |
| nC15 | 115336 | 52360 |
| nC16 | 115694 | 50635 |
| IP18 | 62875 | 29487 |
| nC17 | 99325 | 43479 |
| Pristane | 71070 | 30370 |
| nC18 | 73397 | 37366 |
| Phytane | 57850 | 26166 |
| nC19 | 62338 | 31810 |
| nC20 | 48389 | 25057 |
| nC21 | 29581 | 16989 |
| nC22 | 18145 | 10787 |
| nC23 | 7496 | 4575 |
| nC24 | 3917 | 2191 |
| nC25 | 2413 | 1041 |
| nC26 | 1107 | 569 |
| nC27 | 1449 | 363 |
| nC28 | 1176 | 169 |
| nC29 | 53 | 24 |
| nC30 | 0 | 0 |
| nC31 | 0 | 0 |
| nC32 | 0 | 0 |
| nC33 | 0 | 0 |
| nC34 | 0 | 0 |
| nC35 | 0 | 0 |
| nC36 | 0 | 0 |
| nC37 | 0 | 0 |
| nC38 | 0 | 0 |
| nC39 | 0 | 0 |
| nC40 | 25 | 11 |

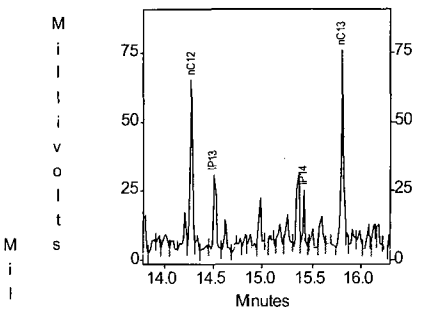
# Torkelson Geochemistry, Inc.

Jal Station, Jal, NM
Sample ID : Gas/Dies/Wax std
Acquired : Sep 25, 2009 11:25:17

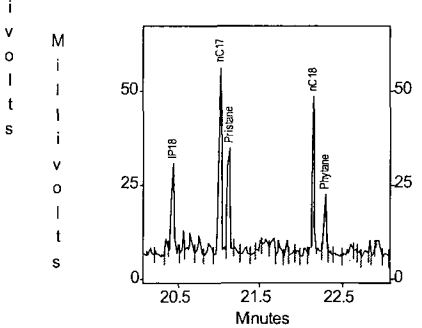
c:\ezchrom\chrom\09148\gadiwax2 – Channel A



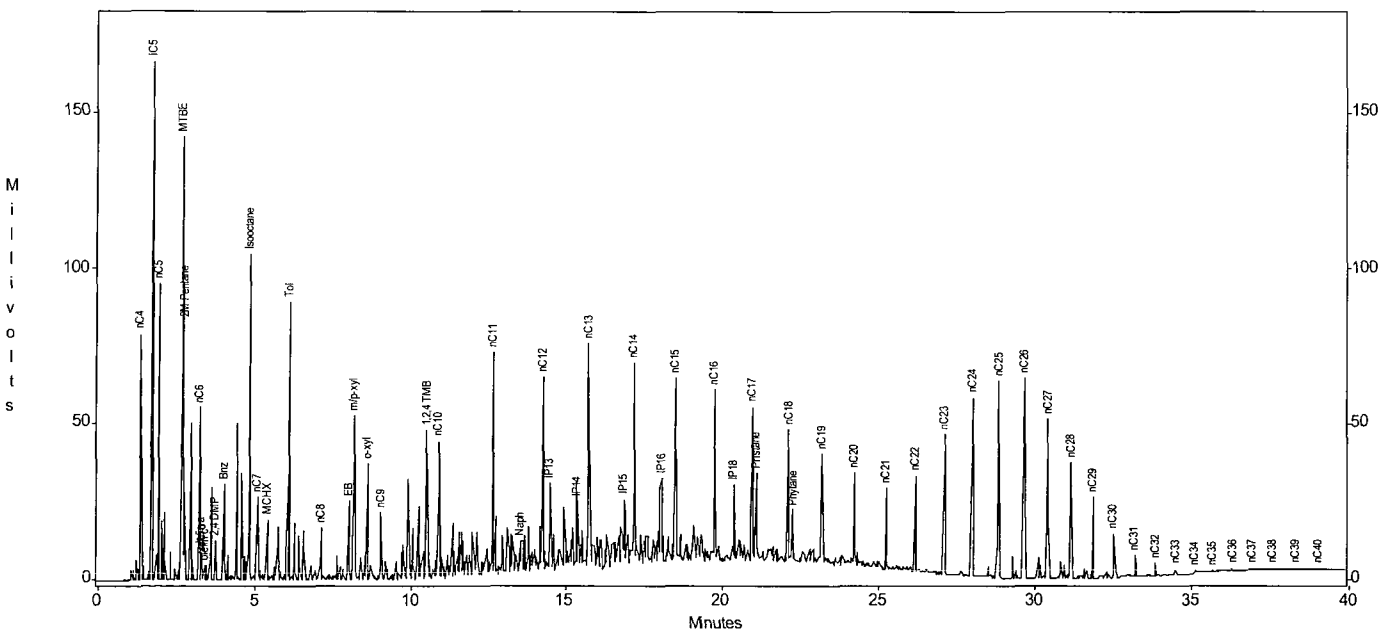

c:\ezchrom\chrom\09148\gadiwax2 – Channel A




c:\ezchrom\chrom\09148\gadiwax2 – Channel A




c:\ezchrom\chrom\09148\gadiwax2 – Channel A



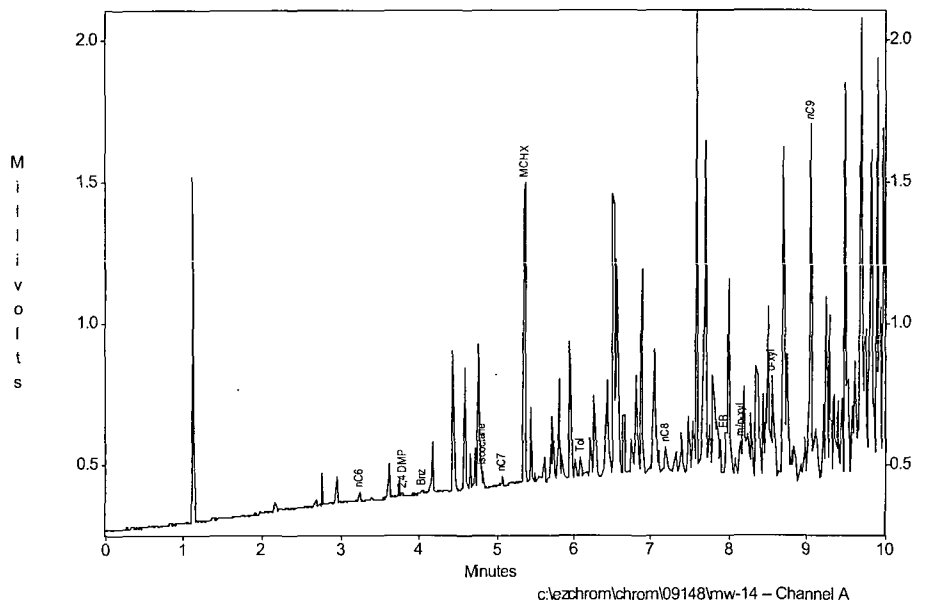

Channel A Results

| Peak | Area | Height |
|---|---|---|
| nC4 | 45001 | 78781 |
| iC5 | 112083 | 166162 |
| nC5 | 68265 | 95362 |
| MTBE | 135323 | 142463 |
| 2M Pentane | 72715 | 82841 |
| nC6 | 54254 | 55264 |
| olefin a | 9431 | 8821 |
| olefin b | 6259 | 6548 |
| olefin c | 5404 | 4902 |
| 2,4 DMP | 13078 | 12792 |
| Bnz | 35683 | 30186 |
| Isooctane | 154313 | 104380 |
| nC7 | 32122 | 26439 |
| MCHX | 23886 | 19371 |
| Tol | 141368 | 89088 |
| nC8 | 19420 | 16175 |
| EB | 34401 | 25276 |
| m/p-xyl | 122347 | 51987 |
| o-xyl | 55055 | 37089 |
| nC9 | 31674 | 21347 |
| 1,2,4 TMB | 84618 | 47591 |
| nC10 | 69467 | 44185 |
| nC11 | 127270 | 71458 |
| Naph | 30263 | 10026 |
| nC12 | 107135 | 60965 |
| IP13 | 52470 | 27992 |
| IP14 | 29090 | 20540 |
| nC13 | 147950 | 71542 |
| IP15 | 46088 | 21885 |
| nC14 | 138085 | 64972 |
| IP16 | 60607 | 27303 |
| nC15 | 123795 | 58656 |
| nC16 | 126928 | 55688 |
| IP18 | 62559 | 24585 |
| nC17 | 113915 | 50202 |
| Pristane | 66019 | 29010 |
| nC18 | 97536 | 43284 |
| Phytane | 38590 | 17460 |
| nC19 | 76962 | 35770 |
| nC20 | 53158 | 29782 |
| nC21 | 47544 | 25799 |
| nC22 | 59958 | 30677 |
| nC23 | 96987 | 45216 |
| nC24 | 147961 | 57275 |
| nC25 | 176203 | 63306 |
| nC26 | 179403 | 64047 |
| nC27 | 137106 | 50852 |
| nC28 | 86827 | 36904 |
| nC29 | 48229 | 25609 |
| nC30 | 23532 | 13431 |
| nC31 | 12499 | 7107 |
| nC32 | 6590 | 3670 |
| nC33 | 3610 | 2063 |
| nC34 | 2089 | 1174 |
| nC35 | 1067 | 613 |
| nC36 | 611 | 346 |
| nC37 | 510 | 186 |
| nC38 | 257 | 111 |
| nC39 | 192 | 79 |
| nC40 | 239 | 62 |

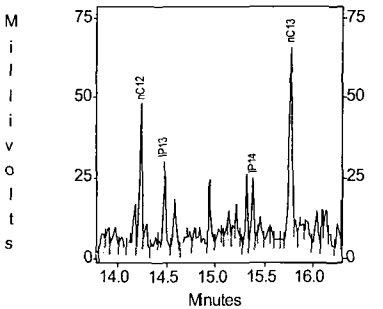
# Torkelson Geochemistry, Inc.

Jal Station, Jal, NM
Sample ID : MW-14 LNAPL
Acquired : Sep 25, 2009 17:22:19

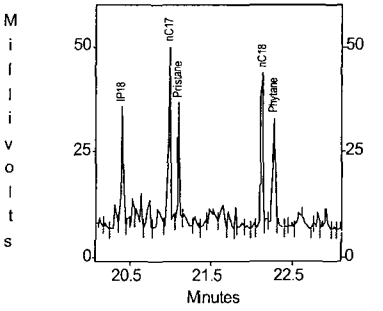
c:\ezchrom\chrom\09148\mw-14 – Channel A



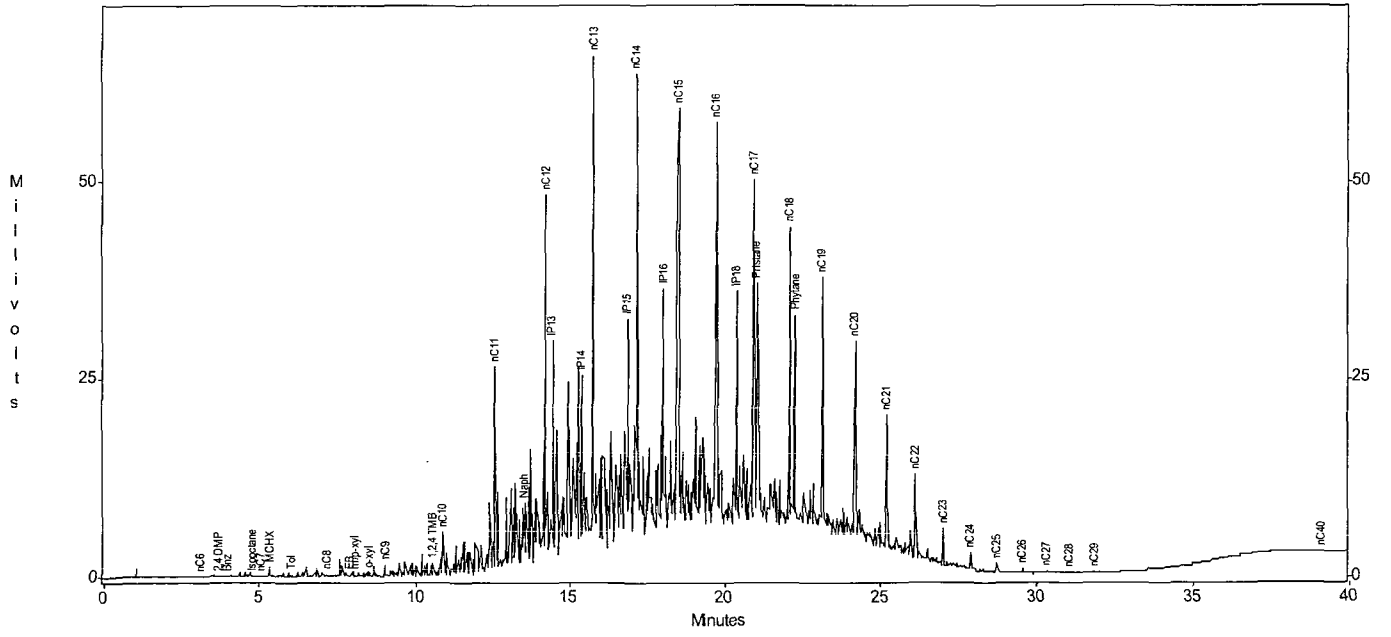

c:\ezchrom\chrom\09148\mw-14 – Channel A




c:\ezchrom\chrom\09148\mw-14 – Channel A




c:\ezchrom\chrom\09148\mw-14 – Channel A



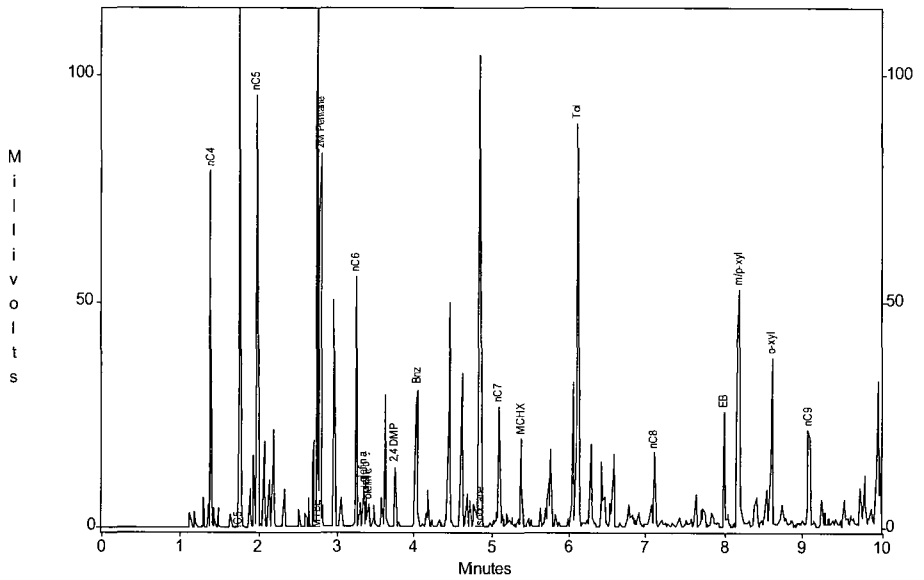

Channel A Results

| Peak | Area | Height |
|---|---|---|
| nC4 | 0 | 0 |
| iC5 | 0 | 0 |
| nC5 | 0 | 0 |
| MTBE | 0 | 0 |
| 2M Pentane | 0 | 0 |
| nC6 | 29 | 27 |
| olefin a | 0 | 0 |
| olefin b | 0 | 0 |
| olefin c | 0 | 0 |
| 2,4 DMP | 12 | 10 |
| Bnz | 12 | 9 |
| Isooctane | 80 | 63 |
| nC7 | 33 | 30 |
| MCHX | 1238 | 1060 |
| Tol | 164 | 81 |
| nC8 | 409 | 115 |
| EB | 193 | 157 |
| m/p-xyl | 279 | 128 |
| o-xyl | 742 | 354 |
| nC9 | 2822 | 1252 |
| 1,2,4 TMB | 2639 | 1417 |
| nC10 | 7320 | 5285 |
| nC11 | 38658 | 25495 |
| Naph | 32410 | 7674 |
| nC12 | 75676 | 44588 |
| IP13 | 50739 | 26839 |
| IP14 | 30499 | 20552 |
| nC13 | 122721 | 59546 |
| IP15 | 45094 | 27857 |
| nC14 | 129999 | 58634 |
| IP16 | 71455 | 29369 |
| nC15 | 115336 | 52360 |
| nC16 | 115694 | 50635 |
| IP18 | 62875 | 29487 |
| nC17 | 99325 | 43479 |
| Pristane | 71070 | 30370 |
| nC18 | 73397 | 37366 |
| Phytane | 57850 | 26166 |
| nC19 | 62338 | 31810 |
| nC20 | 48389 | 25057 |
| nC21 | 29581 | 16989 |
| nC22 | 18145 | 10787 |
| nC23 | 7496 | 4575 |
| nC24 | 3917 | 2191 |
| nC25 | 2413 | 1041 |
| nC26 | 1107 | 569 |
| nC27 | 1449 | 363 |
| nC28 | 1176 | 169 |
| nC29 | 53 | 24 |
| nC30 | 0 | 0 |
| nC31 | 0 | 0 |
| nC32 | 0 | 0 |
| nC33 | 0 | 0 |
| nC34 | 0 | 0 |
| nC35 | 0 | 0 |
| nC36 | 0 | 0 |
| nC37 | 0 | 0 |
| nC38 | 0 | 0 |
| nC39 | 0 | 0 |
| nC40 | 25 | 11 |

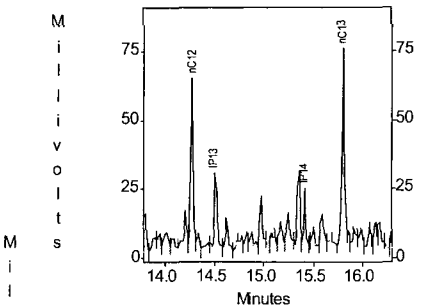
# Torkelson Geochemistry, Inc.

Jal Station, Jal, NM
Sample ID : Gas/Dies/Wax std
Acquired : Sep 25, 2009 11:25:17

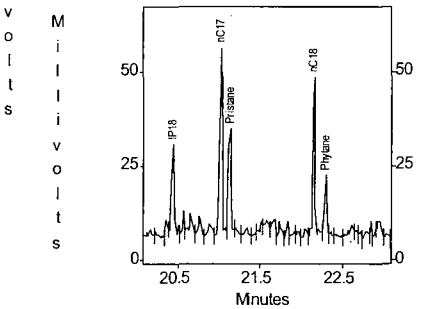
c:\ezchrom\chrom\09148\gadiwax2 – Channel A



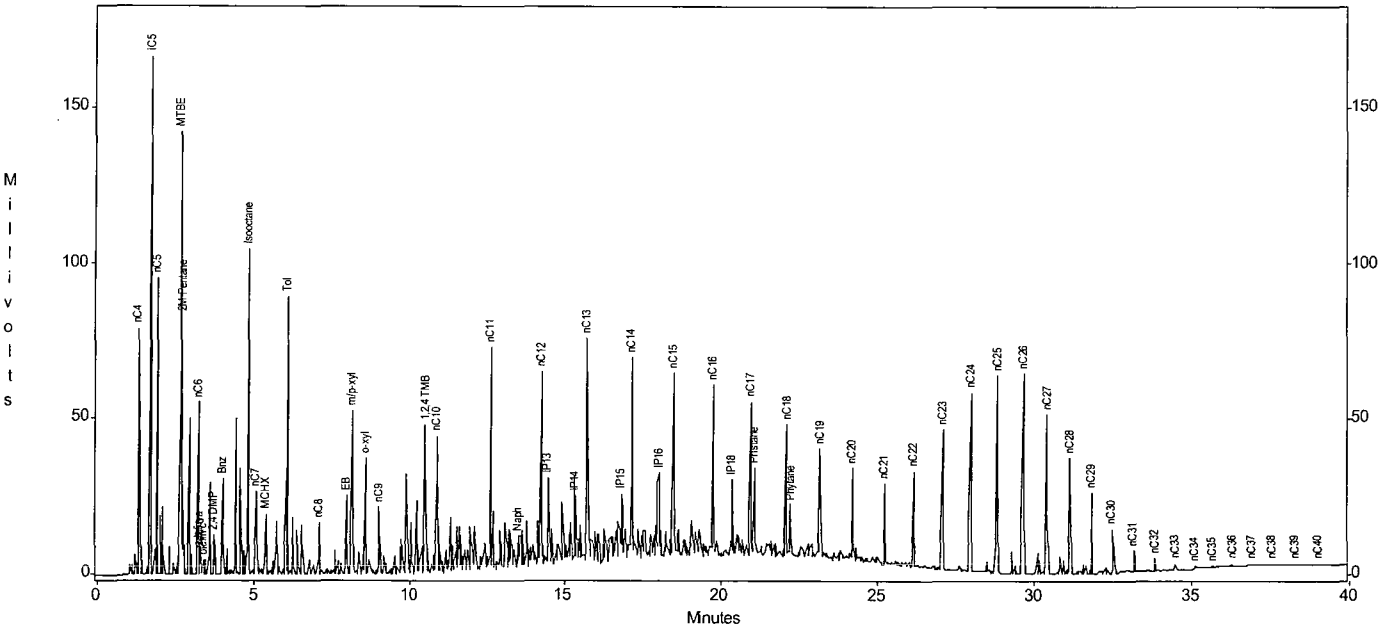

c:\ezchrom\chrom\09148\gadiwax2 – Channel A




c:\ezchrom\chrom\09148\gadiwax2 – Channel A




c:\ezchrom\chrom\09148\gadiwax2 – Channel A




Channel A Results

| Peak | Area | Height |
|---|---|---|
| nC4 | 45001 | 78781 |
| iC5 | 112083 | 166162 |
| nC5 | 68265 | 95362 |
| MTBE | 135323 | 142463 |
| 2M Pentane | 72715 | 82841 |
| nC6 | 54254 | 55264 |
| olefin a | 9431 | 8821 |
| olefin b | 6259 | 6548 |
| olefin c | 5404 | 4902 |
| 2,4 DMP | 13078 | 12792 |
| Bnz | 35683 | 30186 |
| Isooctane | 154313 | 104380 |
| nC7 | 32122 | 26439 |
| MCHX | 23886 | 19371 |
| Tol | 141368 | 89088 |
| nC8 | 19420 | 16175 |
| EB | 34401 | 25276 |
| m/p-xyl | 122347 | 51987 |
| o-xyl | 55055 | 37089 |
| nC9 | 31674 | 21347 |
| 1,2,4 TMB | 84618 | 47591 |
| nC10 | 69467 | 44185 |
| nC11 | 127270 | 71458 |
| Naph | 30263 | 10026 |
| nC12 | 107135 | 60965 |
| IP13 | 52470 | 27992 |
| IP14 | 29090 | 20540 |
| nC13 | 147950 | 71542 |
| IP15 | 46088 | 21885 |
| nC14 | 138085 | 64972 |
| IP16 | 60607 | 27303 |
| nC15 | 123795 | 58656 |
| nC16 | 126928 | 55688 |
| IP18 | 62559 | 24585 |
| nC17 | 113915 | 50202 |
| Pristane | 66019 | 29010 |
| nC18 | 97536 | 43284 |
| Phytane | 38590 | 17460 |
| nC19 | 76962 | 35770 |
| nC20 | 53158 | 29782 |
| nC21 | 47544 | 25799 |
| nC22 | 39958 | 30677 |
| nC23 | 96987 | 45216 |
| nC24 | 147961 | 57275 |
| nC25 | 176203 | 63306 |
| nC26 | 179403 | 64047 |
| nC27 | 137106 | 50852 |
| nC28 | 86827 | 36904 |
| nC29 | 48229 | 25609 |
| nC30 | 23532 | 13431 |
| nC31 | 12499 | 7107 |
| nC32 | 6590 | 3670 |
| nC33 | 3610 | 2063 |
| nC34 | 2089 | 1174 |
| nC35 | 1067 | 613 |
| nC36 | 611 | 346 |
| nC37 | 510 | 186 |
| nC38 | 257 | 111 |
| nC39 | 192 | 79 |
| nC40 | 239 | 62 |

| Torkelson Geochemistry, Inc. | | | | | | | |
|---|---|---|---|---|---|---|---|
| Physical Properties Measurements | | | | | | | |
| Sample | TGI Job Number | Density (gm/ml) | Viscosity (centipoise) | Surface Tension Air/Water (dynes/cm) | Interfacial Tension NAPL/Water (dynes/cm) | Surface Tension Air/NAPL (dynes/cm) | Temperature of Measurements |
| MW-14 | 09148 | 0.8615 | 5.16 | 69.1* | 19.5* | 27.3 | 60F |

* Distilled Water