

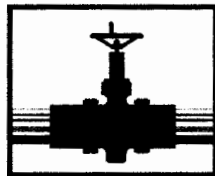
1R - 463

# Annual GW Mon. Report

Year:  
2012

**2012 ANNUAL GROUNDWATER  
MONITORING REPORT  
D S HUGH SITE  
LEA COUNTY, NEW MEXICO  
UL-K, SECTION 26, T21S, R37E  
PLAINS SRS#: 2000-10807  
NMOCD NO.: 1R-0463**

PREPARED FOR



**PLAINS**  
**PIPELINE, L.P.**

333 CLAY STREET, SUITE 1600  
HOUSTON, TEXAS 77002

PREPARED BY  
ENTECH CONSULTING CORPORATION  
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PROJECT NO. PAA12014

**MARCH 2013**

  
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**CHAN PATEL**  
**SENIOR PROJECT MANAGER**

  
\_\_\_\_\_  
**KATHLEEN BUXTON, P.G**  
**SENIOR PROJECT MANAGER**



RECEIVED OGD  
2013 APR - 1 A 11:07

March 19, 2013

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

Re: Plains All American – 2012 Annual Monitoring Reports  
4 Sites in Lea County, New Mexico

Dear Mr. Hansen:

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

<u>Vacuum to Jal 14" Mainline #3</u>	<u>1R-455</u>	<u>Section 35, T21S, R37E, Lea County</u>
<u>Vacuum to Jal 14" Mainline #5</u>	<u>1R-0464</u>	<u>Section 2, T22S, R37E, Lea County</u>
<u>DS Hugh</u>	<u>1R-0463</u>	<u>Section 26, T21S, R37E, Lea County</u>
<u>Hugh Gathering</u>	<u>AP-0041</u>	<u>Section 11, T21S, R37E, Lea County</u>

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

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

Sincerely,

Jason Henry  
Remediation Coordinator  
Plains All American

CC: Geoff Leking, NMOCD, Hobbs, NM

Enclosures

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## **1.0 INTRODUCTION AND OBJECTIVES**

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

On November 10, 2000, a 4 inch steel pipeline at the D S Hugh 4 Inch Gathering line Site (site) released approximately 20 barrels of crude oil into the subsurface. This pipeline was formerly owned by EOTT Energy, LLC (EOTT) and is currently owned by Plains Pipeline, L.P. (Plains). The site is located in Unit Letter K, T21S, R37E, Section 26 of Lea County, New Mexico, approximately two miles east of Eunice, New Mexico (**Figure 1**) or more specifically at latitude 32° 26' 48" N and longitude 103° 08' 07" W. The affected area was reported to be approximately 200 feet by 15 feet and product stayed within the pipeline right of way. The leak that occurred at the site on November 10, 2000, was apparently caused by corrosion of a pipeline. The release was reported by EOTT to Ms. Donna Williams at the New Mexico Oil Conservation Division (NMOCD) on November 10, 2000 at 2:25 P.M. Approximately five barrels of product were reported as recovered out of the approximately 20 barrels reported released into the subsurface.

The leak was repaired and affected soil was excavated and temporarily placed on a plastic liner. The initial response notification form (Form No. C-141), prepared by Plains, provides documentation of reporting the release to Larry Johnson with the New Mexico Oil Conservation Division (NMOCD). Initial soil remediation activities were completed by Environmental Plus Inc. In April 2005, EarthCon Consultants, Inc. (EarthCon; formerly Premier Environmental Services Inc.) personnel completed an initial site investigation for Plains. Details regarding the investigation were reported in EarthCon's 2005 Annual Report and are summarized below in Section 1.2.

This report summarizes the weekly groundwater gauging activities, quarterly groundwater monitoring activities, and PSH recovery efforts that took place during 2012.

### **1.2 Previous Remedial Responses and Environmental Investigations**

The previous environmental consultants for the DS Hugh site were Environmental Plus Inc. and EarthCon Consultants, Inc (EarthCon). As of July 1, 2012, EnTech Consulting Corporation (EnTech) was retained by Plains for consulting services for the site. Even though the environmental consultant for the site has changed, the same personnel were hired by EnTech for historical knowledge, consistency, and to continue working at the site.

Site delineation activities in 2005 included the installation of five soil borings and collection of soil samples within and adjacent to the flow plath of the release. Based on the findings of the September 2005 investiongation, and the surface expression of the release, three groundwater monitor wells (MW-1 through MW-3) were installed in December 2005. Total Petroleum Hydrocarbon (TPH) concentrations in soil from monitor well MW-1 were above 100 mg/kg from the surface to the first water bearing zone at a depth of 45 feet below ground surface (bgs). A

phase-separated hydrocarbon (PSH) sheen was observed in groundwater samples from monitor well MW-1. In May 2006, further soil investigation was conducted by EarthCon to delineate the extent of hydrocarbon contamination in soil. During this investigation, monitor wells MW-4 through MW-7 were installed (**Figure 2**).

A *Soil Remediation Plan* was submitted to and approved by the NMOCD in May 2006. The objective of the *Soil Remediation Plan* was to excavate the most contaminated soils, isolate and control residual chemicals of concern (COCs) in the soil and to prevent further impact to groundwater by the placement of an impermeable line at the base of the excavation. The remediation plan was implemented in October 2006 and a *Soil Closure Report* was prepared by EarthCon and was submitted in March 2007. Details of the activities can be found in the following reports submitted to the NMOCD:

- April 13, 2006 *Groundwater Delineation Investigation* – March 2006 (letter report to Plains)
- May 2006 *Soil Remediation Plan*
- June 6, 2006 *Soil Investigation Results* (letter report to Plains)
- March 2007 *Soil Closure Report*

Quarterly groundwater monitoring was implemented for the site in 2006 and continues to date. Groundwater PSH recovery was conducted on a weekly basis at MW-1. MW-4, which has previously exhibited measurable amounts of PSH, was measured weekly at the beginning of 2011, but when it showed no PSH or PSH sheen, was reduced to being measured on a monthly basis. Approximately 1,087 gallons of water containing dissolved phase hydrocarbons and 19.45 gallons of entrained PSH were recovered from monitor well MW-1 in 2011. Groundwater and PSH recovery for 2012 are presented below in Section 2. This report summarized the activities conducted in 2012 for groundwater analysis and PSH recovery activities.

### 1.3 Regulatory Framework

Based on standards outlined in New Mexico Administrative Code (NMAC), Title 20, Chapter 6, Part 2, the remediation criteria for groundwater at the site are as follows:

Chemical of Concern	Limit (mg/L)
Benzene	0.01
Ethylbenzene	0.75
Total Xylenes	0.62
PAHs <sup>(1,2)</sup>	0.03
Benzo-a-pyrene <sup>(2)</sup>	0.0007

1 – PAHs: Total naphthalenes plus monomethylnaphthalenes

2 – PAH remediation standards will be used as target concentrations only upon PSH removal.

In addition to using the above values as the target cleanup goals for chemicals of concern (COC) concentrations in groundwater at the site, PSH removal is also an integral part of ongoing remediation activities.

#### **1.4 Limitations**

EnTech has examined and relied upon the file information provided by Plains and their contractors, and conversations with Plains personnel and their contractors familiar with the site in question. EnTech has not conducted an independent examination of the information contained in external project files or that provided by Plains or their contract personnel. Furthermore, we assume the genuineness of the documents reviewed and that the information provided in these documents and during the interviews of Plains and contract personnel are true and accurate. EnTech has prepared this report using the level of care and professionalism in the industry for similar projects under similar conditions. EnTech will not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time this report was prepared. EnTech believes the conclusions stated herein are factual, but no guarantee is made or implied.

## 2.0 GROUNDWATER ASSESSMENT AND RESULTS

### 2.1 Groundwater Sampling Methodology

Activities conducted at the site in 2012 primarily consisted of gauging wells for groundwater levels, determining the presence or absence of PSH, recovery of product using Mobil Dual Phase Extraction (MDPE) and recovering PSH using absorbent socks, hand bailing, and submersible pumps in monitor wells. Groundwater sampling of wells not exhibiting PSH was also completed to evaluate the extent of the dissolved-phase hydrocarbon plume.

Measurements of the depth to groundwater and product thickness in wells with hydrocarbon sheen or PSH were completed during the bi-weekly PSH recovery and groundwater sampling events. Seven groundwater monitor wells (MW-1 through MW-7) were gauged using an oil/water interface probe. The well locations are shown on **Figure 2**.

Groundwater level elevations and the presence of PSH, if any, were noted for each well. In cases where no measurable PSH was detected by the interface probe, the downhole sensor of the probe was examined for the presence of PSH upon removal from the well. One monitor well, MW-1, contained a measurable PSH thickness or hydrocarbon sheen during 2012 and was sampled annually. Starting in the second quarter of 2008 all recovery and monitor wells with PSH or sheen were required to be sampled annually and groundwater samples were analyzed for BTEX in the second quarter of 2012. Additional PAH groundwater samples were collected during the second quarter of 2012 from MW-1 and MW-4.

Groundwater monitor wells not exhibiting PSH or hydrocarbon sheen were gauged monthly and sampled quarterly. After collecting and recording groundwater level and PSH thickness measurements, each well was purged with a clean electric submersible pump or hand bailed using a clean disposable bailer, and then groundwater samples were collected using a new dedicated disposable bailer.

Groundwater samples were poured directly from the disposable bailers into the appropriate laboratory-supplied sample containers. The sample containers were then packaged to prevent breakage, placed on ice in a cooler, and shipped to ALS Environmental of Houston, Texas for analysis. The groundwater samples were analyzed for BTEX by EPA Method SW 846-8021B and PAHs by EPA Method SW 8270.

### 2.2 Groundwater Gauging

**Table 1** summarizes groundwater gauging (elevation and PSH thickness) measurements taken before each quarterly groundwater sampling event in 2012. In addition, weekly groundwater elevation and PSH thickness measurements were recorded prior to and after PSH recovery and monthly measurements were taken from wells without PSH. Groundwater elevations and PSH thickness measurements were taken in one monitor well (MW-1) during PSH recovery efforts. Groundwater elevation measurements were recorded monthly for six monitor wells (MW-2 through MW-7) without PSH or hydrocarbon sheen. Complete historical groundwater elevation and PSH thickness measurements since September 21, 2005 are presented in **Table 2**. The

groundwater elevation calculations are based on the top of PVC well casing elevations, which were last surveyed on March 15, 2005 by EarthCon, the previous consultant.

### 2.3 Groundwater Gradient and Flow Direction

Using the groundwater gauging data and summarized in **Table 1**, groundwater gradient maps were prepared and are included as **Figures 3A** through **3D**. The calculated groundwater gradient and estimated groundwater flow direction are based on the gauging data obtained on February 22, May 22, September 11, and November 26, 2012. The hydraulic gradient in 2012 ranged from 0.0033 to 0.0041 feet/feet (ft/ft), based on groundwater elevations measured between monitor wells MW-4 and MW-7. The groundwater gradient and flow direction across the site during 2012 were similar to the gradient and direction observed during the previous five years to the east-southeast.

### 2.4 Groundwater Analytical Results

Groundwater samples were collected on February 22, May 22, September 11, and November 26 during 2012 from all wells that did not contain PSH (see **Table 3**). The monitor wells were purged by removing a minimum of three to five well volumes of groundwater, or depending on groundwater conditions, bailed dry three times using a disposable bailer and allowed to recover to at least 80% of the initial volume before collecting samples. Groundwater samples were collected and transferred into laboratory-supplied sample containers. The sample containers were placed on ice in a cooler and shipped to ALS Laboratory Group (ALS), in Houston, Texas for analysis. Groundwater samples were analyzed for BTEX using EPA Method SW-846 8021B and PAHs by EPA Method SW 8270.

Groundwater samples were collected in the second quarter from monitor well MW-1 due to the presence of PSH. MW-1 exceeded the NMOCD criteria for benzene during the second quarter. Analytical results reported for the groundwater samples collected at four wells (MW-2, MW3, MW-5 through MW-7) displayed BTEX constituent concentrations below laboratory MDLs for all four quarters. Monitor well MW-4 exhibited concentrations of constituents above laboratory MDLs and NMOCD remediation criteria for the first and second quarters of groundwater monitoring for benzene.

The 2012 analytical results are presented in **Table 3**, and historical analytical results are presented in **Table 4**. **Table 2.1** below summarizes the BTEX concentrations in which NMOCD Remediation Criteria exceedances were observed in 2012. BTEX concentrations reported in exceedance of NMOCD standards are marked in **bold**.

Table 2.1				
2012 COC Detected Concentrations (mg/L)				
2012	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	Benzene	Benzene	Benzene	Benzene
TRRC Remediation Criteria (mg/L)	0.01	0.01	0.01	0.01
MW-1	NS	0.55	NS	NS
MW-2	<0.0010	<0.0010	<0.0010	<0.0010
MW-3	<0.0010	<0.0010	<0.0010	<0.001
MW-4	0.011	0.011	0.008	0.004
MW-5	<0.0010	<0.0010	<0.0010	<0.0010
MW-6	<0.0010	<0.0010	<0.0010	<0.0010
MW-7	<0.0010	<0.0010	<0.0010	<0.0010

Note: Concentrations in **bold** indicate exceedances of TRRC Remediation criteria.

J – Estimated. The analyte was detected and identified and associated numerical value is the approximate concentration of the analyte in the sample.

NS – Not sampled due to PSH sheen or a visible PSH sheen.

Historical analytical results are presented in **Table 4**. Laboratory analytical reports are provided in **Appendix A**. The groundwater analytical data and PSH thickness data for each quarterly sampling event are presented in **Figures 4A** through **4D**.

In 2008, 2009, 2010, 2011, and 2012 NMOCD required Plains to analyze for BTEX and PAH constituents in the dissolved phase groundwater in wells with hydrocarbon sheen or wells that exceed NMOCD remediation standards in 2012. To meet this requirement for 2012, groundwater samples were also collected from monitor well MW-1 during the second quarter of 2012 and were analyzed for BTEX constituents (see **Tables 3 and 4** for analytical data) as well as PAHs (see **Table 5**).

During the second quarter sampling event, fluids (PSH and dissolved phase hydrocarbons) from the well MW-1 were bailed off prior to purging the well. After three well volumes were removed and the well was allowed to stabilize a groundwater sample was collected. The analytical results indicated the presence of benzene concentrations above the NMOCD remediation criteria of 0.01 mg/L in the monitor well MW-1. Copies of the laboratory analytical data packages are included in **Appendix A**.

## 2.5 Groundwater Waste Disposal

Purge water from well sampling at wells MW-1 through MW-7 is placed in the 1100-gallon above ground storage tank. These liquids are vacuumed from the tank and transported offsite disposal by Key Energy Services of Hobbs, New Mexico.

## 3.0 PSH RECOVERY

### 3.1 PSH Recovery Methodology

In addition to collecting groundwater samples, EnTech performed weekly visits to the site to gauge and recover PSH from one well with PSH/sheen (MW-1). Measurements to PSH and water levels were recorded during each site visit (see **Table 2**). PSH recovery activities were completed on a weekly basis using submersible pumps, hand bailer and/or absorbent socks. Routine PSH recovery activities typically consisted of the removal of less than 1 gallon of PSH and 10 to 20 gallons of groundwater with possible dissolved phase hydrocarbons from each well.

One Mobile Dual Phase Extraction (MDPE) event was conducted at the site during 2012. MDPE is a remediation technique where vacuum is applied to the subsurface through monitor wells. This vacuum will simultaneously remove vapors and fluids (groundwater and PSH) from the subsurface. MDPE is discussed further in **Section 3.3**.

### 3.2 PSH Recovery via Pumping and Manual bailing

During 2012, measurable PSH was observed in monitor well MW-1. In general, decreasing trends in the PSH thickness data collected for this well has been observed. Monthly recovery data for PSH and dissolved phase groundwater are presented in **Table 6**.

A general decreasing trend in the PSH thickness in monitor well MW-1 was observed starting in early 2008. A thin PSH thickness was observed through most of 2012, with the maximum thickness of PSH reaching 2.07 ft in February 2012.

### 3.3 PSH Recovery via MDPE

PSH recovery via MDPE was conducted at the site during 2012 by Plains consultant Talon, LPE (Talon). The MDPE event was conducted in February 2012 for duration of 12-hours.

MDPE removes multiple phases of hydrocarbons (liquid, dissolved, absorbed and vapor phase) simultaneously by extracting fuel, vapors, and contaminated groundwater from multiple monitor and recovery wells. This is completed with a truck-mounted vacuum and liquid handling system integrated with a mobile hydrocarbon vapor treatment system. High vacuum is applied to multiple wells with down hole apparatuses to control the fluid elevation in each well. Therefore, the vacuum forcefully induces contaminant liquids and vapors to be simultaneously pulled into the extraction wells from the vadose zone, capillary fringe, and the saturated zone. Extracted contaminant liquids are collected in a designated tank at the site. Volatile vapor emissions are treated by the integrated vapor destruction systems.

During the February 2012 event, 1,261 total fluids were removed during the event, with 1.56 gallons of vapor PSH recovery and 3 gallons of fluid PSH recovery. Based on the lack of PSH recovery, this method will no longer be utilized at the site. Fluids generated during this event



were stored in a separate storage tank at the site and were disposed of by Talon at the conclusion of the event.

### **3.4 PSH Waste Disposal**

Approximately 100 gallons of PSH and 400 gallons total of affected groundwater were recovered from the wells containing PSH or sheen during 2012. The aforementioned liquids storage tank was not emptied during 2012.

## 4.0 MONITORED NATURAL ATTENUATION

### 4.1 Regulatory Framework for Monitored Natural Attenuation

Monitored Natural Attenuation (MNA) is defined by the New Mexico Environmental Department in 20.5.13 NMAC as “a methodology for remediation that relies upon a variety of naturally occurring chemical, physical and biological processes to achieve target concentrations in a manner that is equally as protective of public health, safety and welfare, and the environment as other methods and that is accompanied by a program of monitoring to document the process and results of the above mentioned processes.”

As part of the MNA process several lines of evidence need to be evaluated, the general lines of evidence are listed below:

- **Primary Lines of Evidence (PLOE).** Relies on use of historical groundwater data that demonstrate a clear trend of stable or decreasing chemical of concern (COC) concentrations over time and with distance away from the source at appropriate monitoring or sampling points.
- **Secondary Lines of Evidence (SLOE).** Uses geochemical indicators to document certain geochemical signatures or “footprints” in the groundwater that demonstrated (indirectly) the type of natural attenuation process(es) occurring at the affected property and the destruction of COCs; or uses distance-based/time-based/biodegradation rate calculations to demonstrate attenuation.
- **Other Lines of Evidence (OLOE).** Most often consists of predictive modeling studies and other lab/field studies that demonstrate an understanding of the natural attenuation process(es) occurring at the affected property and their effectiveness in controlling PCLE zone migration and decreasing COC concentrations.

### 4.2 Monitored Natural Attenuation Information

The DS Hugh site is currently undergoing Plume Stability Analysis. While samples are collected for monitored natural attenuation, insufficient data exists at this time to perform and reliable evaluation.

The dissolved phase plume was evaluated by analyzing groundwater samples collected quarterly from seven monitor wells which did not contain PSH. Throughout 2012, benzene was detected above the NMOCD remediation criteria in monitor well MW-1. Benzene concentrations in the groundwater samples collected from monitor well MW-4 appear to be generally decreasing from maximum concentrations observed and above NMOCD standards during the first and second quarters of 2012 to below NMOCD standards during third and fourth quarter. The groundwater samples collected from the remaining wells on site reported benzene, toluene, ethylbenzene and total xylenes (BTEX) constituent concentrations either below the NMOCD remediation criteria or below the laboratory MDLs.

The benzene concentrations reported in the groundwater samples collected from the monitor wells down-gradient of the plume (MW-6 and MW-7) from 2006 to 2012 also indicate a general decrease in the benzene concentrations.

Understanding plume stability is an important step in the remedial planning process for a site. For instance, an increasing plume could potentially migrate to human or environmental receptors, whereas a stable or decreasing plume may not pose an imminent threat to human health and the environment. An introduction to plume stability analysis and the basis for the plume evaluation at the site was presented in the 2009 Annual report.

This analysis was conducted in order to understand the overall stability of the benzene plume during 2006 through 2012. This study included the development of benzene concentration isopleths maps, an average of the benzene concentrations reported in the four quarterly groundwater sampling events was used for all the wells with no PSH, specifically monitor wells MW-2 through MW-8. Since the wells with PSH were sampled only during the second quarter groundwater sampling events from 2008 through 2012, the benzene concentrations reported during this sampling event were used in the plume evaluation. The plume characteristics such as the plume area, average concentration and mass were calculated for each of the benzene plumes using numerical methods and engineering principles.

The benzene isopleths maps for 2006 through 2012 are presented in **Figures 5 through 11** respectively. Previous maps prepared by EarthCon are presented in **Figures 5 through 10**.

The analytical data collected for the site used for the plume stability analysis indicated that the benzene plume emanating from the site has a decreasing trend in size and mass while the average concentration of benzene appears to be decreasing as well.

## 5.0 FINDINGS

Findings and recommendations resulting from 2012 groundwater monitoring at the Vac to Jal 3 site are summarized below.

- Groundwater flow in the uppermost groundwater-bearing unit is to the east-southeast ranging from 0.0033ft/ft to 0.0041 ft/ft as measured between wells MW-4 and MW-7.
- Analytical results reported for the groundwater samples collected at five wells (MW-2, MW-3 and MW-5 through MW-7) displayed BTEX constituent concentrations below laboratory MDLs for all four quarters. Monitor well MW-4 exhibited concentrations of constituents above laboratory MDLs, but below NMOCD remediation criteria for the third and fourth quarters of groundwater monitoring. MW-4 exceeded the NMOCD criteria for benzene during the first and second quarters. MW-1 exceeded the NMOCD criteria for benzene during the second quarter.
- PSH recovery from well MW-1 continued during 2012, and the volume recovered appears to have significantly diminished during 2012. The estimated quantity of PSH recovered from wells exhibiting PSH totaled approximately 100 gallons, with groundwater recovery totaling approximately 400 gallons.
- The PSH plume has remained in the historical source area, located in the vicinity of well MW-1 and does not appear to be migrating downgradient.

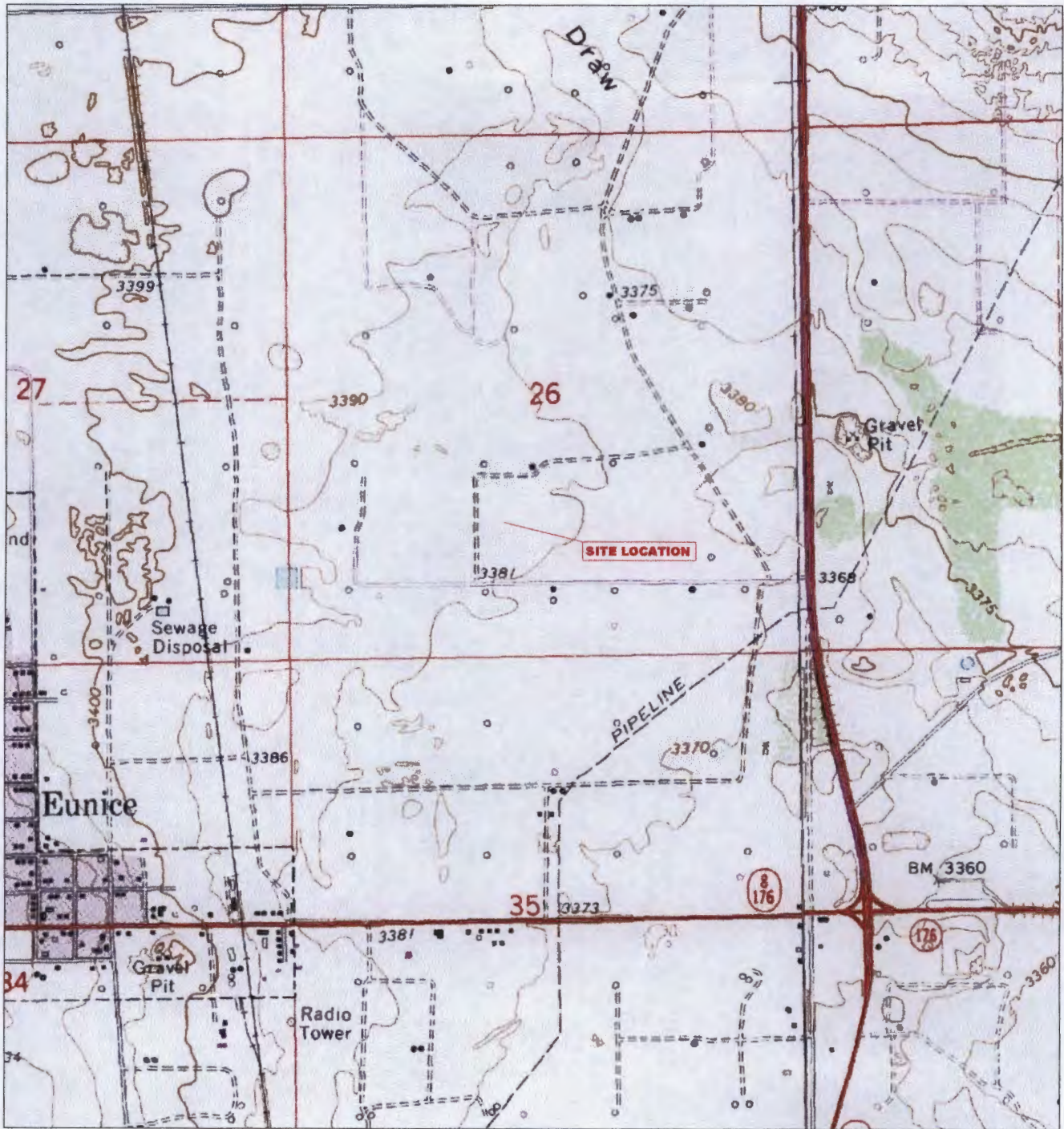
Based on PSH recovery data and groundwater sampling completed during 2012 (and previously) at the site, EnTech recommends the following:

- PSH recovery from well MW-1 continues on a weekly basis.
- Groundwater monitoring continues on a quarterly basis.

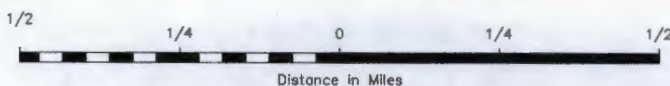
## FIGURES

<b>Figure 1</b>	<b>Site Location Map</b>
<b>Figure 2</b>	<b>Site Layout Map</b>
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<b>Figure 3B</b>	<b>2nd Quarter 2011 – Groundwater Gradient Map, May 23, 2012</b>
<b>Figure 3C</b>	<b>3rd Quarter 2011 – Groundwater Gradient Map, September 12, 2012</b>
<b>Figure 3D</b>	<b>4th Quarter 2011 – Groundwater Gradient Map, November 19, 2012</b>
<b>Figure 4A</b>	<b>1st Quarter 2011 – Groundwater Analytical Map, March 23, 2012</b>
<b>Figure 4B</b>	<b>2nd Quarter 2011 – Groundwater Analytical Map, May 22, 2012</b>
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**Eunice Quadrangle**  
**32°26'48"N Latitude & 103°08'07"W Longitude**



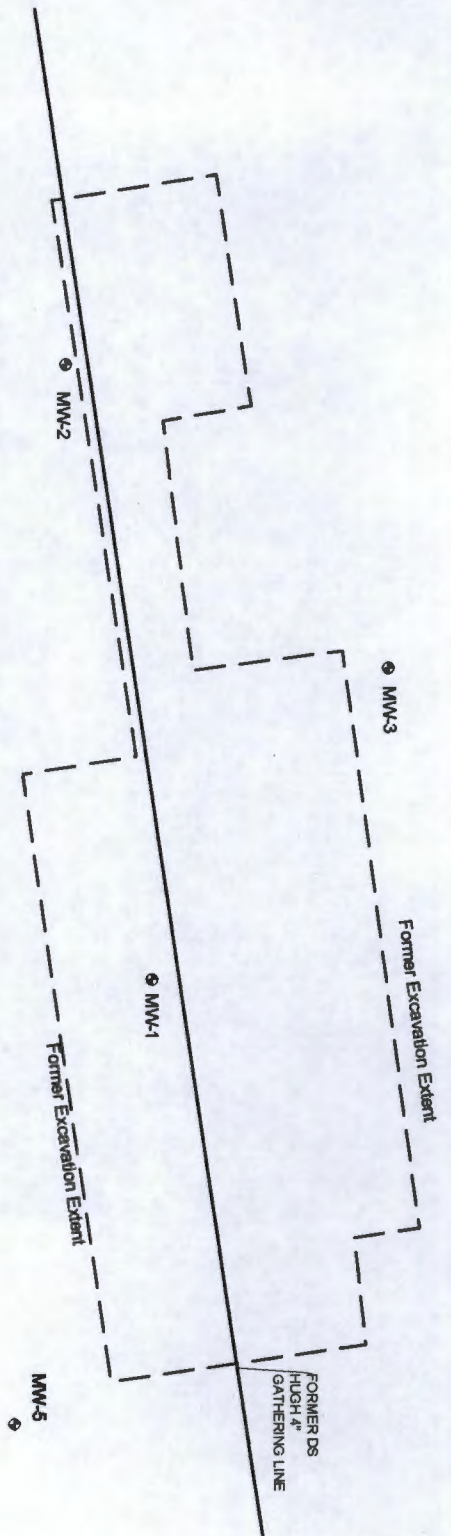
**EnTech**  
 Houston, TX • (281) 362-2714

Figure 1  
 Site Location Map  
 D.S. Hugh Gathering 4" Line  
 SRS. No.: 2000-10807  
 Plains Marketing, L.P.  
 Lea County, New Mexico

PROJ. NO: PAA12003

DATE: 1/13





**LEGEND:**  
 ● MW-  
 --- FORMER EXCAVATION EXTENT  
 --- MONITOR WELL LOCATIONS  
 --- FORMER EXCAVATION EXTENT



MW-7 ●

MW-4 ●

MW-8 ●

MW-5 ●

**Entech**  
 Houston, TX - (281) 362-2714

Figure 2  
 Site Map  
 D.S. Hugh Gathering 4" Line  
 SRS, No.: 2000-10807  
 Plains Marketing, L.P.  
 Lea County, New Mexico

PROJ. NO: PAA12003 DATE

- LEGEND:**
- ⊕ MW- - Monitoring Well Location
  - - - Former Excavation Extent
  - 3370.8- Groundwater Elevation Contour, ft.  
Contour Interval = 0.25'
  - (3370.70) - Corrected Groundwater Elevation, ft.
  - Groundwater Flow Direction



**Entech**  
Houston, TX • (281) 362-2714

Figure 3A

1st Quarter 2012 - Groundwater Gradient Map

February 22, 2012

D.S. Hugh Gathering 4" Line

SRS, No.: 2000-10807

Plains Marketing, L.P.

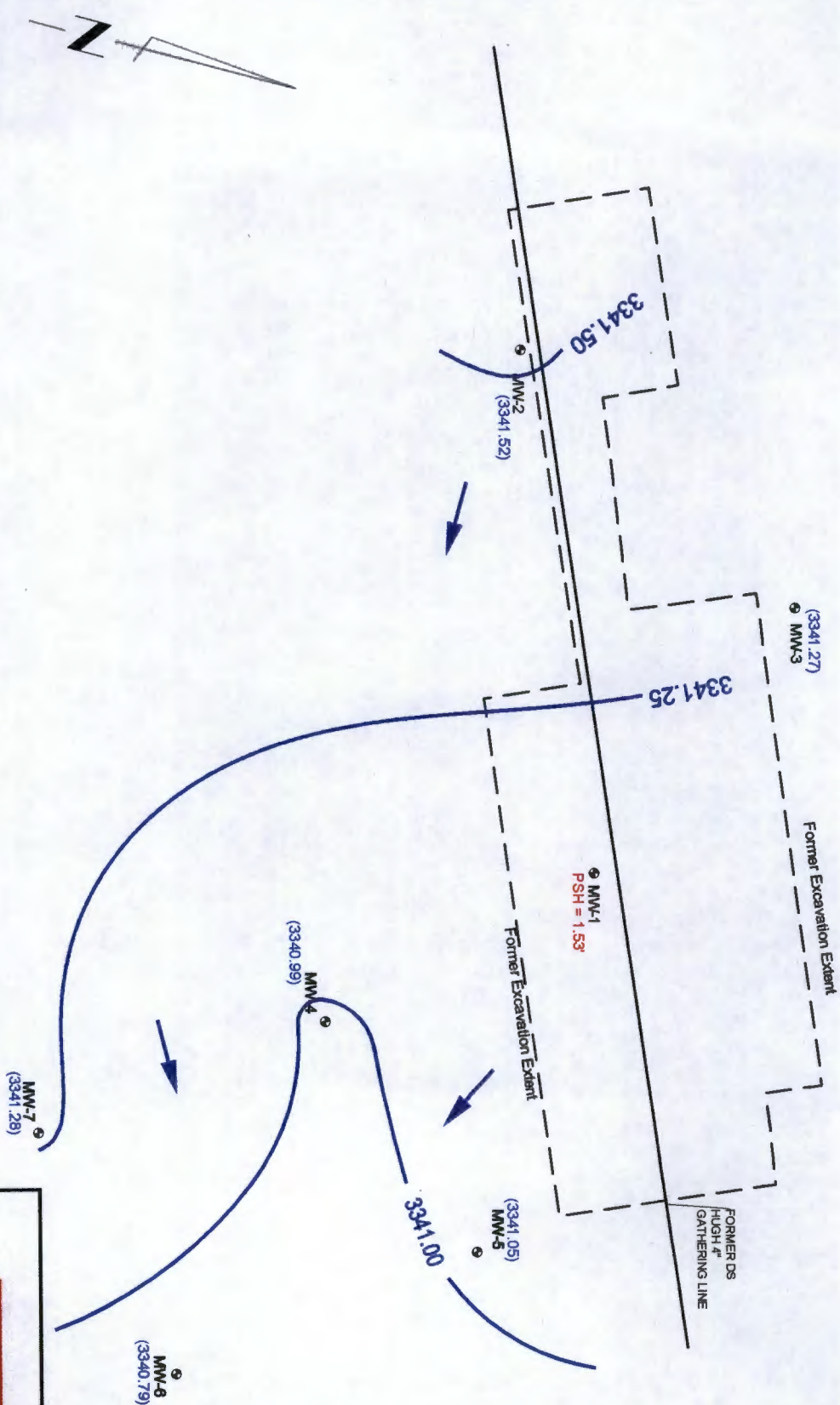
Lea County, New Mexico

PROJ. NO: PAA12003

DATE:



- LEGEND:**
- MW- - Monitoring Well Location
  - - - Former Excavation Extent
  - 3370.8- Groundwater Elevation Contour, ft.  
Contour Interval = 0.25'
  - (3370.70) - Corrected Groundwater Elevation, ft.
  - Groundwater Flow Direction



**Entech**  
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Figure 3B

2nd Quarter 2012 - Groundwater Gradient Map

May 22, 2012

D.S. Hugh Gathering 4" Line

SRS. No.: 2000-10807

Plains Marketing, L.P.

Lea County, New Mexico

PROJ. NO.: PAA12003

DATE:



# LEGEND:

- MW- - Monitoring Well Location
- - - - - Former Excavation Extent
- 3370.8- Groundwater Elevation Contour, ft.
- (3370.70) - Corrected Groundwater Elevation, ft.
- - Groundwater Flow Direction

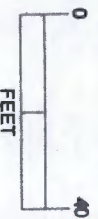
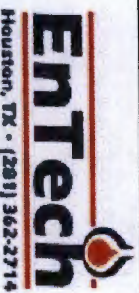


Figure 3C

3rd Quarter 2012 - Groundwater Gradient Map  
September 11, 2012

D.S. Hugh Gathering 4" Line  
SRS. No.: 2000-10807  
Plains Marketing, L.P.  
Lea County, New Mexico

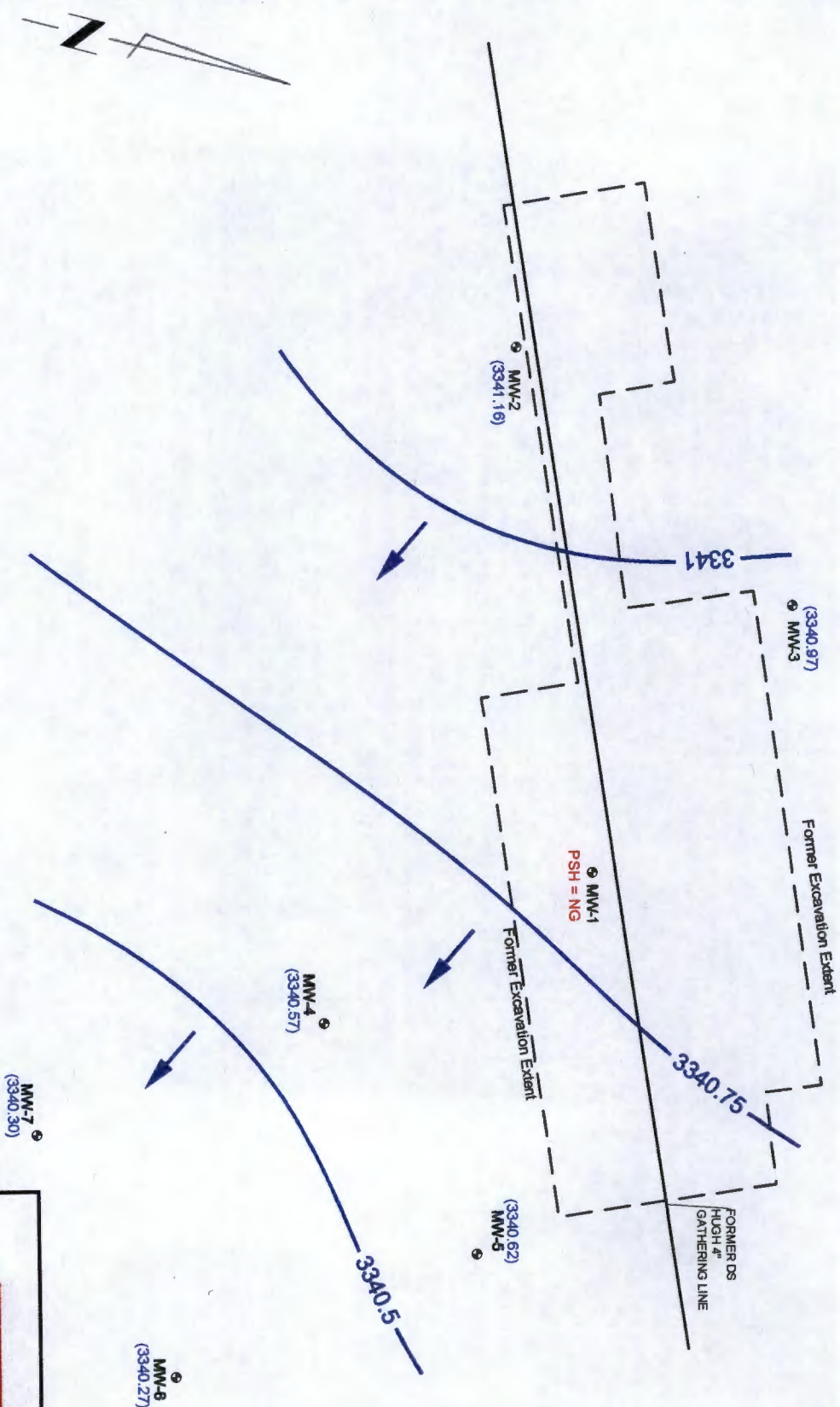
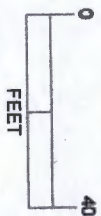


PROJ. NO: PAA12003

DATE:



- LEGEND:**
- ⊕ MW- - Monitoring Well Location
  - - - Former Excavation Extent
  - 3370.8- Groundwater Elevation Contour, ft.
  - Contour Interval = 0.25'
  - (3370.70) - Corrected Groundwater Elevation, ft.
  - Groundwater Flow Direction



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Houston, TX • (281) 362-2714

Figure 3D

4th Quarter 2012 - Groundwater Gradient Map

November 26, 2012

D.S. Hugh Gathering 4" Line

SRS. No.: 2000-10807

Plains Marketing, L.P.

Lea County, New Mexico

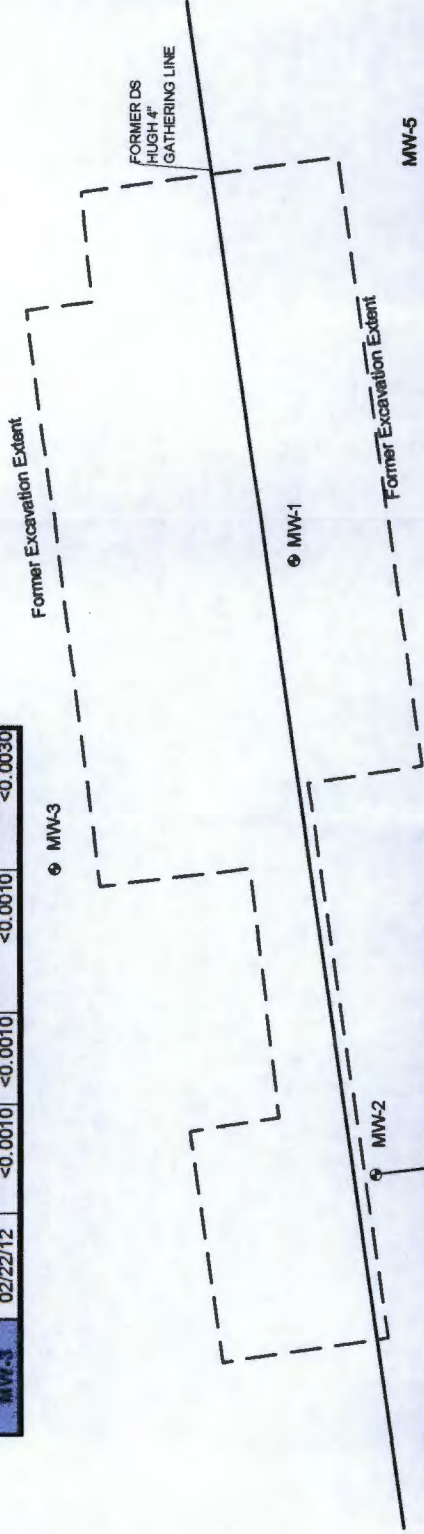
PROJ. NO: PAA12003

DATE:





Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-3	02/22/12	<0.0010	<0.0010	<0.0010	<0.0030



Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-2	02/22/12	<0.0010	<0.0010	<0.0010	<0.0030

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-5	02/22/12	<0.0010	<0.0010	<0.0010	<0.0030

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-4	02/12/22	0.011	<0.0010	0.11	0.21

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-6	02/22/12	<0.0010	<0.0010	<0.0010	<0.0030

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-7	02/22/12	<0.0010	<0.0010	<0.0010	<0.0030

LEGEND:  
● MW-  
--- FORMER EXCAVATION EXTENT

Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
0.01	0.75	0.75	0.62

Concentrations in **BOLD** exceed the NMOCD Remediation Criteria for the Site.

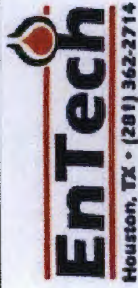


Figure 4A  
1st Quarter 2012 Groundwater Analytical Map  
February 22, 2012  
D.S. Hugh Gathering 4" Line  
SRS. No.: 2000-10807  
Plains Marketing, L.P.  
Lea County, New Mexico





Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-3	05/23/12	<0.0010	<0.0010	<0.0010	<0.0030

⊕ MW-3

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-1	05/22/12	<b>0.55</b>	<b>1.5</b>	0.6	<b>1.5</b>

Former Excavation Extent

FORMER DS  
HUGH 4"  
GATHERING LINE

⊕ MW-1

Former Excavation Extent

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-2	05/22/12	<0.0010	<0.0010	<0.0010	<0.0030

⊕ MW-2

⊕ MW-5

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-5	05/23/12	<0.0010	<0.0010	<0.0010	<0.0030

⊕ MW-4

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-4	05/23/12	<b>0.011</b>	0.001	0.15	0.38

⊕ MW-6

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-6	05/22/12	<0.0010	<0.0010	<0.0010	<0.0030

⊕ MW-7

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-7	05/23/12	<0.0010	<0.0010	<0.0010	<0.0030

LEGEND:

- ⊕ MW- MONITOR WELL LOCATIONS
- FORMER EXCAVATION EXTENT

Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>
NMOCD Remediation Criteria			

Concentrations in **BOLD** exceed the NMOCD Remediation Criteria for the Site.

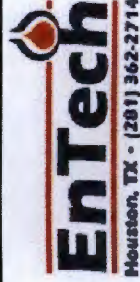


Figure 4B  
2nd Quarter 2012 Groundwater Analytical Map  
May 22 & 23, 2012  
D.S. Hugh Gathering 4" Line  
SRS. No.: 2000-10807  
Plains Marketing, L.P.  
Lea County, New Mexico





Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-3	09/11/12	<0.0010	<0.0010	<0.0010	<0.0030

⊙ MW-3

Former Excavation Extent

FORMER DS  
HUGH 4"  
GATHERING LINE

⊙ MW-1

Former Excavation Extent

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-2	09/11/12	<0.0010	<0.0010	<0.0010	<0.0030

⊙ MW-2

⊙ MW-5

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-5	09/11/12	<0.0010	<0.0010	<0.0010	<0.0030

⊙ MW-4

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-4	09/11/12	0.0075	<0.0010	0.14	0.23

⊙ MW-6

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-6	09/11/12	<0.0010	<0.0010	<0.0010	<0.0030

⊙ MW-7

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-7	09/11/12	<0.0010	<0.0010	<0.0010	<0.0030

LEGEND:

- ⊙ MW- MONITOR WELL LOCATIONS
- FORMER EXCAVATION EXTENT

Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
0.01	0.75	0.75	0.62
NM/OCD Remediation Criteria			

Concentrations in **BOLD** exceed the NM/OCD Remediation Criteria for the Site.

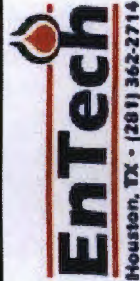


Figure 4C  
3rd Quarter 2012 Groundwater Analytical Map  
September 11, 2012  
D.S. Hugh Gathering 4" Line  
SRS, No.: 2000-10807  
Plains Marketing, L.P.  
Lea County, New Mexico

PROJ. NO: PAA12003

DATE: 1/13





Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-3	11/26/12	<0.0010	<0.0010	<0.0010	<0.0030

⊕ MW-3

Former Excavation Extent

FORMER DS  
HUGH 4"  
GATHERING LINE

⊕ MW-1

⊕ MW-2

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-2	11/26/12	<0.0010	<0.0010	<0.0010	<0.0030

⊕ MW-5

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-5	11/26/12	<0.0010	<0.0010	<0.0010	<0.0030

Former Excavation Extent

⊕ MW-4

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-4	11/26/12	0.004	<0.0010	0.11	0.15

⊕ MW-6

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-6	11/26/12	<0.0010	<0.0010	<0.0010	<0.0030

⊕ MW-7

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
MW-7	11/26/12	<0.0010	<0.0010	<0.0010	<0.0030

LEGEND:

- ⊕ MW- - MONITOR WELL LOCATIONS
- - FORMER EXCAVATION EXTENT

Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
0.01	0.75	0.75	0.82

Concentrations in **BOLD** exceed the NMOCD Remediation Criteria for the Site.

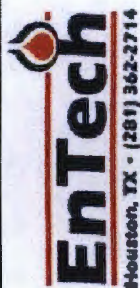


Figure 4D  
4th Quarter 2012 Groundwater Analytical Map  
November 26, 2012  
D.S. Hugh Gathering 4" Line  
SRS. No.: 2000-10807  
Plains Marketing, L.P.  
Lea County, New Mexico



MW-3  
[<0.1]

Former Excavation Extent

FORMER DS  
HUGH 4"  
GATHERING LINE

MW-2  
[<0.1]

MW-1  
[NS (512)]

Former Excavation Extent

MW-5  
[<0.1]

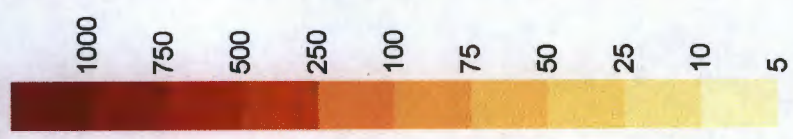
MW-4  
[619]

+

MW-6  
[<0.1]

MW-7  
[13.7]

Concentration  
(ug/l)



**LEGEND:**

- MW + - MW - Monitor Wells
- + - Plume Center of Mass
- [2] - Benzene Concentration (ug/l)
- [NS (512)] - Well Not Sampled, Assumed Concentration (ug/l)

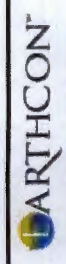
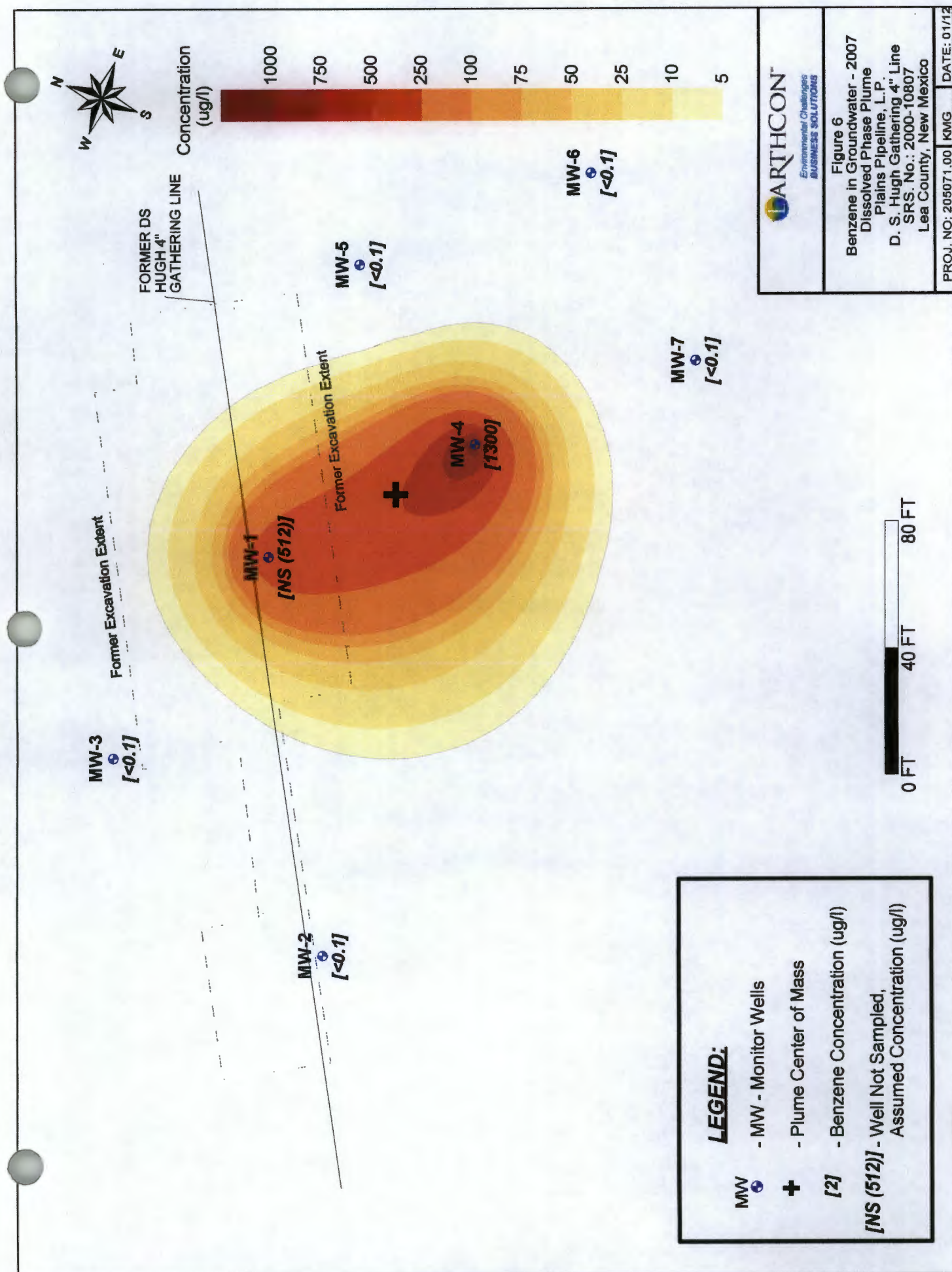


Figure 5  
Benzene in Groundwater - 2006  
Dissolved Phase Plume  
Plains Pipeline, L.P.  
D. S. Hugh Gathering 4" Line  
SRS. No.: 2000-10807  
Lea County, New Mexico



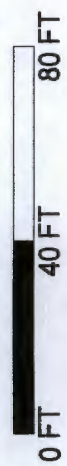


**Figure 6**  
 Benzene in Groundwater - 2007  
 Dissolved Phase Plume  
 Plains Pipeline, L.P.  
 D. S. Hugh Gathering 4" Line  
 SRS. No.: 2000-10807  
 Lea County, New Mexico

PROJ. NO: 205071.00 KMG DATE: 01/12

**LEGEND:**

- MW + - MW - Monitor Wells
- + - Plume Center of Mass
- [2] - Benzene Concentration (ug/l)
- [NS (512)] - Well Not Sampled, Assumed Concentration (ug/l)



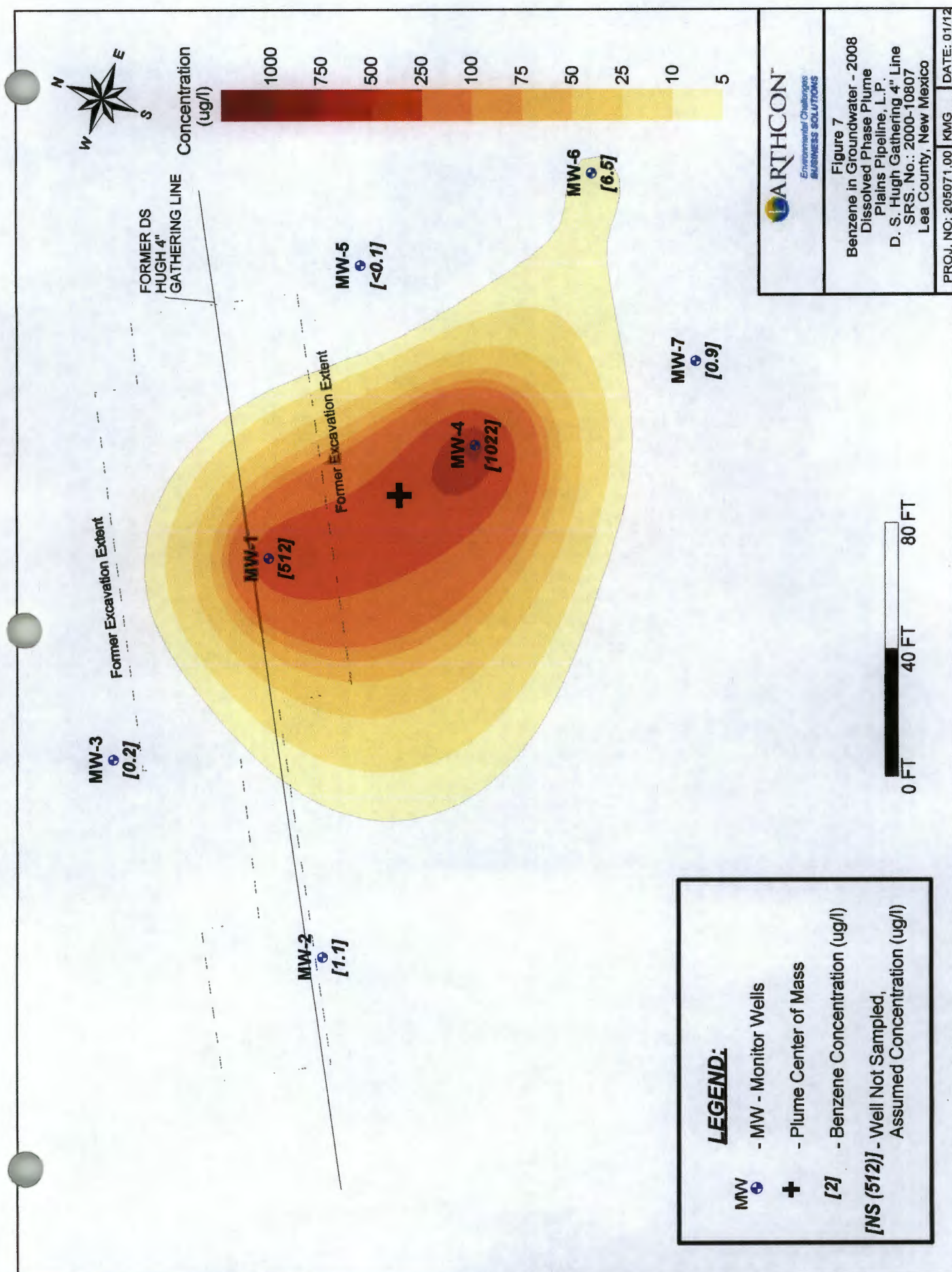
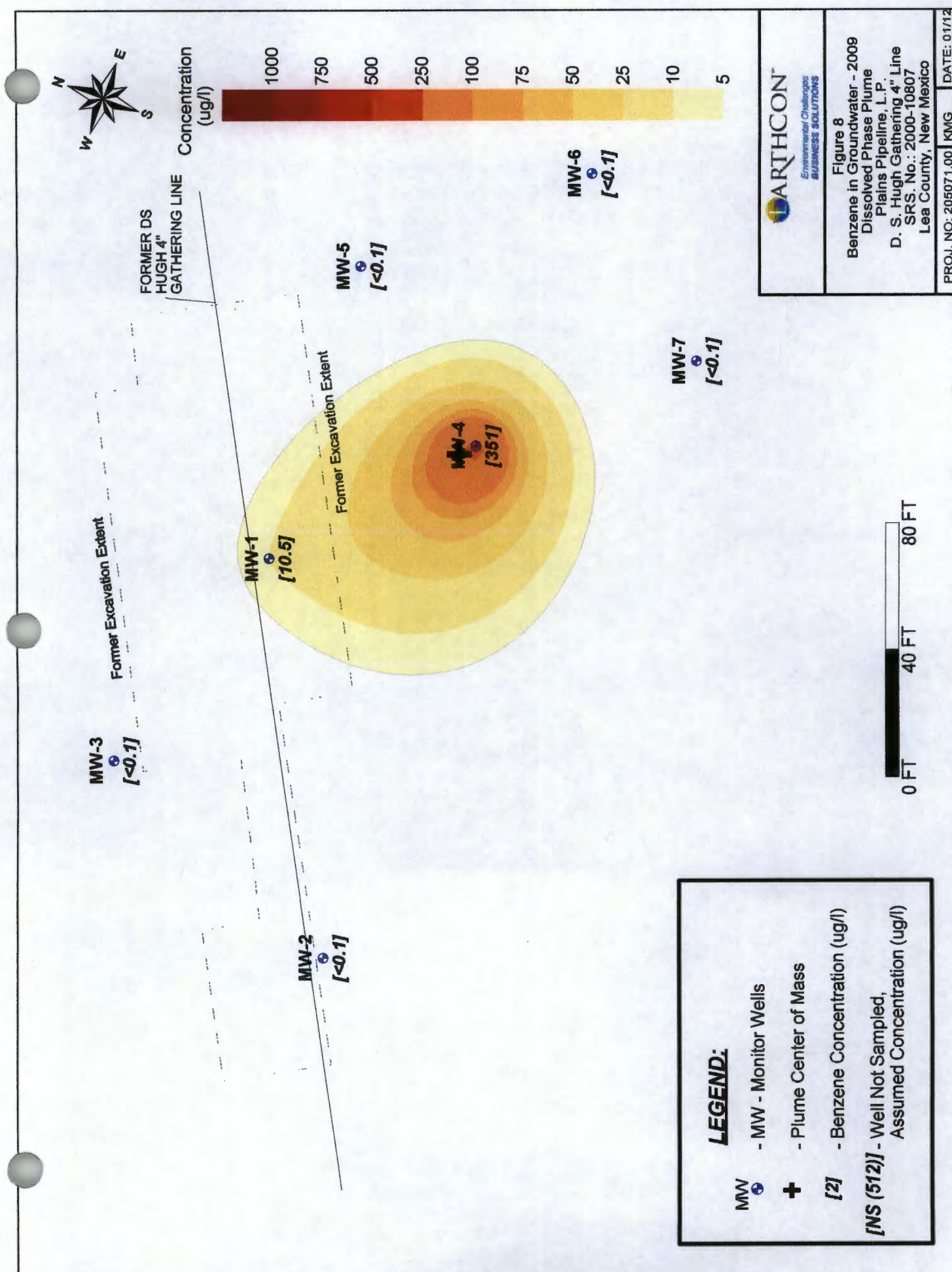


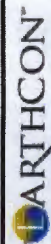
Figure 7  
Benzene in Groundwater - 2008  
Dissolved Phase Plume  
Plains Pipeline, L.P.  
D. S. Hugh Gathering 4" Line  
SRS. No.: 2000-10807  
Lea County, New Mexico





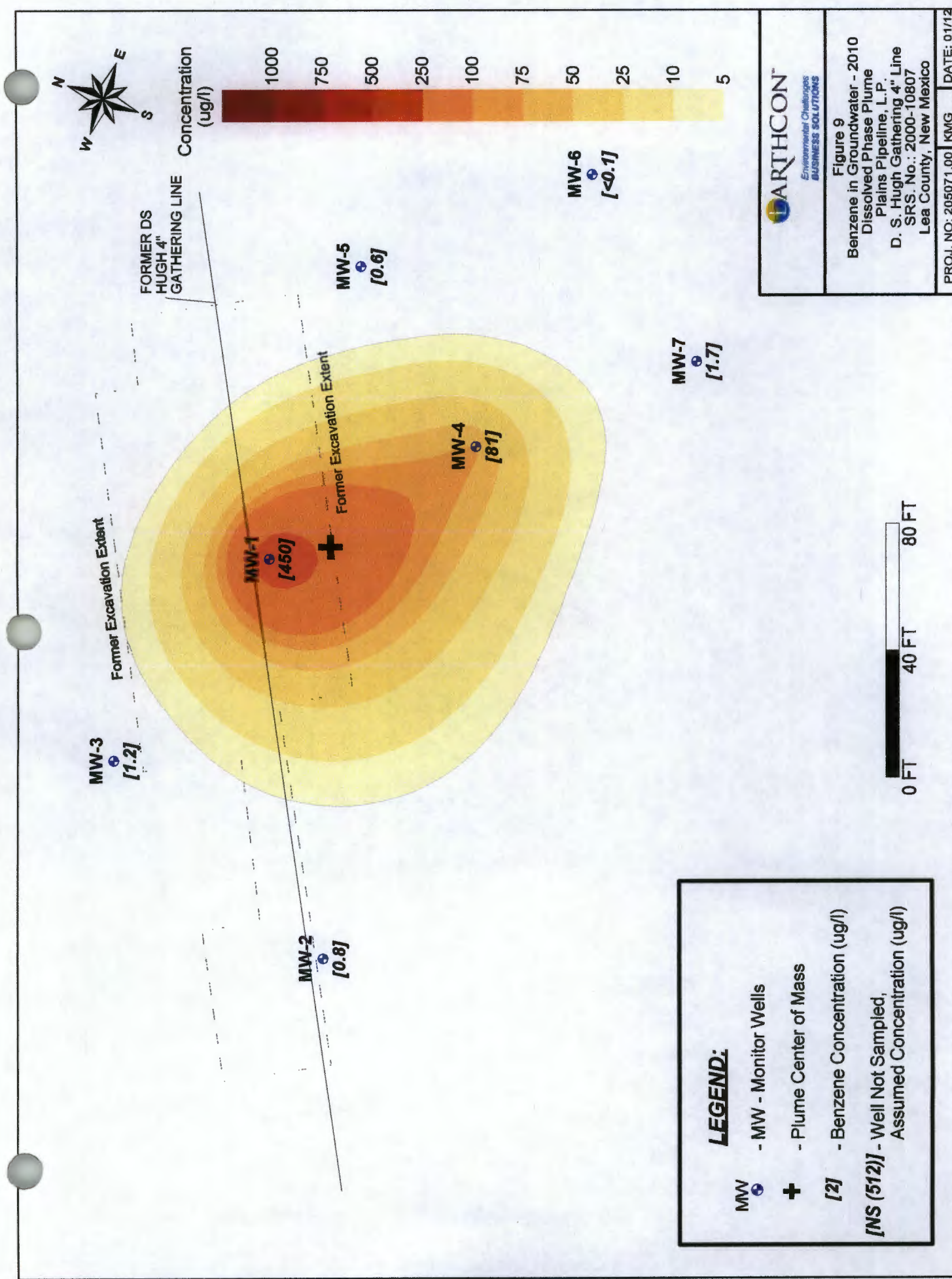
**LEGEND:**

- MW + - MW - Monitor Wells
- + - Plume Center of Mass
- [2] - Benzene Concentration (ug/l)
- [NS (512)] - Well Not Sampled, Assumed Concentration (ug/l)

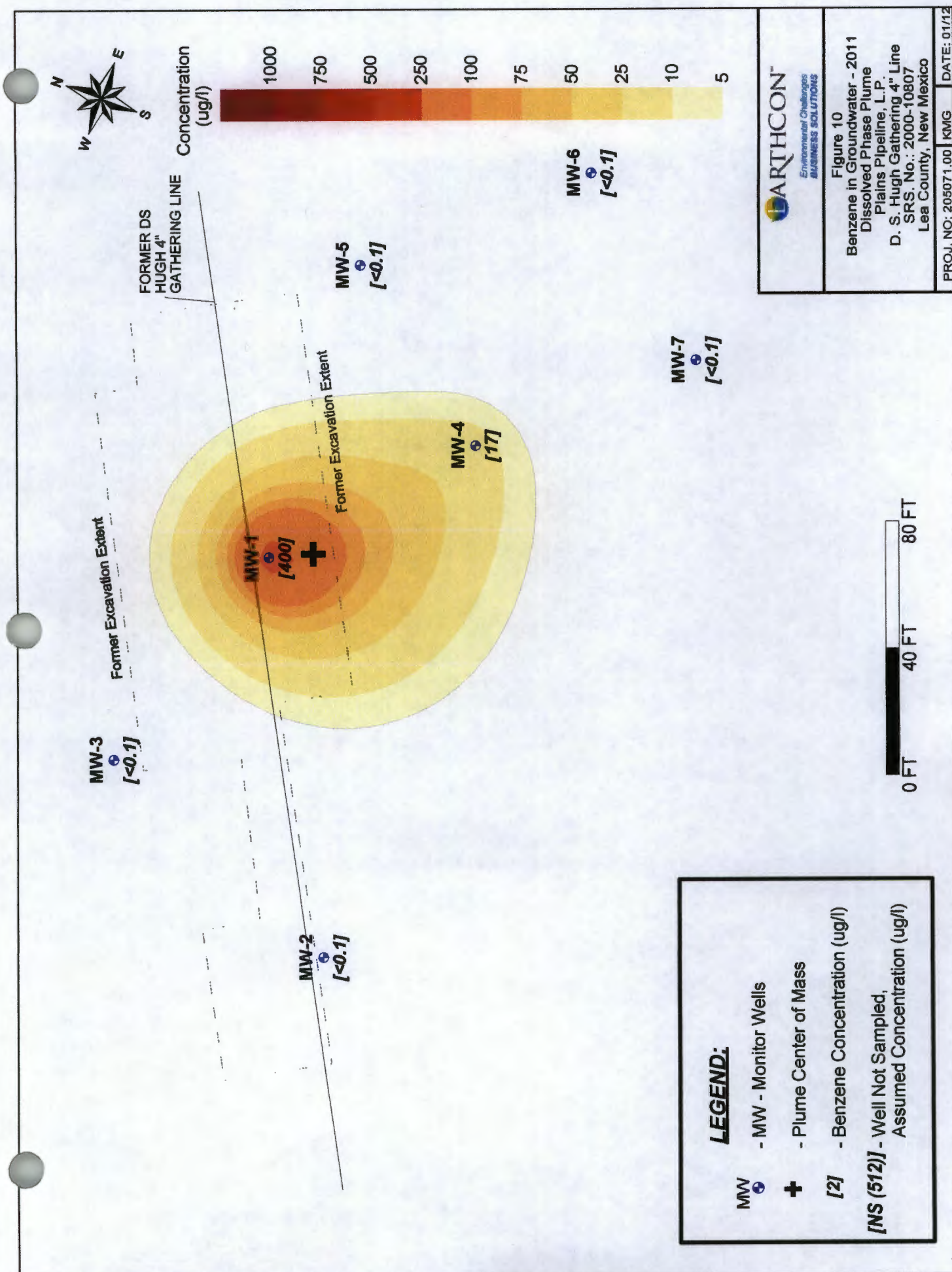


Environmental Challenges  
BUSINESS SOLUTIONS

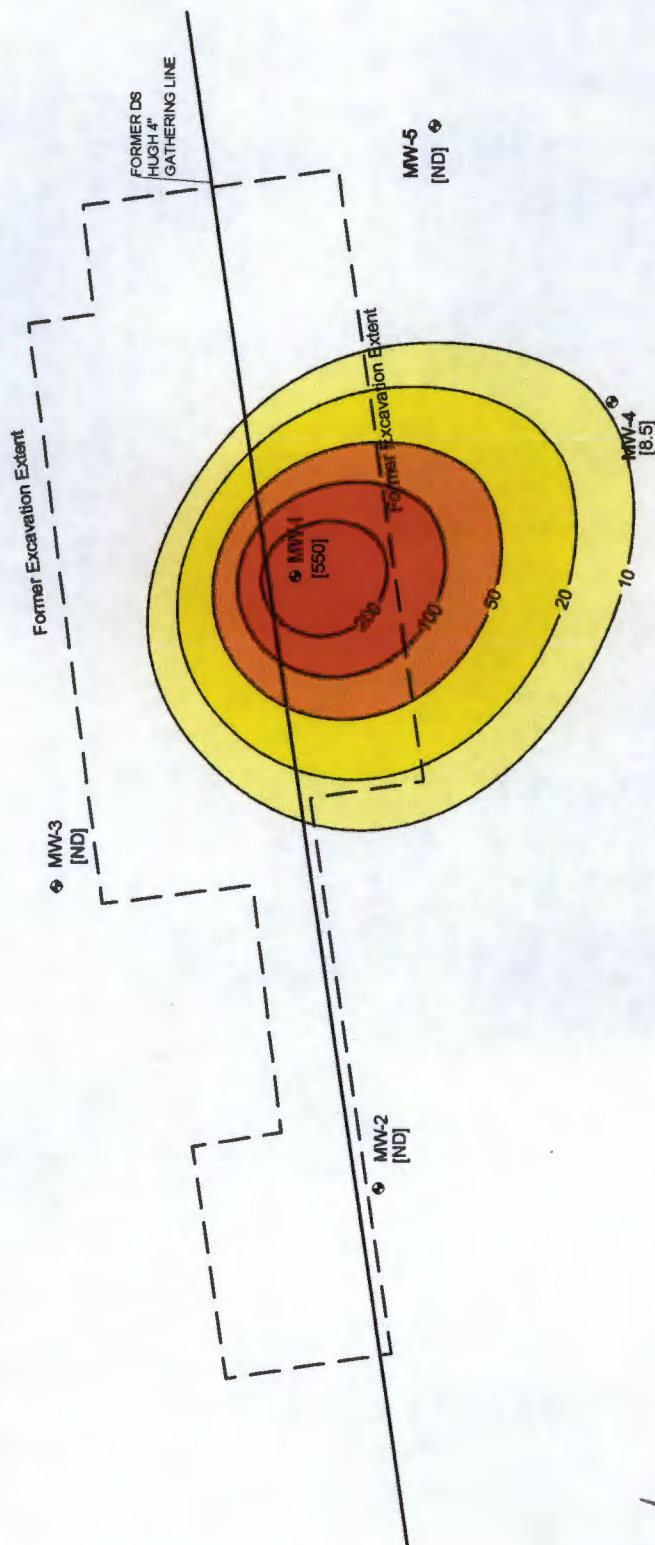
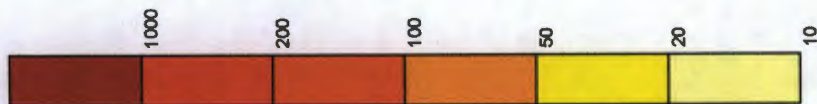
Figure 8  
Benzene in Groundwater - 2009  
Dissolved Phase Plume  
Plains Pipeline, L.P.  
D. S. Hugh Gathering 4" Line  
SRS. No.: 2000-10807  
Lea County, New Mexico







Concentration  
ug/L



MW-6  
[ND]

MW-7  
[ND]



**Entech**  
Houston, TX - (281) 362-2714

Figure 11  
2012 - Benzene Isopleth Map  
D.S. Hugh Gathering 4" Line  
SRS, No.: 2000-10807  
Plains Marketing, L.P.  
Lea County, New Mexico

PROJ. NO: PAA12003 DATE: 7/12

**LEGEND:**

- MW- - MONITOR WELL LOCATIONS
- - - FORMER EXCAVATION EXTENT
- [550] - BENZENE CONCENTRATION IN ug/L
- ND - NOT DETECTED

**NOTE:**  
The benzene concentrations presented on this map represent an average of the concentrations reported in the groundwater samples collected during each quarterly sampling event during 2012. The only exception is the concentration reported in groundwater sample collected from MW-1. This well was only sampled during the 2nd Quarter 2012.

## TABLES

<b>Table 1</b>	<b>2012 Well Survey Data and Groundwater Elevations</b>
<b>Table 2</b>	<b>Historical Well Survey Data and Groundwater Elevations</b>
<b>Table 3</b>	<b>2012 Groundwater Analytical Results</b>
<b>Table 4</b>	<b>Historical Groundwater Analytical Results</b>
<b>Table 5</b>	<b>Groundwater Analytical Results for Polynuclear Aromatic Hydrocarbons (PAHs) from wells with PSH/Sheen</b>
<b>Table 6</b>	<b>2012 Monthly PSH and Dissolved Phase Groundwater Recovery Data</b>



TAB.  
2012 Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-1	02/22/12	3389.00	NG	NG	NG	NG	NG	NG	NG	
MW-1	05/22/12	3389.00	47.08	48.61	1.53	NA	NA	NA	3341.69	
MW-1	09/11/12	3389.00	47.30	48.75	1.45	NA	NA	NA	3341.48	
MW-1	11/26/12	3389.00	NG	NG	NG	NG	NG	NG	NG	
MW-2	02/22/12	3388.38	NA	46.60	NA	NA	NA	NA	3341.78	
MW-2	05/22/12	3388.38	NA	46.86	NA	NA	NA	NA	3341.52	
MW-2	09/11/12	3388.38	NA	47.23	NA	NA	NA	NA	3341.15	
MW-2	11/26/12	3388.38	NA	47.22	NA	NA	NA	NA	3341.16	
MW-3	02/22/12	3388.52	NA	46.90	NA	NA	NA	NA	3341.62	
MW-3	05/22/12	3388.52	NA	47.25	NA	NA	NA	NA	3341.27	
MW-3	09/11/12	3388.52	NA	47.57	NA	NA	NA	NA	3340.95	
MW-3	11/26/12	3388.52	NA	47.55	NA	NA	NA	NA	3340.97	
MW-4	02/22/12	3388.92	NA	47.67	NA	NA	NA	NA	3341.25	
MW-4	05/22/12	3388.92	NA	47.93	NA	NA	NA	NA	3340.99	
MW-4	09/11/12	3388.92	NA	48.35	NA	NA	NA	NA	3340.57	
MW-4	11/26/12	3388.92	NA	48.35	NA	NA	NA	NA	3340.57	
MW-5	02/22/12	3389.40	NA	48.05	NA	NA	NA	NA	3341.35	
MW-5	05/22/12	3389.40	NA	48.35	NA	NA	NA	NA	3341.05	
MW-5	09/11/12	3389.40	NA	48.75	NA	NA	NA	NA	3340.65	
MW-5	11/26/12	3389.40	NA	48.78	NA	NA	NA	NA	3340.62	
MW-6	02/22/12	3389.72	NA	48.69	NA	NA	NA	NA	3341.03	
MW-6	05/22/12	3389.72	NA	48.93	NA	NA	NA	NA	3340.79	
MW-6	09/11/12	3389.72	NA	49.43	NA	NA	NA	NA	3340.29	
MW-6	11/26/12	3389.72	NA	49.45	NA	NA	NA	NA	3340.27	
MW-7	02/22/12	3389.28	NA	48.22	NA	NA	NA	NA	3341.06	
MW-7	05/22/12	3389.28	NA	48.00	NA	NA	NA	NA	3341.28	
MW-7	09/11/12	3389.28	NA	48.98	NA	NA	NA	NA	3340.30	
MW-7	11/26/12	3389.28	NA	48.98	NA	NA	NA	NA	3340.30	

NA: Not Applicable

NG: Not Gauged

<sup>a</sup> Possible error in field data entry



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-1	12/21/05	3389.00	ND	46.22	ND	NA	NA	NA	3342.78	Sampled, Installed Sock
MW-1	12/29/05	3389.00	ND	46.16	ND	NA	NA	NA	3342.84	New Sock
MW-1	01/05/06	3389.00	ND	46.26	ND	NA	NA	NA	3342.74	Sock
MW-1	02/09/06	3389.00	ND	45.05	ND	NA	NA	NA	3343.95	Sock
MW-1	02/22/06	3389.00	ND	46.00	ND	NA	NA	NA	3343.00	Sock
MW-1	03/28/06	3389.00	ND	45.94	ND	NA	NA	NA	3343.06	Sampled, Flipped Sock
MW-1	04/13/06	3389.00	ND	45.98	ND	NA	NA	NA	3343.02	Sock
MW-1	04/25/06	3389.00	ND	45.93	ND	NA	NA	NA	3343.07	Sock
MW-1	05/03/06	3389.00	ND	45.88	ND	NA	NA	NA	3343.12	Sock
MW-1	05/11/06	3389.00	ND	45.90	ND	NA	NA	NA	3343.10	Sock
MW-1	05/24/06	3389.00	ND	45.91	ND	NA	NA	NA	3343.09	Sock
MW-1	06/07/06	3389.00	ND	45.97	ND		0.00	5.00	3343.03	Sock
MW-1	06/07/06	3389.00	ND	46.10	ND	NA	NA	NA	3342.90	Sock
MW-1	06/15/06	3389.00	ND	45.92	ND	NA	NA	NA	3343.08	Sampled, Sock
MW-1	06/29/06	3389.00	ND	46.05	ND		0.10	0.00	3342.95	Sock
MW-1	07/11/06	3389.00	ND	46.06	ND		0.10	0.00	3342.94	Sock
MW-1	07/25/06	3389.00	ND	46.11	ND		0.10	0.00	3342.89	Sock
MW-1	08/09/06	3389.00	ND	46.22	ND	NA	NA	NA	3342.78	Sock
MW-1	08/22/06	3389.00	ND	46.30	ND	Hand Bailed	0.10	9.90	3342.70	
MW-1	08/22/06	3389.00	ND	46.58	ND			NA	3342.42	New Sock
MW-1	09/12/06	3389.00	46.27	46.57	0.30	NA	NA	NA	3342.69	Sampled, New
MW-1	09/19/06	3389.00	46.36	46.50	0.14	Hand Bailed	0.10	9.90	3342.62	
MW-1	09/19/06	3389.00	ND	46.73	ND	NA	NA	NA	3342.27	New Sock
MW-1	10/03/06	3389.00	ND	46.32	ND	NA	NA	NA	3342.68	
MW-1	10/03/06	3389.00	ND	46.48	ND		0.00	10.00	3342.52	Sock
MW-1	10/17/06	3389.00	ND	46.34	ND	NA	NA	NA	3342.66	Removed Sock
MW-1	10/31/06	3389.00	ND	45.93	ND	NA	NA	NA	3343.07	New Sock
MW-1	11/15/06	3389.00	45.73	45.98	0.25	Hand Bailed	0.50	9.50	3343.23	
MW-1	11/15/06	3389.00	ND	45.98	ND	NA	NA	NA	3343.02	New Sock
MW-1	12/06/06	3389.00	44.55	44.80	0.25	NA	NA	NA	3344.41	New Sock
MW-1	12/13/06	3389.00	44.51	44.86	0.35	Hand Bailed	0.50	4.50	3344.44	
MW-1	12/13/06	3389.00	ND	45.22	ND	NA	NA	NA	3343.78	
MW-1	01/03/07	3389.00	45.53	45.60	0.07		0.00	5.00	3343.46	New Sock
MW-1	01/09/07	3389.00	ND	45.64	ND	Hand Bailed	0.25	9.50	3343.36	
MW-1	01/09/07	3389.00	ND	46.18	ND	NA	NA	NA	3342.82	Sock
MW-1	01/18/07	3389.00	45.50	45.75	0.25	Hand Bailed	0.25	8.50	3343.46	
MW-1	01/18/07	3389.00	ND	45.72	ND	NA	NA	NA	3343.28	Removed Sock
MW-1	01/25/07	3389.00	45.42	45.62	0.20	Hand Bailed	0.25	9.50	3343.55	
MW-1	01/25/07	3389.00	45.63	45.65	0.02	NA	NA	NA	3343.37	
MW-1	01/31/07	3389.00	45.35	45.50	0.15	Hand Bailed	0.10	9.90	3343.63	
MW-1	01/31/07	3389.00	ND	45.70	ND	NA	NA	NA	3343.30	
MW-1	02/07/07	3389.00	45.40	45.54	0.14	Hand Bailed	0.10	9.50	3343.58	
MW-1	02/07/07	3389.00	ND	45.59	ND	NA	NA	NA	3343.41	Installed Sock
MW-1	02/14/07	3389.00	ND	45.61	ND	Hand Bailed	0.10	9.90	3343.39	
MW-1	02/14/07	3389.00	ND	45.61	ND	NA	NA	NA	3343.39	Flipped Sock
MW-1	02/21/07	3389.00	ND	45.58	ND	Hand Bailed	0.10	9.90	3343.42	
MW-1	02/21/07	3389.00	ND	45.60	ND	NA	NA	NA	3343.40	Sock
MW-1	03/07/07	3389.00	45.41	45.56	0.15	Hand Bailed	0.25	10.00	3343.57	
MW-1	03/07/07	3389.00	45.53	45.55	0.02	NA	NA	NA	3343.47	New Sock
MW-1	03/14/07	3389.00	ND	45.40	ND	Hand Bailed	0.10	9.90	3343.60	
MW-1	03/14/07	3389.00	ND	45.58	ND	NA	NA	NA	3343.42	New Sock
MW-1	03/21/07	3389.00	ND	45.38	ND	Hand Bailed	0.10	9.90	3343.62	
MW-1	03/21/07	3389.00	ND	45.50	ND	NA	NA	NA	3343.50	Sock
MW-1	03/28/07	3389.00	ND	45.38	ND	Hand Bailed	0.10	9.90	3343.62	
MW-1	03/28/07	3389.00	ND	45.42	ND	NA	NA	NA	3343.58	Sock
MW-1	04/10/07	3389.00	ND	45.46	ND	Hand Bailed	0.10	9.90	3343.54	
MW-1	04/10/07	3389.00	ND	45.50	ND	NA	NA	NA	3343.50	Sock
MW-1	04/18/07	3389.00	ND	45.35	ND	Hand Bailed	0.10	9.90	3343.65	
MW-1	04/18/07	3389.00	ND	45.50	ND	NA	NA	NA	3343.50	Sock
MW-1	04/24/07	3389.00	ND	45.38	ND	Hand Bailed	0.10	9.90	3343.62	
MW-1	04/24/07	3389.00	ND	45.43	ND	NA	NA	NA	3343.57	Sock
MW-1	05/03/07	3389.00	ND	45.30	ND	Hand Bailed	0.10	9.90	3343.70	
MW-1	05/03/07	3389.00	ND	45.45	ND	NA	NA	NA	3343.55	Flipped Sock
MW-1	05/11/07	3389.00	ND	45.40	ND	Hand Bailed	0.10	9.90	3343.60	
MW-1	05/11/07	3389.00	ND	45.75	ND	NA	NA	NA	3343.25	Removed Sock
MW-1	05/16/07	3389.00	45.36	45.37	0.01	Hand Bailed	0.10	9.90	3343.64	
MW-1	05/16/07	3389.00	ND	45.71	ND	NA	NA	NA	3343.29	Installed Sock
MW-1	05/23/07	3389.00	ND	45.32	ND	Hand Bailed	0.10	9.90	3343.68	
MW-1	05/23/07	3389.00	ND	45.51	ND	NA	NA	NA	3343.49	Sock
MW-1	05/31/07	3389.00	ND	45.28	ND	NA	NA	NA	3343.72	New Sock
MW-1	06/06/07	3389.00	ND	45.25	ND	Hand Bailed	0.10	9.90	3343.75	
MW-1	06/06/07	3389.00	ND	45.50	ND	NA	NA	NA	3343.50	Sock



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-1	07/05/07	3389.00	ND	45.35	ND	Hand Bailed	0.10	9.90	3343.65	
MW-1	07/05/07	3389.00	ND	45.65	ND	NA	NA	NA	3343.35	New Sock
MW-1	07/11/07	3389.00	ND	45.37	ND	Hand Bailed	0.10	9.90	3343.63	
MW-1	07/11/07	3389.00	ND	45.61	ND	NA	NA	NA	3343.39	Sock
MW-1	07/19/07	3389.00	ND	45.40	ND	Hand Bailed	0.10	9.90	3343.60	
MW-1	07/19/07	3389.00	ND	45.86	ND	NA	NA	NA	3343.14	Sock
MW-1	07/24/07	3389.00	ND	45.47	ND	Hand Bailed	0.10	9.90	3343.53	
MW-1	07/24/07	3389.00	ND	45.91	ND	NA	NA	NA	3343.09	Sock
MW-1	07/31/07	3389.00	ND	45.50	ND	Hand Bailed	0.10	9.90	3343.50	
MW-1	07/31/07	3389.00	ND	45.99	ND	NA	NA	NA	3343.01	Sock
MW-1	08/09/07	3389.00	ND	45.42	ND	Hand Bailed	0.10	9.90	3343.58	
MW-1	08/09/07	3389.00	ND	45.91	ND	NA	NA	NA	3343.09	New Sock
MW-1	08/16/07	3389.00	ND	45.41	ND	Hand Bailed	0.10	9.90	3343.59	
MW-1	08/16/07	3389.00	ND	45.86	ND	NA	NA	NA	3343.14	Sock
MW-1	08/22/07	3389.00	ND	45.31	ND	Hand Bailed	0.10	9.90	3343.69	
MW-1	08/22/07	3389.00	ND	45.75	ND	NA	NA	NA	3343.25	Sock
MW-1	08/28/07	3389.00	45.44	45.49	0.05	Hand Bailed	0.10	9.90	3343.55	
MW-1	08/28/07	3389.00	ND	45.75	ND	NA	NA	NA	3343.25	Sock
MW-1	09/07/07	3389.00	ND	45.54	ND	NA	NA	NA	3343.46	
MW-1	09/13/07	3389.00	ND	45.62	ND	Hand Bailed	0.10	9.90	3343.38	
MW-1	09/13/07	3389.00	ND	45.98	ND	NA	NA	NA	3343.02	Sock
MW-1	09/18/07	3389.00	ND	45.50	ND	Hand Bailed	0.10	9.90	3343.50	
MW-1	09/18/07	3389.00	ND	45.72	ND	NA	NA	NA	3343.28	Sock
MW-1	09/26/07	3389.00	ND	45.51	ND	Hand Bailed	0.10	9.90	3343.49	
MW-1	09/26/07	3389.00	ND	45.76	ND	NA	NA	NA	3343.24	Sock
MW-1	10/04/07	3389.00	ND	46.00	ND	Hand Bailed	0.10	8.90	3343.00	
MW-1	10/04/07	3389.00	ND	46.33	ND	NA	NA	NA	3342.67	Sock
MW-1	10/10/07	3389.00	ND	46.14	ND	Hand Bailed	0.10	8.90	3342.86	
MW-1	10/10/07	3389.00	ND	46.44	ND	NA	NA	NA	3342.56	Sock
MW-1	10/17/07	3389.00	ND	46.15	ND	Hand Bailed	0.10	8.90	3342.85	
MW-1	10/17/07	3389.00	ND	46.32	ND	NA	NA	NA	3342.68	Sock
MW-1	10/24/07	3389.00	47.35	47.68	0.33	Hand Bailed	0.10	39.90	3341.60	
MW-1	10/24/07	3389.00	46.65	46.80	0.15	NA	NA	NA	3342.33	New Sock
MW-1	10/31/07	3389.00	45.52	45.98	0.46	Hand Bailed	0.50	10.00	3343.41	
MW-1	10/31/07	3389.00	ND	46.23	ND	NA	NA	NA	3342.77	New Sock
MW-1	11/07/07	3389.00	45.63	46.02	0.39	Hand Bailed	0.50	9.00	3343.31	
MW-1	11/07/07	3389.00	46.10	46.14	0.04	NA	NA	NA	3342.89	Sock
MW-1	11/13/07	3389.00	45.50	45.96	0.46	NA	NA	NA	3343.43	Sock
MW-1	11/20/07	3389.00	45.50	45.96	0.46	NA	NA	NA	3343.43	Sock
MW-1	11/20/07	3389.00	46.17	46.18	0.01	NA	NA	NA	3342.83	
MW-1	11/27/07	3389.00	45.90	45.98	0.08	Hand Bailed	0.10	9.00	3343.09	
MW-1	11/27/07	3389.00	ND	46.10	ND	NA	NA	NA	3342.90	Sock
MW-1	12/05/07	3389.00	45.50	45.60	0.10	Hand Bailed	0.10	9.00	3343.49	
MW-1	12/05/07	3389.00	ND	46.15	ND	NA	NA	NA	3342.85	New Sock
MW-1	12/12/07	3389.00	ND	45.58	ND	Hand Bailed	0.10	8.90	3343.42	
MW-1	12/12/07	3389.00	ND	46.00	ND	NA	NA	NA	3343.00	Sock
MW-1	12/18/07	3389.00	45.50	45.63	0.13	Hand Bailed	0.20	9.00	3343.48	
MW-1	12/18/07	3389.00	ND	46.22	ND	NA	NA	NA	3342.78	New Sock
MW-1	12/28/07	3389.00	ND	45.62	ND	Hand Bailed	0.10	8.90	3343.38	
MW-1	12/28/07	3389.00	ND	45.98	ND	NA	NA	NA	3343.02	New Sock
MW-1	01/09/08	3389.00	45.55	45.70	0.15	NA	NA	NA	3343.43	New Sock
MW-1	01/17/08	3389.00	45.42	45.92	0.50	Hand Bailed	0.50	19.50	3343.51	
MW-1	01/17/08	3389.00	ND	45.60	ND	NA	NA	NA	3343.40	New Sock
MW-1	01/23/08	3389.00	45.50	45.65	0.15	Hand Bailed	0.25	9.00	3343.48	
MW-1	01/23/08	3389.00	ND	45.75	ND	NA	NA	NA	3343.25	New Sock
MW-1	01/30/08	3389.00	45.53	45.55	0.02	Hand Bailed	0.10	19.90	3343.47	
MW-1	01/30/08	3389.00	ND	46.46	ND	NA	NA	NA	3342.54	Sock
MW-1	02/06/08	3389.00	ND	45.60	ND	Hand Bailed	0.10	19.90	3343.40	
MW-1	02/06/08	3389.00	ND	46.25	ND	NA	NA	NA	3342.75	Sock
MW-1	02/13/08	3389.00	45.46	45.55	0.09	Hand Bailed	0.10	19.90	3343.53	
MW-1	02/13/08	3389.00	ND	46.21	ND	NA	NA	NA	3342.79	New Sock
MW-1	02/19/08	3389.00	45.50	45.53	0.03	Hand Bailed	0.10	19.90	3343.50	
MW-1	02/19/08	3389.00	ND	46.43	ND	NA	NA	NA	3342.57	Flipped Sock
MW-1	02/27/08	3389.00	45.49	45.59	0.10	Hand Bailed	0.10	19.90	3343.50	
MW-1	02/27/08	3389.00	ND	46.15	ND	NA	NA	NA	3342.85	New Sock
MW-1	03/04/08	3389.00	ND	45.50	ND	Pumped	0.10	19.90	3343.50	
MW-1	03/04/08	3389.00	ND	46.70	ND	NA	NA	NA	3342.30	New Sock
MW-1	03/12/08	3389.00	45.45	45.48	0.03	Pumped	0.10	19.90	3343.55	
MW-1	03/12/08	3389.00	ND	46.70	ND	NA	NA	NA	3342.30	New Sock
MW-1	03/19/08	3389.00	45.49	45.50	0.01	Pumped	0.10	19.90	3343.51	
MW-1	03/19/08	3389.00	ND	46.67	ND	NA	NA	NA	3342.33	New Sock
MW-1	03/26/08	3389.00	45.49	45.50	0.01	Pumped	0.10	19.90	3343.51	
MW-1	03/26/08	3389.00	ND	46.42	ND	NA	NA	NA	3342.58	Flipped Sock
MW-1	04/02/08	3389.00	45.45	45.46	0.01	Hand Bailed	0.10	19.90	3343.55	



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-1	04/02/08	3389.00	ND	46.32	ND	NA	NA	NA	3342.68	Sock
MW-1	04/09/08	3389.00	ND	45.48	ND	Pumped	0.10	19.90	3343.52	
MW-1	04/09/08	3389.00	ND	45.50	ND	NA	NA	NA	3343.50	Sock
MW-1	04/16/08	3389.00	ND	45.41	ND	Pumped	0.10	19.90	3343.59	
MW-1	04/16/08	3389.00	ND	45.66	ND	NA	NA	NA	3343.34	Sock
MW-1	04/24/08	3389.00	ND	45.34	ND	Pumped	0.10	19.90	3343.66	
MW-1	04/24/08	3389.00	ND	46.00	ND	NA	NA	NA	3343.00	New Sock
MW-1	04/30/08	3389.00	ND	45.38	ND	Pumped	0.10	19.90	3343.62	
MW-1	04/30/08	3389.00	ND	45.96	ND	NA	NA	NA	3343.04	Flipped Sock
MW-1	05/07/08	3389.00	ND	45.43	ND	Pumped	0.10	19.90	3343.57	
MW-1	05/07/08	3389.00	ND	45.86	ND	NA	NA	NA	3343.14	Sock
MW-1	05/14/08	3389.00	45.46	45.48	0.02	Pumped	0.10	19.90	3343.54	
MW-1	05/14/08	3389.00	ND	46.00	ND	NA	NA	NA	3343.00	Sock
MW-1	05/22/08	3389.00	ND	45.42	ND	Pumped	0.10	25.90	3343.58	
MW-1	05/22/08	3389.00	ND	47.10	ND	NA	NA	NA	3341.90	Sampled, New
MW-1	05/29/08	3389.00	ND	45.41	ND	Pumped	0.10	19.90	3343.59	
MW-1	05/29/08	3389.00	ND	45.96	ND	NA	NA	NA	3343.04	Sock
MW-1	06/04/08	3389.00	ND	45.43	ND	Pumped	0.10	19.90	3343.57	
MW-1	06/04/08	3389.00	ND	46.02	ND	NA	NA	NA	3342.98	Sock
MW-1	06/11/08	3389.00	ND	45.48	ND	Pumped	0.10	19.90	3343.52	
MW-1	06/11/08	3389.00	ND	45.99	ND	NA	NA	NA	3343.01	Sock
MW-1	06/18/08	3389.00	ND	45.52	ND	Pumped	0.10	19.90	3343.48	
MW-1	06/18/08	3389.00	ND	46.08	ND	NA	NA	NA	3342.92	Sock
MW-1	06/26/08	3389.00	ND	46.12	ND	Hand Bailed	0.00	10.00	3342.88	
MW-1	06/26/08	3389.00	ND	47.12	ND	NA	NA	NA	3341.88	Sock
MW-1	07/07/08	3389.00	ND	46.00	ND	Pumped	0.10	19.90	3343.00	
MW-1	07/07/08	3389.00	ND	46.12	ND	NA	NA	NA	3342.88	New Sock
MW-1	07/16/08	3389.00	45.51	45.56	0.05	Pumped	0.10	19.90	3343.48	
MW-1	07/16/08	3389.00	ND	46.21	ND	NA	NA	NA	3342.79	Sock
MW-1	07/21/08	3389.00	45.36	45.60	0.24	Pumped	0.10	19.90	3343.60	
MW-1	07/21/08	3389.00	ND	46.18	ND	NA	NA	NA	3342.82	Sock
MW-1	07/29/08	3389.00	45.59	45.63	0.04	Pumped	0.10	19.90	3343.40	
MW-1	07/29/08	3389.00	ND	46.28	ND	NA	NA	NA	3342.72	Sock
MW-1	08/06/08	3389.00	45.50	45.66	0.16	NA	NA	NA	3343.48	New Sock
MW-1	08/13/08	3389.00	45.53	45.60	0.07	Pumped	0.10	19.90	3343.46	
MW-1	08/13/08	3389.00	ND	46.36	ND	NA	NA	NA	3342.64	Sock
MW-1	08/20/08	3389.00	45.50	45.88	0.38	NA	NA	NA	3343.44	Sock
MW-1	08/27/08	3389.00	45.58	45.99	0.41	Pumped	0.00	20.00	3343.36	
MW-1	08/27/08	3389.00	ND	46.32	ND	NA	NA	NA	3342.68	Sock
MW-1	09/02/08	3389.00	45.68	45.79	0.11	Pumped	0.00	20.00	3343.30	
MW-1	09/02/08	3389.00	ND	46.21	ND	NA	NA	NA	3342.79	Sock
MW-1	09/09/08	3389.00	45.73	45.85	0.12	Pumped	0.00	20.00	3343.25	
MW-1	09/09/08	3389.00	ND	46.42	ND	NA	NA	NA	3342.58	Sock
MW-1	09/17/08	3389.00	45.73	46.18	0.45	Pumped	0.50	19.50	3343.20	
MW-1	09/17/08	3389.00	ND	46.45	ND	NA	NA	NA	3342.55	Sock
MW-1	09/24/08	3389.00	45.73	46.50	0.77	Pumped	0.50	19.50	3343.15	
MW-1	09/24/08	3389.00	ND	46.50	ND	NA	NA	NA	3342.50	Sock
MW-1	10/01/08	3389.00	45.80	46.67	0.87	Pumped	1.00	19.00	3343.07	
MW-1	10/01/08	3389.00	ND	46.50	ND	NA	NA	NA	3342.50	Sock
MW-1	10/08/08	3389.00	45.60	46.52	0.92	Pumped	1.00	19.00	3343.26	
MW-1	10/08/08	3389.00	ND	46.85	ND	NA	NA	NA	3342.15	Sock
MW-1	11/05/08	3389.00	45.80	45.93	0.13	Pumped	0.50	19.50	3343.18	
MW-1	11/05/08	3389.00	ND	46.21	ND	NA	NA	NA	3342.79	Sock
MW-1	11/12/08	3389.00	45.73	45.97	0.24	Pumped	0.50	9.50	3343.23	
MW-1	11/12/08	3389.00	45.76	45.81	0.05	NA	NA	NA	3343.23	Sock
MW-1	11/19/08	3389.00	45.70	46.25	0.55	NA	NA	NA	3343.22	Sock
MW-1	11/26/08	3389.00	45.79	45.89	0.10	Pumped	0.25	13.75	3343.20	
MW-1	11/26/08	3389.00	45.79	45.84	0.05	NA	NA	NA	3343.20	Sock
MW-1	12/03/08	3389.00	45.85	45.95	0.10	Pumped	0.25	11.75	3343.14	
MW-1	12/03/08	3389.00	ND	45.87	ND	NA	NA	NA	3343.13	Sock
MW-1	12/10/08	3389.00	ND	45.88	ND	NA	NA	NA	3343.12	Sock
MW-1	12/17/08	3389.00	ND	45.84	ND	NA	NA	NA	3343.16	Sock
MW-1	12/17/08	3389.00	ND	45.92	ND		0.00	10.00	3343.08	Sock
MW-1	12/21/08	3389.00	45.86	46.03	0.17		0.50	29.50	3343.11	Sock
MW-1	12/21/08	3389.00	ND	45.65	ND	NA	NA	NA	3343.35	Sock
MW-1	12/31/08	3389.00	45.87	45.97	0.10		0.25	9.75	3343.12	Sock
MW-1	12/31/08	3389.00	ND	45.89	ND	NA	NA	NA	3343.11	Sock
MW-1	01/07/09	3389.00	45.80	45.82	0.02		0.25	9.75	3343.20	Sock
MW-1	01/07/09	3389.00	45.78	45.79	0.01	NA	NA	NA	3343.22	Sock
MW-1	01/15/09	3389.00	45.79	45.89	0.10	Hand Bailed	0.50	9.50	3343.20	
MW-1	01/15/09	3389.00	45.83	45.84	0.01	NA	NA	NA	3343.17	
MW-1	01/22/09	3389.00	45.67	46.03	0.36	Hand Bailed	1.00	13.00	3343.28	
MW-1	01/22/09	3389.00	ND	45.74	ND	NA	NA	NA	3343.26	Installed Sock
MW-1	01/28/09	3389.00	45.67	45.81	0.14	Pumped	0.50	14.50	3343.31	



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H.O		
MW-1	01/28/09	3389.00	ND	45.70	ND	NA	NA	NA	3343.30	
MW-1	02/04/09	3389.00	45.69	45.74	0.05	Pumped	0.25	19.75	3343.30	
MW-1	02/04/09	3389.00	ND	45.69	ND	NA	NA	NA	3343.31	
MW-1	02/11/09	3389.00	45.63	45.67	0.04	Pumped	0.25	21.75	3343.36	
MW-1	02/11/09	3389.00	ND	46.58	ND	NA	NA	NA	3342.42	
MW-1	02/17/09	3389.00	ND	45.59	ND	NA	NA	NA	3343.41	
MW-1	02/25/09	3389.00	45.57	45.60	0.03	Pumped	0.10	19.75	3343.43	
MW-1	02/25/09	3389.00	ND	45.67	ND	NA	NA	NA	3343.33	
MW-1	03/04/09	3389.00	45.58	45.60	0.02	Pumped	0.10	9.90	3343.42	
MW-1	03/04/09	3389.00	ND	45.61	ND	NA	NA	NA	3343.39	
MW-1	03/11/09	3389.00	ND	45.67	ND	Pumped	0.00	10.00	3343.33	
MW-1	03/11/09	3389.00	ND	45.73	ND	NA	NA	NA	3343.27	
MW-1	03/18/09	3389.00	ND	45.63	ND	Pumped	0.00	10.00	3343.37	
MW-1	03/18/09	3389.00	ND	45.89	ND	NA	NA	NA	3343.11	
MW-1	03/25/09	3389.00	45.69	45.73	0.04	Pumped	0.25	14.75	3343.30	
MW-1	03/25/09	3389.00	ND	46.37	ND	NA	NA	NA	3342.63	
MW-1	04/01/09	3389.00	45.60	45.95	0.35	Pumped	0.25	9.75	3343.35	
MW-1	04/01/09	3389.00	ND	45.67	ND	NA	NA	NA	3343.33	
MW-1	04/08/09	3389.00	45.65	45.75	0.10	Pumped	0.10	16.90	3343.34	
MW-1	04/08/09	3389.00	ND	45.72	ND	NA	NA	NA	3343.28	
MW-1	04/15/09	3389.00	45.69	45.71	0.02	Pumped	0.00	15.00	3343.31	
MW-1	04/15/09	3389.00	ND	45.88	ND	NA	NA	NA	3343.12	
MW-1	04/22/09	3389.00	ND	45.72	ND	Pumped	0.00	15.00	3343.28	
MW-1	04/22/09	3389.00	ND	45.72	ND	NA	NA	NA	3343.28	
MW-1	04/29/09	3389.00	45.78	45.82	0.04	Pumped	0.10	14.90	3343.21	
MW-1	04/29/09	3389.00	ND	46.44	ND	NA	NA	NA	3342.56	
MW-1	05/06/09	3389.00	45.82	46.02	0.20	Pumped	0.50	15.00	3343.15	
MW-1	05/06/09	3389.00	ND	46.39	ND	NA	NA	NA	3342.61	
MW-1	05/14/09	3389.00	45.84	45.92	0.08	Pumped	0.10	19.90	3343.15	
MW-1	05/14/09	3389.00	ND	46.48	ND	NA	NA	NA	3342.52	
MW-1	05/19/09	3389.00	45.88	45.90	0.02	Pumped	0.10	29.90	3343.12	Sampled
MW-1	05/28/09	3389.00	ND	45.79	ND	Pumped	0.00	15.00	3343.21	
MW-1	05/28/09	3389.00	ND	46.13	ND	NA	NA	NA	3342.87	
MW-1	06/03/09	3389.00	45.88	45.93	0.05	Pumped	0.10	14.90	3343.11	
MW-1	06/03/09	3389.00	ND	45.92	ND	NA	NA	NA	3343.08	
MW-1	06/11/09	3389.00	ND	45.93	ND	Pumped	0.00	10.00	3343.07	
MW-1	06/11/09	3389.00	ND	46.15	ND	NA	NA	NA	3342.85	
MW-1	06/17/09	3389.00	46.00	46.05	0.05	Pumped	0.00	15.00	3342.99	
MW-1	06/17/09	3389.00	ND	46.62	ND	NA	NA	NA	3342.38	
MW-1	06/23/09	3389.00	ND	45.96	ND	Pumped	0.00	20.00	3343.04	New Sock
MW-1	06/23/09	3389.00	ND	46.85	ND	NA	NA	NA	3342.15	
MW-1	07/01/09	3389.00	45.91	46.21	0.30	Pumped	0.25	19.75	3343.05	
MW-1	07/01/09	3389.00	ND	46.80	ND	NA	NA	NA	3342.20	
MW-1	07/07/09	3389.00	45.91	45.93	0.02	Pumped	0.25	14.75	3343.09	
MW-1	07/07/09	3389.00	ND	46.58	ND	NA	NA	NA	3342.42	
MW-1	07/15/09	3389.00	ND	45.88	ND	Pumped	0.00	20.00	3343.12	
MW-1	07/15/09	3389.00	ND	46.71	ND	NA	NA	NA	3342.29	
MW-1	07/29/09	3389.00	45.88	45.92	0.04	Pumped	0.25	19.75	3343.11	
MW-1	07/29/09	3389.00	ND	46.82	ND	NA	NA	NA	3342.18	
MW-1	08/05/09	3389.00	45.01	45.12	0.11	Pumped	0.25	19.75	3343.97	
MW-1	08/05/09	3389.00	ND	46.93	ND	NA	NA	NA	3342.07	New Sock
MW-1	08/12/09	3389.00	ND	45.75	ND	Pumped	0.00	20.00	3343.25	
MW-1	08/12/09	3389.00	ND	46.90	ND	NA	NA	NA	3342.10	Flipped Sock
MW-1	08/19/09	3389.00	45.74	45.80	0.06	NA	0.10	19.90	3343.25	
MW-1	08/19/09	3389.00	ND	45.87	ND	NA	NA	NA	3343.13	
MW-1	08/26/09	3389.00	ND	45.65	ND	NA	NA	NA	3343.35	
MW-1	09/02/09	3389.00	45.81	45.95	0.14	NA	0.25	19.75	3343.17	New sock
MW-1	09/02/09	3389.00	ND	45.91	ND	NA	NA	NA	3343.09	
MW-1	09/09/09	3389.00	45.80	45.85	0.05	NA	0.25	19.75	3343.19	Flipped Sock
MW-1	09/09/09	3389.00	ND	45.98	ND	NA	NA	NA	3343.02	
MW-1	09/16/09	3389.00	ND	45.88	ND	Pumped	0.00	20.00	3343.12	
MW-1	09/16/09	3389.00	ND	46.63	ND	NA	NA	NA	3342.37	
MW-1	09/23/09	3389.00	ND	45.83	ND	Pumped	0.00	20.00	3343.17	Flipped Sock
MW-1	09/23/09	3389.00	ND	46.52	ND	NA	NA	NA	3342.48	
MW-1	09/30/09	3389.00	45.87	45.90	0.03	Pumped	0.00	10.00	3343.13	New Sock
MW-1	09/30/09	3389.00	ND	46.51	ND	NA	NA	NA	3342.49	
MW-1	09/30/09	3389.00	45.80	45.81	0.01	NA	0.00	10.00	3343.20	
MW-1	09/30/09	3389.00	ND	46.73	ND	NA	NA	NA	3342.27	
MW-1	10/07/09	3389.00	ND	45.90	ND	Pumped	0.00	10.00	3343.10	Flipped Sock
MW-1	10/07/09	3389.00	ND	46.71	ND	NA	NA	NA	3342.29	
MW-1	10/07/09	3389.00	ND	45.87	ND	NA	0.00	10.00	3343.13	
MW-1	10/07/09	3389.00	ND	46.76	ND	NA	NA	NA	3342.24	
MW-1	10/14/09	3389.00	45.80	45.82	0.02	Pumped	0.10	9.90	3343.20	New Sock
MW-1	10/14/09	3389.00	ND	46.23	ND	NA	NA	NA	3342.77	



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Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H.O.		
MW-1	10/14/09	3389.00	45.75	45.76	0.01		0.10	9.90	3343.25	
MW-1	10/14/09	3389.00	ND	46.60	ND	NA	NA	NA	3342.40	
MW-1	10/21/09	3389.00	45.75	45.80	0.05		0.25	9.75	3343.24	
MW-1	10/21/09	3389.00	ND	46.35	ND	NA	NA	NA	3342.65	
MW-1	10/29/09	3389.00	45.73	46.03	0.30		0.25	45.00	3343.23	
MW-1	10/29/09	3389.00	ND	46.20	ND	NA	NA	NA	3342.80	
MW-1	11/04/09	3389.00	45.74	45.99	0.25		0.25	20.00	3343.22	
MW-1	11/04/09	3389.00	ND	46.06	ND	NA	NA	NA	3342.94	
MW-1	11/04/09	3389.00	45.78	45.81	0.03		0.10	19.90	3343.22	
MW-1	11/04/09	3389.00	ND	46.10	ND	NA	NA	NA	3342.90	
MW-1	11/11/09	3389.00	45.72	46.04	0.32		0.25	19.75	3343.23	
MW-1	11/11/09	3389.00	ND	46.85	ND	NA	NA	NA	3342.15	
MW-1	11/11/09	3389.00	45.76	45.77	0.01		0.10	19.90	3343.24	
MW-1	11/11/09	3389.00	ND	46.34	ND	NA	NA	NA	3342.66	
MW-1	11/18/09	3389.00	45.68	45.99	0.31		0.25	19.75	3343.27	
MW-1	11/18/09	3389.00	ND	46.38	ND	NA	NA	NA	3342.62	
MW-1	11/25/09	3389.00	45.70	46.05	0.35		0.25	29.75	3343.25	
MW-1	11/25/09	3389.00	ND	46.33	ND	NA	NA	NA	3342.67	
MW-1	12/02/09	3389.00	45.68	46.03	0.35		0.25	34.75	3343.27	
MW-1	12/02/09	3389.00	ND	46.52	ND	NA	NA	NA	3342.48	
MW-1	12/09/09	3389.00	45.70	46.05	0.35		0.50	20.00	3343.25	
MW-1	12/09/09	3389.00	ND	46.49	ND	NA	NA	NA	3342.51	
MW-1	12/09/09	3389.00	45.77	45.79	0.02		0.10	29.90	3343.23	
MW-1	12/09/09	3389.00	ND	46.77	ND	NA	NA	NA	3342.23	
MW-1	12/16/09	3389.00	45.79	46.14	0.35		0.10	24.90	3343.16	
MW-1	12/16/09	3389.00	ND	46.52	ND	NA	NA	NA	3342.48	
MW-1	12/16/09	3389.00	45.80	45.81	0.01		0.10	24.90	3343.20	
MW-1	12/16/09	3389.00	ND	46.90	ND	NA	NA	NA	3342.10	
MW-1	12/23/09	3389.00	45.74	46.10	0.36		0.25	24.75	3343.21	
MW-1	12/23/09	3389.00	ND	46.29	ND	NA	NA	NA	3342.71	
MW-1	12/23/09	3389.00	45.76	45.77	0.01		0.10	24.90	3343.24	
MW-1	12/23/09	3389.00	ND	46.62	ND	NA	NA	NA	3342.38	
MW-1	12/30/09	3389.00	45.76	46.21	0.45		0.10	29.90	3343.17	
MW-1	12/30/09	3389.00	ND	46.43	ND	NA	NA	NA	3342.57	
MW-1	12/30/09	3389.00	45.76	46.02	0.26		0.10	19.90	3343.20	
MW-1	12/30/09	3389.00	ND	46.68	ND	NA	NA	NA	3342.32	
MW-1	01/06/10	3389.00	45.80	46.20	0.40		0.25	49.75	3343.14	
MW-1	01/06/10	3389.00	ND	46.84	ND	NA	NA	NA	3342.16	
MW-1	01/13/10	3389.00	45.91	46.21	0.30		0.10	49.90	3343.05	
MW-1	01/13/10	3389.00	ND	46.82	ND	NA	NA	NA	3342.18	
MW-1	01/20/10	3389.00	45.95	46.20	0.25		0.25	49.75	3343.01	
MW-1	01/20/10	3389.00	ND	46.52	ND	NA	NA	NA	3342.48	
MW-1	01/27/10	3389.00	46.04	46.22	0.18		0.10	49.90	3342.93	
MW-1	01/27/10	3389.00	ND	46.84	ND	NA	NA	NA	3342.16	
MW-1	02/09/10	3389.00	46.18	46.25	0.07		0.10	49.90	3342.81	
MW-1	02/09/10	3389.00	ND	46.90	ND	NA	NA	NA	3342.10	
MW-1	02/17/10	3389.00	46.16	46.20	0.04		0.10	49.90	3342.83	
MW-1	02/17/10	3389.00	ND	47.29	ND	NA	NA	NA	3341.71	
MW-1	03/02/10	3389.00	46.08	46.09	0.01		0.10	49.90	3342.92	
MW-1	03/02/10	3389.00	ND	46.74	ND	NA	NA	NA	3342.26	
MW-1	03/10/10	3389.00	46.17	46.19	0.02		0.10	39.90	3342.83	
MW-1	03/10/10	3389.00	ND	46.57	ND	NA	NA	NA	3342.43	
MW-1	03/17/10	3389.00	46.11	46.17	0.06		0.10	39.90	3342.88	
MW-1	03/17/10	3389.00	ND	46.69	ND	NA	NA	NA	3342.31	
MW-1	03/24/10	3389.00	46.10	46.22	0.12		0.10	39.90	3342.88	
MW-1	03/24/10	3389.00	ND	46.72	ND	NA	NA	NA	3342.28	
MW-1	03/31/10	3389.00	46.11	46.22	0.11		0.10	39.90	3342.87	
MW-1	03/31/10	3389.00	ND	46.54	ND	NA	NA	NA	3342.46	
MW-1	04/07/10	3389.00	46.15	46.25	0.10		0.10	39.90	3342.84	
MW-1	04/07/10	3389.00	ND	47.15	ND	NA	NA	NA	3341.85	
MW-1	04/14/10	3389.00	46.15	46.32	0.17		0.10	39.90	3342.82	
MW-1	04/14/10	3389.00	ND	47.20	ND	NA	NA	NA	3341.80	
MW-1	04/21/10	3389.00	46.12	46.26	0.14		0.10	39.90	3342.86	
MW-1	04/21/10	3389.00	ND	46.26	ND	NA	NA	NA	3342.74	
MW-1	04/28/10	3389.00	46.15	46.32	0.17		0.10	39.90	3342.82	
MW-1	04/28/10	3389.00	ND	46.51	ND	NA	NA	NA	3342.49	
MW-1	05/05/10	3389.00	46.20	46.37	0.17		0.10	9.90	3342.77	
MW-1	05/05/10	3389.00	ND	46.34	ND	NA	NA	NA	3342.66	
MW-1	05/12/10	3389.00	46.16	46.40	0.24		NA	NA	3342.80	Sampled
MW-1	05/19/10	3389.00	46.20	46.39	0.19		0.10	24.90	3342.77	
MW-1	05/19/10	3389.00	ND	46.85	ND	NA	NA	NA	3342.15	
MW-1	05/29/10	3389.00	46.05	46.30	0.25		0.10	29.90	3342.91	
MW-1	05/29/10	3389.00	ND	46.43	ND	NA	NA	NA	3342.57	
MW-1	06/02/10	3389.00	46.00	46.19	0.19		0.10	19.90	3342.97	



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Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H.B		
MW-1	06/02/10	3389.00	ND	46.53	ND	NA	NA	NA	3342.47	
MW-1	06/12/10	3389.00	45.91	46.31	0.40	NA	0.10	29.90	3343.03	
MW-1	06/12/10	3389.00	ND	46.90	ND	NA	NA	NA	3342.10	
MW-1	06/15/10	3389.00	45.88	46.10	0.22	NA	0.25	39.75	3343.09	
MW-1	06/15/10	3389.00	ND	46.78	ND	NA	NA	NA	3342.22	
MW-1	06/25/10	3389.00	45.84	46.87	1.03	NA	1.00	29.00	3343.01	
MW-1	06/25/10	3389.00	ND	46.81	ND	NA	NA	NA	3342.19	
MW-1	06/30/10	3389.00	45.85	46.22	0.37	NA	NA	NA	3343.09	
MW-1	07/07/10	3389.00	ND	45.78	ND	NA	<0.25	20.00	3343.22	
MW-1	07/07/10	3389.00	ND	46.37	ND	NA	NA	NA	3342.63	
MW-1	07/14/10	3389.00	45.77	46.14	0.37	NA	0.10	14.90	3343.17	
MW-1	07/14/10	3389.00	ND	46.61	ND	NA	NA	NA	3342.39	
MW-1	07/20/10	3389.00	45.88	46.36	0.48	NA	<0.25	30.00	3343.05	
MW-1	07/20/10	3389.00	ND	47.08	ND	NA	NA	NA	3341.92	
MW-1	07/28/10	3389.00	45.97	46.44	0.47	NA	<0.25	20.00	3342.96	
MW-1	07/28/10	3389.00	ND	46.65	ND	NA	NA	NA	3342.35	
MW-1	08/03/10	3389.00	46.02	46.30	0.28	NA	<0.25	30.00	3342.94	
MW-1	08/03/10	3389.00	ND	46.53	ND	NA	NA	NA	3342.47	
MW-1	08/11/10	3389.00	46.09	46.30	0.21	NA	<0.25	3.00	3342.88	
MW-1	08/17/10	3389.00	46.14	46.27	0.13	NA	<0.25	30.00	3342.84	
MW-1	08/17/10	3389.00	ND	47.34	ND	NA	NA	NA	3341.66	
MW-1	08/25/10	3389.00	46.06	46.25	0.19	NA	<0.25	30.00	3342.91	
MW-1	08/25/10	3389.00	ND	46.74	ND	NA	NA	NA	3342.26	
MW-1	09/01/10	3389.00	45.92	46.28	0.36	NA	0.20	29.80	3343.03	
MW-1	09/01/10	3389.00	ND	47.10	ND	NA	NA	NA	3341.90	
MW-1	09/08/10	3389.00	46.09	46.39	0.30	NA	0.20	29.80	3342.87	
MW-1	09/08/10	3389.00	ND	46.77	ND	NA	NA	NA	3342.23	
MW-1	09/15/10	3389.00	46.15	46.23	0.08	NA	0.20	19.80	3342.84	
MW-1	09/15/10	3389.00	ND	46.76	ND	NA	NA	NA	3342.24	
MW-1	09/21/10	3389.00	46.09	46.33	0.24	NA	0.20	19.80	3342.87	
MW-1	09/21/10	3389.00	ND	46.84	ND	NA	NA	NA	3342.16	
MW-1	10/01/10	3389.00	46.02	46.41	0.39	NA	0.20	19.80	3342.92	
MW-1	10/01/10	3389.00	ND	46.79	ND	NA	NA	NA	3342.21	
MW-1	10/06/10	3389.00	45.99	46.21	0.22	NA	0.20	19.80	3342.98	
MW-1	10/06/10	3389.00	ND	46.70	ND	NA	NA	NA	3342.30	
MW-1	10/13/10	3389.00	45.94	46.33	0.39	NA	0.20	19.80	3343.00	
MW-1	10/13/10	3389.00	ND	46.90	ND	NA	NA	NA	3342.10	
MW-1	10/22/10	3389.00	46.02	46.46	0.44	NA	0.20	19.80	3342.91	
MW-1	10/22/10	3389.00	ND	47.04	ND	NA	NA	NA	3341.96	
MW-1	10/27/10	3389.00	46.06	46.18	0.12	NA	0.20	39.80	3342.92	
MW-1	10/27/10	3389.00	ND	46.27	ND	NA	NA	NA	3342.73	
MW-1	11/03/10	3389.00	46.14	46.32	0.18	NA	0.20	29.80	3342.83	
MW-1	11/03/10	3389.00	ND	46.76	ND	NA	NA	NA	3342.24	
MW-1	11/10/10	3389.00	46.08	46.28	0.20	NA	0.20	29.80	3342.89	
MW-1	11/10/10	3389.00	ND	46.84	ND	NA	NA	NA	3342.16	
MW-1	11/16/10	3389.00	46.18	46.35	0.17	NA	0.20	29.80	3342.79	
MW-1	11/16/10	3389.00	ND	46.40	ND	NA	NA	NA	3342.60	
MW-1	11/23/10	3389.00	46.15	46.37	0.22	NA	0.20	9.80	3342.82	
MW-1	11/23/10	3389.00	ND	46.76	ND	NA	NA	NA	3342.24	
MW-1	12/01/10	3389.00	46.17	46.40	0.23	NA	0.20	19.80	3342.80	
MW-1	12/01/10	3389.00	ND	46.65	ND	NA	NA	NA	3342.35	
MW-1	12/08/10	3389.00	46.16	46.42	0.26	NA	0.20	29.80	3342.80	
MW-1	12/08/10	3389.00	ND	47.14	ND	NA	NA	NA	3341.86	
MW-1	12/15/10	3389.00	46.14	46.34	0.20	NA	0.20	29.80	3342.83	
MW-1	12/15/10	3389.00	ND	47.39	ND	NA	NA	NA	3341.61	
MW-1	12/21/10	3389.00	46.20	46.34	0.14	NA	0.20	29.80	3342.78	
MW-1	12/21/10	3389.00	ND	46.92	ND	NA	NA	NA	3342.08	
MW-1	01/08/11	3389.00	46.10	46.50	0.40	NA	0.20	19.80	3342.84	
MW-1	01/08/11	3389.00	ND	46.83	ND	NA	NA	NA	3342.17	
MW-1	01/12/11	3389.00	46.22	46.35	0.13	Hand Bailed	0.20	9.80	3342.76	
MW-1	01/12/11	3389.00	ND	46.79	ND	NA	NA	NA	3342.21	
MW-1	01/19/11	3389.00	46.13	46.44	0.31	NA	<0.25	30.00	3342.82	
MW-1	01/19/11	3389.00	ND	46.82	ND	NA	NA	NA	3342.18	
MW-1	01/25/11	3389.00	46.18	46.39	0.21	NA	<0.25	30.00	3342.79	
MW-1	01/25/11	3389.00	ND	46.58	ND	NA	NA	NA	3342.42	
MW-1	02/04/11	3389.00	46.28	46.43	0.15	NA	0.20	29.80	3342.70	
MW-1	02/04/11	3389.00	ND	47.43	ND	NA	NA	NA	3341.57	
MW-1	02/08/11	3389.00	46.11	46.25	0.14	NA	0.10	14.90	3342.87	
MW-1	02/08/11	3389.00	ND	47.26	ND	NA	NA	NA	3341.74	
MW-1	02/16/11	3389.00	46.05	46.37	0.32	NA	0.10	34.90	3342.90	
MW-1	02/16/11	3389.00	ND	47.38	ND	NA	NA	NA	3341.62	
MW-1	02/24/11	3389.00	46.01	46.30	0.29	NA	0.00	20.00	3342.95	
MW-1	02/24/11	3389.00	ND	46.18	ND	NA	NA	NA	3342.82	
MW-1	03/02/11	3389.00	46.05	46.30	0.25	NA	0.10	19.90	3342.91	



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-1	03/02/11	3389.00	ND	47.00	ND	NA	NA	NA	3342.00	
MW-1	03/08/11	3389.00	46.13	46.41	0.28	NA	0.10	4.90	3342.83	
MW-1	03/08/11	3389.00	ND	46.41	ND	NA	NA	NA	3342.59	
MW-1	03/16/11	3389.00	46.18	46.56	0.38	NA	0.10	4.90	3342.76	
MW-1	03/16/11	3389.00	ND	46.32	ND	NA	NA	NA	3342.68	
MW-1	03/23/11	3389.00	46.25	46.58	0.33	NA	0.10	4.90	3342.70	
MW-1	03/23/11	3389.00	ND	46.40	ND	NA	NA	NA	3342.60	
MW-1	03/30/11	3389.00	46.28	46.64	0.36	NA	0.10	29.90	3342.67	
MW-1	03/30/11	3389.00	ND	46.38	ND	NA	NA	NA	3342.62	
MW-1	04/08/11	3389.00	46.20	46.39	0.19	Hand Bailed	0.10	4.90	3342.77	
MW-1	04/08/11	3389.00	ND	46.40	ND	NA	NA	NA	3342.60	
MW-1	04/13/11	3389.00	46.19	46.42	0.23	NA	0.10	9.90	3342.78	
MW-1	04/13/11	3389.00	ND	46.36	ND	NA	NA	NA	3342.64	
MW-1	04/20/11	3389.00	46.18	46.48	0.30	NA	0.10	9.90	3342.78	
MW-1	04/20/11	3389.00	ND	46.45	ND	NA	NA	NA	3342.55	
MW-1	04/27/11	3389.00	46.23	46.62	0.39	Pumped	0.10	39.90	3342.71	
MW-1	04/27/11	3389.00	0.00	47.04	47.04	NA	NA	NA	3381.94	
MW-1	05/04/11	3389.00	46.31	46.55	0.24	NA	0.10	29.90	3342.65	
MW-1	05/04/11	3389.00	ND	47.11	ND	NA	NA	NA	3341.89	
MW-1	05/11/11	3389.00	46.32	46.52	0.20	NA	0.10	19.90	3342.65	
MW-1	05/11/11	3389.00	ND	46.98	ND	NA	NA	NA	3342.02	
MW-1	05/19/11	3389.00	46.43	46.52	0.09	NA	0.10	29.90	3342.56	
MW-1	05/19/11	3389.00	ND	47.00	ND	NA	NA	NA	3342.00	
MW-1	05/24/11	3389.00	46.35	46.50	0.15	NA	0.10	19.90	3342.63	
MW-1	05/24/11	3389.00	ND	46.72	ND	NA	NA	NA	3342.28	
MW-1	05/31/11	3389.00	46.46	46.61	0.15	NA	NA	NA	3342.52	Sampled
MW-1	06/08/11	3389.00	46.45	46.55	0.10	NA	0.00	20.00	3342.54	
MW-1	06/08/11	3389.00	ND	46.47	ND	NA	NA	NA	3342.53	
MW-1	06/17/11	3389.00	46.35	46.59	0.24	NA	0.00	20.00	3342.61	
MW-1	06/17/11	3389.00	ND	46.50	ND	NA	NA	NA	3342.50	
MW-1	06/21/11	3389.00	46.40	46.98	0.58	NA	0.25	29.75	3342.51	
MW-1	06/21/11	3389.00	ND	47.10	ND	NA	NA	NA	3341.90	
MW-1	06/29/11	3389.00	46.54	46.85	0.31	NA	6.25	30.00	3342.41	
MW-1	06/29/11	3389.00	ND	47.17	ND	NA	NA	NA	3341.83	
MW-1	07/06/11	3389.00	46.65	46.87	0.22	NA	0.10	9.90	3342.32	
MW-1	07/06/11	3389.00	ND	46.74	ND	NA	NA	NA	3342.26	
MW-1	07/13/11	3389.00	46.70	47.05	0.35	NA	0.10	19.90	3342.25	
MW-1	07/13/11	3389.00	ND	47.14	ND	NA	NA	NA	3341.86	
MW-1	07/21/11	3389.00	46.75	47.06	0.31	Hand Bailed	0.10	9.90	3342.20	
MW-1	07/21/11	3389.00	ND	46.86	ND	NA	NA	NA	3342.14	
MW-1	07/27/11	3389.00	46.78	47.30	0.52	NA	0.10	9.90	3342.14	
MW-1	07/27/11	3389.00	ND	46.90	ND	NA	NA	NA	3342.10	
MW-1	08/03/11	3389.00	46.85	47.44	0.59	NA	0.10	9.90	3342.06	
MW-1	08/03/11	3389.00	ND	47.12	ND	NA	NA	NA	3341.88	
MW-1	08/11/11	3389.00	46.90	47.68	0.78	NA	0.10	9.90	3341.98	
MW-1	08/11/11	3389.00	ND	47.20	ND	NA	NA	NA	3341.80	
MW-1	08/17/11	3389.00	46.88	47.82	0.94	Hand Bailed	0.10	9.90	3341.98	
MW-1	08/17/11	3389.00	ND	47.13	ND	NA	NA	NA	3341.87	
MW-1	08/24/11	3389.00	46.98	47.94	0.96	NA	0.20	9.80	3341.88	
MW-1	08/24/11	3389.00	ND	47.20	ND	NA	NA	NA	3341.80	
MW-1	08/29/11	3389.00	47.05	47.97	0.92	NA	0.10	9.90	3341.81	Sampled
MW-1	08/29/11	3389.00	ND	47.18	ND	NA	NA	NA	3341.82	
MW-1	09/07/11	3389.00	47.09	48.15	1.06	NA	0.20	9.80	3341.75	
MW-1	09/07/11	3389.00	ND	47.29	ND	NA	NA	NA	3341.71	
MW-1	09/14/11	3389.00	47.03	47.99	0.96	NA	0.10	4.90	3341.83	
MW-1	09/14/11	3389.00	ND	47.21	ND	NA	NA	NA	3341.79	
MW-1	09/21/11	3389.00	47.10	48.25	1.15	NA	0.10	9.90	3341.73	
MW-1	09/21/11	3389.00	ND	47.33	ND	NA	NA	NA	3341.67	
MW-1	09/28/11	3389.00	47.15	48.30	1.15	Hand Bailed	0.50	9.50	3341.68	
MW-1	09/28/11	3389.00	ND	47.35	ND	NA	NA	NA	3341.65	
MW-1	10/05/11	3389.00	47.12	48.15	1.03	NA	0.75	39.25	3341.73	Semi-clear @ 30 gal
MW-1	10/05/11	3389.00	ND	47.94	ND	NA	NA	NA	3341.06	
MW-1	10/12/11	3389.00	47.13	48.20	1.07	NA	2.00	28.00	3341.71	
MW-1	10/12/11	3389.00	ND	47.80	ND	NA	NA	NA	3341.20	
MW-1	10/18/11	3389.00	47.21	48.18	0.97	NA	0.75	29.25	3341.64	
MW-1	10/18/11	3389.00	ND	48.36	ND	NA	NA	NA	3340.64	
MW-1	10/28/11	3389.00	47.14	48.25	1.11	NA	0.75	29.25	3341.69	
MW-1	10/28/11	3389.00	ND	48.48	ND	NA	NA	NA	3340.52	
MW-1	11/02/11	3389.00	47.11	48.15	1.04	NA	0.75	19.25	3341.73	
MW-1	11/02/11	3389.00	ND	48.19	ND	NA	NA	NA	3340.81	
MW-1	11/09/11	3389.00	47.14	48.39	1.25	Hand Bailed	0.10	9.90	3341.67	
MW-1	11/09/11	3389.00	ND	49.34	ND	NA	NA	NA	3339.66	
MW-1	11/18/11	3389.00	47.06	48.22	1.16	NA	0.75	9.75	3341.77	



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-1	11/18/11	3389.00	ND	47.25	ND	NA	NA	NA	3341.75	
MW-1	11/23/11	3389.00	47.15	48.35	1.20	NA	1.00	19.00	3341.67	
MW-1	11/23/11	3389.00	ND	48.21	ND	NA	NA	NA	3340.79	
MW-1	11/28/11	3389.00	47.16	48.35	1.19	NA	NA	NA	3341.66	Sampled
MW-1	12/07/11	3389.00	47.18	48.58	1.40	NA	0.10	19.90	3341.61	
MW-1	12/07/11	3389.00	ND	47.41	ND	NA	NA	NA	3341.59	
MW-1	12/13/11	3389.00	47.13	48.29	1.16	NA	0.75	19.25	3341.70	
MW-1	12/13/11	3389.00	ND	48.46	ND	NA	NA	NA	3340.54	
MW-1	12/20/11	3389.00	47.22	48.50	1.28	NA	0.25	19.75	3341.59	
MW-1	12/20/11	3389.00	ND	48.31	ND	NA	NA	NA	3340.69	
MW-1	12/27/11	3389.00	47.22	48.80	1.58	NA	1.00	29.00	3341.54	
MW-1	12/27/11	3389.00	ND	48.48	ND	NA	NA	NA	3340.52	
MW-1	01/04/12	3389.00	47.12	47.71	0.59	Hand Bailed	0.10	9.90	3341.79	
MW-1	01/04/12	3389.00	ND	47.44	ND	NA	NA	NA	3341.56	
MW-1	01/13/12	3389.00	47.06	48.19	1.13	Hand Bailed	0.25	9.75	3341.77	
MW-1	01/13/12	3389.00	ND	47.43	ND	NA	NA	NA	3341.57	
MW-1	01/18/12	3389.00	47.01	48.10	1.09		1.00	14.00	3341.83	
MW-1	01/18/12	3389.00	ND	48.03	ND	NA	NA	NA	3340.97	
MW-1	01/27/12	3389.00	46.95	48.10	1.15	NA	1.00	29.00	3341.88	
MW-1	01/27/12	3389.00	ND	48.05	ND	NA	NA	NA	3340.95	
MW-1	02/02/12	3389.00	46.91	48.04	1.13	NA	1.00	19.00	3341.92	
MW-1	02/02/12	3389.00	ND	47.07	ND	NA	NA	NA	3341.93	
MW-1	02/08/12	3389.00	46.90	48.00	1.10	NA	0.10	29.90	3341.94	
MW-1	02/08/12	3389.00	ND	48.90	ND	NA	NA	NA	3340.10	
MW-1	02/15/12	3389.00	46.86	48.93	2.07	NA	0.00	19.00	3341.83	
MW-1	02/15/12	3389.00	ND	47.90	ND	NA	NA	NA	3341.10	
MW-1	02/29/12	3389.00	46.75	47.65	0.90	NA	0.10	29.90	3342.12	
MW-1	02/29/12	3389.00	ND	47.75	ND	NA	NA	NA	3341.25	
MW-1	03/08/12	3389.00	46.80	47.70	0.90	NA	1.00	19.00	3342.07	
MW-1	03/08/12	3389.00	ND	47.40	ND	NA	NA	NA	3341.60	
MW-1	03/14/12	3389.00	46.78	47.68	0.90	NA	0.25	19.75	3342.09	
MW-1	03/14/12	3389.00	ND	47.30	ND	NA	NA	NA	3341.70	
MW-1	03/21/12	3389.00	47.61	48.58	0.97	NA	0.10	19.90	3341.24	
MW-1	03/21/12	3389.00	ND	48.58	ND	NA	NA	NA	3340.42	
MW-1	03/29/12	3389.00	46.70	47.70	1.00	NA	0.10	19.90	3342.15	
MW-1	03/29/12	3389.00	ND	47.50	ND	NA	NA	NA	3341.50	
MW-1	04/03/12	3389.00	46.70	47.70	1.00	NA	0.10	19.90	3342.15	
MW-1	04/03/12	3389.00	ND	47.50	ND	NA	NA	NA	3341.50	
MW-1	04/11/12	3389.00	46.79	48.00	1.21	NA	1.00	19.00	3342.03	
MW-1	04/11/12	3389.00	ND	47.76	ND	NA	NA	NA	3341.24	
MW-1	04/20/12	3389.00	46.83	48.06	1.23	NA	0.50	29.50	3341.99	
MW-1	04/20/12	3389.00	ND	47.70	ND	NA	NA	NA	3341.30	
MW-1	04/26/12	3389.00	46.90	48.32	1.42	NA	1.00	39.00	3341.89	
MW-1	04/26/12	3389.00	ND	47.73	ND	NA	NA	NA	3341.27	
MW-1	05/02/12	3389.00	46.96	48.38	1.42	NA	2.00	43.00	3341.83	
MW-1	05/02/12	3389.00	ND	47.58	ND	NA	NA	NA	3341.42	
MW-1	05/09/12	3389.00	47.02	48.48	1.46	NA	0.50	39.50	3341.76	
MW-1	05/09/12	3389.00	ND	47.91	ND	NA	NA	NA	3341.09	
MW-1	05/16/12	3389.00	47.17	48.62	1.45	NA	0.50	39.50	3341.61	
MW-1	05/16/12	3389.00	ND	47.52	ND	NA	NA	NA	3341.48	
MW-1	05/22/12	3389.00	47.08	48.61	1.53	NA	NA	NA	3341.69	
MW-1	05/29/12	3389.00	47.09	48.56	1.47	NA	1.00	39.00	3341.69	
MW-1	05/29/12	3389.00	ND	47.48	ND	NA	NA	NA	3341.52	
MW-1	06/06/12	3389.00	47.13	48.50	1.37	NA	1.00	39.00	3341.66	
MW-1	06/06/12	3389.00	ND	47.32	ND	NA	NA	NA	3341.68	
MW-1	06/13/12	3389.00	47.15	48.70	1.55	NA	2.00	38.00	3341.62	
MW-1	06/13/12	3389.00	ND	47.53	ND	NA	NA	NA	3341.47	
MW-1	06/19/12	3389.00	47.20	48.85	1.65	NA	2.00	23.00	3341.55	
MW-1	06/19/12	3389.00	ND	48.01	ND	NA	NA	NA	3340.99	
MW-1	06/27/12	3389.00	47.28	48.80	1.52	NA	0.00	20.00	3341.49	
MW-1	06/27/12	3389.00	ND	48.20	ND	NA	NA	NA	3340.80	
MW-1	07/18/12	3389.00	47.42	49.12	1.70	NA	1.70	38.00	3341.33	
MW-1	07/18/12	3389.00	ND	48.58	ND	NA	NA	NA	3340.42	
MW-1	07/25/12	3389.00	47.50	48.99	1.49	NA	2.50	22.50	3341.28	
MW-1	07/25/12	3389.00	ND	48.38	ND	NA	NA	NA	3340.62	
MW-1	07/31/12	3389.00	47.56	48.96	1.40	NA	2.00	38.00	3341.23	
MW-1	07/31/12	3389.00	ND	47.65	ND	NA	NA	NA	3341.35	
MW-1	08/08/12	3389.00	47.45	48.95	1.50	NA	NA	NA	3341.33	
MW-1	08/13/12	3389.00	47.40	48.90	1.50	NA	2.00	38.00	3341.38	
MW-1	08/13/12	3389.00	ND	48.21	ND	NA	NA	NA	3340.79	
MW-1	08/20/12	3389.00	47.37	48.83	1.46	NA	1.00	19.00	3341.41	
MW-1	08/20/12	3389.00	ND	47.95	ND	NA	NA	NA	3341.05	
MW-1	09/05/12	3389.00	47.33	48.90	1.57	NA	1.00	39.00	3341.43	
MW-1	09/05/12	3389.00	ND	48.15	ND	NA	NA	NA	3340.85	



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DS Hugh Site  
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Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-1	09/11/12	3389.00	47.30	48.75	1.45	NA	1.00	39.00	3341.48	
MW-1	09/19/12	3389.00	47.33	48.90	1.57	NA	NA	NA	3341.43	
MW-1	09/25/12	3389.00	47.33	48.88	1.55	NA	1.00	39.00	3341.44	
MW-1	10/02/12	3389.00	47.33	48.80	1.47	NA	1.00	39.00	3341.45	
MW-1	10/10/12	3389.00	47.30	48.85	1.55	NA	1.00	39.00	3341.47	
MW-1	10/16/12	3389.00	47.26	48.84	1.58	NA	1.00	39.00	3341.50	
MW-1	10/16/12	3389.00	ND	47.95	ND	NA	NA	NA	3341.05	
MW-1	10/24/12	3389.00	47.25	48.75	1.50	NA	1.00	39.00	3341.53	
MW-1	10/24/12	3389.00	ND	47.92	ND	NA	NA	NA	3341.08	
MW-1	11/06/12	3389.00	47.29	48.82	1.53	NA	1.00	39.00	3341.48	
MW-1	11/06/12	3389.00	ND	47.82	ND	NA	NA	NA	3341.18	
MW-1	11/26/12	3389.00	ND	NG	NG	NA	NA	NA	NG	
MW-2	12/21/05	3388.28	NA	45.23	NA	NA	NA	NA	3343.05	Sampled
MW-2	12/29/05	3388.28	NA	45.15	NA	NA	NA	NA	3343.13	
MW-2	01/05/06	3388.28	NA	45.25	NA	NA	NA	NA	3343.03	
MW-2	02/09/06	3388.28	NA	45.02	NA	NA	NA	NA	3343.26	
MW-2	02/22/06	3388.28	NA	45.00	NA	NA	NA	NA	3343.28	
MW-2	03/28/06	3388.28	NA	44.90	NA	NA	NA	NA	3343.38	Sampled
MW-2	04/13/06	3388.28	NA	44.95	NA	NA	NA	NA	3343.33	
MW-2	04/25/06	3388.28	NA	44.93	NA	NA	NA	NA	3343.35	
MW-2	05/03/06	3388.28	NA	44.88	NA	NA	NA	NA	3343.40	
MW-2	05/11/06	3388.28	NA	44.96	NA	NA	NA	NA	3343.32	
MW-2	05/24/06	3388.28	NA	44.92	NA	NA	NA	NA	3343.36	
MW-2	06/07/06	3388.28	NA	44.91	NA	NA	NA	NA	3343.37	
MW-2	06/15/06	3388.28	NA	44.92	NA	NA	NA	NA	3343.36	Sampled
MW-2	06/29/06	3388.28	NA	45.02	NA	NA	NA	NA	3343.26	
MW-2	07/11/06	3388.28	NA	45.05	NA	NA	NA	NA	3343.23	
MW-2	07/25/06	3388.28	NA	45.13	NA	NA	NA	NA	3343.15	
MW-2	08/09/06	3388.28	NA	45.19	NA	NA	NA	NA	3343.09	
MW-2	08/22/06	3388.28	NA	45.27	NA	NA	NA	NA	3343.01	
MW-2	09/12/06	3388.28	NA	45.30	NA	NA	NA	NA	3342.98	Sampled
MW-2	09/19/06	3388.28	NA	45.33	NA	NA	NA	NA	3342.95	
MW-2	10/03/06	3388.28	NA	45.32	NA	NA	NA	NA	3342.96	
MW-2	10/17/06	3388.28	NA	45.25	NA	NA	NA	NA	3343.03	
MW-2	10/31/06	3388.28	NA	45.61	NA	NA	NA	NA	3342.67	
MW-2	11/15/06	3388.28	NA	45.18	NA	NA	NA	NA	3343.10	
MW-2	12/06/06	3388.28	NA	45.05	NA	NA	NA	NA	3343.23	Sampled
MW-2	12/13/06	3388.28	NA	45.36	NA	NA	NA	NA	3342.92	
MW-2	01/03/07	3388.28	NA	44.95	NA	NA	NA	NA	3343.33	
MW-2	01/09/07	3388.28	NA	45.00	NA	NA	NA	NA	3343.28	
MW-2	01/18/07	3388.28	NA	44.92	NA	NA	NA	NA	3343.36	
MW-2	01/25/07	3388.28	NA	44.91	NA	NA	NA	NA	3343.37	
MW-2	01/31/07	3388.28	NA	44.84	NA	NA	NA	NA	3343.44	
MW-2	02/07/07	3388.28	NA	44.86	NA	NA	NA	NA	3343.42	
MW-2	02/14/07	3388.28	NA	44.88	NA	NA	NA	NA	3343.40	
MW-2	03/01/07	3388.28	NA	44.82	NA	NA	NA	NA	3343.46	Sampled
MW-2	05/03/07	3388.28	NA	44.70	NA	NA	NA	NA	3343.58	
MW-2	05/31/07	3388.28	NA	44.70	NA	NA	NA	NA	3343.58	
MW-2	06/06/07	3388.28	NA	44.67	NA	NA	NA	NA	3343.61	
MW-2	07/05/07	3388.28	NA	44.77	NA	NA	NA	NA	3343.51	
MW-2	07/31/07	3388.28	NA	44.51	NA	NA	NA	NA	3343.77	
MW-2	09/07/07	3388.28	NA	44.88	NA	NA	NA	NA	3343.40	Sampled
MW-2	10/04/07	3388.28	NA	44.95	NA	NA	NA	NA	3343.33	
MW-2	11/13/07	3388.28	NA	44.95	NA	NA	NA	NA	3343.33	Sampled
MW-2	12/05/07	3388.28	NA	44.94	NA	NA	NA	NA	3343.34	
MW-2	01/09/08	3388.28	NA	44.96	NA	NA	NA	NA	3343.32	
MW-2	02/06/08	3388.28	NA	44.96	NA	NA	NA	NA	3343.32	
MW-2	02/27/08	3388.28	NA	44.92	NA	NA	NA	NA	3343.36	Sampled
MW-2	04/02/08	3388.28	NA	44.81	NA	NA	NA	NA	3343.47	
MW-2	05/22/08	3388.28	NA	44.84	NA	NA	NA	NA	3343.44	Sampled
MW-2	06/26/08	3388.28	NA	44.97	NA	NA	NA	NA	3343.31	
MW-2	07/07/08	3388.28	NA	44.94	NA	NA	NA	NA	3343.34	
MW-2	08/20/08	3388.28	NA	45.00	NA	NA	NA	NA	3343.28	Sampled
MW-2	10/15/08	3388.28	NA	45.42	NA	NA	NA	NA	3342.86	
MW-2	11/19/08	3388.28	NA	45.28	NA	NA	NA	NA	3343.00	Sampled
MW-2	12/21/08	3388.28	NA	45.38	NA	NA	NA	NA	3342.90	
MW-2	01/07/09	3388.28	NA	45.25	NA	NA	NA	NA	3343.03	
MW-2	02/04/09	3388.28	NA	45.19	NA	NA	NA	NA	3343.09	
MW-2	02/17/09	3388.28	NA	45.02	NA	NA	NA	NA	3343.26	Sampled
MW-2	03/04/09	3388.28	NA	45.07	NA	NA	NA	NA	3343.21	
MW-2	04/08/09	3388.28	NA	45.13	NA	NA	NA	NA	3343.15	
MW-2	05/06/09	3388.28	NA	45.31	NA	NA	NA	NA	3342.97	
MW-2	05/19/09	3388.28	NA	45.33	NA	NA	NA	NA	3342.95	Sample



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-2	06/03/09	3388.28	NA	45.34	NA	NA	NA	NA	3342.94	
MW-2	07/15/09	3388.28	NA	45.35	NA	NA	NA	NA	3342.93	
MW-2	08/05/09	3388.28	NA	45.27	NA	NA	NA	NA	3343.01	
MW-2	08/26/09	3388.28	NA	45.36	NA	NA	0.00	7.00	3342.92	Sample
MW-2	09/02/09	3388.28	NA	45.38	NA	NA	NA	NA	3342.90	
MW-2	10/07/09	3388.28	NA	45.31	NA	NA	NA	NA	3342.97	
MW-2	11/04/09	3388.28	NA	45.29	NA	NA	NA	NA	3342.99	
MW-2	11/17/09	3388.28	NA	45.24	NA	NA	NA	NA	3343.04	Sample
MW-2	12/02/09	3388.28	NA	45.23	NA	NA	NA	NA	3343.05	
MW-2	01/06/10	3388.38	NA	45.34	NA	NA	NA	NA	3343.04	
MW-2	02/09/10	3388.38	NA	45.57	NA	NA	NA	NA	3342.81	Sample
MW-2	03/10/10	3388.38	NA	45.54	NA	NA	NA	NA	3342.84	
MW-2	04/07/10	3388.38	NA	45.61	NA	NA	NA	NA	3342.77	
MW-2	05/05/10	3388.38	NA	45.71	NA	NA	NA	NA	3342.67	
MW-2	05/12/10	3388.38	NA	45.68	NA	NA	NA	NA	3342.70	Sample
MW-2	06/02/10	3388.38	NA	45.52	NA	NA	NA	NA	3342.86	
MW-2	07/07/10	3388.38	NA	45.34	NA	NA	NA	NA	3343.04	
MW-2	08/03/10	3388.38	NA	45.56	NA	NA	NA	NA	3342.82	
MW-2	08/26/10	3388.38	NA	45.58	NA	NA	NA	NA	3342.80	Sample
MW-2	09/01/10	3388.38	NA	45.47	NA	NA	NA	NA	3342.91	
MW-2	10/13/10	3388.38	NA	45.58	NA	NA	NA	NA	3342.80	
MW-2	11/18/10	3388.38	NA	45.79	NA	NA	NA	NA	3342.59	Sample
MW-2	11/23/10	3388.38	NA	45.81	NA	NA	NA	NA	3342.57	
MW-2	12/08/10	3388.38	NA	45.83	NA	NA	NA	NA	3342.55	
MW-2	01/12/11	3388.38	NA	45.87	NA	NA	NA	NA	3342.51	
MW-2	02/08/11	3388.38	NA	45.80	NA	NA	NA	NA	3342.58	
MW-2	02/24/11	3388.38	NA	45.73	NA	NA	NA	NA	3342.65	Sampled
MW-2	03/08/11	3388.38	NA	45.80	NA	NA	NA	NA	3342.58	
MW-2	04/13/11	3388.38	NA	46.90	NA	NA	NA	NA	3341.48	
MW-2	05/31/11	3388.38	NA	46.18	NA	NA	NA	NA	3342.20	Sampled
MW-2	07/06/11	3388.38	NA	46.28	NA	NA	NA	NA	3342.10	
MW-2	08/29/11	3388.38	NA	46.76	NA	NA	NA	NA	3341.62	Sampled
MW-2	09/14/11	3388.38	NA	46.79	NA	NA	NA	NA	3341.59	
MW-2	10/12/11	3388.38	NA	46.81	NA	NA	NA	NA	3341.57	
MW-2	11/28/11	3388.38	NA	46.93	NA	NA	NA	NA	3341.45	Sampled
MW-2	12/27/11	3388.38	NA	46.95	NA	NA	NA	NA	3341.43	
MW-2	01/18/12	3388.38	NA	46.80	NA	NA	NA	NA	3341.58	
MW-2	02/02/12	3388.38	NA	46.73	NA	NA	NA	NA	3341.65	
MW-2	02/15/12	3388.38	NA	46.66	NA	NA	NA	NA	3341.72	
MW-2	02/22/12	3388.38	NA	46.60	NA	NA	NA	NA	3341.78	
MW-2	04/20/12	3388.38	NA	46.61	NA	NA	NA	NA	3341.77	
MW-2	05/22/12	3388.38	NA	46.86	NA	NA	NA	NA	3341.52	
MW-2	07/18/12	3388.38	NA	47.32	NA	NA	NA	NA	3341.06	
MW-2	09/11/12	3388.38	NA	47.23	NA	NA	NA	NA	3341.15	
MW-2	10/16/12	3388.38	NA	47.22	NA	NA	NA	NA	3341.16	
MW-2	11/26/12	3388.38	NA	47.22	NA	NA	NA	NA	3341.16	
MW-3	12/21/05	3388.62	NA	45.57	NA	NA	NA	NA	3343.05	Sampled
MW-3	12/29/05	3388.62	NA	45.52	NA	NA	NA	NA	3343.10	
MW-3	01/05/06	3388.62	NA	45.60	NA	NA	NA	NA	3343.02	
MW-3	02/09/06	3388.62	NA	45.41	NA	NA	NA	NA	3343.21	
MW-3	02/22/06	3388.62	NA	45.33	NA	NA	NA	NA	3343.29	
MW-3	03/28/06	3388.62	NA	45.23	NA	NA	NA	NA	3343.39	Sampled
MW-3	04/13/06	3388.62	NA	45.31	NA	NA	NA	NA	3343.31	
MW-3	04/25/06	3388.62	NA	45.30	NA	NA	NA	NA	3343.32	
MW-3	05/03/06	3388.62	NA	45.23	NA	NA	NA	NA	3343.39	
MW-3	05/11/06	3388.62	NA	45.36	NA	NA	NA	NA	3343.28	
MW-3	05/24/06	3388.62	NA	45.28	NA	NA	NA	NA	3343.34	
MW-3	06/07/06	3388.62	NA	45.28	NA	NA	NA	NA	3343.34	
MW-3	06/15/06	3388.62	NA	45.30	NA	NA	NA	NA	3343.32	Sampled
MW-3	06/29/06	3388.62	NA	45.39	NA	NA	NA	NA	3343.23	
MW-3	07/11/06	3388.62	NA	45.41	NA	NA	NA	NA	3343.21	
MW-3	07/25/06	3388.62	NA	45.50	NA	NA	NA	NA	3343.12	
MW-3	08/09/06	3388.62	NA	45.57	NA	NA	NA	NA	3343.05	
MW-3	08/22/06	3388.62	NA	45.63	NA	NA	NA	NA	3342.99	
MW-3	09/12/06	3388.62	NA	45.65	NA	NA	NA	NA	3342.97	Sampled
MW-3	09/19/06	3388.62	NA	45.69	NA	NA	NA	NA	3342.93	
MW-3	10/03/06	3388.62	NA	45.67	NA	NA	NA	NA	3342.95	
MW-3	10/17/06	3388.62	NA	45.62	NA	NA	NA	NA	3343.00	
MW-3	10/31/06	3388.62	NA	45.23	NA	NA	NA	NA	3343.39	
MW-3	11/15/06	3388.62	NA	45.57	NA	NA	NA	NA	3343.05	
MW-3	12/06/06	3388.62	NA	45.45	NA	NA	NA	NA	3343.17	Sampled
MW-3	12/13/06	3388.62	NA	45.73	NA	NA	NA	NA	3342.89	
MW-3	01/03/07	3388.62	NA	45.32	NA	NA	NA	NA	3343.30	



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-3	01/09/07	3388.62	NA	45.36	NA	NA	NA	NA	3343.26	
MW-3	01/18/07	3388.62	NA	45.29	NA	NA	NA	NA	3343.33	
MW-3	01/25/07	3388.62	NA	45.28	NA	NA	NA	NA	3343.34	
MW-3	01/31/07	3388.62	NA	45.20	NA	NA	NA	NA	3343.42	
MW-3	02/07/07	3388.62	NA	45.24	NA	NA	NA	NA	3343.38	
MW-3	02/14/07	3388.62	NA	45.27	NA	NA	NA	NA	3343.35	
MW-3	03/01/07	3388.62	NA	45.20	NA	NA	NA	NA	3343.42	Sampled
MW-3	05/03/07	3388.62	NA	45.08	NA	NA	NA	NA	3343.54	
MW-3	05/31/07	3388.62	NA	45.10	NA	NA	NA	NA	3343.52	Sampled
MW-3	06/06/07	3388.62	NA	45.08	NA	NA	NA	NA	3343.54	
MW-3	07/05/07	3388.62	NA	45.19	NA	NA	NA	NA	3343.43	
MW-3	07/31/07	3388.62	NA	45.21	NA	NA	NA	NA	3343.41	
MW-3	09/06/07	3388.62	NA	45.42	NA	NA	NA	NA	3343.20	Sampled
MW-3	10/04/07	3388.62	NA	45.37	NA	NA	NA	NA	3343.25	
MW-3	11/13/07	3388.62	NA	45.38	NA	NA	NA	NA	3343.24	Sampled
MW-3	12/05/07	3388.62	NA	45.34	NA	NA	NA	NA	3343.28	
MW-3	01/09/08	3388.62	NA	45.34	NA	NA	NA	NA	3343.28	
MW-3	02/08/08	3388.62	NA	45.35	NA	NA	NA	NA	3343.27	
MW-3	02/27/08	3388.62	NA	45.30	NA	NA	NA	NA	3343.32	Sampled
MW-3	04/02/08	3388.62	NA	45.28	NA	NA	NA	NA	3343.34	
MW-3	05/22/08	3388.62	NA	45.24	NA	NA	NA	NA	3343.38	Sampled
MW-3	06/26/08	3388.62	NA	45.32	NA	NA	NA	NA	3343.30	
MW-3	07/07/08	3388.62	NA	45.72	NA	NA	NA	NA	3342.90	
MW-3	08/20/08	3388.62	NA	45.35	NA	NA	NA	NA	3343.27	Sampled
MW-3	10/15/08	3388.62	NA	45.82	NA	NA	NA	NA	3342.80	
MW-3	11/19/08	3388.62	NA	45.66	NA	NA	NA	NA	3342.96	Sampled
MW-3	12/21/08	3388.62	NA	45.75	NA	NA	NA	NA	3342.87	
MW-3	01/07/09	3388.62	NA	45.66	NA	NA	NA	NA	3342.96	
MW-3	02/04/09	3388.62	NA	45.56	NA	NA	NA	NA	3343.06	
MW-3	02/17/09	3388.62	NA	45.39	NA	NA	NA	NA	3343.23	Sampled
MW-3	03/04/09	3388.62	NA	45.46	NA	NA	NA	NA	3343.16	
MW-3	04/08/09	3388.62	NA	45.51	NA	NA	NA	NA	3343.11	
MW-3	05/06/09	3388.62	NA	45.70	NA	NA	NA	NA	3342.92	
MW-3	05/19/09	3388.62	NA	45.70	NA	0.00	7.00		3342.92	Sampled
MW-3	06/03/09	3388.62	NA	45.70	NA	NA	NA	NA	3342.92	
MW-3	07/15/09	3388.62	NA	45.75	NA	NA	NA	NA	3342.87	
MW-3	08/05/09	3388.62	NA	45.62	NA	NA	NA	NA	3343.00	
MW-3	08/26/09	3388.62	NA	45.75	NA	0.00	7.00		3342.87	Sampled
MW-3	09/02/09	3388.62	NA	45.75	NA	NA	NA	NA	3342.87	
MW-3	10/07/09	3388.62	NA	45.67	NA	NA	NA	NA	3342.95	
MW-3	11/04/09	3388.62	NA	45.64	NA	NA	NA	NA	3342.98	
MW-3	11/17/09	3388.62	NA	45.66	NA	NA	NA	NA	3342.96	Sampled
MW-3	12/02/09	3388.62	NA	45.60	NA	NA	NA	NA	3343.02	
MW-3	01/08/10	3388.52	NA	45.74	NA	NA	NA	NA	3342.78	
MW-3	02/09/10	3388.52	NA	45.95	NA	NA	NA	NA	3342.57	Sampled
MW-3	03/10/10	3388.52	NA	45.98	NA	NA	NA	NA	3342.54	
MW-3	04/07/10	3388.52	NA	46.05	NA	NA	NA	NA	3342.47	
MW-3	05/05/10	3388.52	NA	46.14	NA	NA	NA	NA	3342.38	
MW-3	05/12/10	3388.52	NA	46.15	NA	NA	NA	NA	3342.37	Sampled
MW-3	06/02/10	3388.52	NA	45.91	NA	NA	NA	NA	3342.61	
MW-3	07/07/10	3388.52	NA	45.72	NA	NA	NA	NA	3342.80	
MW-3	08/03/10	3388.52	NA	45.95	NA	NA	NA	NA	3342.57	
MW-3	08/26/10	3388.52	NA	45.94	NA	NA	NA	NA	3342.58	Sampled
MW-3	09/01/10	3388.52	NA	45.84	NA	NA	NA	NA	3342.68	
MW-3	10/13/10	3388.52	NA	45.93	NA	NA	NA	NA	3342.59	
MW-3	11/18/10	3388.52	NA	46.20	NA	NA	NA	NA	3342.32	Sampled
MW-3	11/23/10	3388.52	NA	46.22	NA	NA	NA	NA	3342.30	
MW-3	12/08/10	3388.52	NA	46.24	NA	NA	NA	NA	3342.28	
MW-3	01/12/11	3388.52	NA	46.27	NA	NA	NA	NA	3342.25	
MW-3	02/08/11	3388.52	NA	46.17	NA	NA	NA	NA	3342.35	
MW-3	02/24/11	3388.52	NA	46.11	NA	NA	NA	NA	3342.41	Sampled
MW-3	03/08/11	3388.52	NA	46.19	NA	NA	NA	NA	3342.33	
MW-3	04/13/11	3388.52	NA	46.30	NA	NA	NA	NA	3342.22	
MW-3	05/31/11	3388.52	NA	46.57	NA	NA	NA	NA	3341.95	Sampled
MW-3	07/06/11	3388.52	NA	46.65	NA	NA	NA	NA	3341.87	
MW-3	08/29/11	3388.52	NA	47.18	NA	NA	NA	NA	3341.34	Sampled
MW-3	09/14/11	3388.52	NA	47.19	NA	NA	NA	NA	3341.33	
MW-3	10/12/11	3388.52	NA	47.29	NA	NA	NA	NA	3341.23	
MW-3	11/28/11	3388.52	NA	47.32	NA	NA	NA	NA	3341.20	Sampled
MW-3	12/27/11	3388.52	NA	47.39	NA	NA	NA	NA	3341.13	
MW-3	01/18/12	3388.52	NA	47.15	NA	NA	NA	NA	3341.37	
MW-3	02/02/12	3388.52	NA	47.01	NA	NA	NA	NA	3341.51	
MW-3	02/15/12	3388.52	NA	47.00	NA	NA	NA	NA	3341.52	
MW-3	02/22/12	3388.52	NA	46.90	NA	NA	NA	NA	3341.62	



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-3	04/20/12	3388.52	NA	46.99	NA	NA	NA	NA	3341.53	
MW-3	05/22/12	3388.52	NA	47.25	NA	NA	NA	NA	3341.27	
MW-3	07/18/12	3388.52	NA	47.73	NA	NA	NA	NA	3340.79	Sampled
MW-3	09/11/12	3388.52	NA	47.57	NA	NA	NA	NA	3340.95	
MW-3	10/16/12	3388.52	NA	47.54	NA	NA	NA	NA	3340.98	
MW-3	11/26/12	3388.52	NA	47.55	NA	NA	NA	NA	3340.97	
MW-4	03/21/06	3388.92	NA	46.12	NA	NA	NA	NA	3342.80	
MW-4	03/28/06	3388.92	NA	46.03	NA	NA	NA	NA	3342.89	Sampled
MW-4	04/13/06	3388.92	NA	46.08	NA	NA	NA	NA	3342.84	
MW-4	04/25/06	3388.92	NA	46.01	NA	NA	NA	NA	3342.91	
MW-4	05/03/06	3388.92	NA	46.01	NA	NA	7.00	0.00	3342.91	
MW-4	05/03/06	3388.92	NA	46.01	NA	NA	NA	NA	3342.91	
MW-4	05/11/06	3388.92	NA	46.07	NA	NA	NA	NA	3342.85	
MW-4	05/24/06	3388.92	NA	46.05	NA	NA	NA	NA	3342.87	
MW-4	06/07/06	3388.92	NA	46.03	NA	NA	NA	NA	3342.89	
MW-4	06/15/06	3388.92	NA	46.05	NA	NA	NA	NA	3342.87	Sampled
MW-4	06/29/06	3388.92	NA	46.15	NA	NA	NA	NA	3342.77	
MW-4	07/11/06	3388.92	NA	46.18	NA	NA	NA	NA	3342.74	
MW-4	07/25/06	3388.92	NA	46.24	NA	NA	NA	NA	3342.68	
MW-4	08/09/06	3388.92	NA	46.33	NA	NA	NA	NA	3342.59	
MW-4	08/22/06	3388.92	NA	46.37	NA	NA	NA	NA	3342.55	
MW-4	09/12/06	3388.92	NA	46.41	NA	NA	NA	NA	3342.51	Sampled
MW-4	09/19/06	3388.92	NA	46.46	NA	NA	NA	NA	3342.46	
MW-4	10/03/06	3388.92	NA	46.45	NA	NA	NA	NA	3342.47	
MW-4	10/17/06	3388.92	NA	46.38	NA	NA	NA	NA	3342.54	
MW-4	10/31/06	3388.92	NA	46.36	NA	NA	NA	NA	3342.56	
MW-4	11/15/06	3388.92	NA	46.78	NA	NA	NA	NA	3342.14	
MW-4	12/06/06	3388.92	NA	46.25	NA	NA	NA	NA	3342.67	Sampled
MW-4	12/13/06	3388.92	NA	46.51	NA	NA	NA	NA	3342.41	
MW-4	01/03/07	3388.92	NA	46.06	NA	NA	NA	NA	3342.86	
MW-4	01/09/07	3388.92	NA	46.18	NA	NA	NA	NA	3342.74	
MW-4	01/18/07	3388.92	NA	46.10	NA	Hand Bailed	0.00	10.00	3342.82	Bailed 11 Min
MW-4	01/18/07	3388.92	NA	46.15	NA	Hand Bailed	0.00	10.00	3342.77	Bailed 11 Min
MW-4	01/18/07	3388.92	NA	46.10	NA	NA	NA	NA	3342.82	
MW-4	01/25/07	3388.92	NA	46.06	NA	NA	NA	NA	3342.86	
MW-4	01/31/07	3388.92	NA	45.98	NA	NA	NA	NA	3342.94	
MW-4	02/07/07	3388.92	NA	46.43	NA	NA	NA	NA	3342.49	
MW-4	02/14/07	3388.92	NA	46.46	NA	NA	NA	NA	3342.46	
MW-4	03/01/07	3388.92	NA	45.98	NA	NA	NA	NA	3342.94	Sampled
MW-4	05/03/07	3388.92	NA	45.90	NA	NA	NA	NA	3343.02	
MW-4	05/31/07	3388.92	NA	45.92	NA	NA	NA	NA	3343.00	Sampled
MW-4	06/06/07	3388.92	NA	45.88	NA	NA	NA	NA	3343.04	
MW-4	07/05/07	3388.92	NA	45.98	NA	NA	NA	NA	3342.94	
MW-4	07/31/07	3388.92	NA	46.00	NA	NA	NA	NA	3342.92	
MW-4	09/07/07	3388.92	NA	46.10	NA	NA	NA	NA	3342.82	Sampled
MW-4	09/13/07	3388.92	NA	46.27	NA	Pumped	100.00	100.00	3342.65	
MW-4	09/13/07	3388.92	NA	46.88	NA	NA	NA	NA	3342.04	
MW-4	09/18/07	3388.92	NA	46.11	NA	Bailed	0.00	50.00	3342.81	
MW-4	09/18/07	3388.92	NA	46.60	NA	NA	NA	NA	3342.32	
MW-4	09/26/07	3388.92	NA	46.16	NA	NA	0.00	50.00	3342.76	
MW-4	09/26/07	3388.92	NA	46.73	NA	Pumped	NA	NA	3342.19	
MW-4	10/04/07	3388.92	NA	46.15	NA	NA	0.00	50.00	3342.77	
MW-4	10/04/07	3388.92	NA	46.99	NA	Pumped	NA	NA	3341.93	
MW-4	10/10/07	3388.92	NA	46.21	NA	NA	0.00	50.00	3342.71	
MW-4	10/10/07	3388.92	NA	46.92	NA	Pumped	NA	NA	3342.00	
MW-4	10/17/07	3388.92	NA	46.20	NA	NA	0.00	50.00	3342.72	
MW-4	10/17/07	3388.92	NA	46.74	NA	Pumped	NA	NA	3342.18	
MW-4	10/24/07	3388.92	NA	45.25	NA	NA	0.00	50.00	3343.67	
MW-4	10/24/07	3388.92	NA	45.30	NA	Pumped	NA	NA	3343.62	
MW-4	11/07/07	3388.92	NA	46.27	NA	NA	0.00	50.00	3342.65	
MW-4	11/07/07	3388.92	NA	46.30	NA	Pumped	NA	NA	3342.62	
MW-4	11/13/07	3388.92	NA	46.20	NA	NA	NA	NA	3342.72	Sampled
MW-4	12/05/07	3388.92	NA	46.15	NA	NA	NA	NA	3342.77	
MW-4	01/09/08	3388.92	NA	46.12	NA	NA	NA	NA	3342.80	
MW-4	02/06/08	3388.92	NA	46.16	NA	Pumped	0.00	20.00	3342.76	
MW-4	02/06/08	3388.92	NA	46.16	NA	NA	NA	NA	3342.76	
MW-4	02/13/08	3388.92	NA	46.11	NA	Pumped	0.00	20.00	3342.81	
MW-4	02/13/08	3388.92	NA	46.11	NA	NA	NA	NA	3342.81	
MW-4	02/19/08	3388.92	NA	46.11	NA	Pumped	0.00	20.00	3342.81	
MW-4	02/19/08	3388.92	NA	46.13	NA	NA	NA	NA	3342.79	
MW-4	02/27/08	3388.92	NA	46.11	NA	Pumped	0.00	20.00	3342.81	Sampled
MW-4	02/27/08	3388.92	NA	46.14	NA	NA	NA	NA	3342.78	
MW-4	03/04/08	3388.92	NA	46.10	NA	Pumped	0.00	20.00	3342.82	



TABLE 2  
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Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-4	03/04/08	3388.92	NA	46.13	NA	NA	NA	NA	3342.79	
MW-4	03/12/08	3388.92	NA	46.08	NA	Pumped	0.00	20.00	3342.84	
MW-4	03/12/08	3388.92	NA	46.10	NA	NA	NA	NA	3342.82	
MW-4	03/19/08	3388.92	NA	46.11	NA	Pumped	0.00	20.00	3342.81	
MW-4	03/19/08	3388.92	NA	46.12	NA	NA	NA	NA	3342.80	
MW-4	03/26/08	3388.92	NA	46.05	NA	Pumped	0.00	20.00	3342.87	
MW-4	03/26/08	3388.92	NA	46.07	NA	NA	NA	NA	3342.85	
MW-4	04/02/08	3388.92	NA	46.07	NA	Pumped	0.00	20.00	3342.85	
MW-4	04/02/08	3388.92	NA	46.03	NA	NA	NA	NA	3342.89	
MW-4	04/09/08	3388.92	NA	45.99	NA	Pumped	0.00	20.00	3342.93	
MW-4	04/09/08	3388.92	NA	45.96	NA	NA	NA	NA	3342.96	
MW-4	04/16/08	3388.92	NA	45.98	NA	Pumped	0.00	20.00	3342.94	
MW-4	04/16/08	3388.92	NA	45.96	NA	NA	NA	NA	3342.96	
MW-4	04/24/08	3388.92	NA	45.96	NA	NA	NA	NA	3342.96	
MW-4	04/30/08	3388.92	NA	45.93	NA	Pumped	0.00	20.00	3342.99	
MW-4	04/30/08	3388.92	NA	45.95	NA	NA	NA	NA	3342.97	
MW-4	05/07/08	3388.92	NA	45.94	NA	Pumped	0.00	20.00	3342.98	
MW-4	05/07/08	3388.92	NA	45.94	NA	NA	NA	NA	3342.98	
MW-4	05/14/08	3388.92	NA	45.95	NA	Pumped	0.00	20.00	3342.97	
MW-4	05/14/08	3388.92	NA	45.96	NA	NA	NA	NA	3342.96	
MW-4	05/22/08	3388.92	NA	45.99	NA	Pumped	0.00	20.00	3342.93	Sampled
MW-4	05/22/08	3388.92	NA	45.99	NA	NA	NA	NA	3342.93	
MW-4	05/29/08	3388.92	NA	46.00	NA	NA	0.00	20.00	3342.92	
MW-4	05/29/08	3388.92	NA	46.01	NA	Pumped	NA	NA	3342.91	
MW-4	06/04/08	3388.92	NA	46.03	NA	NA	0.00	20.00	3342.89	
MW-4	06/04/08	3388.92	NA	46.02	NA	Pumped	NA	NA	3342.90	
MW-4	06/11/08	3388.92	NA	46.07	NA	NA	0.00	20.00	3342.85	
MW-4	06/11/08	3388.92	NA	46.09	NA	Pumped	NA	NA	3342.83	
MW-4	06/18/08	3388.92	NA	46.08	NA	NA	0.00	20.00	3342.84	
MW-4	06/18/08	3388.92	NA	46.10	NA	Pumped	NA	NA	3342.82	
MW-4	06/26/08	3388.92	NA	46.10	NA	NA	0.00	20.00	3342.82	
MW-4	06/26/08	3388.92	NA	46.13	NA	Pumped	NA	NA	3342.79	
MW-4	07/07/08	3388.92	NA	46.14	NA	NA	0.00	20.00	3342.78	
MW-4	07/07/08	3388.92	NA	46.15	NA	Pumped	NA	NA	3342.77	
MW-4	07/16/08	3388.92	NA	46.15	NA	NA	0.00	20.00	3342.77	
MW-4	07/16/08	3388.92	NA	46.17	NA	Pumped	NA	NA	3342.75	
MW-4	07/21/08	3388.92	NA	46.15	NA	NA	0.00	20.00	3342.77	
MW-4	07/21/08	3388.92	NA	46.16	NA	Pumped	NA	NA	3342.76	
MW-4	07/29/08	3388.92	NA	46.16	NA	NA	0.00	20.00	3342.76	
MW-4	07/29/08	3388.92	NA	46.16	NA	Pumped	NA	NA	3342.76	
MW-4	08/06/08	3388.92	NA	46.17	NA	NA	NA	NA	3342.75	
MW-4	08/13/08	3388.92	NA	46.16	NA	Pumped	0.00	20.00	3342.76	
MW-4	08/13/08	3388.92	NA	46.17	NA	NA	NA	NA	3342.75	
MW-4	08/20/08	3388.92	NA	46.20	NA	NA	NA	NA	3342.72	Sampled
MW-4	08/27/08	3388.92	NA	47.22	NA	Pumped	0.00	20.00	3341.70	
MW-4	08/27/08	3388.92	NA	47.24	NA	NA	NA	NA	3341.68	
MW-4	09/02/08	3388.92	NA	47.24	NA	Pumped	0.00	20.00	3341.68	
MW-4	09/02/08	3388.92	NA	47.24	NA	NA	NA	NA	3341.68	
MW-4	09/09/08	3388.92	NA	47.24	NA	Pumped	0.00	40.00	3341.68	
MW-4	09/09/08	3388.92	NA	47.26	NA	NA	NA	NA	3341.66	
MW-4	09/17/08	3388.92	NA	47.26	NA	Pumped	0.00	20.00	3341.66	
MW-4	09/17/08	3388.92	NA	47.27	NA	NA	NA	NA	3341.65	
MW-4	09/24/08	3388.92	NA	46.49	NA	Pumped	0.00	20.00	3342.43	
MW-4	09/24/08	3388.92	NA	46.51	NA	NA	NA	NA	3342.41	
MW-4	10/01/08	3388.92	NA	46.48	NA	Pumped	0.00	20.00	3342.44	
MW-4	10/01/08	3388.92	NA	46.50	NA	NA	NA	NA	3342.42	
MW-4	10/08/08	3388.92	NA	46.58	NA	Pumped	0.00	20.00	3342.34	
MW-4	10/08/08	3388.92	NA	46.58	NA	NA	NA	NA	3342.34	
MW-4	11/05/08	3388.92	NA	46.46	NA	Pumped	0.00	10.00	3342.46	
MW-4	11/05/08	3388.92	NA	47.57	NA	NA	NA	NA	3341.35	
MW-4	11/12/08	3388.92	NA	46.44	NA	NA	NA	NA	3342.48	
MW-4	11/19/08	3388.92	NA	46.46	NA	NA	NA	NA	3342.46	Sampled
MW-4	11/26/08	3388.92	NA	46.47	NA	Pumped	0.00	20.00	3342.45	
MW-4	11/26/08	3388.92	NA	46.49	NA	NA	NA	NA	3342.43	
MW-4	12/03/08	3388.92	NA	46.52	NA	Pumped	0.00	20.00	3342.40	
MW-4	12/03/08	3388.92	NA	46.58	NA	NA	NA	NA	3342.34	
MW-4	12/10/08	3388.92	NA	46.55	NA	Pumped	0.00	20.00	3342.37	
MW-4	12/10/08	3388.92	NA	46.55	NA	NA	NA	NA	3342.37	
MW-4	12/17/08	3388.92	NA	46.51	NA	Pumped	0.00	15.00	3342.41	
MW-4	12/17/08	3388.92	NA	46.54	NA	NA	NA	NA	3342.38	
MW-4	12/21/08	3388.92	NA	46.57	NA	Pumped	0.00	20.00	3342.35	
MW-4	12/21/08	3388.92	NA	46.58	NA	NA	NA	NA	3342.34	
MW-4	12/31/08	3388.92	NA	46.57	NA	Pumped	0.00	20.00	3342.35	
MW-4	12/31/08	3388.92	NA	46.57	NA	NA	NA	NA	3342.35	



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Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
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Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H-2		
MW-4	01/07/09	3388.92	NA	46.49	NA	Pumped	0.00	20.00	3342.43	
MW-4	01/07/09	3388.92	NA	46.51	NA	NA	NA	NA	3342.41	
MW-4	01/15/09	3388.92	NA	46.49	NA	Pumped	0.00	15.00	3342.43	
MW-4	01/15/09	3388.92	NA	46.51	NA	NA	NA	NA	3342.41	
MW-4	01/22/09	3388.92	NA	46.43	NA	Pumped	0.00	12.00	3342.49	
MW-4	01/22/09	3388.92	NA	46.45	NA	NA	NA	NA	3342.47	
MW-4	01/28/09	3388.92	NA	46.41	NA	Pumped	0.00	15.00	3342.51	
MW-4	01/28/09	3388.92	NA	46.43	NA	NA	NA	NA	3342.49	
MW-4	02/04/09	3388.92	NA	46.39	NA	Pumped	0.00	10.00	3342.53	
MW-4	02/04/09	3388.92	NA	46.41	NA	NA	NA	NA	3342.51	
MW-4	02/11/09	3388.92	NA	46.35	NA	Pumped	0.00	20.00	3342.57	
MW-4	02/11/09	3388.92	NA	46.36	NA	NA	NA	NA	3342.56	
MW-4	02/17/09	3388.92	NA	46.23	NA	NA	NA	NA	3342.69	Sample
MW-4	02/25/09	3388.92	NA	46.29	NA	Pumped	0.00	20.00	3342.63	
MW-4	02/25/09	3388.92	NA	46.31	NA	NA	NA	NA	3342.61	
MW-4	03/04/09	3388.92	NA	46.30	NA	Pumped	0.00	20.00	3342.62	
MW-4	03/04/09	3388.92	NA	46.35	NA	NA	NA	NA	3342.57	
MW-4	03/11/09	3388.92	NA	46.38	NA	Pumped	0.00	20.00	3342.54	
MW-4	03/11/09	3388.92	NA	46.41	NA	NA	NA	NA	3342.51	
MW-4	03/18/09	3388.92	NA	46.33	NA	Pumped	0.00	20.00	3342.59	
MW-4	03/18/09	3388.92	NA	46.45	NA	NA	NA	NA	3342.47	
MW-4	03/25/09	3388.92	NA	46.37	NA	Pumped	0.00	20.00	3342.55	
MW-4	03/25/09	3388.92	NA	46.42	NA	NA	NA	NA	3342.50	
MW-4	04/01/09	3388.92	NA	46.33	NA	Pumped	0.00	20.00	3342.59	
MW-4	04/01/09	3388.92	NA	46.35	NA	NA	NA	NA	3342.57	
MW-4	04/15/09	3388.92	NA	46.38	NA	Pumped	0.00	20.00	3342.54	
MW-4	04/15/09	3388.92	NA	46.35	NA	NA	NA	NA	3342.57	
MW-4	04/22/09	3388.92	NA	46.34	NA	Pumped	0.00	20.00	3342.58	
MW-4	04/22/09	3388.92	NA	46.34	NA	NA	NA	NA	3342.58	
MW-4	04/29/09	3388.92	NA	46.44	NA	Pumped	0.00	20.00	3342.48	
MW-4	04/29/09	3388.92	NA	46.47	NA	NA	NA	NA	3342.45	
MW-4	05/06/09	3388.92	NA	46.48	NA	Pumped	0.00	20.00	3342.44	
MW-4	05/06/09	3388.92	NA	46.59	NA	NA	NA	NA	3342.33	
MW-4	05/14/09	3388.92	NA	46.50	NA	Pumped	0.00	20.00	3342.42	
MW-4	05/14/09	3388.92	NA	46.51	NA	NA	NA	NA	3342.41	
MW-4	05/19/09	3388.92	NA	46.50	NA	NA	NA	6.00	3342.42	Sampled
MW-4	05/28/09	3388.92	NA	46.48	NA	Pumped	0.00	20.00	3342.44	
MW-4	05/28/09	3388.92	NA	46.52	NA	NA	NA	NA	3342.40	
MW-4	06/03/09	3388.92	NA	46.50	NA	Pumped	0.00	20.00	3342.42	
MW-4	06/03/09	3388.92	NA	46.52	NA	NA	NA	NA	3342.40	
MW-4	06/11/09	3388.92	NA	46.47	NA	Pumped	0.00	20.00	3342.45	
MW-4	06/11/09	3388.92	NA	46.50	NA	NA	NA	NA	3342.42	
MW-4	06/17/09	3388.92	NA	46.62	NA	Pumped	0.00	20.00	3342.30	
MW-4	06/17/09	3388.92	NA	46.65	NA	NA	NA	NA	3342.27	
MW-4	06/23/09	3388.92	NA	46.62	NA	Pumped	0.00	20.00	3342.30	
MW-4	06/23/09	3388.92	NA	46.70	NA	NA	NA	NA	3342.22	
MW-4	07/01/09	3388.92	NA	46.58	NA	Pumped	0.00	20.00	3342.34	
MW-4	07/01/09	3388.92	NA	46.58	NA	NA	NA	NA	3342.34	
MW-4	07/07/09	3388.28	NA	46.54	NA	NA	0.00	20.00	3341.74	
MW-4	07/07/09	3388.28	NA	46.56	NA	NA	NA	NA	3341.72	
MW-4	07/15/09	3388.92	NA	46.55	NA	Pumped	0.00	20.00	3342.37	
MW-4	07/15/09	3388.92	NA	46.55	NA	NA	NA	NA	3342.37	
MW-4	07/29/09	3388.92	NA	46.49	NA	Pumped	0.00	20.00	3342.43	
MW-4	07/29/09	3388.92	NA	46.47	NA	NA	NA	NA	3342.45	
MW-4	08/05/09	3388.92	NA	46.42	NA	Pumped	0.00	20.00	3342.50	
MW-4	08/05/09	3388.92	NA	46.92	NA	NA	NA	NA	3342.00	
MW-4	08/12/09	3388.92	NA	46.48	NA	Pumped	0.00	20.00	3342.44	
MW-4	08/12/09	3388.92	NA	46.68	NA	NA	NA	NA	3342.24	
MW-4	08/19/09	3388.92	NA	46.46	NA	Pumped	0.00	20.00	3342.46	
MW-4	08/19/09	3388.92	NA	46.50	NA	NA	NA	NA	3342.42	
MW-4	08/26/09	3388.92	NA	46.53	NA	NA	0.00	6.00	3342.39	Sampled
MW-4	09/02/09	3388.92	NA	46.55	NA	Pumped	0.00	20.00	3342.37	
MW-4	09/02/09	3388.92	NA	46.60	NA	NA	NA	NA	3342.32	
MW-4	09/09/09	3388.92	NA	46.50	NA	Pumped	0.00	20.00	3342.42	
MW-4	09/09/09	3388.92	NA	46.51	NA	NA	NA	NA	3342.41	
MW-4	09/16/09	3388.92	NA	46.51	NA	Pumped	0.00	20.00	3342.41	
MW-4	09/16/09	3388.92	NA	46.53	NA	NA	NA	NA	3342.39	
MW-4	09/23/09	3388.92	NA	46.48	NA	Pumped	0.00	20.00	3342.44	
MW-4	09/23/09	3388.92	NA	46.50	NA	NA	NA	NA	3342.42	
MW-4	09/30/09	3388.92	NA	46.47	NA	Pumped	0.00	20.00	3342.45	
MW-4	09/30/09	3388.92	NA	46.48	NA	NA	NA	NA	3342.44	
MW-4	10/07/09	3388.92	NA	46.47	NA	Pumped	0.00	20.00	3342.45	
MW-4	10/07/09	3388.92	NA	46.48	NA	NA	NA	NA	3342.44	
MW-4	10/12/09	3388.92	NA	46.43	NA	Pumped	0.00	20.00	3342.49	



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H-0		
MW-4	10/12/09	3388.92	NA	46.49	NA	NA	NA	NA	3342.43	
MW-4	10/29/09	3388.92	NA	46.41	NA	Pumped	0.00	20.00	3342.51	
MW-4	10/29/09	3388.92	NA	46.42	NA	NA	NA	NA	3342.50	
MW-4	11/04/09	3388.92	NA	46.44	NA	Pumped	0.00	20.00	3342.48	
MW-4	11/04/09	3388.92	NA	46.45	NA	NA	NA	NA	3342.47	
MW-4	11/17/09	3388.92	NA	46.43	NA	Pumped	0.00	20.00	3342.49	Sampled
MW-4	11/25/09	3388.92	NA	46.43	NA	Pumped	0.00	20.00	3342.49	
MW-4	11/25/09	3388.92	NA	46.43	NA	NA	NA	NA	3342.49	
MW-4	12/02/09	3388.92	NA	46.39	NA	Pumped	0.00	20.00	3342.53	
MW-4	12/02/09	3388.92	NA	46.40	NA	NA	NA	NA	3342.52	
MW-4	12/09/09	3388.92	NA	46.42	NA	Pumped	0.00	20.00	3342.50	
MW-4	12/09/09	3388.92	NA	46.41	NA	NA	NA	NA	3342.51	
MW-4	12/16/09	3388.92	NA	46.46	NA	Pumped	0.00	20.00	3342.46	
MW-4	12/16/09	3388.92	NA	46.40	NA	NA	NA	NA	3342.52	
MW-4	12/23/09	3388.92	NA	46.39	NA	Pumped	0.00	20.00	3342.53	
MW-4	12/23/09	3388.92	NA	46.42	NA	NA	NA	NA	3342.50	
MW-4	12/30/09	3388.92	NA	46.39	NA	Pumped	0.00	20.00	3342.53	
MW-4	12/30/09	3388.92	NA	46.42	NA	NA	NA	NA	3342.50	
MW-4	01/06/10	3388.92	NA	46.49	NA	Pumped	0.00	20.00	3342.43	
MW-4	01/06/10	3388.92	NA	46.51	NA	NA	NA	NA	3342.41	
MW-4	01/13/10	3388.92	NA	46.57	NA	Pumped	0.00	20.00	3342.35	
MW-4	01/13/10	3388.92	NA	46.60	NA	NA	NA	NA	3342.32	
MW-4	01/20/10	3388.92	NA	46.60	NA	Pumped	0.00	20.00	3342.32	
MW-4	01/20/10	3388.92	NA	46.61	NA	NA	NA	NA	3342.31	
MW-4	01/27/10	3388.92	NA	46.66	NA	Pumped	0.00	20.00	3342.26	
MW-4	01/27/10	3388.92	NA	46.67	NA	NA	NA	NA	3342.25	
MW-4	02/09/10	3388.92	NA	46.72	NA	Pumped	0.00	20.00	3342.20	Sampled
MW-4	02/09/10	3388.92	NA	46.75	NA	NA	NA	NA	3342.17	
MW-4	02/17/10	3388.92	NA	46.67	NA	Pumped	0.00	20.00	3342.25	
MW-4	02/17/10	3388.92	NA	46.68	NA	NA	NA	NA	3342.24	
MW-4	03/02/10	3388.92	NA	46.76	NA	Pumped	0.00	20.00	3342.16	
MW-4	03/02/10	3388.92	NA	46.78	NA	NA	NA	NA	3342.14	
MW-4	03/10/10	3388.92	NA	46.71	NA	Pumped	0.00	20.00	3342.21	
MW-4	03/10/10	3388.92	NA	46.74	NA	NA	NA	NA	3342.18	
MW-4	03/17/10	3388.92	NA	46.80	NA	Pumped	0.00	20.00	3342.12	
MW-4	03/17/10	3388.92	NA	46.81	NA	NA	NA	NA	3342.11	
MW-4	03/24/10	3388.92	NA	46.80	NA	Pumped	0.00	20.00	3342.12	
MW-4	03/24/10	3388.92	NA	46.85	NA	NA	NA	NA	3342.07	
MW-4	03/31/10	3388.92	NA	46.74	NA	Pumped	0.00	20.00	3342.18	
MW-4	03/31/10	3388.92	NA	46.75	NA	NA	NA	NA	3342.17	
MW-4	04/07/10	3388.92	NA	46.78	NA	Pumped	0.00	20.00	3342.14	
MW-4	04/07/10	3388.92	NA	46.80	NA	NA	NA	NA	3342.12	
MW-4	04/14/10	3388.92	NA	46.82	NA	Pumped	0.00	20.00	3342.10	
MW-4	04/14/10	3388.92	NA	46.83	NA	NA	NA	NA	3342.09	
MW-4	04/21/10	3388.92	NA	46.78	NA	Pumped	0.00	20.00	3342.14	
MW-4	04/21/10	3388.92	NA	46.80	NA	NA	NA	NA	3342.12	
MW-4	04/28/10	3388.92	NA	46.80	NA	Pumped	0.00	20.00	3342.12	
MW-4	04/28/10	3388.92	NA	46.81	NA	NA	NA	NA	3342.11	
MW-4	05/05/10	3388.92	NA	46.87	NA	Pumped	0.00	20.00	3342.05	
MW-4	05/05/10	3388.92	NA	46.90	NA	NA	NA	NA	3342.02	
MW-4	05/12/10	3388.92	NA	46.86	NA	NA	NA	NA	3342.06	Sampled
MW-4	05/19/10	3388.92	NA	46.84	NA	Pumped	0.00	20.00	3342.08	
MW-4	05/19/10	3388.92	NA	46.85	NA	NA	NA	NA	3342.07	
MW-4	05/29/10	3388.92	NA	46.70	NA	Pumped	0.00	20.00	3342.22	
MW-4	05/29/10	3388.92	NA	46.73	NA	NA	NA	NA	3342.19	
MW-4	06/02/10	3388.92	NA	46.69	NA	NA	NA	NA	3342.23	
MW-4	06/12/10	3388.92	NA	46.63	NA	Pumped	0.00	20.00	3342.29	
MW-4	06/12/10	3388.92	NA	46.63	NA	NA	NA	NA	3342.29	
MW-4	06/15/10	3388.92	NA	46.52	NA	Pumped	0.00	20.00	3342.40	
MW-4	06/15/10	3388.92	NA	46.54	NA	NA	NA	NA	3342.38	
MW-4	06/25/10	3388.92	NA	46.58	NA	Pumped	0.00	20.00	3342.34	
MW-4	06/25/10	3388.92	NA	46.59	NA	NA	NA	NA	3342.33	
MW-4	06/30/10	3388.92	NA	46.55	NA	NA	NA	NA	3342.37	
MW-4	07/07/10	3388.92	NA	46.52	NA	Pumped	0.00	20.00	3342.40	
MW-4	07/07/10	3388.92	NA	46.54	NA	NA	NA	NA	3342.38	
MW-4	07/14/10	3388.92	NA	46.51	NA	Pumped	0.00	20.00	3342.41	
MW-4	07/14/10	3388.92	NA	46.51	NA	NA	NA	NA	3342.41	
MW-4	07/29/10	3388.92	NA	46.68	NA	Pumped	0.00	20.00	3342.24	
MW-4	07/28/10	3388.92	NA	46.69	NA	NA	NA	NA	3342.23	
MW-4	08/03/10	3388.92	NA	46.67	NA	Pumped	0.00	20.00	3342.25	
MW-4	08/03/10	3388.92	NA	46.68	NA	NA	NA	NA	3342.24	
MW-4	08/17/10	3388.92	NA	46.83	NA	Pumped	0.00	20.00	3342.09	
MW-4	08/17/10	3388.92	NA	46.83	NA	NA	NA	NA	3342.09	
MW-4	08/25/10	3388.92	NA	46.72	NA	Pumped	0.00	20.00	3342.20	



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-4	08/25/10	3388.92	NA	46.74	NA	NA	NA	NA	3342.18	
MW-4	08/26/10	3388.92	NA	46.77	NA	NA	NA	NA	3342.15	Sampled
MW-4	09/01/10	3388.92	NA	46.62	NA	Pumped	0.00	20.00	3342.30	
MW-4	09/01/10	3388.92	NA	46.67	NA	NA	NA	NA	3342.25	
MW-4	09/08/10	3388.92	NA	46.77	NA	Pumped	0.00	20.00	3342.15	
MW-4	09/08/10	3388.92	NA	46.79	NA	NA	NA	NA	3342.13	
MW-4	09/15/10	3388.92	NA	46.84	NA	Pumped	0.00	20.00	3342.08	
MW-4	09/15/10	3388.92	NA	46.87	NA	NA	NA	NA	3342.05	
MW-4	09/21/10	3388.92	NA	46.76	NA	Pumped	0.00	20.00	3342.16	
MW-4	09/21/10	3388.92	NA	46.75	NA	NA	NA	NA	3342.17	
MW-4	10/01/10	3388.92	NA	46.71	NA	Pumped	0.00	20.00	3342.21	
MW-4	10/01/10	3388.92	NA	46.74	NA	NA	NA	NA	3342.18	
MW-4	10/06/10	3388.92	NA	46.69	NA	Pumped	0.00	20.00	3342.23	
MW-4	10/06/10	3388.92	NA	46.71	NA	NA	NA	NA	3342.21	
MW-4	10/13/10	3388.92	NA	46.69	NA	Pumped	0.00	20.00	3342.23	
MW-4	10/13/10	3388.92	NA	46.72	NA	NA	NA	NA	3342.20	
MW-4	10/27/10	3388.92	NA	46.83	NA	Pumped	0.00	20.00	3342.09	
MW-4	10/27/10	3388.92	NA	46.83	NA	NA	NA	NA	3342.09	
MW-4	11/03/10	3388.92	NA	46.81	NA	Pumped	0.00	20.00	3342.11	
MW-4	11/03/10	3388.92	NA	46.86	NA	NA	NA	NA	3342.06	
MW-4	11/10/10	3388.92	NA	46.84	NA	Pumped	0.00	20.00	3342.08	
MW-4	11/10/10	3388.92	NA	46.85	NA	NA	NA	NA	3342.07	
MW-4	11/18/10	3388.92	NA	46.92	NA	NA	NA	NA	3342.00	Sampled
MW-4	11/23/10	3388.92	NA	46.91	NA	Pumped	0.00	10.00	3342.01	
MW-4	11/23/10	3388.92	NA	46.92	NA	NA	NA	NA	3342.00	
MW-4	12/01/10	3388.92	NA	46.92	NA	Pumped	0.00	20.00	3342.00	
MW-4	12/01/10	3388.92	NA	46.96	NA	NA	NA	NA	3341.96	
MW-4	12/08/10	3388.92	NA	46.96	NA	NA	NA	NA	3341.96	
MW-4	12/15/10	3388.92	NA	46.92	NA	Pumped	0.00	20.00	3342.00	
MW-4	12/15/10	3388.92	NA	46.93	NA	NA	NA	NA	3341.99	
MW-4	12/21/10	3388.92	NA	46.99	NA	Pumped	0.00	20.00	3341.93	
MW-4	12/21/10	3388.92	NA	47.01	NA	NA	NA	NA	3341.91	
MW-4	01/12/11	3388.92	ND	46.98	ND	Hand Bailed	0.00	20.00	3341.94	
MW-4	01/12/11	3388.92	ND	47.00	ND	NA	NA	NA	3341.92	
MW-4	01/19/11	3388.92	NA	DNG	NA	NA	0.00	20.00	DNG	
MW-4	01/19/11	3388.92	NA	DNG	NA	NA	NA	NA	DNG	
MW-4	01/25/11	3388.92	ND	46.97	ND	NA	0.00	30.00	3341.95	
MW-4	01/25/11	3388.92	ND	46.98	ND	NA	NA	NA	3341.94	
MW-4	02/08/11	3388.92	ND	46.88	ND	NA	0.00	15.00	3342.04	
MW-4	02/08/11	3388.92	ND	46.90	ND	NA	NA	NA	3342.02	
MW-4	02/24/11	3388.92	NA	46.84	NA	NA	NA	NA	3342.08	Sampled
MW-4	03/02/11	3388.92	ND	46.83	ND	NA	0.00	20.00	3342.09	
MW-4	03/02/11	3388.92	ND	46.84	ND	NA	NA	NA	3342.08	
MW-4	03/08/11	3388.92	NA	46.90	NA	NA	0.00	20.00	3342.02	
MW-4	03/08/11	3388.92	NA	46.93	NA	NA	NA	NA	3341.99	
MW-4	03/23/11	3388.92	NA	47.06	NA	NA	0.00	20.00	3341.86	
MW-4	03/23/11	3388.92	NA	47.07	NA	NA	NA	NA	3341.85	
MW-4	04/13/11	3388.92	NA	47.00	NA	NA	NA	NA	3341.92	
MW-4	05/04/11	3388.92	NA	47.10	NA	NA	0.00	20.00	3341.82	
MW-4	05/04/11	3388.92	NA	47.11	NA	NA	NA	NA	3341.81	
MW-4	05/31/11	3388.92	NA	47.27	NA	NA	NA	NA	3341.65	Sampled
MW-4	07/06/11	3388.92	NA	47.34	NA	NA	NA	NA	3341.58	
MW-4	08/29/11	3388.92	NA	47.83	NA	NA	NA	NA	3341.09	Sampled
MW-4	09/14/11	3388.92	NA	47.86	NA	NA	NA	NA	3341.06	
MW-4	10/12/11	3388.92	NA	47.95	NA	NA	NA	NA	3340.97	
MW-4	11/28/11	3388.92	NA	47.98	NA	NA	NA	NA	3340.94	Sampled
MW-4	12/07/11	3388.92	48.94	58.58	9.64	NA	NA	NA	3338.53	Sampled
MW-4	12/27/11	3388.92	NA	48.03	NA	NA	NA	NA	3340.89	
MW-4	01/18/12	3388.92	NA	47.84	NA	NA	NA	NA	3341.08	
MW-4	02/02/12	3388.92	NA	47.76	NA	NA	NA	NA	3341.16	
MW-4	02/15/12	3388.92	NA	47.77	NA	NA	NA	NA	3341.15	
MW-4	02/22/12	3388.92	NA	47.67	NA	NA	NA	NA	3341.25	
MW-4	04/20/12	3388.92	NA	47.65	NA	NA	NA	NA	3341.27	
MW-4	05/22/12	3388.92	NA	47.93	NA	NA	NA	NA	3340.99	
MW-4	07/18/12	3388.92	NA	48.42	NA	NA	NA	NA	3340.50	
MW-4	07/25/12	3388.92	NA	48.47	NA	NA	NA	NA	3340.45	
MW-4	07/25/12	3388.92	NA	48.50	NA	NA	NA	NA	3340.42	
MW-4	09/11/12	3388.92	NA	48.35	NA	NA	NA	NA	3340.57	
MW-4	10/16/12	3388.92	NA	48.33	NA	NA	NA	NA	3340.59	
MW-4	11/26/12	3388.92	NA	48.35	NA	NA	NA	NA	3340.57	
MW-5	03/21/06	3389.40	NA	46.50	NA	NA	NA	NA	3342.90	
MW-5	03/28/06	3389.40	NA	46.44	NA	NA	NA	NA	3342.96	Sampled
MW-5	04/13/06	3389.40	NA	46.48	NA	NA	NA	NA	3342.92	



TABLE 2  
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Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
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Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H.O.		
MW-5	04/25/06	3389.40	NA	46.47	NA	NA	NA	NA	3342.93	
MW-5	05/03/06	3389.40	NA	46.41	NA	NA	NA	NA	3342.99	
MW-5	05/11/06	3389.40	NA	46.47	NA	NA	NA	NA	3342.93	
MW-5	05/24/06	3389.40	NA	46.46	NA	NA	NA	NA	3342.94	
MW-5	06/07/06	3389.40	NA	46.44	NA	NA	NA	NA	3342.96	
MW-5	06/15/06	3389.40	NA	46.48	NA	NA	NA	NA	3342.92	Sampled
MW-5	06/29/06	3389.40	NA	46.56	NA	NA	NA	NA	3342.84	
MW-5	07/11/06	3389.40	NA	46.51	NA	NA	NA	NA	3342.89	
MW-5	07/25/06	3389.40	NA	46.63	NA	NA	NA	NA	3342.77	
MW-5	08/09/06	3389.40	NA	46.68	NA	NA	NA	NA	3342.72	
MW-5	08/22/06	3389.40	NA	46.77	NA	NA	NA	NA	3342.63	
MW-5	09/12/06	3389.40	NA	46.84	NA	NA	NA	NA	3342.56	Sampled
MW-5	09/19/06	3389.40	NA	46.86	NA	NA	NA	NA	3342.54	
MW-5	10/03/06	3389.40	NA	46.85	NA	NA	NA	NA	3342.55	
MW-5	10/17/06	3389.40	NA	46.80	NA	NA	NA	NA	3342.60	
MW-5	10/31/06	3389.40	NA	46.79	NA	NA	NA	NA	3342.61	
MW-5	11/15/06	3389.40	NA	46.35	NA	NA	NA	NA	3343.05	
MW-5	12/06/06	3389.40	NA	46.65	NA	NA	NA	NA	3342.75	Sampled
MW-5	12/13/06	3389.40	NA	46.71	NA	NA	NA	NA	3342.69	
MW-5	01/03/07	3389.40	NA	46.55	NA	NA	NA	NA	3342.85	
MW-5	01/09/07	3389.40	NA	46.60	NA	NA	NA	NA	3342.80	
MW-5	01/18/07	3389.40	NA	46.51	NA	NA	NA	NA	3342.89	
MW-5	01/25/07	3389.40	NA	46.47	NA	NA	NA	NA	3342.93	
MW-5	01/31/07	3389.40	NA	46.39	NA	NA	NA	NA	3343.01	
MW-5	02/07/07	3389.40	NA	46.02	NA	NA	NA	NA	3343.38	
MW-5	02/14/07	3389.40	NA	46.05	NA	NA	NA	NA	3343.35	
MW-5	03/01/07	3389.40	NA	46.35	NA	NA	NA	NA	3343.05	Sampled
MW-5	05/31/07	3389.40	NA	46.35	NA	NA	NA	NA	3343.05	Sampled
MW-5	06/06/07	3389.40	NA	46.30	NA	NA	NA	NA	3343.10	
MW-5	07/05/07	3389.40	NA	46.44	NA	NA	NA	NA	3342.96	
MW-5	07/31/07	3389.40	NA	46.48	NA	NA	NA	NA	3342.92	
MW-5	09/06/07	3389.40	NA	46.57	NA	NA	NA	NA	3342.83	Sampled
MW-5	10/04/07	3389.40	NA	46.67	NA	NA	NA	NA	3342.73	
MW-5	11/13/07	3389.40	NA	46.65	NA	NA	NA	NA	3342.75	Sampled
MW-5	12/05/07	3389.40	NA	46.60	NA	NA	NA	NA	3342.80	
MW-5	01/09/08	3389.40	NA	46.60	NA	NA	NA	NA	3342.80	
MW-5	02/06/08	3389.40	NA	46.63	NA	NA	NA	NA	3342.77	
MW-5	02/27/08	3389.40	NA	46.61	NA	NA	NA	NA	3342.79	Sampled
MW-5	04/02/08	3389.40	NA	46.58	NA	NA	NA	NA	3342.82	
MW-5	05/22/08	3389.40	NA	47.14	NA	NA	NA	NA	3342.26	Sampled
MW-5	06/26/08	3389.40	NA	47.18	NA	NA	NA	NA	3342.22	
MW-5	07/07/08	3389.40	NA	46.53	NA	NA	NA	NA	3342.87	
MW-5	08/20/08	3389.40	NA	46.60	NA	NA	NA	NA	3342.80	Sampled
MW-5	10/15/08	3389.40	NA	47.06	NA	NA	NA	NA	3342.34	
MW-5	11/19/08	3389.40	NA	46.89	NA	NA	NA	NA	3342.51	Sampled
MW-5	12/21/08	3389.40	NA	46.99	NA	NA	NA	NA	3342.41	
MW-5	01/07/09	3389.40	NA	46.87	NA	NA	NA	NA	3342.53	
MW-5	02/04/09	3389.40	NA	46.84	NA	NA	NA	NA	3342.56	
MW-5	02/17/09	3389.40	NA	46.68	NA	NA	NA	NA	3342.72	Sampled
MW-5	03/04/09	3389.40	NA	46.69	NA	NA	NA	NA	3342.71	
MW-5	04/08/09	3389.40	NA	46.77	NA	NA	NA	NA	3342.63	
MW-5	05/06/09	3389.40	NA	46.93	NA	NA	NA	NA	3342.47	
MW-5	05/19/09	3389.40	NA	46.96	NA	NA	NA	NA	3342.44	Sampled
MW-5	06/03/09	3389.40	NA	46.93	NA	NA	NA	NA	3342.47	
MW-5	07/15/09	3389.40	NA	46.55	NA	NA	NA	NA	3342.85	
MW-5	08/05/09	3389.40	NA	46.84	NA	NA	NA	NA	3342.56	
MW-5	08/26/09	3389.40	NA	46.98	NA		0.00	6.00	3342.42	Sampled
MW-5	09/02/09	3389.40	NA	46.99	NA	NA	NA	NA	3342.41	
MW-5	10/07/09	3389.40	NA	46.89	NA	NA	NA	NA	3342.51	
MW-5	11/04/09	3389.40	NA	46.85	NA	NA	NA	NA	3342.55	
MW-5	11/17/09	3389.40	NA	46.85	NA	NA	NA	NA	3342.55	Sampled
MW-5	12/02/09	3389.40	NA	46.82	NA	NA	NA	NA	3342.58	
MW-5	01/06/10	3389.40	NA	46.93	NA	NA	NA	NA	3342.47	
MW-5	02/09/10	3389.40	NA	47.20	NA	NA	NA	NA	3342.20	Sampled
MW-5	03/10/10	3389.40	NA	47.19	NA	NA	NA	NA	3342.21	
MW-5	04/07/10	3389.40	NA	47.24	NA	NA	NA	NA	3342.16	
MW-5	05/05/10	3389.40	NA	47.35	NA	NA	NA	NA	3342.05	
MW-5	05/12/10	3389.40	NA	47.36	NA	NA	NA	NA	3342.04	Sampled
MW-5	06/02/10	3389.40	NA	47.13	NA	NA	NA	NA	3342.27	
MW-5	07/07/10	3389.40	NA	46.96	NA	NA	NA	NA	3342.44	
MW-5	08/03/10	3389.40	NA	47.19	NA	NA	NA	NA	3342.21	
MW-5	08/26/10	3389.40	NA	47.15	NA	NA	NA	NA	3342.25	Sampled
MW-5	09/01/10	3389.40	NA	47.11	NA	NA	NA	NA	3342.29	
MW-5	10/13/10	3389.40	NA	47.16	NA	NA	NA	NA	3342.24	



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H-2		
MW-5	11/18/10	3389.40	NA	47.33	NA	NA	NA	NA	3342.07	Sampled
MW-5	11/23/10	3389.40	NA	47.40	NA	NA	NA	NA	3342.00	
MW-5	12/08/10	3389.40	NA	47.41	NA	NA	NA	NA	3341.99	
MW-5	01/12/11	3389.40	NA	47.44	NA	NA	NA	NA	3341.96	
MW-5	02/08/11	3389.40	NA	47.33	NA	NA	NA	NA	3342.07	
MW-5	02/24/11	3389.40	NA	47.26	NA	NA	NA	NA	3342.14	Sampled
MW-5	03/08/11	3389.40	NA	47.35	NA	NA	NA	NA	3342.05	
MW-5	04/13/11	3389.40	NA	47.44	NA	NA	NA	NA	3341.96	
MW-5	05/31/11	3389.40	NA	47.21	NA	NA	NA	NA	3342.19	Sampled
MW-5	07/06/11	3389.40	NA	47.79	NA	NA	NA	NA	3341.61	
MW-5	08/29/11	3389.40	NA	48.28	NA	NA	NA	NA	3341.12	Sampled
MW-5	09/14/11	3389.40	NA	48.31	NA	NA	NA	NA	3341.09	
MW-5	10/12/11	3389.40	NA	48.42	NA	NA	NA	NA	3340.98	
MW-5	11/28/11	3389.40	NA	48.43	NA	NA	NA	NA	3340.97	Sampled
MW-5	12/27/11	3389.40	NA	48.45	NA	NA	NA	NA	3340.95	
MW-5	01/18/12	3389.40	NA	48.25	NA	NA	NA	NA	3341.15	
MW-5	02/02/12	3389.40	NA	48.15	NA	NA	NA	NA	3341.25	
MW-5	02/15/12	3389.40	NA	48.12	NA	NA	NA	NA	3341.28	
MW-5	02/22/12	3389.40	NA	48.05	NA	NA	NA	NA	3341.35	
MW-5	04/20/12	3389.40	NA	48.09	NA	NA	NA	NA	3341.31	
MW-5	05/22/12	3389.40	NA	48.35	NA	NA	NA	NA	3341.05	
MW-5	07/18/12	3389.40	NA	48.89	NA	NA	NA	NA	3340.51	
MW-5	09/11/12	3389.40	NA	48.75	NA	NA	NA	NA	3340.65	
MW-5	10/16/12	3389.40	NA	48.73	NA	NA	NA	NA	3340.67	
MW-5	11/26/12	3389.40	NA	48.78	NA	NA	NA	NA	3340.62	
MW-6	05/24/06	3389.72	NA	47.12	NA	NA	NA	NA	3342.60	
MW-6	06/07/06	3389.72	NA	47.10	NA	NA	NA	NA	3342.62	
MW-6	06/07/06	3389.72	NA	47.15	NA	Hand Bailed	5.00	0.00	3342.57	
MW-6	06/15/06	3389.72	NA	47.13	NA	NA	NA	NA	3342.59	Sampled
MW-6	06/29/06	3389.72	NA	47.20	NA	NA	NA	NA	3342.52	
MW-6	07/11/06	3389.72	NA	47.23	NA	NA	NA	NA	3342.49	
MW-6	07/25/06	3389.72	NA	47.28	NA	NA	NA	NA	3342.44	
MW-6	08/09/06	3389.72	NA	47.35	NA	NA	NA	NA	3342.37	
MW-6	08/22/06	3389.72	NA	47.43	NA	NA	NA	NA	3342.29	
MW-6	09/12/06	3389.72	NA	47.46	NA	NA	NA	NA	3342.26	Sampled
MW-6	09/19/06	3389.72	NA	47.51	NA	NA	NA	NA	3342.21	
MW-6	10/03/06	3389.72	NA	47.51	NA	NA	NA	NA	3342.21	
MW-6	10/17/06	3389.72	NA	47.48	NA	NA	NA	NA	3342.24	
MW-6	10/31/06	3389.72	NA	47.45	NA	NA	NA	NA	3342.27	
MW-6	11/15/06	3389.72	NA	47.00	NA	NA	NA	NA	3342.72	
MW-6	12/06/06	3389.72	NA	47.34	NA	NA	NA	NA	3342.38	Sampled
MW-6	12/13/06	3389.72	NA	47.50	NA	NA	NA	NA	3342.22	
MW-6	01/03/07	3389.72	NA	47.20	NA	NA	NA	NA	3342.52	
MW-6	01/09/07	3389.72	NA	47.25	NA	NA	NA	NA	3342.47	
MW-6	01/18/07	3389.72	NA	47.18	NA	NA	NA	NA	3342.54	
MW-6	01/25/07	3389.72	NA	47.15	NA	NA	NA	NA	3342.57	
MW-6	01/31/07	3389.72	NA	47.07	NA	NA	NA	NA	3342.65	
MW-6	02/07/07	3389.72	NA	47.12	NA	NA	NA	NA	3342.60	
MW-6	02/14/07	3389.72	NA	47.17	NA	NA	NA	NA	3342.55	
MW-6	03/01/07	3389.72	NA	47.08	NA	NA	NA	NA	3342.64	Sampled
MW-6	05/03/07	3389.72	NA	47.00	NA	NA	NA	NA	3342.72	
MW-6	05/31/07	3389.72	NA	47.01	NA	NA	NA	NA	3342.71	Sampled
MW-6	06/06/07	3389.72	NA	46.97	NA	NA	NA	NA	3342.75	
MW-6	07/05/07	3389.72	NA	47.09	NA	NA	NA	NA	3342.63	
MW-6	07/31/07	3389.72	NA	47.12	NA	NA	NA	NA	3342.60	
MW-6	09/06/07	3389.72	NA	47.20	NA	NA	NA	NA	3342.52	Sampled
MW-6	10/04/07	3389.72	NA	47.24	NA	NA	NA	NA	3342.48	
MW-6	11/13/07	3389.72	NA	47.31	NA	NA	NA	NA	3342.41	Sampled
MW-6	12/05/07	3389.72	NA	47.25	NA	NA	NA	NA	3342.47	
MW-6	01/09/08	3389.72	NA	47.24	NA	NA	NA	NA	3342.48	
MW-6	02/06/08	3389.72	NA	47.26	NA	NA	NA	NA	3342.46	
MW-6	02/27/08	3389.72	NA	47.24	NA	NA	NA	NA	3342.48	Sampled
MW-6	04/02/08	3389.72	NA	47.19	NA	NA	NA	NA	3342.53	
MW-6	05/22/08	3389.72	NA	47.14	NA	NA	NA	NA	3342.58	Sampled
MW-6	06/27/08	3389.72	NA	47.24	NA	NA	NA	NA	3342.48	
MW-6	07/07/08	3389.72	NA	47.20	NA	NA	NA	NA	3342.52	
MW-6	08/20/08	3389.72	NA	47.28	NA	NA	NA	NA	3342.44	Sampled
MW-6	10/15/08	3389.72	NA	47.70	NA	NA	NA	NA	3342.02	
MW-6	11/19/08	3389.72	NA	47.56	NA	NA	NA	NA	3342.16	Sampled
MW-6	12/21/08	3389.72	NA	47.68	NA	NA	NA	NA	3342.04	
MW-6	01/07/09	3389.72	NA	47.54	NA	NA	NA	NA	3342.18	
MW-6	02/04/09	3389.72	NA	47.53	NA	NA	NA	NA	3342.19	
MW-6	02/17/09	3389.72	NA	47.36	NA	NA	NA	NA	3342.36	Sampled



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H.O.		
MW-6	03/04/09	3389.72	NA	47.37	NA	NA	NA	NA	3342.35	
MW-6	04/08/09	3389.72	NA	47.43	NA	NA	NA	NA	3342.29	
MW-6	05/06/09	3389.72	NA	47.60	NA	NA	NA	NA	3342.12	
MW-6	05/19/09	3389.72	NA	47.59	NA		0.00	5.00	3342.13	Sampled
MW-6	06/03/09	3389.72	NA	47.58	NA		0.00	5.00	3342.14	
MW-6	07/15/09	3389.72	NA	47.65	NA		0.00	5.00	3342.07	
MW-6	08/05/09	3389.72	NA	47.51	NA	NA	NA	NA	3342.21	
MW-6	08/26/09	3389.72	NA	47.61	NA		0.00	5.00	3342.11	Sampled
MW-6	09/02/09	3389.72	NA	47.63	NA	NA	NA	NA	3342.09	
MW-6	10/07/09	3389.72	NA	47.55	NA	NA	NA	NA	3342.17	
MW-6	11/04/09	3389.72	NA	47.51	NA	NA	NA	NA	3342.21	
MW-6	11/17/09	3389.72	NA	47.51	NA	NA	NA	NA	3342.21	Sampled
MW-6	12/02/09	3389.72	NA	47.47	NA	NA	NA	NA	3342.25	
MW-6	01/06/10	3389.72	NA	47.56	NA	NA	NA	NA	3342.16	
MW-6	02/09/10	3389.72	NA	47.81	NA	NA	NA	NA	3341.91	Sampled
MW-6	03/10/10	3389.72	NA	47.82	NA	NA	NA	NA	3341.90	
MW-6	04/07/10	3389.72	NA	47.88	NA	NA	NA	NA	3341.84	
MW-6	05/05/10	3389.72	NA	47.98	NA	NA	NA	NA	3341.74	
MW-6	05/12/10	3389.72	NA	47.96	NA	NA	NA	NA	3341.76	Sampled
MW-6	06/02/10	3389.72	NA	47.78	NA	NA	NA	NA	3341.94	
MW-6	07/07/10	3389.72	NA	47.60	NA	NA	NA	NA	3342.12	
MW-6	08/03/10	3389.72	NA	47.80	NA	NA	NA	NA	3341.92	
MW-6	08/26/10	3389.72	NA	47.82	NA	NA	NA	NA	3341.90	Sampled
MW-6	09/01/10	3389.72	NA	47.74	NA	NA	NA	NA	3341.98	
MW-6	10/13/10	3389.72	NA	47.78	NA	NA	NA	NA	3341.94	
MW-6	11/18/10	3389.72	NA	48.01	NA	NA	NA	NA	3341.71	Sampled
MW-6	11/23/10	3389.72	NA	48.00	NA	NA	NA	NA	3341.72	
MW-6	12/08/10	3389.72	NA	48.03	NA	NA	NA	NA	3341.69	
MW-6	01/12/11	3389.72	NA	48.04	NA	NA	NA	NA	3341.68	
MW-6	02/08/11	3389.72	NA	47.94	NA	NA	NA	NA	3341.78	
MW-6	02/24/11	3389.72	NA	47.88	NA	NA	NA	NA	3341.84	Sampled
MW-6	03/08/11	3389.72	NA	47.95	NA	NA	NA	NA	3341.77	
MW-6	04/13/11	3389.72	NA	48.04	NA	NA	NA	NA	3341.68	
MW-6	05/31/11	3389.72	NA	48.35	NA	NA	NA	NA	3341.37	Sampled
MW-6	07/06/11	3389.72	NA	48.37	NA	NA	NA	NA	3341.35	
MW-6	08/29/11	3389.72	NA	48.85	NA	NA	NA	NA	3340.87	Sampled
MW-6	09/14/11	3389.72	NA	48.89	NA	NA	NA	NA	3340.83	
MW-6	10/12/11	3389.72	NA	48.99	NA	NA	NA	NA	3340.73	
MW-6	11/28/11	3389.72	NA	49.00	NA	NA	NA	NA	3340.72	Sampled
MW-6	12/27/11	3389.72	NA	49.05	NA	NA	NA	NA	3340.67	
MW-6	01/18/12	3389.72	NA	48.87	NA	NA	NA	NA	3340.85	
MW-6	02/02/12	3389.72	NA	48.79	NA	NA	NA	NA	3340.93	
MW-6	02/15/12	3389.72	NA	48.75	NA	NA	NA	NA	3340.97	
MW-6	02/22/12	3389.72	NA	48.69	NA	NA	NA	NA	3341.03	
MW-6	04/20/12	3389.72	NA	48.70	NA	NA	NA	NA	3341.02	
MW-6	05/22/12	3389.72	NA	48.93	NA	NA	NA	NA	3340.79	
MW-6	07/18/12	3389.72	NA	49.49	NA	NA	NA	NA	3340.23	
MW-6	09/11/12	3389.72	NA	49.43	NA	NA	NA	NA	3340.29	
MW-6	10/16/12	3389.72	NA	49.34	NA	NA	NA	NA	3340.38	
MW-6	11/26/12	3389.72	NA	49.45	NA	NA	NA	NA	3340.27	
MW-7	05/24/06	3389.28	NA	46.67	NA	NA	NA	NA	3342.61	
MW-7	06/07/06	3389.28	NA	46.69	NA	NA	NA	NA	3342.59	
MW-7	06/07/06	3389.28	NA	46.77	NA	Hand Bailed	5.00	0.00	3342.51	
MW-7	06/15/06	3389.28	NA	46.67	NA	NA	NA	NA	3342.61	Sampled
MW-7	06/29/06	3389.28	NA	46.77	NA	NA	NA	NA	3342.51	
MW-7	07/11/06	3389.28	NA	46.78	NA	NA	NA	NA	3342.50	
MW-7	07/25/06	3389.28	NA	46.84	NA	NA	NA	NA	3342.44	
MW-7	08/09/06	3389.28	NA	46.94	NA	NA	NA	NA	3342.34	
MW-7	08/22/06	3389.28	NA	46.98	NA	NA	NA	NA	3342.30	
MW-7	09/12/06	3389.28	NA	47.03	NA	NA	NA	NA	3342.25	Sampled
MW-7	09/19/06	3389.28	NA	47.07	NA	NA	NA	NA	3342.21	
MW-7	10/03/06	3389.28	NA	47.05	NA	NA	NA	NA	3342.23	
MW-7	10/17/06	3389.28	NA	47.04	NA	NA	NA	NA	3342.24	
MW-7	10/31/06	3389.28	NA	46.98	NA	NA	NA	NA	3342.30	
MW-7	11/15/06	3389.28	NA	47.43	NA	NA	NA	NA	3341.85	
MW-7	12/06/06	3389.28	NA	46.88	NA	NA	NA	NA	3342.40	Sampled
MW-7	12/13/06	3389.28	NA	47.00	NA	NA	NA	NA	3342.28	
MW-7	01/03/07	3389.28	NA	46.75	NA	NA	NA	NA	3342.53	
MW-7	01/09/07	3389.28	NA	46.81	NA	NA	NA	NA	3342.47	
MW-7	01/18/07	3389.28	NA	46.71	NA	NA	NA	NA	3342.57	
MW-7	01/25/07	3389.28	NA	46.70	NA	NA	NA	NA	3342.58	
MW-7	01/31/07	3389.28	NA	46.62	NA	NA	NA	NA	3342.66	
MW-7	02/07/07	3389.28	NA	46.65	NA	NA	NA	NA	3342.63	



TABLE 2  
Historical Well Survey Data and Groundwater Elevations  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H <sub>2</sub> O		
MW-7	02/14/07	3389.28	NA	46.69	NA	NA	NA	NA	3342.59	
MW-7	03/01/07	3389.28	NA	46.62	NA	NA	NA	NA	3342.66	Sampled
MW-7	05/03/07	3389.28	NA	46.53	NA	NA	NA	NA	3342.75	
MW-7	05/31/07	3389.28	NA	46.53	NA	NA	NA	NA	3342.75	Sampled
MW-7	06/06/07	3389.28	NA	46.50	NA	NA	NA	NA	3342.78	
MW-7	07/05/07	3389.28	NA	46.60	NA	NA	NA	NA	3342.68	
MW-7	07/31/07	3389.28	NA	46.63	NA	NA	NA	NA	3342.65	
MW-7	09/06/07	3389.28	NA	46.72	NA	NA	NA	NA	3342.56	Sampled
MW-7	10/04/07	3389.28	NA	46.78	NA	NA	NA	NA	3342.50	
MW-7	11/13/07	3389.28	NA	46.80	NA	NA	NA	NA	3342.48	Sampled
MW-7	12/05/07	3389.28	NA	46.75	NA	NA	NA	NA	3342.53	
MW-7	01/09/08	3389.28	NA	46.75	NA	NA	NA	NA	3342.53	
MW-7	02/06/08	3389.28	NA	46.75	NA	NA	NA	NA	3342.53	
MW-7	02/27/08	3389.28	NA	46.72	NA	NA	NA	NA	3342.56	Sampled
MW-7	04/02/08	3389.28	NA	46.69	NA	NA	NA	NA	3342.59	
MW-7	05/22/08	3389.28	NA	46.63	NA	NA	NA	NA	3342.65	Sampled
MW-7	06/26/08	3389.28	NA	46.72	NA	NA	NA	NA	3342.56	
MW-7	07/07/08	3389.28	NA	46.72	NA	NA	NA	NA	3342.56	
MW-7	08/20/08	3389.28	NA	46.77	NA	NA	NA	NA	3342.51	Sampled
MW-7	10/15/08	3389.28	NA	47.20	NA	NA	NA	NA	3342.08	
MW-7	11/19/08	3389.28	NA	47.08	NA	NA	NA	NA	3342.20	
MW-7	12/21/08	3389.28	NA	47.18	NA	NA	NA	NA	3342.10	
MW-7	01/07/09	3389.28	NA	47.05	NA	NA	NA	NA	3342.23	
MW-7	02/04/09	3389.28	NA	47.05	NA	NA	NA	NA	3342.23	
MW-7	02/17/09	3389.28	NA	46.89	NA	NA	NA	NA	3342.39	Sampled
MW-7	03/04/09	3389.28	NA	46.90	NA	NA	NA	NA	3342.38	
MW-7	04/08/09	3389.28	NA	46.90	NA	NA	NA	NA	3342.38	
MW-7	05/07/09	3389.28	NA	47.11	NA	NA	NA	NA	3342.17	
MW-7	05/19/09	3389.28	NA	47.13	NA		0.00	5.00	3342.15	Sampled
MW-7	06/03/09	3389.28	NA	47.11	NA	NA	NA	NA	3342.17	
MW-7	07/15/09	3389.28	NA	47.17	NA	NA	NA	NA	3342.11	
MW-7	08/05/09	3389.28	NA	47.07	NA	NA	NA	NA	3342.21	
MW-7	08/26/09	3389.28	NA	47.13	NA		0.00	5.00	3342.15	Sampled
MW-7	09/02/09	3389.28	NA	47.17	NA	NA	NA	NA	3342.11	
MW-7	10/07/09	3389.28	NA	47.10	NA	NA	NA	NA	3342.18	
MW-7	11/04/09	3389.28	NA	47.08	NA	NA	NA	NA	3342.20	
MW-7	11/17/09	3389.28	NA	47.06	NA	NA	NA	NA	3342.22	Sampled
MW-7	12/02/09	3389.28	NA	47.03	NA	NA	NA	NA	3342.25	
MW-7	01/06/10	3389.28	NA	47.10	NA	NA	NA	NA	3342.18	
MW-7	02/09/10	3389.28	NA	47.30	NA	NA	NA	NA	3341.98	Sampled
MW-7	03/10/10	3389.28	NA	47.29	NA	NA	NA	NA	3341.99	
MW-7	04/07/10	3389.28	NA	47.37	NA	NA	NA	NA	3341.91	
MW-7	05/05/10	3389.28	NA	47.45	NA	NA	NA	NA	3341.83	
MW-7	05/12/10	3389.28	NA	47.45	NA	NA	NA	NA	3341.83	Sampled
MW-7	06/02/10	3389.28	NA	47.30	NA	NA	NA	NA	3341.98	
MW-7	07/07/10	3389.28	NA	47.17	NA	NA	NA	NA	3342.11	
MW-7	08/03/10	3389.28	NA	47.28	NA	NA	NA	NA	3342.00	
MW-7	08/26/10	3389.28	NA	47.27	NA	NA	NA	NA	3342.01	Sampled
MW-7	09/01/10	3389.28	NA	47.24	NA	NA	NA	NA	3342.04	
MW-7	10/13/10	3389.28	NA	47.28	NA	NA	NA	NA	3342.00	
MW-7	11/18/10	3389.28	NA	47.47	NA	NA	NA	NA	3341.81	Sampled
MW-7	11/23/10	3389.28	NA	47.51	NA	NA	NA	NA	3341.77	
MW-7	12/08/10	3389.28	NA	47.55	NA	NA	NA	NA	3341.73	
MW-7	01/12/11	3389.28	NA	47.56	NA	NA	NA	NA	3341.72	
MW-7	02/08/11	3389.28	NA	47.45	NA	NA	NA	NA	3341.83	
MW-7	02/24/11	3389.28	NA	47.41	NA	NA	NA	NA	3341.87	Sampled
MW-7	03/08/11	3389.28	NA	47.48	NA	NA	NA	NA	3341.80	
MW-7	04/13/11	3389.28	NA	47.59	NA	NA	NA	NA	3341.69	
MW-7	05/31/11	3389.28	NA	47.83	NA	NA	NA	NA	3341.45	Sampled
MW-7	07/06/11	3389.28	NA	47.91	NA	NA	NA	NA	3341.37	
MW-7	08/29/11	3389.28	NA	48.36	NA	NA	NA	NA	3340.92	Sampled
MW-7	09/14/11	3389.28	NA	48.40	NA	NA	NA	NA	3340.88	
MW-7	10/12/11	3389.28	NA	48.50	NA	NA	NA	NA	3340.78	
MW-7	11/28/11	3389.28	NA	48.53	NA	NA	NA	NA	3340.75	Sampled
MW-7	12/27/11	3389.28	NA	48.52	NA	NA	NA	NA	3340.76	
MW-7	01/18/12	3389.28	NA	48.41	NA	NA	NA	NA	3340.87	
MW-7	02/02/12	3389.28	NA	48.35	NA	NA	NA	NA	3340.93	



TABLE 2  
 Historical Well Survey Data and Groundwater Elevations  
 Plains Marketing, L.P.  
 DS Hugh Site  
 SRS #2000-10807  
 Lea County, New Mexico

Well Number	Date Measured	Top of Casing Elevation (ft)	Depth to Product (ft)	Depth to Water (ft)	PSH Thickness (ft)	Recovery Method	Recovery (gallons)		Corrected Groundwater Elevation (ft)	Comments
							PSH	H.B.		
MW-7	02/15/12	3389.28	NA	48.32	NA	NA	NA	NA	3340.96	
MW-7	02/22/12	3389.28	NA	48.22	NA	NA	NA	NA	3341.06	
MW-7	04/20/12	3389.28	NA	48.23	NA	NA	NA	NA	3341.05	
MW-7	05/22/12	3389.28	NA	48.00	NA	NA	NA	NA	3341.28	
MW-7	07/18/12	3389.28	NA	49.00	NA	NA	NA	NA	3340.28	Sampled
MW-7	09/11/12	3389.28	NA	48.98	NA	NA	NA	NA	3340.30	
MW-7	10/16/12	3389.28	NA	48.95	NA	NA	NA	NA	3340.33	
MW-7	11/26/12	3389.28	NA	48.98	NA	NA	NA	NA	3340.30	

NA: Not Applicable

NG: Not Gauged

\* Possible error in field data entry



TABLE 3  
2012 GROUNDWATER ANALYTICAL RESULTS  
Plains Marketing, L.P.  
DS Hugh Site  
SRS #2000-10807  
Lea County, New Mexico

Well Number	Sample Date	Sample ID	SW 846-8021B			
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
			NMOCD Remediation Criteria			
			0.01 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L
MW-1	02/22/12	NS	NS	NS	NS	NS
MW-1	05/22/12	12051129-01	<b>0.55</b>	<b>1.5</b>	0.6	<b>1.5</b>
MW-1	09/11/12	NS	NS	NS	NS	NS
MW-1	11/26/12	NS	NS	NS	NS	NS
MW-2	02/22/12	1202868-01	<0.0010	<0.0010	<0.0010	<0.0030
MW-2	05/22/12	12051129-02	<0.0010	<0.0010	<0.0010	<0.0030
MW-2	09/11/12	1209470-01	<0.0010	<0.0010	<0.0010	<0.0030
MW-2	11/26/12	1211905-01	<0.0010	<0.0010	<0.0010	<0.0030
MW-3	02/22/12	1202868-02	<0.0010	<0.0010	<0.0010	<0.0030
MW-3	05/23/12	12051129-03	<0.0010	<0.0010	<0.0010	<0.0030
MW-3	09/11/12	1209470-02	<0.0010	<0.0010	<0.0010	<0.0030
MW-3	11/26/12	1211905-02	<0.0010	<0.0010	<0.0010	<0.0030
MW-4	02/12/22	1202868-03	<b>0.011</b>	<0.0010	0.11	0.21
MW-4	05/23/12	12051129-03	<b>0.011</b>	0.001	0.15	0.38
MW-4	09/11/12	1209470-03	<b>0.0075</b>	<0.0010	0.14	0.23
MW-4	11/26/12	1211905-03	<b>0.004</b>	<0.0010	0.11	0.15
MW-5	02/22/12	1202868-04	<0.0010	<0.0010	<0.0010	<0.0030
MW-5	05/23/12	12051129-05	<0.0010	<0.0010	<0.0010	<0.0030
MW-5	09/11/12	1209470-04	<0.0010	<0.0010	<0.0010	<0.0030
MW-5	11/26/12	1211905-04	<0.0010	<0.0010	<0.0010	<0.0030
MW-6	02/22/12	1202868-05	<0.0010	<0.0010	<0.0010	<0.0030
MW-6	05/22/12	12051129-06	<0.0010	<0.0010	<0.0010	<0.0030
MW-6	09/11/12	1209470-05	<0.0010	<0.0010	<0.0010	<0.0030
MW-6	11/26/12	1211905-05	<0.0010	<0.0010	<0.0010	<0.0030
MW-7	02/22/12	1202868-06	<0.0010	<0.0010	<0.0010	<0.0030
MW-7	05/23/12	12051129-07	<0.0010	<0.0010	<0.0010	<0.0030
MW-7	09/11/12	1209470-06	<0.0010	<0.0010	<0.0010	<0.0030
MW-7	11/26/12	1211905-06	<0.0010	<0.0010	<0.0010	<0.0030

NMOCD: New Mexico Oil Conservation District  
Exceedences of NMOCD Remediation Criteria are shown in **bold**



**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS**  
**Plains Marketing, L.P.**  
**DS Hugh Site**  
**SRS #2000-10807**  
**Lea County, New Mexico**

Well Number	Sample Date	Sample ID	MTBE (mg/L)	SW 846-8021B				Total Dissolved Solids (mg/L)
				Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	
				NMOCD Remediation Criteria				
				0.01 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L	
MW-1	12/21/05	NS	NA	NS	NS	NS	NS	
MW-1	03/28/06	NS	NA	NS	NS	NS	NS	
MW-1	06/15/06	NS	NA	NS	NS	NS	NS	
MW-1	09/12/06	NS	NA	NS	NS	NS	NS	
MW-1	03/01/07	NS	NA	NS	NS	NS	NS	
MW-1	05/22/08	T22302-1	NA	0.512	0.439	0.141	0.323	
MW-1	05/19/09	9052214	<0.000750	0.0105	0.0143	0.0061	0.0178	
MW-1	05/12/10	1005476-01	NA	0.45	0.68	0.3	0.84	
MW-1	05/31/11	1106003-01	NA	0.4	0.36	0.3	0.74	
MW-1	08/29/11	NS	NS	NS	NS	NS	NS	
MW-1	11/28/11	NS	NS	NS	NS	NS	NS	
MW-1	02/22/12	NS	NS	NS	NS	NS	NS	
MW-1	05/22/12	12051129-01	NA	0.55	1.5	0.6	1.5	
MW-1	09/11/12	NS	NS	NS	NS	NS	NS	
MW-1	11/26/12	NS	NS	NS	NS	NS	NS	
MW-2	12/21/05	T12186-1	NA	<0.002	<0.002	<0.002	<0.006	
MW-2	03/28/06	T13038-1	NA	<0.00038	<0.00036	<0.00035	<0.00072	
MW-2	06/15/06	T13864-1	NA	<0.00038	<0.00036	<0.00035	<0.00072	
MW-2	09/12/06	T14673-1	NA	<0.00035	<0.00020	<0.00033	<0.00036	
MW-2	12/06/06	T15625-1	NA	<0.00035	<0.00020	<0.00033	<0.00036	
MW-2	03/01/07	T16518-1	NA	<0.00035	<0.00020	<0.00033	<0.00036	
MW-2	06/01/07	T17666-1	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-2	09/07/07	T18804-1	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-2	11/13/07	T19746-1	NA	<0.0005	<0.0005	<0.0005	<0.001	
MW-2	02/27/08	T21042-1	NA	0.00077 J	<0.00023	0.00085 J	0.00068 J	
MW-2	05/22/08	T22302-2	NA	0.00029 J	<0.00023	<0.00035	<0.0055	
MW-2	08/20/08	T23537-1	NA	<0.0005	<0.0005	<0.0005	<0.001	
MW-2	11/19/08	180051	NA	0.00230	<0.00100	0.00180	0.00130	
MW-2	02/17/09	187738	NA	<0.001	<0.001	<0.001	<0.001	
MW-2	05/19/09	9052214	<0.000160	<0.000133	<0.000281	<0.000535	<0.000960	
MW-2	08/26/09	208335	NA	<0.000133	<0.000281	<0.000535	<0.000960	
MW-2	11/17/09	215429	<0.000750	<0.000160	<0.000332	<0.000230	<0.000143	
MW-2	02/09/10	222048	NA	<0.000208	<0.000208	<0.000303	<0.000326	
MW-2	05/12/10	1005476-02	NA	0.00077 J	<0.00020	0.00039 J	<0.00070	
MW-2	08/26/10	1008908-01	NA	<0.00020	<0.00020	<0.00020	<0.00070	
MW-2	11/18/10	1011751-01	NA	<0.00020	<0.00020	<0.00020	<0.00070	
MW-2	02/24/11	1102759-01	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	05/31/11	1106003-02	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	08/29/11	1108973-01	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	11/28/11	1111900-01	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	02/22/12	1202868-01	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	05/22/12	12051129-02	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	09/11/12	1209470-01	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-2	11/26/12	1211905-01	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	12/21/05	T12186-2	NA	<0.002	<0.002	<0.002	<0.006	
MW-3	03/28/06	T13038-2	NA	<0.00038	<0.00036	<0.00035	<0.00072	
MW-3	06/15/06	T13864-2	NA	<0.00038	<0.00036	<0.00035	<0.00072	



**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS**  
**Plains Marketing, L.P.**  
**DS Hugh Site**  
**SRS #2000-10807**  
**Lea County, New Mexico**

Well Number	Sample Date	Sample ID	MTBE (mg/L)	SW 846-8021B				Total Dissolved Solids (mg/L)
				Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	
				NMOCD Remediation Criteria				
				0.01 mg/L	0.75 mg/L	0.75 mg/L	0.52 mg/L	
MW-3	09/12/06	T14673-2	NA	<0.00035	<0.00020	<0.00033	<0.00036	
MW-3	12/06/06	T15625-2	NA	<0.00035	<0.00020	<0.00033	<0.00036	
MW-3	03/01/07	T16518-2	NA	<0.00035	<0.00020	<0.00033	<0.00036	
MW-3	06/01/07	T17666-2	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-3	09/07/07	T18804-2	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-3	11/13/07	T19746-2	NA	<0.0005	<0.0005	<0.0005	<0.001	
MW-3	02/27/08	T21042-2	NA	0.00021 J	<0.00023	<0.00035	<0.00055	
MW-3	05/22/08	T22302-3	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-3	08/20/08	T23537-2	NA	<0.0005	<0.0005	<0.0005	<0.001	
MW-3	11/19/08	180052	NA	<0.00100	<0.00100	<0.00100	<0.00100	
MW-3	02/17/09	187739	NA	<0.001	<0.001	<0.001	<0.001	
MW-3	05/19/09	9052214	<0.000469	<0.000149	<0.000188	<0.000178	<0.000163	
MW-3	08/26/09	208336	NA	<0.000133	<0.000281	<0.000535	<0.000960	
MW-3	11/17/09	215430	<0.000750	<0.000160	<0.000332	<0.000230	<0.000143	
MW-3	02/09/10	222049	NA	<0.000208	<0.000208	<0.000303	<0.000326	
MW-3	05/12/10	1005476-03	NA	0.0012	<0.00020	0.00049 J	0.00088 J	
MW-3	08/26/10	1008908-02	NA	<0.00020	<0.00020	<0.00020	<0.00070	
MW-3	11/18/10	1011751-02	NA	<0.00020	<0.00020	<0.00020	<0.00070	
MW-3	02/24/11	1102759-02	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	05/31/11	1106003-03	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	08/29/11	1108973-02	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	11/28/11	1111900-02	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	02/22/12	1202868-02	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	05/23/12	12051129-03	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	09/11/12	1209470-02	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-3	11/26/12	1211905-02	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-4	03/28/06	T13038-3	NA	0.2 <sup>a</sup>	0.0535	0.0384	0.115	
MW-4	06/15/06	T13864-3	NA	0.41 <sup>a</sup>	0.0926	0.144 <sup>a</sup>	0.403 <sup>a</sup>	
MW-4	09/12/06	T14673-3	NA	0.617 <sup>a</sup>	0.025	0.232 <sup>a</sup>	0.208	
MW-4	12/06/06	T15625-3	NA	1.25 <sup>a</sup>	0.196	0.581 <sup>a</sup>	0.818	
MW-4	03/01/07	T16518-3	NA	1.06	0.186	0.294	0.195	
MW-4	06/01/07	T17666-3	NA	1.25	0.0195 J	0.349	0.192	
MW-4	09/07/07	T18804-3	NA	1.51	0.0554	0.317	0.295	
MW-4	11/13/07	T19746-3	NA	1.38 <sup>a</sup>	0.0251	0.256	0.22	
MW-4	02/27/08	T21042-3	NA	1.77	0.0882	0.532	0.792	
MW-4	05/22/08	T22302-4	NA	1.09	0.0215	0.291	0.254	
MW-4	08/20/08	T23537-3	NA	0.662 <sup>a</sup>	0.0161	0.207 <sup>a</sup>	0.249	
MW-4	11/19/08	180053	NA	0.567	0.0398	0.205	0.326	
MW-4	02/17/09	187740	NA	0.654	0.0451	0.196	0.507	
MW-4	05/19/09	9052214	<0.00938	0.338	0.0259	0.174	0.319	
MW-4	08/26/09	208337	NA	0.301	0.0405	0.180	0.407	
MW-4	11/17/09	215431	<0.000750	0.112	0.0350	0.115	0.246	
MW-4	02/09/10	222050	NA	0.16	0.0663	0.159	0.398	
MW-4	05/12/10	1005476-04	NA	0.11	0.0450	0.14	0.4	
MW-4	08/26/10	1008908-03	NA	0.038	0.0340	0.094	0.26	
MW-4	11/18/10	1011751-03	NA	0.014	0.0023	0.12	0.26	
MW-4	02/24/11	1102759-03	NA	0.020	0.030	0.096	0.26	
MW-4	05/31/11	1106003-04	NA	0.024	0.022	0.079	0.28	



**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS**  
**Plains Marketing, L.P.**  
**DS Hugh Site**  
**SRS #2000-10807**  
**Lea County, New Mexico**

Well Number	Sample Date	Sample ID	MTBE (mg/L)	SW 846-8021B				Total Dissolved Solids (mg/L)
				Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	
				0.01 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L	
MW-4	08/29/11	1108973-03	NA	0.014	0.0035 P	0.11	0.28	
MW-4	11/28/11	1111900-03	NA	0.0091	<0.0010	0.10	0.18	
MW-4	02/12/22	1202868-03	NA	0.011	<0.0010	0.11	0.21	
MW-4	05/23/12	12051129-03	NA	0.011	0.001	0.15	0.38	
MW-4	09/11/12	1209470-03	NA	0.0075	<0.0010	0.14	0.23	
MW-4	11/26/12	1211905-03	NA	0.004	<0.0010	0.11	0.15	
MW-5	03/28/06	T13038-4	NA	<0.00038	<0.00036	<0.00035	<0.00072	
MW-5	06/15/06	T13864-4	NA	<0.00038	<0.00036	<0.00035	<0.00072	
MW-5	09/12/06	T14673-4	NA	<0.00035	<0.00020	<0.00033	<0.00036	
MW-5	12/06/06	T15625-4	NA	<0.00035	<0.00020	<0.00033	<0.00036	
MW-5	03/01/07	T16518-4	NA	<0.00035	<0.00020	<0.00033	<0.00036	
MW-5	06/01/07	T17666-4	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-5	09/07/07	T18804-4	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-5	11/13/07	T19746-4	NA	<0.0005	<0.0005	<0.0005	<0.001	
MW-5	02/27/08	T21042-4	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-5	05/22/08	T22302-5	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-5	08/20/08	T23537-4	NA	<0.0005	<0.0005	<0.0005	<0.001	
MW-5	11/19/08	180054	NA	<0.00100	<0.00100	<0.00100	<0.00100	
MW-5	02/17/09	187741	NA	<0.00100	<0.00100	<0.00100	<0.00100	
MW-5	05/19/09	9052214	<0.000469	<0.000149	<0.000188	<0.000178	<0.000163	
MW-5	08/26/09	208338	NA	<0.000133	<0.000281	<0.000535	<0.000960	
MW-5	11/17/09	215432	<0.000160	<0.000133	<0.000281	<0.000535	<0.000960	
MW-5	02/09/10	222051	NA	<0.000208	<0.000208	<0.000303	<0.000326	
MW-5	05/12/10	1005476-05	NA	0.00058 J	<0.00020	0.00042 J	0.001 J	
MW-5	08/26/10	1008908-04	NA	<0.00020	<0.00020	<0.00020	<0.00070	
MW-5	11/18/10	1011751-04	NA	<0.00020	<0.00020	<0.00020	<0.00070	
MW-5	02/24/11	1102759-04	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-5	05/31/11	1106003-05	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-5	08/29/11	1108973-04	NA	<0.0010	<0.0010	<0.0010	<0.0030 P	
MW-5	11/28/11	1111900-04	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-5	02/22/12	1202868-04	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-5	05/23/12	12051129-05	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-5	09/11/12	1209470-04	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-5	11/26/12	1211905-04	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-6	06/15/06	T13864-5	NA	<0.00038	<0.00036	<0.00035	<0.00072	
MW-6	09/12/06	T14673-5	NA	<0.00035	<0.00020	<0.00033	<0.00036	
MW-6	12/06/06	T15625-5	NA	<0.00035	<0.00020	<0.00033	<0.00036	
MW-6	03/01/07	T16518-5	NA	<0.00035	<0.00020	<0.00033	<0.00036	
MW-6	06/01/07	T17666-5	NA	<0.00021	<0.00023	<0.00035	0.0014 J	
MW-6	09/07/07	T18804-5	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-6	11/13/07	T19746-5	NA	<0.0005	<0.0005	<0.0005	<0.001	
MW-6	02/27/08	T21042-5	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-6	05/22/08	T22302-6	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-6	08/20/08	T23537-5	NA	0.0065	<0.0005	0.0037	<0.001	
MW-6	11/19/08	180055	NA	<0.00100	<0.00100	<0.00100	<0.00100	
MW-6	02/17/09	187742	NA	<0.00100	<0.00100	<0.00100	<0.00100	
MW-6	05/19/09	9052214	<0.000469	<0.000149	<0.000188	<0.000178	<0.000163	



**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS**  
**Plains Marketing, L.P.**  
**DS Hugh Site**  
**SRS #2000-10807**  
**Lea County, New Mexico**

Well Number	Sample Date	Sample ID	MTBE (mg/L)	SW 846-3021B				Total Dissolved Solids (mg/L)
				Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	
				NMOCD Remediation Criteria				
				0.01 mg/L	0.75 mg/L	0.75 mg/L	0.52 mg/L	
MW-6	08/26/09	208339	NA	<0.000133	<0.000281	<0.000535	<0.000960	
MW-6	11/17/09	215433	<0.000160	<0.000133	<0.000281	<0.000535	<0.000960	
MW-6	02/09/10	222052	NA	<0.000208	<0.000208	0.0006 J	0.0007 J	
MW-6	05/12/10	1005476-06	NA	<0.00020	<0.00020	<0.00020	<0.00070	
MW-6	08/26/10	1008908-05	NA	<0.00020	<0.00020	<0.00020	<0.00070	
MW-6	11/18/10	1011751-05	NA	<0.00020	<0.00020	<0.00020	<0.00070	
MW-6	02/24/11	1102759-05	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-6	05/31/11	1106003-06	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-6	08/29/11	1108973-05	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-6	11/28/11	1111900-05	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-6	02/22/12	1202868-05	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-6	05/22/12	12051129-06	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-6	09/11/12	1209470-05	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-6	11/26/12	1211905-05	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-7	06/15/06	T13864-6	NA	<0.00038	<0.00036	<0.00035	<0.00072	
MW-7	09/12/06	T14673-6	NA	0.0163	<0.00020	<0.00033	0.0036	
MW-7	12/06/06	T15625-6	NA	0.011	<0.00020	<0.00033	0.004	
MW-7	03/01/07	T16518-6	NA	<0.00035	<0.00020	<0.00033	0.0053	
MW-7	06/01/07	T17666-6	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-7	09/07/07	T18804-6	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-7	11/13/07	T19746-6	NA	<0.0005	<0.0005	<0.0005	<0.001	
MW-7	02/27/08	T21042-6	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-7	05/22/08	T22302-7	NA	<0.00021	<0.00023	<0.00035	<0.00055	
MW-7	08/20/08	T23537-6	NA	0.00086 J	<0.0005	0.00054 J	<0.001	
MW-7*	11/19/08	180056	NA	NS	NS	NS	NS	
MW-7	02/17/09	187743	NA	<0.00100	<0.00100	<0.00100	<0.00100	
MW-7	05/19/09	9052214	<0.000469	<0.000149	<0.000188	<0.000178	<0.000163	
MW-7	08/26/09	208340	NA	<0.000133	<0.000281	<0.000535	<0.000960	
MW-7	11/17/09	215434	<0.000160	<0.000133	<0.000281	<0.000535	<0.000960	
MW-7	02/09/10	222053	NA	<0.000208	<0.000208	0.0012	0.0014	
MW-7	05/12/10	1005476-07	NA	0.0017	<0.00020	0.00079 J	0.0019 J	
MW-7	08/26/10	1008908-06	NA	<0.00020	<0.00020	<0.00020	<0.00070	
MW-7	11/18/10	1011751-06	NA	<0.00020	<0.00020	<0.00020	<0.00070	
MW-7	02/24/11	1102759-06	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-7	05/31/11	1106003-07	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-7	08/29/11	1108973-06	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-7	11/28/11	1111900-06	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-7	02/22/12	1202868-06	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-7	05/23/12	12051129-07	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-7	09/11/12	1209470-06	NA	<0.0010	<0.0010	<0.0010	<0.0030	
MW-7	11/26/12	1211905-06	NA	<0.0010	<0.0010	<0.0010	<0.0030	

NMOCD: New Mexico Oil Conservation District

Exceedences of NMOCD Remediation Criteria are shown in **bold**

NA: Not analyzed

J: Analyte detected below method detection limit (MDL) but above sample detection limit (SDL)

\* Result is from Run #2



**TABLE 4**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS**  
**Plains Marketing, L.P.**  
**DS Hugh Site**  
**SRS #2000-10807**  
**Lea County, New Mexico**

Well Number	Sample Date	Sample ID	MTBE (mg/L)	SW 846-8021B				Total Dissolved Solids (mg/L)
				Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	
				NMOCD Remediation Criteria				
				0.01 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L	

P: Dual Column results percent difference > 40%

\* MW-7 was not sampled in 4th Quarter 2008, due to root growth in the well



TABLE 5  
Groundwater Analysis Results for  
Polynuclear Aromatic Hydrocarbons (PAHs)  
Plains Marketing, L.P.  
D.S. Hugh Site  
Lea County, New Mexico

Well	Date	Acenaphthene	Acenaphthylene	Chrysene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Other Regulatory Limits (Tap Water)*		0.365	NA	1.83	1.46	1.46	***	1.1	0.183
MW-1	5/22/2008	<0.0015	<0.0016	<0.0018	<0.0016	<0.0016	0.0107	<0.0016	<0.0011
MW-1	5/19/2009	<0.0013	<0.070	<0.0808	<0.0880	<0.0880	0.00667	0.00153	<0.0458
MW-1	5/12/2010	0.0037	<0.070	<0.070	<0.070	<0.070	0.047	0.0067	<0.070
MW-1	12/7/2011	0.0051	0.0007	0.00035	<0.002	<0.002	0.028	0.01	<0.002
MW-1	5/22/2012	0.0063	0.00995	0.0062	0.00254	0.0309	0.468	0.144	0.00198
MW-4	12/7/2011	<0.002	<0.002	<0.002	<0.002	<0.002	0.0036	0.00022	<0.002
MW-4	5/23/2012	0.000169	<0.00009	<0.00009	<0.00009	0.00058	0.0458	0.000716	<0.00009

< = Not Detected

Tap Water\* = NMED Tap Water Soil screening levels for residential scenarios

\*\*\* = NM Water Quality Standard for PAHs is 0.030 mg/L for total naphthalenes plus monomethylnaphthalenes (total Methylnaphthalens)

\*\* = NM Water Standard



Table 6  
 2012 Monthly PSH and Dissolved Phase Groundwater Recovery  
 Plains Marketing, L.P.  
 DS Hugh Site  
 Lea County, New Mexico

Month	PSH Recoverd (gallons)	Total Fluids Recovered (gallons)
January	2.35	62.65
February	1.2	97.8
March	1.45	78.55
April	2.6	107.4
May	4	161
June	5	120
July	6.2	98.5
August	3	57
September	3.00	117.00
October	5	195
November	4	156
December	4	156
<b>Total Fluids Recovered in 2012</b>	<b>41.8</b>	<b>1406.9</b>

**Note:** The above estimated gallons of total fluids (PSH and groundwater) include those pumped and manually bailed; these are estimates only.



## **2012 LABORATORY ANALYTICAL DATA**

**1st Quarter 2012 – Sample ID# 1202873**

**2nd Quarter 2012 – Sample ID# 12051130**

**3rd Quarter 2012 – Sample ID# 1209743**

**4th Quarter 2012 – Sample ID# 1211764**

**And**

**Appendix A - 2012 Chain of Custody Documentation**





01-Mar-2012

Kathleen Buxton  
EarthCon Consultants, Inc.  
4800 Sugar Grove Blvd.  
Suite 390  
Houston, TX 77477

Tel: (281) 240-5200  
Fax: (281) 240-5201

Re: D S Hugh

Work Order: **1202868**

Dear Kathleen,

ALS Environmental received 7 samples on 24-Feb-2012 09:12 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 17.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Mary K. Knowles

Patricia L. Lynch  
Project Manager



Certificate No: TX: T104704231-11-5

**Client:** EarthCon Consultants, Inc.

**Project:** D S Hugh

**Work Order:** 1202868

**Work Order Sample Summary**

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1202868-01	MW2	Groundwater		2/22/2012 15:55	2/24/2012 09:12	<input type="checkbox"/>
1202868-02	MW3	Groundwater		2/22/2012 16:00	2/24/2012 09:12	<input type="checkbox"/>
1202868-03	MW4	Groundwater		2/22/2012 16:05	2/24/2012 09:12	<input type="checkbox"/>
1202868-04	MW5	Groundwater		2/22/2012 16:10	2/24/2012 09:12	<input type="checkbox"/>
1202868-05	MW6	Groundwater		2/22/2012 16:15	2/24/2012 09:12	<input type="checkbox"/>
1202868-06	MW7	Groundwater		2/22/2012 16:20	2/24/2012 09:12	<input type="checkbox"/>
1202868-07	Trip Blank - 020112-20	Water		2/22/2012	2/24/2012 09:12	<input type="checkbox"/>



## ALS Environmental

*Date: 02-Mar-12*

---

**Client:** EarthCon Consultants, Inc.

**Project:** D S Hugh

**Work Order:** 1202868

### **Case Narrative**

---

A trip blank was received and placed on hold since it was not requested on the chain of custody.

**ALS Environmental****Date:** 01-Mar-12**Client:** EarthCon Consultants, Inc.**Project:** D S Hugh**Work Order:** 1202868**Sample ID:** MW2**Lab ID:** 1202868-01**Collection Date:** 2/22/2012 03:55 PM**Matrix:** GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: <b>SMA</b>
Benzene	ND		0.0010	mg/L	1	2/27/2012 11:17 PM
Toluene	ND		0.0010	mg/L	1	2/27/2012 11:17 PM
Ethylbenzene	ND		0.0010	mg/L	1	2/27/2012 11:17 PM
Xylenes, Total	ND		0.0030	mg/L	1	2/27/2012 11:17 PM
Surr: 4-Bromofluorobenzene	106		77-129	%REC	1	2/27/2012 11:17 PM
Surr: Trifluorotoluene	108		75-130	%REC	1	2/27/2012 11:17 PM

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.



**ALS Environmental**

Date: 01-Mar-12

Client: EarthCon Consultants, Inc.

Project: D S Hugh

Work Order: 1202868

Sample ID: MW3

Lab ID: 1202868-02

Collection Date: 2/22/2012 04:00 PM

Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: <b>SMA</b>
Benzene	ND		0.0010	mg/L	1	2/28/2012 12:13 AM
Toluene	ND		0.0010	mg/L	1	2/28/2012 12:13 AM
Ethylbenzene	ND		0.0010	mg/L	1	2/28/2012 12:13 AM
Xylenes, Total	ND		0.0030	mg/L	1	2/28/2012 12:13 AM
Surr: 4-Bromofluorobenzene	109		77-129	%REC	1	2/28/2012 12:13 AM
Surr: Trifluorotoluene	109		75-130	%REC	1	2/28/2012 12:13 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Environmental**

Date: 01-Mar-12

Client: EarthCon Consultants, Inc.

Project: D S Hugh

Work Order: 1202868

Sample ID: MW4

Lab ID: 1202868-03

Collection Date: 2/22/2012 04:05 PM

Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: SMA
Benzene	0.011		0.0010	mg/L	1	2/28/2012 12:32 AM
Toluene	ND		0.0010	mg/L	1	2/28/2012 12:32 AM
Ethylbenzene	0.11		0.0010	mg/L	1	2/28/2012 12:32 AM
Xylenes, Total	0.21		0.0030	mg/L	1	2/28/2012 12:32 AM
Surr: 4-Bromofluorobenzene	101		77-129	%REC	1	2/28/2012 12:32 AM
Surr: Trifluorotoluene	121		75-130	%REC	1	2/28/2012 12:32 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.



**ALS Environmental**

Date: 01-Mar-12

Client: EarthCon Consultants, Inc.

Project: D S Hugh

Work Order: 1202868

Sample ID: MW5

Lab ID: 1202868-04

Collection Date: 2/22/2012 04:10 PM

Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: <b>SMA</b>
Benzene	ND		0.0010	mg/L	1	2/29/2012 03:34 PM
Toluene	ND		0.0010	mg/L	1	2/29/2012 03:34 PM
Ethylbenzene	ND		0.0010	mg/L	1	2/29/2012 03:34 PM
Xylenes, Total	ND		0.0030	mg/L	1	2/29/2012 03:34 PM
Surr: 4-Bromofluorobenzene	110		77-129	%REC	1	2/29/2012 03:34 PM
Surr: Trifluorotoluene	104		75-130	%REC	1	2/29/2012 03:34 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Environmental**

Date: 01-Mar-12

Client: EarthCon Consultants, Inc.

Project: D S Hugh

Work Order: 1202868

Sample ID: MW6

Lab ID: 1202868-05

Collection Date: 2/22/2012 04:15 PM

Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: SMA
Benzene	ND		0.0010	mg/L	1	2/28/2012 01:09 AM
Toluene	ND		0.0010	mg/L	1	2/28/2012 01:09 AM
Ethylbenzene	ND		0.0010	mg/L	1	2/28/2012 01:09 AM
Xylenes, Total	ND		0.0030	mg/L	1	2/28/2012 01:09 AM
Surr: 4-Bromofluorobenzene	110		77-129	%REC	1	2/28/2012 01:09 AM
Surr: Trifluorotoluene	109		75-130	%REC	1	2/28/2012 01:09 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.



**ALS Environmental**

Date: 01-Mar-12

Client: EarthCon Consultants, Inc.

Project: D S Hugh

Work Order: 1202868

Sample ID: MW7

Lab ID: 1202868-06

Collection Date: 2/22/2012 04:20 PM

Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: SMA
Benzene	ND		0.0010	mg/L	1	2/28/2012 01:28 AM
Toluene	ND		0.0010	mg/L	1	2/28/2012 01:28 AM
Ethylbenzene	ND		0.0010	mg/L	1	2/28/2012 01:28 AM
Xylenes, Total	ND		0.0030	mg/L	1	2/28/2012 01:28 AM
Surr: 4-Bromofluorobenzene	107		77-129	%REC	1	2/28/2012 01:28 AM
Surr: Trifluorotoluene	108		75-130	%REC	1	2/28/2012 01:28 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

## ALS Environmental

Date: 01-Mar-12

Client: EarthCon Consultants, Inc.

## QC BATCH REPORT

Order: 1202868

Project: D S Hugh

Batch ID: R123984 Instrument ID BTEX1 Method: SW8021B

MBLK Sample ID: BBLKW1-120227-R123984 Units: µg/L Analysis Date: 2/27/2012 04:37 PM

Client ID: Run ID: BTEX1\_120227B SeqNo: 2700884 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	31.46	1.0	30	0	105	77-129	0			
Surr: Trifluorotoluene	32.11	1.0	30	0	107	75-130	0			

LCS Sample ID: BLCSW1-120227-R123984 Units: µg/L Analysis Date: 2/27/2012 04:18 PM

Client ID: Run ID: BTEX1\_120227B SeqNo: 2700883 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.29	1.0	20	0	101	77-126	0			
Toluene	20.65	1.0	20	0	103	80-124	0			
Ethylbenzene	21.12	1.0	20	0	106	76-125	0			
Xylenes, Total	62.99	3.0	60	0	105	79-124	0			
Surr: 4-Bromofluorobenzene	34.02	1.0	30	0	113	77-129	0			
Surr: Trifluorotoluene	34.62	1.0	30	0	115	75-130	0			

MS Sample ID: 1202864-01AMS Units: µg/L Analysis Date: 2/27/2012 07:25 PM

Client ID: Run ID: BTEX1\_120227B SeqNo: 2700896 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.25	1.0	20	1.043	101	77-126	0			
Toluene	20.45	1.0	20	0	102	80-124	0			
Ethylbenzene	21.05	1.0	20	0	105	76-125	0			
Xylenes, Total	62.72	3.0	60	0	105	79-124	0			
Surr: 4-Bromofluorobenzene	33.94	1.0	30	0	113	77-129	0			
Surr: Trifluorotoluene	33.64	1.0	30	0	112	75-130	0			

MSD Sample ID: 1202864-01AMSD Units: µg/L Analysis Date: 2/27/2012 07:43 PM

Client ID: Run ID: BTEX1\_120227B SeqNo: 2700897 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.61	1.0	20	1.043	103	77-126	21.25	1.66	20	
Toluene	20.82	1.0	20	0	104	80-124	20.45	1.81	20	
Ethylbenzene	21.54	1.0	20	0	108	76-125	21.05	2.31	20	
Xylenes, Total	64.42	3.0	60	0	107	79-124	62.72	2.67	20	
Surr: 4-Bromofluorobenzene	34.88	1.0	30	0	116	77-129	33.94	2.74	20	
Surr: Trifluorotoluene	33.79	1.0	30	0	113	75-130	33.64	0.448	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



**Client:** EarthCon Consultants, Inc.  
**Work Order:** 1202868  
**P ct:** D S Hugh

**QC BATCH REPORT**

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Batch ID: **R123984**      Instrument ID **BTEX1**      Method: **SW8021B**

---

**The following samples were analyzed in this batch:**

1202868-01A	1202868-02A	1202868-03A
1202868-05A	1202868-06A	

---

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon Consultants, Inc.  
 Work Order: 1202868  
 Project: D S Hugh

# QC BATCH REPORT

Batch ID: R124109 Instrument ID BTEX1 Method: SW8021B

MBLK Sample ID: BBLKW1-120229-R124109 Units: µg/L Analysis Date: 2/29/2012 02:00 PM

Client ID: Run ID: BTEX1\_120229A SeqNo: 2703735 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	33.66	1.0	30	0	112	77-129	0			
Surr: Trifluorotoluene	30.79	1.0	30	0	103	75-130	0			

LCS Sample ID: BLCBW1-120229-R124109 Units: µg/L Analysis Date: 2/29/2012 01:23 PM

Client ID: Run ID: BTEX1\_120229A SeqNo: 2703733 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.93	1.0	20	0	99.7	77-126	0			
Toluene	20.15	1.0	20	0	101	80-124	0			
Ethylbenzene	20.83	1.0	20	0	104	76-125	0			
Xylenes, Total	61.62	3.0	60	0	103	79-124	0			
Surr: 4-Bromofluorobenzene	33.47	1.0	30	0	112	77-129	0			
Surr: Trifluorotoluene	31.66	1.0	30	0	106	75-130	0			

LCSD Sample ID: BLCSDW1-120229-R124109 Units: µg/L Analysis Date: 2/29/2012 01:41 PM

Client ID: Run ID: BTEX1\_120229A SeqNo: 2703734 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.88	1.0	20	0	99.4	77-126	19.93	0.282	20	
Toluene	20.09	1.0	20	0	100	80-124	20.15	0.319	20	
Ethylbenzene	20.67	1.0	20	0	103	76-125	20.83	0.776	20	
Xylenes, Total	61.5	3.0	60	0	103	79-124	61.62	0.197	20	
Surr: 4-Bromofluorobenzene	34.23	1.0	30	0	114	77-129	33.47	2.25	20	
Surr: Trifluorotoluene	31.92	1.0	30	0	106	75-130	31.66	0.818	20	

MS Sample ID: 1202934-04AMS Units: µg/L Analysis Date: 2/29/2012 02:56 PM

Client ID: Run ID: BTEX1\_120229A SeqNo: 2703737 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.13	1.0	20	0	106	77-126	0			
Toluene	21.55	1.0	20	0	108	80-124	0			
Ethylbenzene	22.16	1.0	20	0	111	76-125	0			
Xylenes, Total	65.05	3.0	60	0	108	79-124	0			
Surr: 4-Bromofluorobenzene	34.6	1.0	30	0	115	77-129	0			
Surr: Trifluorotoluene	32.6	1.0	30	0	109	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



**Client:** EarthCon Consultants, Inc.  
**Work Order:** 1202868  
**Project:** D S Hugh

## QC BATCH REPORT

Batch ID: **R124109** Instrument ID **BTEX1** Method: **SW8021B**

**MSD** Sample ID: **1202934-04AMSD** Units: **µg/L** Analysis Date: **2/29/2012 03:15 PM**

Client ID: Run ID: **BTEX1\_120229A** SeqNo: **2703738** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.52	1.0	20	0	108	77-126	21.13	1.87	20	
Toluene	21.53	1.0	20	0	108	80-124	21.55	0.108	20	
Ethylbenzene	22.5	1.0	20	0	112	76-125	22.16	1.49	20	
Xylenes, Total	66.15	3.0	60	0	110	79-124	65.05	1.68	20	
Surr: 4-Bromofluorobenzene	34.33	1.0	30	0	114	77-129	34.6	0.8	20	
Surr: Trifluorotoluene	32.44	1.0	30	0	108	75-130	32.6	0.476	20	

The following samples were analyzed in this batch:

1202868-04A

**Client:** EarthCon Consultants, Inc.  
**Project:** D S Hugh  
**WorkOrder:** 1202868

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
mg/L	Milligrams per Liter



# ALS Environmental

## Sample Receipt Checklist

Client Name: **PREMIER ENV**

Date/Time Received: **24-Feb-12 09:12**

Work Order: **1202868**

Received by: **PMG**

Checklist completed by Parash M. Giga  
eSignature

24-Feb-12  
Date

Reviewed by: Patricia L. Lynch  
eSignature

27-Feb-12  
Date

Matrices: Groundwater

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>1.9</u>	<u>002</u>	
Cooler(s)/Kit(s):	<u>1362</u>		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<u></u>		

Login Notes: Received trip blank; not on COC. Logged in without analyses.

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



# Chain of Custody Form

Page 1 of 1

COC ID: 55057

**Environmental**

## Customer Information

Purchase Order	Project Name	D S Hugh
Work Order	Project Number	205071
Company Name	Bill To Company	Plains All America, LP
Send Report To	Invoice Attn	
Address	Address	c/o ENV. Accounts Payable P.O. Box 4648
City/State/Zip	City/State/Zip	Houston, TX 77210-4648
Phone	Phone	(713) 846-4610
Fax	Fax	(713) 846-4199
e-Mail Address	e-Mail Address	

## Project Information

A	B	C	D	E	F	G	H	I	J
ALS Project Manager:									

BTEX (8021)

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW2	2-22-12	15:55	GW	HEL	3	X										
2	MW3		16:00														
3	MW4		16:05														
4	MW5		16:10														
5	MW6		16:15														
6	MW7		16:20														
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign	Shipment Method	Required Turnaround Time: (Check Box)	Results Due Date:
Matt Crull	FedEx	<input type="checkbox"/> Std 10 WK Days <input checked="" type="checkbox"/> 5 WK Days <input type="checkbox"/> 2 WK Days <input type="checkbox"/> 24 Hour	
Relinquished by:	Received by:	Notes: 5 Day TAT.	
Matt Crull	Agg. Crull		
Relinquished by:	Received by (Laboratory):		
	2-23-12 17:30		
Logged by (Laboratory):	Checked by (Laboratory):		
Preservative Key: 1-HCl 2-HNO <sub>3</sub> 3-H <sub>2</sub> SO <sub>4</sub> 4-NaOH 5-Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 6-NaHSO <sub>3</sub> 7-Other 8-4°C 9-5035	Cooler ID	Cooler Temp.	OC Package: (Check One Box Below)
	1362		<input checked="" type="checkbox"/> Level II Std OC <input type="checkbox"/> TRRP Checklist
			<input type="checkbox"/> Level III Std OC/Raw Data <input type="checkbox"/> TRRP Level IV
			<input type="checkbox"/> Level IV SW846/CLP <input type="checkbox"/> Other / EDD

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.  
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.  
3. The Chain of Custody is a legal document. All information must be completed accurately.



**ALS Environmental**

10450 Stancil Rd., Suite 210  
Houston, Texas 77099  
Tel. +1 281 530 5656  
Fax. +1 281 530 5887

1362.

CUS

Date: 2-23-12  
Name: Matt Garibay  
Company: EAC

**BODY SEAL**

Time: 19630

Garibay  
EAC

Seal Broken By:

Date: 2.23.12.

ite 2-23-12 FedEx Tracking Number 898941672181

nder's name Matt Garibay Phone

Company EAC

Address 30 W Industrial Loop 2  
Date, Floor, Suite, Room

y Midland State TX ZIP 79701

ur Internal Billing Reference 205071 D.S. Hagg



04-Jun-2012

Kathleen Buxton  
EarthCon Consultants, Inc.  
4800 Sugar Grove Blvd.  
Suite 390  
Houston, TX 77477

Tel: (281) 240-5200  
Fax: (281) 240-5201

Re: DS Hugh

Work Order: **12051129**

Dear Kathleen,

ALS Environmental received 8 samples on 25-May-2012 09:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 22.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Patricia L. Lynch

Patricia L. Lynch  
Project Manager



Certificate No: TX: T104704231-12-10



[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS



**Client:** EarthCon Consultants, Inc.  
**Project:** DS Hugh  
**Work Order:** 12051129

**Work Order Sample Summary**

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
12051129-01	MW1	Water		5/22/2012 17:30	5/25/2012 09:15	<input type="checkbox"/>
12051129-02	MW2	Water		5/22/2012 17:50	5/25/2012 09:15	<input type="checkbox"/>
12051129-03	MW3	Water		5/23/2012 11:50	5/25/2012 09:15	<input type="checkbox"/>
12051129-04	MW4	Water		5/23/2012 11:20	5/25/2012 09:15	<input type="checkbox"/>
12051129-05	MW5	Water		5/23/2012 12:10	5/25/2012 09:15	<input type="checkbox"/>
12051129-06	MW6	Water		5/22/2012 18:05	5/25/2012 09:15	<input type="checkbox"/>
12051129-07	MW7	Water		5/23/2012 12:40	5/25/2012 09:15	<input type="checkbox"/>
12051129-08	TRIP BLANK	Water		5/23/2012	5/25/2012 09:15	<input type="checkbox"/>

---

**Client:** EarthCon Consultants, Inc.**Project:** DS Hugh**Work Order:** 12051129**Case Narrative**

---

Surrogates are diluted out in the 100-fold dilution of sample MW1 for PAHs, but are in control in the 10-fold dilution.

Batch R128634, BTEX, Sample 12051078-10A: MS/MSD recoveries are for an unrelated sample.



# ALS Environmental

Date: 04-Jun-12

Client: EarthCon Consultants, Inc.

Project: DS Hugh

Work Order: 12051129

Sample ID: MW1

Lab ID: 12051129-01

Collection Date: 5/22/2012 05:30 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: SMA
Benzene	0.55		0.050	mg/L	50	5/31/2012 02:16 AM
Toluene	1.5		0.050	mg/L	50	5/31/2012 02:16 AM
Ethylbenzene	0.60		0.050	mg/L	50	5/31/2012 02:16 AM
Xylenes, Total	1.5		0.15	mg/L	50	5/31/2012 02:16 AM
Surr: 4-Bromofluorobenzene	117		75-129	%REC	50	5/31/2012 02:16 AM
Surr: Trifluorotoluene	101		75-130	%REC	50	5/31/2012 02:16 AM
<b>LOW-LEVEL PAHS</b>			<b>SW8270</b>		Prep Date: 5/29/2012	Analyst: LG
Acenaphthene	6.30		0.988	µg/L	10	6/2/2012 02:01 AM
Acenaphthylene	9.95		0.988	µg/L	10	6/2/2012 02:01 AM
Anthracene	6.20		0.988	µg/L	10	6/2/2012 02:01 AM
Benz(a)anthracene	ND		0.988	µg/L	10	6/2/2012 02:01 AM
Benzo(a)pyrene	ND		0.988	µg/L	10	6/2/2012 02:01 AM
Benzo(b)fluoranthene	ND		0.988	µg/L	10	6/2/2012 02:01 AM
Benzo(g,h,i)perylene	ND		0.988	µg/L	10	6/2/2012 02:01 AM
Benzo(k)fluoranthene	ND		0.988	µg/L	10	6/2/2012 02:01 AM
Chrysene	10.1		0.988	µg/L	10	6/2/2012 02:01 AM
Dibenz(a,h)anthracene	ND		0.988	µg/L	10	6/2/2012 02:01 AM
Fluoranthene	2.54		0.988	µg/L	10	6/2/2012 02:01 AM
Fluorene	30.9		0.988	µg/L	10	6/2/2012 02:01 AM
Indeno(1,2,3-cd)pyrene	ND		0.988	µg/L	10	6/2/2012 02:01 AM
Naphthalene	468		9.88	µg/L	100	6/2/2012 02:20 AM
Phenanthrene	144		9.88	µg/L	100	6/2/2012 02:20 AM
Pyrene	1.98		0.988	µg/L	10	6/2/2012 02:01 AM
Surr: 2-Fluorobiphenyl	90.7		40-125	%REC	10	6/2/2012 02:01 AM
Surr: 2-Fluorobiphenyl	0	S	40-125	%REC	100	6/2/2012 02:20 AM
Surr: 4-Terphenyl-d14	116		40-135	%REC	10	6/2/2012 02:01 AM
Surr: 4-Terphenyl-d14	0	S	40-135	%REC	100	6/2/2012 02:20 AM
Surr: Nitrobenzene-d5	88.0		41-120	%REC	10	6/2/2012 02:01 AM
Surr: Nitrobenzene-d5	0	S	41-120	%REC	100	6/2/2012 02:20 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Environmental**

Date: 04-Jun-12

Client: EarthCon Consultants, Inc.

Project: DS Hugh

Work Order: 12051129

Sample ID: MW2

Lab ID: 12051129-02

Collection Date: 5/22/2012 05:50 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: SMA
Benzene	ND		0.0010	mg/L	1	5/30/2012 02:39 AM
Toluene	ND		0.0010	mg/L	1	5/30/2012 02:39 AM
Ethylbenzene	ND		0.0010	mg/L	1	5/30/2012 02:39 AM
Xylenes, Total	ND		0.0030	mg/L	1	5/30/2012 02:39 AM
Surr: 4-Bromofluorobenzene	107		75-129	%REC	1	5/30/2012 02:39 AM
Surr: Trifluorotoluene	108		75-130	%REC	1	5/30/2012 02:39 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.



**ALS Environmental****Date:** 04-Jun-12**Client:** EarthCon Consultants, Inc.**Project:** DS Hugh**Work Order:** 12051129**Sample ID:** MW3**Lab ID:** 12051129-03**Collection Date:** 5/23/2012 11:50 AM**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: <b>SMA</b>
Benzene	ND		0.0010	mg/L	1	5/30/2012 02:56 AM
Toluene	ND		0.0010	mg/L	1	5/30/2012 02:56 AM
Ethylbenzene	ND		0.0010	mg/L	1	5/30/2012 02:56 AM
Xylenes, Total	ND		0.0030	mg/L	1	5/30/2012 02:56 AM
Surr: 4-Bromofluorobenzene	105		75-129	%REC	1	5/30/2012 02:56 AM
Surr: Trifluorotoluene	109		75-130	%REC	1	5/30/2012 02:56 AM

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.

## ALS Environmental

Date: 04-Jun-12

Client: EarthCon Consultants, Inc.

Project: DS Hugh

Work Order: 12051129

Sample ID: MW4

Lab ID: 12051129-04

Collection Date: 5/23/2012 11:20 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: SMA
Benzene	0.011		0.0010	mg/L	1	5/31/2012 08:28 PM
Toluene	0.0012		0.0010	mg/L	1	5/31/2012 08:28 PM
Ethylbenzene	0.15		0.0010	mg/L	1	5/31/2012 08:28 PM
Xylenes, Total	0.38		0.0030	mg/L	1	5/31/2012 08:28 PM
Surr: 4-Bromofluorobenzene	108		75-129	%REC	1	5/31/2012 08:28 PM
Surr: Trifluorotoluene	114		75-130	%REC	1	5/31/2012 08:28 PM
<b>LOW-LEVEL PAHS</b>			<b>SW8270</b>		Prep Date: 5/29/2012	Analyst: LG
Acenaphthene	0.169		0.0951	µg/L	1	5/30/2012 03:27 AM
Acenaphthylene	ND		0.0951	µg/L	1	5/30/2012 03:27 AM
Anthracene	ND		0.0951	µg/L	1	5/30/2012 03:27 AM
Benz(a)anthracene	ND		0.0951	µg/L	1	5/30/2012 03:27 AM
Benzo(a)pyrene	ND		0.0951	µg/L	1	5/30/2012 03:27 AM
Benzo(b)fluoranthene	ND		0.0951	µg/L	1	5/30/2012 03:27 AM
Benzo(g,h,i)perylene	ND		0.0951	µg/L	1	5/30/2012 03:27 AM
Benzo(k)fluoranthene	ND		0.0951	µg/L	1	5/30/2012 03:27 AM
Chrysene	ND		0.0951	µg/L	1	5/30/2012 03:27 AM
Dibenz(a,h)anthracene	ND		0.0951	µg/L	1	5/30/2012 03:27 AM
Fluoranthene	ND		0.0951	µg/L	1	5/30/2012 03:27 AM
Fluorene	0.580		0.0951	µg/L	1	5/30/2012 03:27 AM
Indeno(1,2,3-cd)pyrene	ND		0.0951	µg/L	1	5/30/2012 03:27 AM
Naphthalene	45.8		0.951	µg/L	10	5/31/2012 08:33 AM
Phenanthrene	0.716		0.0951	µg/L	1	5/30/2012 03:27 AM
Pyrene	ND		0.0951	µg/L	1	5/30/2012 03:27 AM
Surr: 2-Fluorobiphenyl	119		40-125	%REC	1	5/30/2012 03:27 AM
Surr: 2-Fluorobiphenyl	115		40-125	%REC	10	5/31/2012 08:33 AM
Surr: 4-Terphenyl-d14	75.5		40-135	%REC	1	5/30/2012 03:27 AM
Surr: 4-Terphenyl-d14	93.2		40-135	%REC	10	5/31/2012 08:33 AM
Surr: Nitrobenzene-d5	104		41-120	%REC	1	5/30/2012 03:27 AM
Surr: Nitrobenzene-d5	74.5		41-120	%REC	10	5/31/2012 08:33 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.



**ALS Environmental****Date:** 04-Jun-12**Client:** EarthCon Consultants, Inc.**Project:** DS Hugh**Work Order:** 12051129**Sample ID:** MW5**Lab ID:** 12051129-05**Collection Date:** 5/23/2012 12:10 PM**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: <b>SMA</b>
Benzene	ND		0.0010	mg/L	1	5/30/2012 04:07 AM
Toluene	ND		0.0010	mg/L	1	5/30/2012 04:07 AM
Ethylbenzene	ND		0.0010	mg/L	1	5/30/2012 04:07 AM
Xylenes, Total	ND		0.0030	mg/L	1	5/30/2012 04:07 AM
Surr: 4-Bromofluorobenzene	108		75-129	%REC	1	5/30/2012 04:07 AM
Surr: Trifluorotoluene	112		75-130	%REC	1	5/30/2012 04:07 AM

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Environmental**

Date: 04-Jun-12

Client: EarthCon Consultants, Inc.

Project: DS Hugh

Work Order: 12051129

Sample ID: MW6

Lab ID: 12051129-06

Collection Date: 5/22/2012 06:05 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: SMA
Benzene	ND		0.0010	mg/L	1	5/30/2012 04:25 AM
Toluene	ND		0.0010	mg/L	1	5/30/2012 04:25 AM
Ethylbenzene	ND		0.0010	mg/L	1	5/30/2012 04:25 AM
Xylenes, Total	ND		0.0030	mg/L	1	5/30/2012 04:25 AM
Surr: 4-Bromofluorobenzene	108		75-129	%REC	1	5/30/2012 04:25 AM
Surr: Trifluorotoluene	116		75-130	%REC	1	5/30/2012 04:25 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.



**LS Environmental****Date:** 04-Jun-12**Client:** EarthCon Consultants, Inc.**Project:** DS Hugh**Work Order:** 12051129**Sample ID:** MW7**Lab ID:** 12051129-07**Collection Date:** 5/23/2012 12:40 PM**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>BTEX</b>			<b>SW8021B</b>			Analyst: <b>SMA</b>
Benzene	ND		0.0010	mg/L	1	5/30/2012 04:43 AM
Toluene	ND		0.0010	mg/L	1	5/30/2012 04:43 AM
Ethylbenzene	ND		0.0010	mg/L	1	5/30/2012 04:43 AM
Xylenes, Total	ND		0.0030	mg/L	1	5/30/2012 04:43 AM
Surr: 4-Bromofluorobenzene	109		75-129	%REC	1	5/30/2012 04:43 AM
Surr: Trifluorotoluene	115		75-130	%REC	1	5/30/2012 04:43 AM

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** EarthCon Consultants, Inc.

**Project:** DS Hugh

**WorkOrder:** 12051129

## QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter



# ALS Environmental

Date: 04-Jun-12

Client: EarthCon Consultants, Inc.

## QC BATCH REPORT

Order: 12051129

Project: DS Hugh

Batch ID: R128634 Instrument ID BTEX3 Method: SW8021B

MBLK Sample ID: BBLKW1-120529-R128634 Units: µg/L Analysis Date: 5/29/2012 09:19 PM

Client ID: Run ID: BTEX3\_120529B SeqNo: 2799942 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	32.57	1.0	30	0	109	75-129	0			
Surr: Trifluorotoluene	34.36	1.0	30	0	115	75-130	0			

LCS Sample ID: BLCSW1-120529-R128634 Units: µg/L Analysis Date: 5/29/2012 08:43 PM

Client ID: Run ID: BTEX3\_120529B SeqNo: 2799940 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.18	1.0	20	0	106	75-126	0			
Toluene	22.23	1.0	20	0	111	75-125	0			
Ethylbenzene	22.15	1.0	20	0	111	75-125	0			
Xylenes, Total	66.23	3.0	60	0	110	75-125	0			
Surr: 4-Bromofluorobenzene	33.41	1.0	30	0	111	75-129	0			
Surr: Trifluorotoluene	34.79	1.0	30	0	116	75-130	0			

LCSD Sample ID: BLCSDW1-120529-R128634 Units: µg/L Analysis Date: 5/29/2012 09:01 PM

Client ID: Run ID: BTEX3\_120529B SeqNo: 2799941 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.95	1.0	20	0	110	75-126	21.18	3.56	20	
Toluene	22.84	1.0	20	0	114	75-125	22.23	2.73	20	
Ethylbenzene	23.01	1.0	20	0	115	75-125	22.15	3.84	20	
Xylenes, Total	69.03	3.0	60	0	115	75-125	66.23	4.13	20	
Surr: 4-Bromofluorobenzene	32.4	1.0	30	0	108	75-129	33.41	3.06	20	
Surr: Trifluorotoluene	34.11	1.0	30	0	114	75-130	34.79	1.98	20	

MS Sample ID: 12051078-10AMS Units: µg/L Analysis Date: 5/29/2012 11:05 PM

Client ID: Run ID: BTEX3\_120529B SeqNo: 2799944 Prep Date: DF: 5

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	416	5.0	100	312.8	103	75-126	0			
Toluene	786.2	5.0	100	664.9	121	75-125	0			O
Ethylbenzene	687	5.0	100	561.1	126	75-125	0			SO
Xylenes, Total	1481	15	300	1093	129	75-125	0			S
Surr: 4-Bromofluorobenzene	159.8	5.0	150	0	107	75-129	0			
Surr: Trifluorotoluene	175	5.0	150	0	117	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon Consultants, Inc.  
 Work Order: 12051129  
 Project: DS Hugh

# QC BATCH REPORT

Batch ID: R128634 Instrument ID BTEX3 Method: SW8021B

MSD Sample ID: 12051078-10AMSD Units: µg/L Analysis Date: 5/29/2012 11:23 PM

Client ID: Run ID: BTEX3\_120529B SeqNo: 2799945 Prep Date: DF: 5

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	415.2	5.0	100	312.8	102	77-126	416	0.194	20	
Toluene	769.6	5.0	100	664.9	105	75-125	786.2	2.13	20	O
Ethylbenzene	679.2	5.0	100	561.1	118	76-125	687	1.13	20	O
Xylenes, Total	1472	15	300	1093	126	75-125	1481	0.619	20	S
Surr: 4-Bromofluorobenzene	164	5.0	150	0	109	75-129	159.8	2.56	20	
Surr: Trifluorotoluene	175	5.0	150	0	117	75-130	175	0.0155	20	

The following samples were analyzed in this batch:

12051129-02A	12051129-03A	12051129-05A
12051129-06A	12051129-07A	



Client: EarthCon Consultants, Inc.  
 Work Order: 12051129  
 Project: DS Hugh

# QC BATCH REPORT

Batch ID: **R128705** Instrument ID **BTEX1** Method: **SW8021B**

<b>MBLK</b>	Sample ID: <b>BBLKW2-120530-R128705</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/30/2012 10:25 PM</b>			
Client ID:	Run ID: <b>BTEX1_120530D</b>				SeqNo: <b>2801871</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	32.28	1.0	30	0	108	75-129	0			
Surr: Trifluorotoluene	29.29	1.0	30	0	97.6	75-130	0			

<b>LCS</b>	Sample ID: <b>BLCSW2-120530-R128705</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/30/2012 09:49 PM</b>			
Client ID:	Run ID: <b>BTEX1_120530D</b>				SeqNo: <b>2801869</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.88	1.0	20	0	99.4	75-126	0			
Toluene	19.49	1.0	20	0	97.5	75-125	0			
Ethylbenzene	19.19	1.0	20	0	95.9	75-125	0			
Xylenes, Total	57.02	3.0	60	0	95	75-125	0			
Surr: 4-Bromofluorobenzene	32.38	1.0	30	0	108	75-129	0			
Surr: Trifluorotoluene	30.19	1.0	30	0	101	75-130	0			

<b>LCSD</b>	Sample ID: <b>BLCSDW2-120530-R128705</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/30/2012 10:07 PM</b>			
Client ID:	Run ID: <b>BTEX1_120530D</b>				SeqNo: <b>2801870</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.78	1.0	20	0	98.9	75-126	19.88	0.51	20	
Toluene	19.36	1.0	20	0	96.8	75-125	19.49	0.651	20	
Ethylbenzene	19.07	1.0	20	0	95.4	75-125	19.19	0.597	20	
Xylenes, Total	56.66	3.0	60	0	94.4	75-125	57.02	0.63	20	
Surr: 4-Bromofluorobenzene	32.86	1.0	30	0	110	75-129	32.38	1.46	20	
Surr: Trifluorotoluene	30.67	1.0	30	0	102	75-130	30.19	1.56	20	

<b>MS</b>	Sample ID: <b>12051129-01AMS</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/31/2012 02:33 AM</b>			
Client ID: <b>MW1</b>	Run ID: <b>BTEX1_120530D</b>				SeqNo: <b>2801883</b>		Prep Date:		DF: <b>50</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1588	50	1000	548.5	104	75-126	0			
Toluene	2553	50	1000	1462	109	75-125	0			
Ethylbenzene	1608	50	1000	595.8	101	75-125	0			
Xylenes, Total	4504	150	3000	1527	99.2	75-125	0			
Surr: 4-Bromofluorobenzene	1682	50	1500	0	112	75-129	0			
Surr: Trifluorotoluene	1497	50	1500	0	99.8	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** EarthCon Consultants, Inc.  
**Work Order:** 12051129  
**Project:** DS Hugh

## QC BATCH REPORT

Batch ID: **R128705** Instrument ID **BTEX1** Method: **SW8021B**

**MSD** Sample ID: **12051129-01AMSD** Units: **µg/L** Analysis Date: **5/31/2012 02:51 AM**

Client ID: **MW1** Run ID: **BTEX1\_120530D** SeqNo: **2801884** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1566	50	1000	548.5	102	77-126	1588	1.36	20	
Toluene	2505	50	1000	1462	104	75-125	2553	1.89	20	
Ethylbenzene	1599	50	1000	595.8	100	76-125	1608	0.575	20	
Xylenes, Total	4478	150	3000	1527	98.4	75-125	4504	0.582	20	
Surr: 4-Bromofluorobenzene	1693	50	1500	0	113	75-129	1682	0.641	20	
Surr: Trifluorotoluene	1490	50	1500	0	99.3	75-130	1497	0.434	20	

The following samples were analyzed in this batch:

12051129-01A



Client: EarthCon Consultants, Inc.  
 Work Order: 12051129  
 Project: DS Hugh

# QC BATCH REPORT

Batch ID: **R128750** Instrument ID **BTEX1** Method: **SW8021B**

**MBLK** Sample ID: **BBLKW1-120531-R128750** Units: **µg/L** Analysis Date: **5/31/2012 01:17 PM**

Client ID: Run ID: **BTEX1\_120531A** SeqNo: **2802714** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	33.23	1.0	30	0	111	75-129	0			
Surr: Trifluorotoluene	29.71	1.0	30	0	99	75-130	0			

**LCS** Sample ID: **BLCSW1-120531-R128750** Units: **µg/L** Analysis Date: **5/31/2012 12:41 PM**

Client ID: Run ID: **BTEX1\_120531A** SeqNo: **2802712** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.01	1.0	20	0	105	75-126	0			
Toluene	20.67	1.0	20	0	103	75-125	0			
Ethylbenzene	20.55	1.0	20	0	103	75-125	0			
Xylenes, Total	61.07	3.0	60	0	102	75-125	0			
Surr: 4-Bromofluorobenzene	32.69	1.0	30	0	109	75-129	0			
Surr: Trifluorotoluene	29.84	1.0	30	0	99.5	75-130	0			

**LCSD** Sample ID: **BLCSDW1-120531-R128750** Units: **µg/L** Analysis Date: **5/31/2012 12:59 PM**

Client ID: Run ID: **BTEX1\_120531A** SeqNo: **2802713** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.95	1.0	20	0	105	75-126	21.01	0.278	20	
Toluene	20.61	1.0	20	0	103	75-125	20.67	0.297	20	
Ethylbenzene	20.43	1.0	20	0	102	75-125	20.55	0.613	20	
Xylenes, Total	60.75	3.0	60	0	101	75-125	61.07	0.522	20	
Surr: 4-Bromofluorobenzene	33.92	1.0	30	0	113	75-129	32.69	3.68	20	
Surr: Trifluorotoluene	30.77	1.0	30	0	103	75-130	29.84	3.08	20	

**MS** Sample ID: **12051266-01AMS** Units: **µg/L** Analysis Date: **5/31/2012 02:29 PM**

Client ID: Run ID: **BTEX1\_120531A** SeqNo: **2802716** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.21	1.0	20	0	91	75-126	0			
Toluene	18.09	1.0	20	0	90.5	75-125	0			
Ethylbenzene	17.79	1.0	20	0	89	75-125	0			
Xylenes, Total	52.58	3.0	60	0	87.6	75-125	0			
Surr: 4-Bromofluorobenzene	34.27	1.0	30	0	114	75-129	0			
Surr: Trifluorotoluene	30.94	1.0	30	0	103	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon Consultants, Inc.  
Work Order: 12051129  
Project: DS Hugh

## QC BATCH REPORT

Batch ID: R128750 Instrument ID BTEX1 Method: SW8021B

MSD Sample ID: 12051266-01AMSD Units: µg/L Analysis Date: 5/31/2012 02:47 PM

Client ID: Run ID: BTEX1\_120531A SeqNo: 2802717 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.07	1.0	20	0	100	77-126	18.21	9.74	20	
Toluene	19.9	1.0	20	0	99.5	75-125	18.09	9.51	20	
Ethylbenzene	19.65	1.0	20	0	98.2	76-125	17.79	9.9	20	
Xylenes, Total	58.46	3.0	60	0	97.4	75-125	52.58	10.6	20	
Surr: 4-Bromofluorobenzene	34.59	1.0	30	0	115	75-129	34.27	0.934	20	
Surr: Trifluorotoluene	30.94	1.0	30	0	103	75-130	30.94	0	20	

The following samples were analyzed in this batch:

12051129-04A



Client: EarthCon Consultants, Inc.  
 Work Order: 12051129  
 Project: DS Hugh

## QC BATCH REPORT

Batch ID: 61451 Instrument ID SV-6 Method: SW8270

MBLK Sample ID: SBLKL1-120529-61451 Units: µg/L Analysis Date: 5/29/2012 11:34 PM

Client ID: Run ID: SV-6\_120529C SeqNo: 2806277 Prep Date: 5/29/2012 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	0.10								
Acenaphthylene	ND	0.10								
Anthracene	ND	0.10								
Benz(a)anthracene	ND	0.10								
Benzo(a)pyrene	ND	0.10								
Benzo(b)fluoranthene	ND	0.10								
Benzo(g,h,i)perylene	ND	0.10								
Benzo(k)fluoranthene	ND	0.10								
Chrysene	ND	0.10								
Dibenz(a,h)anthracene	ND	0.10								
Fluoranthene	ND	0.10								
Fluorene	ND	0.10								
Indeno(1,2,3-cd)pyrene	ND	0.10								
Naphthalene	ND	0.10								
Phenanthrene	ND	0.10								
Pyrene	ND	0.10								
Surr: 2-Fluorobiphenyl	3.774	0.10	3.03	0	125	40-125	0			
Surr: 4-Terphenyl-d14	2.938	0.10	3.03	0	97	40-135	0			
Surr: Nitrobenzene-d5	3.619	0.10	3.03	0	119	41-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EarthCon Consultants, Inc.  
 Work Order: 12051129  
 Project: DS Hugh

## QC BATCH REPORT

Batch ID: 61451 Instrument ID SV-6 Method: SW8270

LCS Sample ID: SLCSL1-120529-61451 Units: µg/L Analysis Date: 5/29/2012 10:55 PM

Client ID: Run ID: SV-6\_120529C SeqNo: 2806275 Prep Date: 5/29/2012 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	3.225	0.10	3.03	0	106	40-140	0			
Acenaphthylene	3.388	0.10	3.03	0	112	40-140	0			
Anthracene	3.517	0.10	3.03	0	116	40-140	0			
Benz(a)anthracene	2.88	0.10	3.03	0	95	40-140	0			
Benzo(a)pyrene	2.845	0.10	3.03	0	93.9	40-140	0			
Benzo(b)fluoranthene	2.783	0.10	3.03	0	91.9	40-140	0			
Benzo(g,h,i)perylene	2.469	0.10	3.03	0	81.5	40-140	0			
Benzo(k)fluoranthene	2.893	0.10	3.03	0	95.5	40-140	0			
Chrysene	2.843	0.10	3.03	0	93.8	40-140	0			
Dibenz(a,h)anthracene	2.606	0.10	3.03	0	86	40-140	0			
Fluoranthene	3.185	0.10	3.03	0	105	40-140	0			
Fluorene	3.051	0.10	3.03	0	101	40-140	0			
Indeno(1,2,3-cd)pyrene	2.667	0.10	3.03	0	88	40-140	0			
Naphthalene	3.222	0.10	3.03	0	106	40-140	0			
Phenanthrene	3.205	0.10	3.03	0	106	40-140	0			
Pyrene	3.072	0.10	3.03	0	101	40-140	0			
Surr: 2-Fluorobiphenyl	3.673	0.10	3.03	0	121	40-125	0			
Surr: 4-Terphenyl-d14	3.091	0.10	3.03	0	102	40-135	0			
Surr: Nitrobenzene-d5	3.286	0.10	3.03	0	108	41-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Client: EarthCon Consultants, Inc.  
 Work Order: 12051129  
 Project: DS Hugh

## QC BATCH REPORT

Batch ID: 61451 Instrument ID SV-6 Method: SW8270

LCSD Sample ID: SLCS DL1-120529-61451 Units: µg/L Analysis Date: 5/29/2012 11:14 PM

Client ID: Run ID: SV-6\_120529C SeqNo: 2806276 Prep Date: 5/29/2012 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	3.205	0.10	3.03	0	106	40-140	3.225	0.63	25	
Acenaphthylene	3.349	0.10	3.03	0	111	40-140	3.388	1.16	25	
Anthracene	3.401	0.10	3.03	0	112	40-140	3.517	3.36	25	
Benz(a)anthracene	3.057	0.10	3.03	0	101	40-140	2.88	5.97	25	
Benzo(a)pyrene	3.088	0.10	3.03	0	102	40-140	2.845	8.17	25	
Benzo(b)fluoranthene	2.936	0.10	3.03	0	96.9	40-140	2.783	5.33	25	
Benzo(g,h,i)perylene	2.71	0.10	3.03	0	89.4	40-140	2.469	9.33	25	
Benzo(k)fluoranthene	3.226	0.10	3.03	0	106	40-140	2.893	10.9	25	
Chrysene	3.037	0.10	3.03	0	100	40-140	2.843	6.59	25	
Dibenz(a,h)anthracene	2.945	0.10	3.03	0	97.2	40-140	2.606	12.2	25	
Fluoranthene	3.286	0.10	3.03	0	108	40-140	3.185	3.14	25	
Fluorene	3.035	0.10	3.03	0	100	40-140	3.051	0.53	25	
Indeno(1,2,3-cd)pyrene	2.848	0.10	3.03	0	94	40-140	2.667	6.57	25	
Naphthalene	3.227	0.10	3.03	0	106	40-140	3.222	0.148	25	
Phenanthrene	3.225	0.10	3.03	0	106	40-140	3.205	0.598	25	
Pyrene	3.17	0.10	3.03	0	105	40-140	3.072	3.16	25	
Surr: 2-Fluorobiphenyl	3.667	0.10	3.03	0	121	40-125	3.673	0.175	25	
Surr: 4-Terphenyl-d14	3.153	0.10	3.03	0	104	40-135	3.091	1.98	25	
Surr: Nitrobenzene-d5	3.195	0.10	3.03	0	105	41-120	3.286	2.8	25	

The following samples were analyzed in this batch:

12051129-01B	12051129-04B
--------------	--------------



 <b>ALS Environmental</b> 10460 Staircliff Rd., Suite 210 Houston, Texas 77060 Tel. +1 281 630 6666 Fax. +1 281 630 6667	<b>CUSTODY SEAL</b>		Signed By:  Date: <i>5-24-12</i> Name: <i>Shane Diller</i> Company: <i>ALS</i>
	Date: <i>5-24-12</i>	Time: <i>10:00 AM</i>	
	Name: <i>Shane Diller</i>	Phone: <i>281-630-6666</i>	
	Company: <i>ALS</i>		

**FedEx** NEW Package  
 Express **US Airbill** 8996 5266 6582

From: This portion may be returned to the shipper's address  
 To: *5-24-12* Date: *5-24-12* Time: *10:00 AM*

Shipper: *SHANE DILLER* Phone: *281-630-6666*


Receiver: *Eastman*



Address: *30 W. Industrial Loop I*

*1205/129*

**FedEx** 8996 5266 6711 **FRI - 25 MAY A2**  
 77099 **PRIORITY OVERNIGHT** 77701

**AB SGRA** 77099  
 IAH



 <b>ALS Environmental</b> 10460 Staircliff Rd., Suite 210 Houston, Texas 77060 Tel. +1 281 630 6666 Fax. +1 281 630 6667	<b>CUSTODY SEAL</b>		Signed By:  Date: <i>5-24-12</i> Name: <i>Shane Diller</i> Company: <i>ALS</i>
	Date: <i>5-24-12</i>	Time: <i>10:00 AM</i>	
	Name: <i>Shane Diller</i>	Phone: <i>281-630-6666</i>	
	Company: <i>ALS</i>		





17-Oct-2012

Kathleen Buxton  
Entech Consulting Corp.  
21 Waterway Avenue  
Suite 300  
The Woodlands, TX 77380

Tel: (979) 997-2338  
Fax: (281) 362-2704

Re: DS Hugh

Work Order: **1209470**

Dear Kathleen,

ALS Environmental received 7 samples on 14-Sep-2012 09:10 AM for the analyses presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

The total number of pages in this revised report is 15.

Regards,

Electronically approved by: Luke F. Hernandez

Patricia L. Lynch  
Project Manager



Certificate No: TX: T104704231-12-10



[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS

**Client:** Entech Consulting Corp.  
**Project:** DS Hugh  
**Work Order:** 1209470

**Work Order Sample Summary**

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1209470-01	MW 2	Water		9/11/2012 17:05	9/14/2012 09:10	<input type="checkbox"/>
1209470-02	MW 3	Water		9/11/2012 17:10	9/14/2012 09:10	<input type="checkbox"/>
1209470-03	MW 4	Water		9/11/2012 17:15	9/14/2012 09:10	<input type="checkbox"/>
1209470-04	MW 5	Water		9/11/2012 17:20	9/14/2012 09:10	<input type="checkbox"/>
1209470-05	MW 6	Water		9/11/2012 17:25	9/14/2012 09:10	<input type="checkbox"/>
1209470-06	MW 7	Water		9/11/2012 17:30	9/14/2012 09:10	<input type="checkbox"/>
1209470-07	Trip Blank 082012-83	Water		9/11/2012	9/14/2012 09:10	<input type="checkbox"/>

## ALS Environmental

*Date: 17-Oct-12*

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**Client:** Entech Consulting Corp.

**Project:** DS Hugh

**Work Order:** 1209470

### **Case Narrative**

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This Final Report has been revised on October 17, 2012 per Client request. Removed MTBE results.



**LS Environmental**

Date: 17-Oct-12

Client: Entech Consulting Corp.

Project: DS Hugh

Work Order: 1209470

Sample ID: MW 2

Lab ID: 1209470-01

Collection Date: 9/11/2012 05:05 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
<b>BTEX BY SW8021B</b>			<b>SW8021B</b>				Analyst: SMA
Benzene	U		1.0	µg/L	1		9/19/2012 09:01 PM
Toluene	U		1.0	µg/L	1		9/19/2012 09:01 PM
Ethylbenzene	U		1.0	µg/L	1		9/19/2012 09:01 PM
Xylenes, Total	U		3.0	µg/L	1		9/19/2012 09:01 PM
Surr: 4-Bromofluorobenzene	99.4		75-129	%REC	1		9/19/2012 09:01 PM
Surr: Trifluorotoluene	109		75-130	%REC	1		9/19/2012 09:01 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**LS Environmental**

Date: 17-Oct-12

Client: Entech Consulting Corp.

Project: DS Hugh

Work Order: 1209470

Sample ID: MW 3

Lab ID: 1209470-02

Collection Date: 9/11/2012 05:10 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
<b>BTEX BY SW8021B</b>			<b>SW8021B</b>				Analyst: SMA
Benzene	U		1.0	µg/L	1		9/19/2012 09:19 PM
Toluene	U		1.0	µg/L	1		9/19/2012 09:19 PM
Ethylbenzene	U		1.0	µg/L	1		9/19/2012 09:19 PM
Xylenes, Total	U		3.0	µg/L	1		9/19/2012 09:19 PM
Surr: 4-Bromofluorobenzene	101		75-129	%REC	1		9/19/2012 09:19 PM
Surr: Trifluorotoluene	107		75-130	%REC	1		9/19/2012 09:19 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Environmental**

Date: 17-Oct-12

Client: Entech Consulting Corp.

Project: DS Hugh

Work Order: 1209470

Sample ID: MW 4

Lab ID: 1209470-03

Collection Date: 9/11/2012 05:15 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
<b>BTEX BY SW8021B</b>			<b>SW8021B</b>				Analyst: <b>SMA</b>
<b>Benzene</b>	<b>7.5</b>		<b>1.0</b>	<b>µg/L</b>	<b>1</b>		9/19/2012 09:36 PM
Toluene	U		1.0	µg/L	1		9/19/2012 09:36 PM
<b>Ethylbenzene</b>	<b>140</b>		<b>1.0</b>	<b>µg/L</b>	<b>1</b>		9/19/2012 09:36 PM
<b>Xylenes, Total</b>	<b>230</b>		<b>3.0</b>	<b>µg/L</b>	<b>1</b>		9/19/2012 09:36 PM
Surr: 4-Bromofluorobenzene	100		75-129	%REC	1		9/19/2012 09:36 PM
Surr: Trifluorotoluene	122		75-130	%REC	1		9/19/2012 09:36 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.



**ALS Environmental**

Date: 17-Oct-12

Client: Entech Consulting Corp.

Project: DS Hugh

Work Order: 1209470

Sample ID: MW 5

Lab ID: 1209470-04

Collection Date: 9/11/2012 05:20 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
<b>BTEX BY SW8021B</b>			<b>SW8021B</b>				Analyst: SMA
Benzene	U		1.0	µg/L	1		9/19/2012 10:12 PM
Toluene	U		1.0	µg/L	1		9/19/2012 10:12 PM
Ethylbenzene	U		1.0	µg/L	1		9/19/2012 10:12 PM
Xylenes, Total	U		3.0	µg/L	1		9/19/2012 10:12 PM
Surr: 4-Bromofluorobenzene	98.5		75-129	%REC	1		9/19/2012 10:12 PM
Surr: Trifluorotoluene	105		75-130	%REC	1		9/19/2012 10:12 PM

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.

## ALS Environmental

Date: 17-Oct-12

Client: Entech Consulting Corp.

Project: DS Hugh

Work Order: 1209470

Sample ID: MW 6

Lab ID: 1209470-05

Collection Date: 9/11/2012 05:25 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
<b>BTEX BY SW8021B</b>			<b>SW8021B</b>				Analyst: SMA
Benzene	U		1.0	µg/L	1		9/19/2012 10:30 PM
Toluene	U		1.0	µg/L	1		9/19/2012 10:30 PM
Ethylbenzene	U		1.0	µg/L	1		9/19/2012 10:30 PM
Xylenes, Total	U		3.0	µg/L	1		9/19/2012 10:30 PM
Surr: 4-Bromofluorobenzene	102		75-129	%REC	1		9/19/2012 10:30 PM
Surr: Trifluorotoluene	107		75-130	%REC	1		9/19/2012 10:30 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Environmental**

Date: 17-Oct-12

Client: Entech Consulting Corp.

Project: DS Hugh

Work Order: 1209470

Sample ID: MW 7

Lab ID: 1209470-06

Collection Date: 9/11/2012 05:30 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
<b>BTEX BY SW8021B</b>			<b>SW8021B</b>				Analyst: SMA
Benzene	U		1.0	µg/L	1		9/19/2012 10:47 PM
Toluene	U		1.0	µg/L	1		9/19/2012 10:47 PM
Ethylbenzene	U		1.0	µg/L	1		9/19/2012 10:47 PM
Xylenes, Total	U		3.0	µg/L	1		9/19/2012 10:47 PM
Surr: 4-Bromofluorobenzene	100		75-129	%REC	1		9/19/2012 10:47 PM
Surr: Trifluorotoluene	108		75-130	%REC	1		9/19/2012 10:47 PM

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.



## ALS Environmental

Date: 17-Oct-12

Client: Entech Consulting Corp.

## QC BATCH REPORT

k Order: 1209470

Project: DS Hugh

Batch ID: R135276 Instrument ID BTEX1 Method: SW8021B

MBLK Sample ID: BBLKW1-120919-R135276 Units: µg/L Analysis Date: 9/19/2012 08:25 PM

Client ID: Run ID: BTEX1\_120919A SeqNo: 2948487 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Toluene	U	1.0								
Ethylbenzene	U	1.0								
Xylenes, Total	U	3.0								
Surr: 4-Bromofluorobenzene	30.25	1.0	30	0	101	75-129	0			
Surr: Trifluorotoluene	32.42	1.0	30	0	108	75-130	0			

LCS Sample ID: BLCSW1-120919-R135276 Units: µg/L Analysis Date: 9/19/2012 07:50 PM

Client ID: Run ID: BTEX1\_120919A SeqNo: 2948485 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.08	1.0	20	0	95.4	75-126	0			
Toluene	18.81	1.0	20	0	94	75-125	0			
Ethylbenzene	18.34	1.0	20	0	91.7	75-125	0			
Xylenes, Total	55.42	3.0	60	0	92.4	75-125	0			
Surr: 4-Bromofluorobenzene	30.57	1.0	30	0	102	75-129	0			
Surr: Trifluorotoluene	32.88	1.0	30	0	110	75-130	0			

LCSD Sample ID: BLCSDW1-120919-R135276 Units: µg/L Analysis Date: 9/19/2012 08:07 PM

Client ID: Run ID: BTEX1\_120919A SeqNo: 2948486 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.68	1.0	20	0	108	75-126	19.08	12.7	20	
Toluene	21.23	1.0	20	0	106	75-125	18.81	12.1	20	
Ethylbenzene	20.9	1.0	20	0	105	75-125	18.34	13	20	
Xylenes, Total	63.11	3.0	60	0	105	75-125	55.42	13	20	
Surr: 4-Bromofluorobenzene	32.35	1.0	30	0	108	75-129	30.57	5.66	20	
Surr: Trifluorotoluene	34.08	1.0	30	0	114	75-130	32.88	3.6	20	

MS Sample ID: 1209471-06AMS Units: µg/L Analysis Date: 9/20/2012 02:03 AM

Client ID: Run ID: BTEX1\_120919A SeqNo: 2948502 Prep Date: DF: 5

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	722.8	5.0	100	634.5	88.3	75-126	0			O
Toluene	124.3	5.0	100	0	124	75-125	0			
Ethylbenzene	119.9	5.0	100	0	120	75-125	0			
Xylenes, Total	368.7	15	300	3.609	122	75-125	0			
Surr: 4-Bromofluorobenzene	176.4	5.0	150	0	118	75-129	0			
Surr: Trifluorotoluene	179.4	5.0	150	0	120	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC Page: 1 of 2

Client: Entech Consulting Corp.  
 Work Order: 1209470  
 Project: DS Hugh

## QC BATCH REPORT

Batch ID: **R135276** Instrument ID **BTEX1** Method: **SW8021B**

**MSD** Sample ID: **1209471-06AMSD** Units: **µg/L** Analysis Date: **9/20/2012 02:20 AM**

Client ID: Run ID: **BTEX1\_120919A** SeqNo: **2948503** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	734.5	5.0	100	634.5	99.9	77-126	722.8	1.6	20	O
Toluene	121.8	5.0	100	0	122	75-125	124.3	2	20	
Ethylbenzene	116.5	5.0	100	0	116	76-125	119.9	2.89	20	
Xylenes, Total	357.2	15	300	3.609	118	75-125	368.7	3.16	20	
Surr: 4-Bromofluorobenzene	172.8	5.0	150	0	115	75-129	176.4	2.07	20	
Surr: Trifluorotoluene	181.7	5.0	150	0	121	75-130	179.4	1.28	20	

The following samples were analyzed in this batch:

1209470-01A	1209470-02A	1209470-03A
1209470-04A	1209470-05A	1209470-06A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Entech Consulting Corp.  
**Project:** DS Hugh  
**WorkOrder:** 1209470

## **QUALIFIERS, ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
µg/L	Micrograms per Liter



# ALS Environmental

## Sample Receipt Checklist

Client Name: **ENTECH**

Date/Time Received: **14-Sep-12 09:10**

Work Order: **1209470**

Received by: **JBA**

Checklist completed by Jahnnie B. Allen  
eSignature

14-Sep-12  
Date

Reviewed by: Sania West  
eSignature

14-Sep-12  
Date

Matrices: water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>1.1 C/uc</u> <u>004</u>		
Cooler(s)/Kit(s):	<u>5102</u>		
Date/Time sample(s) sent to storage:	<u>09/14/12 14:46</u>		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted by:	<u></u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Cincinnati, OH  
+1 513 733 5336

Everett, WA  
+1 425 356 2600

Fort Collins, CO  
+1 970 490 1511

Holland, MI  
+1 616 399 6070

# Chain of Custody Form

Page 1 of 1

COC ID: 64925

1209470

ENTECH: Entech Consulting Corp.

Project: DS Hugh

## Environmental



ALS Project Manager:

Customer Information				Project Information				ALS Project Manager:																		
Purchase Order	Work Order	Company Name	Send Report To	Project Name	Project Number	Bill To Company	Invoice Attn	Project Manager	Project ID	Project Address	City/State/Zip	Phone	Fax	e-Mail Address	BTEX (8021)											
		Entech Consulting Corp.	Kathleen Buxton					DS Hugh		c/o ENV. Accounts Payable	Houston, TX 77210-4648	(713) 646-4610	(713) 646-4199													
										P.O. Box 4648																
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold									
1	mw2	9-11	1705	GW	HCL	3	X																			
2	mw3		1710																							
3	mw4		1715																							
4	mw5		1720																							
5	mw6		1725																							
6	mw7	9-11	1730	GW	HCL	3	X																			
7																										
8																										
9																										
10																										

Ⓜ This portion can be removed for Recipient's records.

to 9-13-12 FedEx Tracking Number 899652673448

Sender's Name SHANIE A. DILLER Phone 437 230 3344

Company Entech

Address 3211 MARIL

City MIDLAND State TX ZIP 79707

Our Internal Billing Reference 1/20 to Tel 15 PLAINS



### ALS Environmental

10450 Standliff Rd., Suite 270  
Houston, Texas 77099  
Tel. +1 281 530 5656  
Fax. +1 281 530 5887

### CUSTODY SEAL

Date: 9-13 Time: 1720  
Name: SHANIE A. DILLER  
Company: ENTECH

Signature: [Signature]  
Date: 9/14/12





01-Dec-2012

Kathleen Buxton  
Entech Consulting Corp.  
21 Waterway Avenue  
Suite 300  
The Woodlands, TX 77380

Tel: (979) 997-2338  
Fax: (281) 362-2704

Re: DS Hugh

Work Order: **1211905**

Dear Kathleen,

ALS Environmental received 7 samples on 28-Nov-2012 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 15.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Jumoke M. Lawal

Patricia L. Lynch  
Project Manager



Certificate No: TX: T104704231-12-10

**Client:** Entech Consulting Corp.  
**Project:** DS Hugh  
**Work Order:** 1211905

**Work Order Sample Summary**

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1211905-01	MW 2	Groundwater		11/26/2012 19:05	11/28/2012 09:30	<input type="checkbox"/>
1211905-02	MW 3	Groundwater		11/26/2012 19:00	11/28/2012 09:30	<input type="checkbox"/>
1211905-03	MW 4	Groundwater		11/26/2012 18:40	11/28/2012 09:30	<input type="checkbox"/>
1211905-04	MW 5	Groundwater		11/26/2012 18:35	11/28/2012 09:30	<input type="checkbox"/>
1211905-05	MW 6	Groundwater		11/26/2012 18:45	11/28/2012 09:30	<input type="checkbox"/>
1211905-06	MW 7	Groundwater		11/26/2012 18:55	11/28/2012 09:30	<input type="checkbox"/>
1211905-07	Trip Blank	Water		11/26/2012	11/28/2012 09:30	<input type="checkbox"/>

## ALS Environmental

*Date: 03-Dec-12*

---

**Client:** Entech Consulting Corp.

**Project:** DS Hugh

**Work Order:** 1211905

## Case Narrative

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Batch R139054, BTEX, Sample 1211911-04: MSD is for an unrelated sample.



**ALS Environmental**

Date: 01-Dec-12

Client: Entech Consulting Corp.

Project: DS Hugh

Work Order: 1211905

Sample ID: MW 2

Lab ID: 1211905-01

Collection Date: 11/26/2012 07:05 PM

Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
<b>BTEX BY SW8021B</b>			<b>SW8021B</b>				Analyst: SMA
Benzene	U		1.0	µg/L	1		11/30/2012 06:22 AM
Toluene	U		1.0	µg/L	1		11/30/2012 06:22 AM
Ethylbenzene	U		1.0	µg/L	1		11/30/2012 06:22 AM
Xylenes, Total	U		3.0	µg/L	1		11/30/2012 06:22 AM
Surr: 4-Bromofluorobenzene	100		75-129	%REC	1		11/30/2012 06:22 AM
Surr: Trifluorotoluene	99.8		75-130	%REC	1		11/30/2012 06:22 AM

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.

# ALS Environmental

Date: 01-Dec-12

Client: Entech Consulting Corp.

Project: DS Hugh

Sample ID: MW 3

Collection Date: 11/26/2012 07:00 PM

Work Order: 1211905

Lab ID: 1211905-02

Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
<b>BTEX BY SW8021B</b>			<b>SW8021B</b>				Analyst: SMA
Benzene	U		1.0	µg/L	1		11/30/2012 06:41 AM
Toluene	U		1.0	µg/L	1		11/30/2012 06:41 AM
Ethylbenzene	U		1.0	µg/L	1		11/30/2012 06:41 AM
Xylenes, Total	U		3.0	µg/L	1		11/30/2012 06:41 AM
Surr: 4-Bromofluorobenzene	106		75-129	%REC	1		11/30/2012 06:41 AM
Surr: Trifluorotoluene	106		75-130	%REC	1		11/30/2012 06:41 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Environmental**

Date: 01-Dec-12

Client: Entech Consulting Corp.

Project: DS Hugh

Work Order: 1211905

Sample ID: MW 4

Lab ID: 1211905-03

Collection Date: 11/26/2012 06:40 PM

Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
<b>BTEX BY SW8021B</b>			<b>SW8021B</b>				Analyst: SMA
Benzene	4.0		1.0	µg/L	1		11/30/2012 07:00 AM
Toluene	U		1.0	µg/L	1		11/30/2012 07:00 AM
Ethylbenzene	110		1.0	µg/L	1		11/30/2012 07:00 AM
Xylenes, Total	150		3.0	µg/L	1		11/30/2012 07:00 AM
Surr: 4-Bromofluorobenzene	98.8		75-129	%REC	1		11/30/2012 07:00 AM
Surr: Trifluorotoluene	121		75-130	%REC	1		11/30/2012 07:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.



**ALS Environmental**

Date: 01-Dec-12

Client: Entech Consulting Corp.

Project: DS Hugh

Sample ID: MW 5

Collection Date: 11/26/2012 06:35 PM

Work Order: 1211905

Lab ID: 1211905-04

Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
<b>BTEX BY SW8021B</b>			<b>SW8021B</b>				Analyst: SMA
Benzene	U		1.0	µg/L	1		11/30/2012 07:19 AM
Toluene	U		1.0	µg/L	1		11/30/2012 07:19 AM
Ethylbenzene	U		1.0	µg/L	1		11/30/2012 07:19 AM
Xylenes, Total	U		3.0	µg/L	1		11/30/2012 07:19 AM
Surr: 4-Bromofluorobenzene	104		75-129	%REC	1		11/30/2012 07:19 AM
Surr: Trifluorotoluene	102		75-130	%REC	1		11/30/2012 07:19 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Environmental**

Date: 01-Dec-12

Client: Entech Consulting Corp.

Project: DS Hugh

Sample ID: MW 6

Collection Date: 11/26/2012 06:45 PM

Work Order: 1211905

Lab ID: 1211905-05

Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
<b>BTEX BY SW8021B</b>			<b>SW8021B</b>				Analyst: SMA
Benzene	U		1.0 µg/L		1		11/30/2012 07:37 AM
Toluene	U		1.0 µg/L		1		11/30/2012 07:37 AM
Ethylbenzene	U		1.0 µg/L		1		11/30/2012 07:37 AM
Xylenes, Total	U		3.0 µg/L		1		11/30/2012 07:37 AM
Surr: 4-Bromofluorobenzene	105		75-129 %REC		1		11/30/2012 07:37 AM
Surr: Trifluorotoluene	105		75-130 %REC		1		11/30/2012 07:37 AM

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.

**ALS Environmental**

Date: 01-Dec-12

Client: Entech Consulting Corp.

Project: DS Hugh

Sample ID: MW 7

Collection Date: 11/26/2012 06:55 PM

Work Order: 1211905

Lab ID: 1211905-06

Matrix: GROUNDWATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
<b>BTEX BY SW8021B</b>			<b>SW8021B</b>				Analyst: SMA
Benzene	U		1.0	µg/L	1		11/30/2012 07:56 AM
Toluene	U		1.0	µg/L	1		11/30/2012 07:56 AM
Ethylbenzene	U		1.0	µg/L	1		11/30/2012 07:56 AM
Xylenes, Total	U		3.0	µg/L	1		11/30/2012 07:56 AM
Surr: 4-Bromofluorobenzene	108		75-129	%REC	1		11/30/2012 07:56 AM
Surr: Trifluorotoluene	107		75-130	%REC	1		11/30/2012 07:56 AM

**Note:** See Qualifiers Page for a list of qualifiers and their explanation.



## ALS Environmental

Date: 01-Dec-12

Client: Entech Consulting Corp.

## QC BATCH REPORT

Order: 1211905

Project: DS Hugh

Batch ID: R139054 Instrument ID BTEX3 Method: SW8021B

MBLK Sample ID: BBLKW2-121129-R139054 Units: µg/L Analysis Date: 11/30/2012 02:01 AM

Client ID: Run ID: BTEX3\_121129C SeqNo: 3034518 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Toluene	U	1.0								
Ethylbenzene	U	1.0								
Xylenes, Total	U	3.0								
Surr: 4-Bromofluorobenzene	32.42	1.0	30	0	108	75-129	0			
Surr: Trifluorotoluene	32.48	1.0	30	0	108	75-130	0			

LCS Sample ID: BLCSW2-121129-R139054 Units: µg/L Analysis Date: 11/30/2012 01:23 AM

Client ID: Run ID: BTEX3\_121129C SeqNo: 3034516 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.39	1.0	20	0	92	75-126	0			
Toluene	18.5	1.0	20	0	92.5	75-125	0			
Ethylbenzene	18.05	1.0	20	0	90.2	75-125	0			
Xylenes, Total	55.11	3.0	60	0	91.9	75-125	0			
Surr: 4-Bromofluorobenzene	30.88	1.0	30	0	103	75-129	0			
Surr: Trifluorotoluene	30.55	1.0	30	0	102	75-130	0			

LCSD Sample ID: BLCSDW2-121129-R139054 Units: µg/L Analysis Date: 11/30/2012 01:42 AM

Client ID: Run ID: BTEX3\_121129C SeqNo: 3034517 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.27	1.0	20	0	96.4	75-126	18.39	4.69	20	
Toluene	19.45	1.0	20	0	97.2	75-125	18.5	4.97	20	
Ethylbenzene	19.09	1.0	20	0	95.4	75-125	18.05	5.6	20	
Xylenes, Total	57.74	3.0	60	0	96.2	75-125	55.11	4.67	20	
Surr: 4-Bromofluorobenzene	30.68	1.0	30	0	102	75-129	30.88	0.651	20	
Surr: Trifluorotoluene	30.37	1.0	30	0	101	75-130	30.55	0.596	20	

MS Sample ID: 1211911-04AMS Units: µg/L Analysis Date: 11/30/2012 10:08 AM

Client ID: Run ID: BTEX3\_121129C SeqNo: 3034543 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.11	1.0	20	0	106	75-126	0			
Toluene	21.01	1.0	20	0	105	75-125	0			
Ethylbenzene	20.27	1.0	20	0	101	75-125	0			
Xylenes, Total	61.79	3.0	60	0	103	75-125	0			
Surr: 4-Bromofluorobenzene	30.74	1.0	30	0	102	75-129	0			
Surr: Trifluorotoluene	30.58	1.0	30	0	102	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entech Consulting Corp.  
 Work Order: 1211905  
 Project: DS Hugh

## QC BATCH REPORT

Batch ID: **R139054** Instrument ID **BTEX3** Method: **SW8021B**

**MSD** Sample ID: **1211911-04AMSD** Units: **µg/L** Analysis Date: **11/30/2012 10:26 AM**

Client ID: Run ID: **BTEX3\_121129C** SeqNo: **3034544** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	15.76	1.0	20	0	78.8	77-126	21.11	29	20	R
Toluene	15.71	1.0	20	0	78.5	75-125	21.01	28.9	20	R
Ethylbenzene	15.02	1.0	20	0	75.1	76-125	20.27	29.7	20	SR
Xylenes, Total	46.06	3.0	60	0	76.8	75-125	61.79	29.2	20	R
Surr: 4-Bromofluorobenzene	31.57	1.0	30	0	105	75-129	30.74	2.66	20	
Surr: Trifluorotoluene	31.34	1.0	30	0	104	75-130	30.58	2.46	20	

The following samples were analyzed in this batch:

1211905-01A	1211905-02A	1211905-03A
1211905-04A	1211905-05A	1211905-06A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

---

**Client:** Entech Consulting Corp.**Project:** DS Hugh**WorkOrder:** 1211905

---

**QUALIFIERS,  
ACRONYMS, UNITS**

---

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
µg/L	Micrograms per Liter



# ALS Environmental

## Sample Receipt Checklist

Client Name: **ENTECH**

Date/Time Received: **28-Nov-12 09:30**

Work Order: **1211905**

Received by: **JBA**

Checklist completed by Robert D. Harris  
eSignature

28-Nov-12  
Date

Reviewed by: Patricia L. Lynch  
eSignature

01-Dec-12  
Date

Matrices: groundwaters/water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>1.1c c/u</u> <u>005</u>		
Cooler(s)/Kit(s):	<u>5113</u>		
Date/Time sample(s) sent to storage:	<u>11/28/12 13:55</u>		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<u></u>		

Login Notes: Trip blank not on COC; logged in without analysis.

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Cincinnati, OH  
+1 513 733 5336  
Everett, WA  
+1 425 356 2600

Fort Collins, CO  
+1 970 490 1511  
Holland, MI  
+1 616 399 6070

## Chain of Custody Form

Page 1 of 1

COC ID: 71484

1211905

ENTECH: Entech Consulting Corp.

Project: DS Hugh

## Environmental



ALS Project Manager:

Customer Information				Project Information													
Purchase Order	Project Name	Project Number	Project Manager	A	B	C	D	E	F	G	H	I	J	Hold			
Work Order	Project Name	Project Number	DS Hugh														
Company Name	Ertech Consulting Corp.	Bill To Company	Plains All America, LP														
Send Report To	Kathleen Buxton	Invoice Attn															
Address	21 Waterway Avenue Suite 300	Address	c/o ENV. Accounts Payable P.O. Box 4648														
City/State/Zip	The Woodlands, TX 77380	City/State/Zip	Houston, TX 77210-4648														
Phone	(318) 282-8343	Phone	(713) 648-4610														
Fax	(281) 362-2704	Fax	(713) 646-4199														
e-Mail Address		e-Mail Address															
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	mw2	11-26	1905	GW	HCL	3	X										
2	mw3		1900														
3	mw4		1840														
4	mw5		1835														
5	mw6		1845														
6	mw7	11-26	1853	GW	HCL	3	X										
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: SHANE A. DUKER

Relinquished by: SHANE A. DUKER

Relinquished by: SHANE A. DUKER

Shipment Method: Standard

Required Turnaround Time: (Check Box) ☐ Other ☐ 2 WK Days ☐ 24 Hour

Notes: 5 Day TAT

Received by (Laboratory): SHANE A. DUKER

Received by (Laboratory): SHANE A. DUKER

Checked by (Laboratory): SHANE A. DUKER

Logged by (Laboratory): SHANE A. DUKER

Preservative Key: 1-HCl 2-HNO<sub>3</sub> 3-H<sub>2</sub>SO<sub>4</sub> 4-NaOH 5-Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 6-NaHSO<sub>4</sub> 7-Other 8-4°C 9-5085

QC Packages: (Check One Box Below) ☒ Level II Std QC ☐ TRRP Check List  
☐ Level III Std QC/Raw Data ☐ TRRP Level IV  
☐ Level IV SW846/CLP ☐ Other / EDD

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.  
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.  
3. The Chain of Custody is a legal document. All information must be completed accurately.

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FedEx Tracking Number 8013 7025 2874

Date 11-27-12

Sender's Name SHANE DILLER Phone 432 230-3846

Company ENTERCH

Address 3211 MARK Dept./Floor/Suite/Room

City MIDLAND State TX ZIP 79707

Your Internal Billing Reference Plains-Vac No. J41#5

To Recipient's Name CLIENT SERVICES Phone 281 530-5656

Company ALS LABORATORY GROUP

Address 10450 STANCLIFF RD STE 210 Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address Use this line for the HOLD location address or for continuation of your shipping address.

City HOUSTON State TX ZIP 77099-4305

0455309602



8013 7025 2874



## 4 Express Package Service

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs.  
For packages over 150 lbs., use the  
FedEx Express Freight US Airtail.

## Next Business Day

☐ FedEx First Overnight  
Earliest next business morning delivery to select  
locations. Priority shipments will be delivered on  
Monday unless SATURDAY Delivery is selected.☒ FedEx Priority Overnight  
Next business morning. Priority shipments will be  
delivered on Monday unless SATURDAY Delivery  
is selected.☐ FedEx Standard Overnight  
Next business afternoon.  
Saturday Delivery NOT available.

## 2 or 3 Business Days

☐ FedEx 2Day A.M.  
Second business morning.  
Saturday Delivery NOT available.☐ FedEx 2Day  
Second business afternoon. Thursday shipments  
will be delivered on Monday unless SATURDAY  
Delivery is selected.☐ FedEx Express Saver  
Third business day.  
Saturday Delivery NOT available.

## 5 Packaging \*Declared value limit \$500.

☐ FedEx Envelope\* ☐ FedEx Pak\* ☐ FedEx Box ☐ FedEx Tube ☒ Other

## 6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery  
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.☐ No Signature Required  
Package may be left without  
obtaining a signature for delivery.☐ Direct Signature  
Someone at recipient's address  
may sign for delivery. See applic.☐ Indirect Signature  
If no one is available at recipient's  
address, someone at a neighboring  
address may sign for delivery. For  
specialized deliveries only. See applic.

## Does this shipment contain dangerous goods?

☒ No ☐ Yes  
As per attached  
Shipper's Declaration.☐ Yes  
Shipper's Declaration  
not required.Dangerous goods (including dry ice) cannot be shipped in FedEx packaging  
or placed in a FedEx Express Drop Box.☐ Dry Ice  
Dry Ice, I, UN 1845☐ Cargo Aircraft Only

## 7 Payment BHT to:

Enter FedEx Acct. No. or Credit Card No. below. Obtain receipt.  
Acct. No. ☐ Sender ☒ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Total Packages Total Weight Credit Card Auth.

Our liability is limited to US\$100 unless you declare a higher value. See the current FedEx Services Guide for details.

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ALS Environmental  
10450 Stancliff Rd., Suite 210  
Houston, Texas 77099  
Tel. +1 281 530 5656  
Fax. +1 281 530 5887

SKJ

## CUSTODY SEAL

Date: 11-27-12 Time: 1:30  
Name: SHANE DILLER  
Company: ENTERCH

Signature: SHANE DILLER